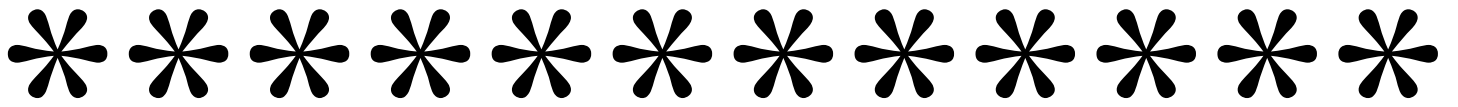




**RAMSEY-WASHINGTON**  
METRO WATERSHED DISTRICT

# **November 2019**

# **Board Packet**



# Agenda





## **Regular Board Meeting Agenda**

Wednesday, November 6, 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 October 2, 2019
  - B. 2020 BMP Program Service Agreement with Washington Conservation District
  - C. 2020 BMP Program Service Agreement with Ramsey County
4. **Treasurer’s Report and Bill List**
5. Visitor Comments (limited to 4 minutes each)
6. Permit Program
  - A. Applications
    - i. **19-46 Snail Lake Beach Improvements, Shoreview**
    - ii. **19-47 Valley Creek-Woodlane Redevelopment, Woodbury**
    - iii. **19-48 Elim Care Assisted Living, Maplewood**
  - B. Enforcement Action Report
7. Stewardship Grant Program
  - A. Applications - NONE
  - B. Budget Status Update
8. Action Items
  - A. **2020 CIP Maintenance and Repair Project Approval of Plans & Authorization to Advertise for Bid**
9. Administrator’s Report
  - A. Meetings Attended
  - B. Upcoming Meetings and Dates
  - C. MAWD Annual Meeting Information and Delegate Designation

10. Project and Program Status Reports

A. PRESENTATION: Ongoing Project and Program Updates *(at the meeting staff will walk through the ongoing projects with a multimedia presentation)*

- i. Grass/Snail Lake Area Flood Risk
- ii. Twin Lake Emergency Response Management 2019
- iii. Beltline Resiliency Study
- iv. FEMA Flood Mapping
- v. West Vadnais Lakes Outlet Permitting
- vi. 500-Year Atlas 14 Modeling
- vii. Hillcrest Golf Course
- viii. Wetland Restoration Site Search
- ix. Auto Lake Monitoring Systems
- x. Maplewood Mall Monitoring
- xi. Spent-Lime Pond Research Project
- xii. Iron Aggregate Pond Application Research
- xiii. Wakefield Park/Frost Avenue Project
- xiv. Targeted Retrofit Projects
- xv. Willow Pond CMAC
- xvi. Cottage Place Wetland Restoration
- xvii. Aldrich Arena
- xviii. Kohlman Lake Macrophyte Management
- xix. CIP Maintenance and Repair 2019 Project
- xx. CIP Maintenance and Repair 2020 Project
- xxi. 2019 Tanners Lake Alum Facility
- xxii. New Technology Review: In-Situ Harmful Algal Bloom Monitoring
- xxiii. Natural Resources Program
- xxiv. Education Program

11. Informational Items

12. Report of Managers

**13. Adjourn to a Closed Executive Session re: Notice of Claim**

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





# Consent Agenda





**Ramsey-Washington Metro Watershed District  
Minutes of Regular Board Meeting  
October 2, 2019**

The Regular Meeting of October 2, 2019, was held at the District Office Board Room, 2665 Noel Drive, Little Canada, Minnesota, at 6:30 p.m.

**PRESENT:**

Marj Ebensteiner, President  
Dianne Ward, Treasurer  
Dr. Pam Skinner, Secretary  
Lawrence Swope, Manager

**ABSENT:**

Cliff Aichinger, Vice President

**ALSO PRESENT:**

Tina Carstens, District Administrator  
Amanda Staple, Recording Secretary  
Brad Lindaman, Barr Engineering  
Simba Blood, Natural Resources Specialist  
Dave Vlasin, Water Quality Technician  
Bruce Copley, Crestview Addition  
Allison Harwood, WSB  
Greg Windsperger, Crestview Addition  
Liz Jones, Gold Line  
Joey Diederichs, Civil Site Group  
Mitch Caron, Mendota Heights  
John Bilotta, U of M Water Resources Center

Paige Ahlborg, Project Manager  
Tracey Galowitz, Attorney for District  
Nicole Soderholm, Permit Inspector  
Eric Korte, Water Quality Monitoring Coordinator  
Trevor Romanko, 5 Star Mobile Estates  
David Filipiak, SRF  
Chelsa Johnson, Metro Transit  
Andi Moffatt, WSB  
Joel Larson, Hampton Companies and Suite Living  
Jeremy Larson, Mahtomedi, MN  
Kevin O'Neill, Landowner

**1. CALL TO ORDER**

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

**2. APPROVAL OF AGENDA**

Dianne Ward requested to add an item under Ongoing Projects and Program Updates, Item 19, titled 10 Year Plan Update.

Motion: Dianne Ward moved, Lawrence Swope seconded, to approve the agenda as amended. Motion carried unanimously.

**3. CONSENT AGENDA**

- A. Approval of Minutes from September 12, 2019
- B. Approval of Special Meeting Minutes from September 16, 2019

Lawrence Swope stated that there is a motion related to increasing the per diem and noted that he would like to see more detail added to that item. He provided the following statement to be added, "The Board discussed the recent legislative increase of the per diem for watershed Board members from \$75 to \$125 per meeting. The

Board decided that to maintain consistency with other watershed organizations and to keep current with the financial requirements of future Board members, the Board compensation should be increased.”

Tina Carstens noted that the audio recording stopped working after 20 minutes and therefore the minutes after that point were very brief.

Lawrence Swope referenced the special meeting minutes. He suggested a statement to be added related to the flooding of wetlands. “Staff and Barr will engage the Board in a review of the RWMWD wetlands stewardship role with respect to the impact of temporary and permanent flooding. This will include determination if the changed condition of the wetland area is a detriment or an improvement to the ecological environment.”

Motion: Lawrence Swope moved, Dr. Pam Skinner seconded, to approve the consent agenda as amended. Motion carried unanimously.

#### **4. TREASURER’S REPORT AND BILL LIST**

Motion: Dr. Pam Skinner moved, Dianne Ward seconded, to approve the October 2, 2019, bill list as submitted. Motion carried unanimously.

#### **5. VISITOR PRESENTATIONS**

Bruce Copley, Crestview Addition resident, stated that the persistent high-water levels in two landlocked water bodies continues to cause problems. He stated that lowering Snail Lake may assist in the problems and hoped that the Board would consider reverse augmentation. He stated that the emergency response plan has only partially been completed as Shoreview is having problems finding a contractor and is awaiting Barr Engineering to complete the design. He asked the Board to help Shoreview find a suitable contractor and ensure that the work by Barr Engineering is completed in time for Shoreview to install the pump prior to the spring. He referenced the system modification tab on the Beltline Resiliency Study, noting that details have been removed and asked if that would be replaced. He asked the starting conditions for the Beltline Resiliency Study. He stated that he continues to be surprised as the member cities within the RWMWD are not interested in pursuing the lowering of West Vadnais Lake and believed that the RWMWD should be leading the effort.

#### **6. PERMIT PROGRAM**

##### **A. Applications**

##### Permit #19-42: American Indian Magnet School Addition – St. Paul

Nicole Soderholm noted that this is for an addition to an existing school in Saint Paul.

Motion: Dianne Ward moved, Lawrence Swope seconded, to approve Permit #19-42. Motion carried unanimously.

##### Permit #19-43: CDI Medical Office – Maplewood

Motion: Dr. Pam Skinner moved, Lawrence Swope seconded, to approve Permit #19-43. Motion carried unanimously.

##### Permit #19-44: 5 Star Mobile Estates Soil Correction – Vadnais Heights

Dr. Pam Skinner asked if this development is one of the mobile home parks at risk of flooding.

Nicole Soderholm explained that this project will remove contaminated soil and replace with clean soil. She noted that staff anticipated this question and the conclusion was that this was not a large enough area to provide meaningful containment.

Tina Carstens noted that the area with soil replacement does not have homes on it.

President Ebensteiner noted that she had the same question, noting that if this was a low area, perhaps it could be made lower to store water.

Dr. Pam Skinner asked if the homes in this park would be inundated under a 100-year event.

Lawrence Swope asked if this area would be considered in the Beltline Resiliency Study.

Brad Lindaman explained that this area is not included in that study.

Tina Carstens noted that these homes may be above the 100-year elevation but could still be at risk of flooding.

Brad Lindaman stated that because Twin Lake is landlocked and this is a relatively small area, staff is more concerned with the volume of water flowing through and therefore detaining the water longer would not provide a measurable benefit to Twin Lake.

Motion: Lawrence Swope moved, Dr. Pam Skinner seconded, to approve Permit #19-44. Motion carried unanimously.

Permit #19-45: Villages on McKnight Clubhouse – St. Paul

Motion: Dr. Pam Skinner moved, Dianne Ward seconded, to approve Permit #19-45. Motion carried unanimously.

#### B. Metro Transit Gold Line Presentation

Chelsa Johnson, Metro Transit, stated that they will be publishing their environmental assessment on Monday, which will begin the 30-day comment period. She stated that this will be Minnesota's first bus rapid transit (BRT) with 21 full amenity stations along the corridor serving two counties and five municipalities. She stated that they are seeking federal funding, which is why the environmental assessment was completed. She reviewed the purpose and need for the Gold Line. She displayed the proposed alignment for the project and highlighted some of the other project elements including new park and ride facilities, stormwater facilities, pedestrian connections/trails, BRT exclusive bridges, underpasses for dedicated guideway, and BRT/roadway bridge/pedestrian trail. She provided details on the proposed project schedule, noting that they hope construction to be complete in 2024.

Allison Harwood, WSB and Associates, stated that the wetland impact numbers are from the environmental assessments are based off the 15 percent design, which is a high-level design. She identified the proposed impacts within each alignment section, noting a total proposed 15 percent design impacts at 2.65 acres. She stated that they do anticipate reduction in the impacts with advanced design, estimating perhaps a reduction of one acre. She identified some of the proposed impacts along alignment D3. She reviewed some of the minimization efforts that will be considered as the design process continues. She stated that the impacts would be replaced with bank credits and noted that the WCA application will come forward in October or November.

Tina Carstens asked if all the impacts would be permanent or whether there would be temporary impacts as well.

Ms. Harwood noted that those were permanent impacts but there would be temporary impacts as well.

David Filipiak, SRF, stated that there are other project considerations as well noting that a fair amount of time has been spent on volume control. He reviewed some of the elements that have been considered, noting that stakeholders would prefer biofiltration and bioinfiltration. He stated that they have also been reviewing rate control, floodplain compensatory storage, and erosion control. He stated that there has been and will continue to be considerable coordination with RWMWD staff and other stakeholders. He stated that since 2018 they have identified and studied over potential 60 BMP locations throughout the 10 mile stretch and thus far 30 to 40 sites

are still in consideration. He stated that they have appreciated the cooperation and assistance from the project partners and District staff throughout the process and continued process.

President Ebensteiner asked if the BMPs would provide aesthetic improvement along the corridor.

Mr. Filipiak stated that he would hope that would be a result. He noted that there are a lot of constraints throughout the corridor. He provided the example of Grace Church, which is an historic property, and they received a comment that the BMP could not include anything that would take away from, or compete with, the historic aesthetic of the building. He stated that he prefers things that blend into the environment, rather than geometric shaped items.

Nicole Soderholm stated that the WCA wetland impact application will be the first thing to come before the Board and noted that any major concerns about that should be provided to the applicants now.

Brad Lindaman referenced the no net loss policy with respect to the one to one ratio within the District boundary.

Nicole Soderholm stated that there has been an exception to the no net loss policy for another linear road project and asked for input from the Board.

Dianne Ward stated that additional information on size will be helpful.

Lawrence Swope stated that he prefers mitigation within the District compared to purchasing credits outside of the District.

Dr. Pam Skinner asked and received confirmation that staff is tracking the amount of wetland impacts and replacements in the District. She stated that perhaps it would be helpful to consider a policy that would require mitigation or credits downstream to treat the water that the District releases downstream.

Brad Lindaman referenced the construction timeline and asked the anticipated duration.

Ms. Johnson anticipated construction would be about two years.

Nicole Soderholm explained that the WCA application would come before the permit.

Mr. Filipiak stated that design will occur over the next 12 to 18 months with construction proposed from 2022 to 2024. He stated that he would prefer to have one permit for all construction activity but noted that if required to be split between contractors they would apply for separate permits. He stated that they are going impact wetlands during this linear project as there is limited space to complete improvements and mitigation onsite.

#### C. Woodbury Suite Living Wetland Discussion

Nicole Soderholm provided details on a potential application that came across her desk which involved filling of a wetland. She noted that she explained the no net loss policy to the applicant and believed that this wetland issue should be discussed before the actual permit be reviewed. She stated that the project would propose to impact about 2,500 square feet of wetland. She noted that the intent tonight is to have a discussion on mitigation requirements for the potential project.

Joel Larson, CEO of Hampton Companies and Suite Living, stated that they have completed Planning and Zoning review with Woodbury. He stated that they are attempting to work within the District rules and are here to talk about possible ideas.

Joey Diederichs distributed a proposed site plan for the site, noting that the wetland was discovered this spring under wetter than normal conditions. He stated that the wetland lies in the middle of the site, which would make it difficult to develop anything other than a single-family home on the site.

President Ebensteiner stated that basically the applicant would like to build on top of the wetland.

Mr. Larson confirmed that they would like to fill the wetland in order to build on the site.

Mr. Diederichs stated that there are no banked credits within the District and therefore their proposal for mitigation would be to purchase credits in Washington County at a ratio of two to one.

Dr. Pam Skinner stated that she is concerned that this will become a trend as the area is built out and the only area left for development would be wetlands. She stated that perhaps this be a topic for a future Board workshop as this will continue to come forward. She stated that a natural wetland has amenities that cannot be generated through a newly created wetland.

Mr. Diederichs noted that there would be a pond and filtration basin onsite to treat and hold water. He explained that the wetland does not treat a large volume of water and therefore water coming out of the pond and filtration basin would be cleaner than water in the wetland.

Dr. Pam Skinner asked if there could be multiple buildings around the wetland feature.

Mr. Larson stated that one building would be needed for the project, it would not be feasible to have three buildings for this purpose.

Kevin O'Neill, property owner, stated that Woodbury is in favor of the project as there are no one story senior housing products of this type available in the community. He stated that this is a good project and they would like to see if the District could work with them.

Mr. Diederichs stated that they did look at onsite mitigation but with buffer requirements that would not be possible. He noted that if a variance to wetland buffers was granted, they could mitigate at a ratio of one to one onsite.

Dr. Pam Skinner noted that there are two of these applications tonight and her concern is that the Board should consider its policy moving forward.

Mr. O'Neill stated that the wetland does not have natural vegetation and noted that there are other natural elements on the site that will be protected.

Tina Carstens asked if there have been conversations with the City on this.

Nicole Soderholm stated that she did express her concern with filling the wetland, but the discussion was limited to that topic.

President Ebensteiner referenced the stormwater pond that would be constructed and asked the features that pond would have that would make it an improvement.

Mr. Diederichs stated that the wet pond would allow sediment to settle and when that overflows it would lead to the filtration basin that would allow the water to filter. He confirmed that the pond would hold water year-round. He confirmed that a robust mix of natural plants would be planted around the pond.

Tina Carstens stated that the District has allowed one to one mitigation onsite with variance to the buffer requirements.

Mr. Larson stated that they could increase the area around the pond, but they would require a variance from the setback as the building would fall within the required buffer.

Tracey Galowitz stated that when the Costco application came forward, the Board made Costco rework the project. She stated that it would not be unprecedented to require additional information on why this is the only proposed building site and building size. She stated that if the Board is not convinced that the policies cannot be met the applicant could be requested to rework the plans.

Tina Carstens commented that the applicant could be asked to rework the plans or show the sequencing.

Brad Lindaman noted that the sequencing process would need to be strengthened along with articulating a variance request for the buffer and providing details on the stormwater management requirements. He noted that the sequencing would be the main element that will help decide whether this will be able to move forward and therefore that element should be robust. He noted that this will be challenging because of the process set forth in the rules.

Nicole Soderholm noted that the application would also need to go before the TAC.

Mr. Diederich asked if variance requests from the buffer have been approved in the past.

Brad Lindaman confirmed that has been done in the past but for an existing wetland. He noted that this would be new as the wetland would be filled and the buffer variance would be for a newly created wetland.

Dr. Pam Skinner noted that she also appreciates the preservation of upland trees. She noted that the Board does consider the whole picture.

Mr. Larson noted that they have worked with the adjacent landowner as well to potentially increase that pond to accept water from the site in order to preserve existing trees.

President Ebensteiner suggested that the applicants continue to work with staff on the elements discussed tonight.

D. Monthly Enforcement Report

During September, 19 notices were sent to address: install/maintain inlet protection (3), install/maintain perimeter control (5), install/maintain construction entrance (1), sweep streets (2), stabilize exposed soils (1), contain/dispose of liquid and solid waste (2), remove discharged sediment (2), implement proper dewatering (1), maintain temporary sediment basin (1), and maintain proper records (1).

## **7. MINNESOTA RESEARCH COUNCIL PRESENTATION**

John Bilotta, University of Minnesota Water Resources Center, provided background information on the Minnesota Stormwater Research Council, which is administered through the Water Resources Center at the University of Minnesota. He noted that the group is much more than the University of Minnesota and involves private engineers and staff from other colleges in Minnesota. He provided details on the purpose of the Council and the funding that has been received in 2017 and 2018. He noted that this has become a well-funded program to help tackle some of the urban stormwater challenges. He stated that the Council does not rely on one source of funding and instead has relied on pooled funding sources, acknowledging that RWMWD has been a funding partner. He stated that legislators have been impressed that the Council was able to leverage local dollars from the Clean Water Land and Legacy dollars. He stated that over the past two years the funds have been invested in 11 projects involving over 50 researchers, noting that the projects are split between rapid response (12 month) and integrated (18 month). He provided details on four different research projects that the Council is working on. He stated that since 2015 a

lot of time was spent identifying the research priorities, noting that eight major areas of research were identified as priorities and are included in the stormwater research roadmap. He stated that the program was funded for another biennium at a rate of \$1,500,000. He explained that there is a technology transfer element to each of the research projects. He noted that over the next year they will spend time looking at the element of technology transfer and training. He identified the activities that will occur for the remainder of 2019 and through 2020. He thanked the District for contributing funds and expertise.

President Ebensteiner thanked Mr. Bilotta for his presentation.

Lawrence Swope asked how the District works with the Council.

Tina Carstens noted that the District has a seat at the table, noting that Cliff Aichinger was a member of the Council until recently and noted that Bill Bartodziej will replace him. She noted that other District staff have been involved and Barr Engineer has also been a part of the research projects. She stated that the District has contributed \$25,000 per year for funding as well.

## **8. STEWARDSHIP GRANT PROGRAM**

### **A. Applications**

Permit #19-25 CS: Cedar Lakeside Apartments – Shoreline Restoration

Motion: Lawrence Swope moved, Dr. Pam Skinner seconded, to approve Permit #19-25 CS. Motion carried unanimously.

Permit #19-26 CS: Harding Arena – Habitat Restoration

Motion: Dianne Ward moved, Lawrence Swope seconded, to approve Permit #19-26 CS. Motion carried unanimously.

### **B. Budget Status Update**

Dianne Ward referenced the remaining budget remaining and asked for details.

Paige Ahlborg stated that there were funds budgeted for the Snail Lake buffer restorations and therefore those funds will carry over. She noted that staff will continue to look for additional opportunities, including options for permit applicants to go above the permit requirements.

## **9. ACTION ITEMS**

### **A. Watershed Excellence Awards Approval**

President Ebensteiner noted that the list of nominations included in the packet.

Motion: Dianne Ward moved, Lawrence Swope seconded, to approve the proposed Watershed Excellence Award winners. Motion carried unanimously.

## **10. ADMINISTRATOR'S REPORT**

### **A. Meetings Attended**

No comments.

### **B. Upcoming Meetings and Dates**

Tina Carstens highlighted the upcoming meetings and events.

### **C. MAWD Annual Meeting and Resolution Process**

Tina Carstens stated that a draft resolution was provided to the Board that could be submitted to the MAWD Resolution Committee. She explained that these are priorities for the District that the District would be asking for



MAWD to support. She provided details on the draft resolution regarding flood risk mitigation efforts within the urban area. She noted that there has been a comment made that the language should be cautious to avoid being exclusive to non-metro areas.

President Ebensteiner agreed that there are flooding issues outside of urban areas as well.

Dr. Pam Skinner asked if the draft resolution could be amended to not be exclusive of non-urban areas.

Tina Carstens stated that there are funds available for flood risk, but it can become difficult for metro areas to rise to the top of that list. She explained that DNR staff has stated that funding is very competitive as metro areas do not have the land available to compete with large cost-effective solutions that can be achieved in non-urban areas. She stated that when the draft resolution is reviewed by the MAWD Resolution Committee, they can also make suggestions to tweak the language.

Lawrence Swope acknowledged that metro areas are much more constrained than rural areas.

President Ebensteiner asked if this would apply to areas like Duluth and Rochester.

Tina Carstens stated that the language states Twin Cities metro area. She noted that she was told that the draft resolutions should be kept general as that would allow MAWD to make suggestions and would not pigeonhole the potential resolution.

Tracey Galowitz noted that the language is inclusive but simply asks that some funds be earmarked for the Twin Cities metro area.

Tina Carstens confirmed the consensus of the Board to send the draft resolution for review by the MAWD Resolution Committee.

D. Special Work Session Meeting Regarding Beltline Resiliency Study

No comments.

E. CAC Meeting Update

No comments.

**11. PROJECT AND PROGRAM STATUS REPORTS**

A. New Project Scope: Hillcrest Golf Course Study of Existing Conditions

No comments.

B. Ongoing Project and Program Updates

i. Twin Lake Emergency Response Management 2019

ii. Beltline Resiliency Study

Tina Carstens noted that the Beltline Resiliency Study work session will most likely occur in December, dependent on scheduling ability. She noted that the report would be made available to the Board prior to the special meeting in order to allow appropriate discussion by the Board and staff at the special meeting.

iii. FEMA Flood Mapping

iv. Snail, Grass and West Vadnais Lakes Outlet Permitting

v. 500 Year Atlas 14 Modeling

vi. Wetland Restoration

Lawrence Swope referenced the wetland restoration site search. He noted that he would like to see additional discussion on wetlands in general.

Tina Carstens stated that a ranking was provided of the sites along with the scoring system that was used. She stated that the information was simply provided to the Board to review.

Brad Lindaman explained that the scoring system comes directly or indirectly from the State and BWSR. He explained that a few applicants came before the Board tonight with the intent of purchasing credits outside of the District. He noted that the intent of this would be to be able to create a bank of credits that could efficiently be used for mitigation purposes. He noted therefore the scoring criteria were based on the criteria that BWSR considers when determining whether that could become banked credits. He stated that the desktop study of the ranking occurred based on the criteria. He explained that because so much information is known on Cottage Place, more can be determined in ranking. He noted that he would not recommend doing that level of information gathering on each of the potential sites.

Tina Carstens stated that the Board could review the scoring criteria and then provide input on additional elements that they would like to see in the scoring/ranking process.

Brad Lindaman reviewed some of the potential next steps.

Dianne Ward stated that there has been discussion related to vulnerable areas, primarily related to the Beltline study and stated that she would be interested if a large wetland near that area could tie into flood control.

Lawrence Swope asked how wetlands are accounted for in situations like tonight where the developer identified a wetland that was previously not identified.

Brad Lindaman stated that just because a wetland is not identified in the desktop review, does not mean it does not exist and this is not a unique circumstance where a wetland is brought to the attention of the District through potential development.

Tina Carstens noted that the Board can review this information and further discussion can occur at a later date related to the prioritization and scoring system.

Brad Lindaman noted that this would perhaps be a good workshop topic.

President Ebensteiner noted that it would be helpful to go through an example of ranking a wetland during that discussion.

- vii. Auto Lake Monitoring Systems
- viii. Maplewood Mall Monitoring
- ix. Spent Lime Pond Research Project
- x. Wakefield Park/Frost Avenue Project
- xi. Targeted Retrofit Projects
- xii. Target and Motel 6 Stormwater Retrofit Projects
- xiii. Willow Pond CMAC
- xiv. Cottage Place Wetland Restoration
- xv. Aldrich Arena Site Design
- xvi. CIP Maintenance and Repair 2019 Project

Dianne Ward asked what would happen if the maintenance and repair items are not completed by the contract deadline, specific for Item 16.

Dave Vlasin replied that the District may have to add the item to the 2020 CIP program in the end. He explained that site conditions have changed onsite compared to the bid project scope.

Brad Lindaman confirmed that the problem is not with the contractor but is instead due to the site conditions.

- xvii. Natural Resources Program
- xviii. Education Program
- xix. 10 Year Plan Update

Dianne Ward noted that it would be helpful to have additional information on the 10 Year Plan update process.

Tina Carstens noted that a scope summary will come before the board at a later date with the work starting in 2020.

## **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 9:00 p.m. Motion carried unanimously.

Respectfully submitted,

Dr. Pam Skinner, Secretary

# Consent Agenda Item

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**Board Meeting Date:** November 6, 2019

**Consent Agenda Item No:** 3B

**Preparer:** Tina Carstens, Administrator

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**Item Description:** Approval of the 2020 Service Agreement with Washington Conservation District (WCD) for BMP Incentive Program and Water Quality Monitoring.

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**Background:**

This is a yearly agreement with WCD to provide technical services for the BMP Incentive Program and a small amount of water quality monitoring support in Washington County. The quality of support we receive from WCD in these two areas is economical and we have been happy with the work done by the staff. The staff meets with landowners in Washington County, provide education and potentially design BMPs for their properties. The total 2020 agreement is \$20,000 for BMP work and \$459 for water monitoring services. This is the same amount as previous years.

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**Applicable District Goal and Action Item:**

**Goal: Achieve quality surface water** – the District will maintain or improve surface water quality to support healthy ecosystems and provide the public with a wide range of water-based benefits.

**Action Items:** Encourage and provide technical assistance to individuals to implement water quality improvement practices at their homes and businesses and in public places.

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**Staff Recommendation:**

Approve the service agreement.

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**Financial Implications:**

The costs incurred under this agreement are budgeted for through the BMP Incentive Program Fund.

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**Board Action Requested:**

Approve the 2020 Service Agreement with Washington Conservation District.

**2020 SERVICE AGREEMENT  
BETWEEN  
WASHINGTON CONSERVATION DISTRICT  
AND RAMSEY WASHINGTON METRO WATERSHED DISTRICT**

**A. PARTIES**

This Agreement is made and entered into by Washington Conservation District, (WCD), and the Ramsey Washington Metro Watershed District (Watershed District).

**B. PURPOSE**

WHEREAS, the Watershed District has requested assistance from the WCD to implement the policies specified in MINN. STAT. §§ 103A.206 and 103D.201; and

WHEREAS, the WCD is authorized to enter agreements to provide such assistance pursuant to MINN. STAT. §§ 103C.331, SUBD. 3 and 7 and 103D.335, subd. 21.

NOW, THEREFORE, the parties agree as follows:

**C. TERM OF AGREEMENT**

The term of this agreement shall be from January 1, 2020 to December 31, 2020 unless extended or terminated earlier as provided herein.

**D. SCOPE OF SERVICES**

The WCD will perform all services and furnish and deliver work products generally described in the attached Exhibits.

**E. COST**

In full consideration for services under this agreement, the WCD shall charge the RWMWD for its services at the rate set forth in Section F. Costs for services for activities detailed in the attached Exhibits include:

Exhibit A: Technical Services for BMP Coast Share Program - \$20,000

Exhibit B: Water Monitoring Services - \$459

**Total 2020 Agreement: \$20,459**

Any additional costs for special studies or capital projects must be set forth in a written amendment to this Agreement.

**F. BILLING RATE AND PAYMENTS**

1. Services in Exhibit A are billed on an hourly basis at the rate of \$39.00 - \$84.00 per hour, based on personnel and task.

Seasonal	\$39.00
Technician	\$59.00
Senior Technician/Specialist	\$64.00
Senior Tech II /Specialist II	\$70.00
Senior Specialist	\$76.00
Manager/Administrator/Engineer	\$84.00

Services in Exhibit B are billed on a lump sum basis, and on an actual cost basis for lab and project expenses.

Invoices for Exhibit A will be sent on a monthly basis, invoices for Exhibit B will be sent on a quarterly basis and both will list specifically the work performed.

2. Project expenses will be billed as they are accrued.
3. Invoices are payable by the RWMWD within 60 days.
4. Office supplies, normal office reproduction expenses, and transportation are included in the hourly rate. Other expenses are to be reimbursed at actual cost.

**G. EQUAL EMPLOYMENT OPPORTUNITY- CIVIL RIGHTS**

During the performance of this Agreement, the WCD agrees to the following:

No person shall, on the grounds of race, color, religion, age, sex, disability, marital status, public assistance, criminal record, creed or national origin, be excluded from full employment rights in, be denied the benefits of, or be otherwise subjected to discrimination under any program, service, or activity under the provisions of and all applicable federal and state laws against discrimination including the Civil Rights Act of 1964.

**H. STANDARDS**

The WCD shall comply with all applicable Federal and State statutes and regulations as well as local ordinances now in effect or hereafter adopted. Failure to meet the requirements of the above may be cause for cancellation of this contract effective the date of receipt of the Notice of Cancellation.

**I. DATA PRIVACY**

All data collected, created, received, maintained, or disseminated, or used for any purpose in the course of the WCD's performance of the Agreement is governed by the Minnesota Government Data Practices Act, Minnesota 1984, Section 13.01, et seq. Or any other applicable state statutes and state rules adopted to implement the Act, as well as state statutes and federal regulations on data privacy. The WCD agrees to abide by these statutes, rules and regulations and as they may be amended.

**J. AUDITS, REPORTS, AND MONITORING PROCEDURES**

The WCD will:

1. Maintain records that reflect all revenues, cost incurred and services provided in the performance of the Agreement.
2. Agree that the County, the State Auditor, or legislative authority, or any of their duly authorized representatives at any time during normal business hours, and as often as they may deem reasonably necessary, shall have access to the rights to examine audit, excerpt, and transcribe any books, documents, papers, records, etc., and accounting procedures and practices of the WCD which are relevant to the contract.

**K. INDEMNITY**

The WCD and the Watershed District mutually agree, to the fullest extent permitted by law, to indemnify and hold each other harmless for any and all damages, liability or cost (including reasonable attorneys' fees and costs of defense) arising from their own negligent acts, errors or omissions in the performance of their services under this agreement, to the extent each party is responsible for such damages and losses on a comparative basis of fault. Parties agree to provide proof of contractual liability insurance upon request. This paragraph does not diminish, with respect to any third party, any defense, immunity or liability limit that the WCD or the Watershed District may enjoy under law.

**L. INDEPENDENT CONTRACTOR**

It is agreed that nothing herein contained is intended or should be construed in any manner as creating or establishing the relationship of co-partners between the parties hereto or as constituting the WCD as the agent, representative, or employee of Watershed District for any purpose or in any manner whatsoever. The WCD is to be and shall remain an independent contractor with respect to all services performed under this Agreement.

The WCD represents that it has, or will secure at its own expense, all personnel required in performing services under this Agreement. Any and all personnel of the WCD or other person, while engaged in the performance of any work or services required by the WCD under this Agreement, shall have no contractual relationship with the Watershed District and shall not be considered employees of the Watershed District.

**M. MODIFICATIONS**

Any material alteration or variation shall be reduced to writing as an amendment and signed by the parties. Any alteration, modification, or variation deemed not to be material by written agreement of the WCD and the Watershed District shall not require written approval.

**N. MERGER**

It is understood and agreed that the entire agreement of the parties is contained here, except as modified during the term of the Agreement by a writing under Paragraph M above concerning a non-material change, and that this contract supersedes oral agreements and negotiations between the parties relating to this subject matter. All items referred to in this contract are incorporated or attached and deemed to be part of the contract.

**O. TERMINATION**

Either the WCD or the Watershed District may terminate this Agreement with or without cause by giving the other party ninety (90) days written notice prior to the effective date of such termination. If the Watershed District terminates this Agreement, it may specify work to be performed by the WCD before termination is effective and shall pay the WCD for services performed by the WCD up to the time specified for termination. If the WCD terminates the Agreement, it will not be compensated for part completion of a task except to the extent part completion has value to the Watershed District.

**P. OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY**

All property of the Watershed District used, acquired or created in the performance of work under this Agreement, including documents and records of any kind, shall remain the property of the Watershed District. The Watershed District shall have the sole right to use, sell, license, publish, or otherwise disseminate any product developed in whole or in part during the performance of work under this Agreement.

**2020 SERVICE AGREEMENT  
BETWEEN  
WASHINGTON CONSERVATION DISTRICT  
AND RAMSEY WASHINGTON METRO WATERSHED DISTRICT  
RWMWD BMP COST-SHARE PROGRAM**

IN TESTIMONY WHEREOF the parties have duly executed this agreement by their duly authorized officers.

APPROVED:

Watershed District

WCD

BY: \_\_\_\_\_  
Board President Date

BY: \_\_\_\_\_  
Board Chair Date

BY: \_\_\_\_\_  
Administrator Date

BY: \_\_\_\_\_  
WCD Manager Date

Approval as to form and execution:

\_\_\_\_\_  
Date



## EXHIBIT A

### 2020 RWMWD BMP COST-SHARE PROGRAM

#### TASKS

**1. Project Oversight**

All work performed by the WCD will be at the direction of the RWMWD staff.

**2. Landowner Outreach**

Targeted and broad-based outreach techniques will be implemented through a coordinated effort of the RWMWD and WCD. Outreach will be coordinated with educational efforts by the RWMWD.

**3. Project Database**

Project information will be maintained by the RWMWD. Information on assistance provided by the WCD will be regularly communicated to the RWMWD staff Coordinator.

**4. Respond to inquiries from the public**

The RWMWD will act as the primary and first responder to inquiries from the public regarding the BMP Program. The WCD and the RWMWD will jointly provide responses to the public regarding general program information, program eligibility, best management practice information, and general watershed information.

**5. Site Reviews and Project Evaluation**

Initial site visits will be provided by the WCD County-wide and are part of the standard WCD programs and not charged under this contract. Follow-up reviews and subsequent site visits of potential BMP implementation sites will be conducted under this contract. Other activities will include: assessing BMP options which will adequately address the problem, discussing BMP alternatives with landowners, and promoting implementation of BMPs. WCD will assist program applicants with identification of supplemental funding sources if needed. Educational materials will be distributed during the site visit.

**6. BMP Design and Contractor Assistance**

The WCD will coordinate BMP design assistance. Design support will be provided by WCD technical resources and/or obtaining assistance from an appropriate technical agency, organization, or the Watershed District. WCD will assist landowners with obtaining qualified contractors to install BMPs if requested.

**7. Construction Monitoring (Site inspections)**

The WCD will monitor construction activities to verify proper implementation of BMPs.

**8. Miscellaneous Services**

Other services may be provided as requested by the Watershed District to implement and carry out the Program.

**EXHIBIT B**

**2020 WATER MONITORING SERVICES**

<b>Total Monitoring Cost Summary</b>	<b>Labor</b>	<b>Lab Expenses</b>	<b>Total Cost</b>
<b>Total RWMWD Lake Gage Monitoring Cost</b>	<b>\$459</b>	<b>\$0</b>	<b>\$459</b>
<b>RWMWD Total</b>	<b>\$459</b>	<b>\$0</b>	<b>\$459</b>

# Consent Agenda Item

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**Board Meeting Date:** November 6, 2019

**Consent Agenda Item No:** 3C

**Preparer:** Tina Carstens, Administrator

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**Item Description:** Approval of the 2020 Service Agreement with Ramsey County – Parks and Recreation Department – Soil & Water Conservation division (SWCD) for the BMP Incentive Program.

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**Background:**

This is a yearly agreement with the Ramsey SWCD to provide technical services for the BMP Incentive Program in Ramsey County. The quality of support we receive from SWCD in this area is economical and we have been happy with the work done by the staff. The staff meets with landowners in Ramsey County, provide education and potentially design BMPs for their properties. The total 2020 agreement is a not to exceed of \$65,000 for BMP work. This is a slight increase from the \$60,000 contract in 2019.

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**Applicable District Goal and Action Item:**

**Goal: Achieve quality surface water** – the District will maintain or improve surface water quality to support healthy ecosystems and provide the public with a wide range of water-based benefits.

**Action Items:** Encourage and provide technical assistance to individuals to implement water quality improvement practices at their homes and businesses and in public places.

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**Staff Recommendation:**

Approve the service agreement.

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**Financial Implications:**

The costs incurred under this agreement are budgeted for through the BMP Incentive Program Fund.

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**Board Action Requested:**

Approve the 2020 Service Agreement with Ramsey County – Parks and Recreation Department – Soil & Water Conservation division (SWCD) for the BMP Incentive Program.

**2020 SERVICE AGREEMENT  
BETWEEN  
RAMSEY COUNTY  
AND RAMSEY- WASHINGTON METRO WATERSHED DISTRICT**

**RWMWD BMP COST-SHARE PROGRAM**

**A. PARTIES**

This is an Agreement between Ramsey County, a political subdivision of the State of Minnesota, on behalf of its Parks & Recreation department – Soil & Water Conservation division (SWCD), 1425 Paul Kirkwold Drive, Arden Hills, MN 55112, and the Ramsey-Washington Metro Watershed District (Watershed District), 2665 Noel Drive, Little Canada, MN 55117.

**B. PURPOSE**

WHEREAS, the Watershed District has requested assistance from the SWCD to implement the policies specified in MINN. STAT. §§ 103A.206 and 103D.201; and  
WHEREAS, the SWCD is authorized to enter agreements to provide such assistance pursuant to MINN. STAT. §§ 103C.331, SUBD. 3 and 7 and 103D.335, subd. 21.  
NOW, THEREFORE, the parties agree as follows:

**C. TERM OF AGREEMENT**

The term of this agreement shall be from January 1, 2020 to December 31, 2020 unless extended or terminated earlier as provided herein.

**D. SCOPE OF SERVICES**

The SWCD will perform all services and furnish and deliver work products generally described in the attached Exhibits.

**E. COST**

In full consideration for services under this agreement, the Watershed District will compensate the SWCD for providing the services listed in Exhibit A, on an hourly basis, not to exceed \$65,000 during the term of this agreement.

Any additional costs must be approved by the Watershed District.

**F. BILLING RATE AND PAYMENTS**

The Watershed District will pay the SWCD the amount of the cost for services invoiced by the SWCD, within 30 days after receipt, based on the fee schedule listed in Exhibit 2 of this agreement. Project expenses will be billed as they are accrued. Office supplies, normal office reproduction expenses, and transportation are included in the hourly rate. Other expenses are to be reimbursed at actual cost.

## **G. EQUAL EMPLOYMENT OPPORTUNITY- CIVIL RIGHTS**

During the performance of this Agreement, the SWCD agrees to the following:

No person shall, on the grounds of race, color, religion, age, sex, disability, marital status, public assistance, criminal record, creed or national origin, be excluded from full employment rights in, be denied the benefits of, or be otherwise subjected to discrimination under any program, service, or activity under the provisions of and all applicable federal and state laws against discrimination including the Civil Rights Act of 1964.

## **H. STANDARDS**

The SWCD shall comply with all applicable Federal and State statutes and regulations as well as local ordinances now in effect or hereafter adopted. Failure to meet the requirements of the above may be cause for cancellation of this contract effective the date of receipt of the Notice of Cancellation.

## **I. DATA PRIVACY**

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## **J. AUDITS, REPORTS, AND MONITORING PROCEDURES**

The SWCD will:

1. Maintain records that reflect all revenues, cost incurred and services provided in the performance of the Agreement.
2. Agree that the SWCD, the State Auditor, or legislative authority, or any of their duly authorized representatives at any time during normal business hours, and as often as they may deem reasonably necessary, shall have access to the rights to examine audit, excerpt, and transcribe any books, documents, papers, records, etc., and accounting procedures and practices of the SWCD which are relevant to the contract.

## **K. INDEMNITY**

The SWCD and the Watershed District mutually agree, to the fullest extent permitted by law, to indemnify and hold each other harmless for any and all damages, liability or cost (including reasonable attorneys' fees and costs of defense) arising from their own negligent acts, errors or omissions in the performance of their services under this agreement, to the extent each party is responsible for such damages and losses on a comparative basis of fault. Parties agree to provide proof of contractual liability insurance upon request. This paragraph does not diminish, with respect to any third party, any defense, immunity or liability limit that the SWCD or the Watershed District may enjoy under law.

## **L. INDEPENDENT CONTRACTOR**

It is agreed that nothing herein contained is intended or should be construed in any manner as creating or establishing the relationship of co-partners between the parties hereto or as constituting the SWCD as the agent, representative, or employee of Watershed District for any purpose or in any manner whatsoever. The SWCD is to be and shall remain an independent contractor with respect to all services performed under this Agreement.

The SWCD represents that it has, or will secure at its own expense, all personnel required in performing services under this Agreement. Any and all personnel of the SWCD or other person, while engaged in the performance of any work or services required by the SWCD under this Agreement, shall have no contractual relationship with the Watershed District and shall not be considered employees of the Watershed District.

#### **M. MODIFICATIONS**

Any material alteration or variation shall be reduced to writing as an amendment and signed by the parties. Any alteration, modification, or variation deemed not to be material by written agreement of the SWCD and the Watershed District shall not require written approval.

#### **N. MERGER**

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**2020 SERVICE AGREEMENT  
BETWEEN  
RAMSEY COUNTY  
AND RAMSEY- WASHINGTON METRO WATERSHED DISTRICT  
RWMWD BMP COST-SHARE PROGRAM**

IN TESTIMONY WHEREOF the parties have duly executed this agreement by their duly authorized officers.

APPROVED:

Watershed District

Ramsey County

BY: \_\_\_\_\_  
Board President                      Date

BY: \_\_\_\_\_  
County Manager                      Date

BY: \_\_\_\_\_  
RWMWD Administrator              Date

BY: \_\_\_\_\_  
Parks and Recreation Director    Date

BY: \_\_\_\_\_  
County Attorney                      Date

## EXHIBIT A

### 2020 RWMWD BMP COST-SHARE PROGRAM

#### TASKS

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**8. Miscellaneous Services**

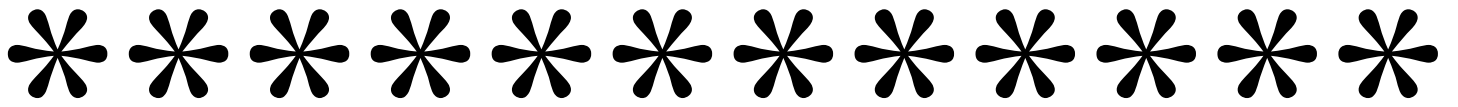
Other services may be provided as requested by the Watershed District to implement and carry out the Program.



**EXHIBIT B**

**FEE SCHEDULE**

Services in Exhibit A are billed on an hourly basis at the rate of \$72.00 per hour, for all SWCD staff.



# Bill List



**RWMWD BUDGET STATUS REPORT**

**Administrative & Program Budget**

Fiscal Year 2019

10/31/2019

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	-	430.00	4,580.00	\$1,920.00	70.46%
	Manager expenses	4360	3,500.00	-	-	871.40	2,628.60	24.90%
Committees	Committee/Bd Mtg. Exp.	4365	3,500.00	-	523.43	3,079.54	420.46	87.99%
Employees	Staff salary/taxes/benefits	4010	1,385,000.00	-	99,536.43	1,085,212.56	299,787.44	78.35%
	Employee expenses	4020	10,000.00	-	547.06	6,525.92	3,474.08	65.26%
	District training & education	4350	25,000.00	-	196.23	17,102.80	7,897.20	68.41%
Administration/ Office	GIS system maint. & equip.	4170	15,000.00	-	-	2,028.52	12,971.48	13.52%
	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	-	361.48	5,719.06	2,280.94	71.49%
	Office supplies	4320	5,000.00	-	518.34	4,225.95	774.05	84.52%
	IT/Internet/Web Site/Software Lic.	4325	45,000.00	-	2,612.39	33,922.64	11,077.36	75.38%
	Postage	4330	10,000.00	-	-	597.39	9,402.61	5.97%
	Printing/copying	4335	8,000.00	-	323.40	4,773.29	3,226.71	59.67%
	Dues & publications	4338	11,000.00	-	51.00	9,953.00	1,047.00	90.48%
	Janitorial/Trash Service	4341	17,000.00	-	-	5,652.18	11,347.82	33.25%
	Utilities/Bldg.Contracts	4342	20,000.00	-	1,639.49	16,486.47	3,513.53	82.43%
	Bldg/Site Maintenance	4343	300,000.00	-	1,017.43	72,950.83	227,049.17	24.32%
	Miscellaneous	4390	5,000.00	-	-	500.00	4,500.00	10.00%
	Insurance	4480	35,000.00	-	-	36,479.00	(1,479.00)	104.23%
	Office equipment	4703	40,000.00	-	-	29,222.15	10,777.85	73.06%
	Vehicle lease, maintenance	4810-40	43,000.00	-	1,226.92	7,026.00	35,974.00	16.34%
Consultants/ Outside Services	Auditor/Accounting	4110	55,000.00	-	4,248.52	45,550.28	9,449.72	82.82%
	Engineering-administration	4121	93,000.00	-	7,585.16	58,485.80	34,514.20	62.89%
	Engineering-permit I&E	4122	10,000.00	-	-	3,024.44	6,975.56	30.24%
	Engineering-eng. review	4123	55,000.00	-	2,885.50	38,687.66	16,312.34	70.34%
	Engineering-permit review	4124	55,000.00	-	4,175.00	30,807.50	24,192.50	56.01%
	Project Feasibility Studies	4129	790,000.00	-	61,290.45	327,733.25	462,266.75	41.49%
	Attorney-permits	4130	10,000.00	-	-	-	10,000.00	0.00%
	Attorney-general	4131	40,000.00	-	3,593.00	25,002.50	14,997.50	62.51%
	Outside Consulting Services	4160	40,000.00	-	-	-	40,000.00	0.00%
Programs	Educational programming	4370	60,000.00	-	310.13	14,943.49	45,056.51	24.91%
	Communications & Marketing	4371	25,000.00	-	-	5,937.78	19,062.22	23.75%
	Events	4372	50,000.00	-	121.80	34,975.95	15,024.05	69.95%
	Water QM-Engineering	4520-30	300,000.00	-	85,243.94	223,367.47	76,632.53	74.46%
	Project operations	4650	160,000.00	-	439.62	26,617.87	133,382.13	16.64%
	SLMP/TMDL Studies	4661	68,000.00	-	278.00	4,022.00	63,978.00	5.91%
	Natural Resources/Keller Creek	4670-72	115,000.00	-	21,975.55	127,584.00	(12,584.00)	110.94%
	Outside Prog.Support/Weed Mgmt.	4683-84	67,000.00	-	5,318.25	45,734.41	21,265.59	68.26%
	Research Projects	4695	115,000.00	-	5,531.50	49,825.59	65,174.41	43.33%
	Health and Safety Program	4697	3,000.00	-	-	1,043.48	1,956.52	34.78%
	NPDES Phase II	4698	10,000.00	-	-	-	10,000.00	0.00%
<b>GENERAL FUND TOTAL</b>			<b>\$4,124,500.00</b>	<b>\$0.00</b>	<b>\$311,980.02</b>	<b>\$2,412,462.17</b>	<b>\$1,712,037.83</b>	<b>58.49%</b>
CIP's	CIP Project Repair & Maintenance	516	1,120,000.00	-	80,433.92	844,730.86	275,269.14	75.42%
	Targeted Retrofit Projects	518	978,760.00	-	21,287.32	237,249.47	741,510.53	24.24%
	District Office Building Solar Energy Retrofit	519	-	-	-	-	-	---
	Flood Damage Reduction Fund	520	2,500,000.00	-	15,421.50	256,120.46	2,243,879.54	10.24%
	Debt Services-96-97 Beltline/MM/Battle Creek	526	399,113.00	-	-	396,907.30	2,205.70	99.45%
	Stewardship Grant Program Fund	528-529	1,250,000.00	-	152,056.30	586,374.17	663,625.83	46.91%
	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	-	-	5,842.48	59,157.52	8.99%
	Wakefield Park Project	553	1,100,000.00	-	9,068.26	67,194.96	1,032,805.04	6.11%
	Willow Pond CMAC	554	300,000.00	-	2,518.63	14,357.79	285,642.21	4.79%
	District Office Bond Payment	585	194,885.00	-	-	193,453.76	1,431.24	99.27%
<b>CIP BUDGET TOTAL</b>			<b>\$9,407,758.00</b>	<b>-</b>	<b>\$280,785.93</b>	<b>\$2,602,231.25</b>	<b>\$6,805,526.75</b>	<b>27.66%</b>
<b>TOTAL BUDGET</b>			<b>\$13,532,258.00</b>	<b>\$0.00</b>	<b>\$592,765.95</b>	<b>\$5,014,693.42</b>	<b>\$8,517,564.58</b>	<b>37.06%</b>

**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 @ 10/31/19
101 - General Fund	\$4,464,553.28	-	2,030,239.09	311,980.02	\$2,412,462.17	\$4,082,330.20
516 - CIP Project Repair & Maintenance	951,963.00	-	589,276.30	80,433.92	\$844,730.86	\$696,508.44
518 - Targeted Retrofit Projects	994,725.00	-	105,227.91	21,287.32	\$237,249.47	\$862,703.44
519 - District Office Building Solar Energy Retrofit	32,805.00	-	-	-	\$0.00	\$32,805.00
520 - Flood Damage Reduction Fund	1,823,918.00	-	490,488.04	15,421.50	\$256,120.46	\$2,058,285.58
526 - Debt Services-96-97 Beltline/MM/Beltline-Battle Creek Tunnel Repair	381,949.00	-	311,016.62	-	\$396,907.30	\$296,058.32
528/529 - Stewardship Grant Program Fund	389,152.00	-	657,674.45	152,056.30	\$586,374.17	\$460,452.28
531 - Impervious Surface Volume Reduction Opportunity	1,484,215.00	-	-	-	\$0.00	\$1,484,215.00
549 - Beltline & Battle Creek Tunnel Repair	863,674.00	-	-	-	\$0.00	\$863,674.00
550 - Frost/Kennard Enhanced WQ BMP	70,017.00	-	-	-	\$0.00	\$70,017.00
551 - Markham Pond Dredging & Aeration	110,379.00	-	-	-	\$5,842.48	\$104,536.52
553 - Wakefield Park Project	1,049,286.00	-	-	9,068.26	\$67,194.96	\$982,091.04
554 - Willow Pond CMAC	(44,588.00)	-	-	2,518.63	\$14,357.79	(\$58,945.79)
580 - Contingency Fund	598,985.00	-	-	-	\$0.00	\$598,985.00
585 - Certificates of Participation	131,513.00	-	102,536.71	-	\$193,453.76	\$40,595.95
<b>Total District Fund Balance</b>	<b>\$13,302,546.28</b>	<b>-</b>	<b>\$ 4,286,459.12</b>	<b>\$ 592,765.95</b>	<b>\$5,014,693.42</b>	<b>\$12,574,311.98</b>

**Ramsey Washington Metro Watershed Dist.**  
**Check Register**  
**For the Period From Oct 1, 2019 to Oct 31, 2019**

Check #	Date	Payee ID	Invoice #	Payee	Description	Amount
EFT	10/01/19	met008	Oct 2019	MetLife-Group Benefits	Employee Benefits	\$1,615.20
EFT	10/10/19	hea002	Nov 2019	HealthPartneres	Employee Benefits	10,825.13
70501V	10/14/19	car003	Void Check	Tina Carstens	Employee Reimbursement	(2,031.49)
70585V	10/14/19	qwe001	Void Check	CenturyLink	Project Operations	(228.61)
71078	10/15/19	aws001	S1335957-100119	AWS Service Center	Utilities/Bldg.Contracts	209.14
71079	10/15/19	ben002	90622	Benefit Extras, Inc.	Employee Benefits	90.00
71080	10/15/19	car003	Oct 2019	Tina Carstens	Employee Reimbursement (Re-Issue)	2,031.49
71081	10/15/19	fle001	79202	Flemings Auto Service	Vehicle Maintenance	24.15
71082	10/15/19	gru001	1918761	Gruber's Power Equipment	Natural Resources Project	52.54
71083	10/15/19	hom001	Sep 2019	Home Depot Credit Services	Water QM/Natural Resources	231.36
71084	10/15/19	ins001	2133	Instrumental Research, Inc.	Water QM/Natural Resources	1,575.00
71085	10/15/19	lit001	080819JTV	Little Sioux Prairie Company	Natural Resources Project	157.66
71086	10/15/19	mnd004	F1903275	MN DNR Fisheries	Natural Resources Project	250.00
71087	10/15/19	pre003	317119598	Premium Waters, Inc.	Utilities/Bldg.Contracts	46.00
71088	10/15/19	san003	Sep 2019	Sandstrom Land Management	Construction Imp.-Maint. & Repair	682.50
71089	10/15/19	usb005	396192288	US Bank Equipment Finance	Printing Expense	323.40
71090	10/15/19	van001	68648	Vanguard Cleaning Systems of Minnesota	Utilities/Bldg.Contracts	550.00
71091	10/29/19	ada002	2839498	Adam's Pest Control, Inc.	Bldg./Site Maintenance	79.00
71092	10/29/19	ahl001	Oct 2019	Paige Ahlborg	Employee Reimbursement	244.44
71093	10/29/19	all004	16439253	allstream	Water QM Staff	65.55
71094	10/29/19	att002	287256653401X10252019	AT & T Mobility - ROC	Water QM Staff	80.45
71095	10/29/19	bar001	9/7-10/18/19	Barr Engineering	9/7-10/18/19 Engineering Expense	216,087.93
71096	10/29/19	bar004	Oct 2019	Deborah Barnes	Employee Reimbursement	45.80
71097	10/29/19	blo001	Sep/Oct 2019	Simba Blood	Employee Reimbursement	139.22
71098	10/29/19	car007	RWMWD_9_20_19	Carp Solutions, LLC	Natural Resources Project	6,580.00
71099	10/29/19	cit001	007734-001-000	City of Little Canada	Utilities/Bldg.Contracts	125.93
71100	10/29/19	cit002	18-08 CS	City of Maplewood	Stewardship Grant Fund	20,200.00
71101	10/29/19	cit011	226845/227071/226884	City of Roseville	IT/Website/Software/Telephone	2,821.00
71102	10/29/19	com004	Oct 2019	Comcast	Utilities/Bldg.Contracts	61.93
71103	10/29/19	don001	Oct 2019	Matthew Doneux	Employee Reimbursement	182.68
71104	10/29/19	fit002	Oct 2019	Mary Fitzgerald	Employee Reimbursement	160.60
71105	10/29/19	fre001	798/811	Freshwater Society	Outside Program Support	1,000.00
71106	10/29/19	fre002	19-24 CS	Anne Frenchick	Stewardship Grant Fund	390.46
71107	10/29/19	gal001	Oct 2019	Galowitz Olson, PLLC	September Legal Expense	4,031.00
71108	10/29/19	gil001	185475	Gilbert Mechanical Contractors, Inc.	Bldg./Site Maintenance	558.50
71109	10/29/19	haw001	4593678/4596134/4603382	Hawkins, Inc.	Water QM Staff	13,532.00
71110	10/29/19	inn002	IN2689905	Innovative Office Solutions LLC	Events	109.59
71111	10/29/19	int001	W19090511	Office of MN, IT Services	Telephone Expense	57.48
71112	10/29/19	kel004	18-20 CS	Keller Properties	Stewardship Grant Fund	10,953.00
71113	10/29/19	kub001	Oct 2019	Kyle W. Kubitza	Employee Reimbursement	56.04
71114	10/29/19	lar002	Sep/Oct 2019	Andrew S. Larson	Employee Reimbursement	55.68
71115	10/29/19	mar007	19-16 CS	James Marquardt	Stewardship Grant Fund	16,500.00
71116	10/29/19	mel001	Oct 2019	Michelle L. Melser	Employee Reimbursement	63.08
71117	10/29/19	mid003	532358/532349	Roseville Midway Ford	Vehicle Maintenance	789.91
71118	10/29/19	min008	21681	Minnesota Native Landscapes, Inc.	Construction Imp.-Maint. & Repair	25,486.25
71119	10/29/19	nat004	19-31	Natural Environments Corporation	Dev. Escrow-General Fund	100.00
71120	10/29/19	nor019	19-01 CS	North Park Condominium Assoc., Inc.	Stewardship Grant Fund	56,267.50
71121	10/29/19	nsp001	658495463	Xcel Energy	Proj.Oper./Utilities/Constr-Willow	289.16
71122	10/29/19	out001	19-127	Outdoor Lab Landscape Design, Inc.	Constr.-Maint. & Repair/Stewardship	4,505.72
71123	10/29/19	pac001	1912011228	Pace Analytical Services, Inc.	Water QM Staff	10,462.00
71124	10/29/19	par007	19-06 CS	Parkview United Church of Christ	Stewardship Grant Fund	2,050.00
71125	10/29/19	pas002	Sep/Oct 2019	Sage Passi	Employee Reimbursement	159.51
71126	10/29/19	pet001	Progress Payment #5	Peterson Companies, Inc.	Pay #5-CMAC Project	1,221.70

**Ramsey Washington Metro Watershed Dist.**  
**Check Register**  
**For the Period From Oct 1, 2019 to Oct 31, 2019**

Check #	Date	Payee ID	Invoice #	Payee	Description	Amount
71127	10/29/19	qwe001	Oct 2019	CenturyLink	Project Operations	228.99
71128	10/29/19	ram002	PRK-001656	Ramsey County	Stewardship/Natrual Res./Water QM	77,044.21
71129	10/29/19	red002	150449216	Redpath & Company, Ltd	August/September Accounting	4,248.52
71130	10/29/19	reg002	0340027739	Regents of the University of Minnesota	Research Projects	2,915.00
71131	10/29/19	sel001	5003	Tim Melser	Bldg./Site Maintenance	275.00
71132	10/29/19	stu001	2602	Studio Lola	Office Supplies	155.50
71133	10/29/19	tim002	M25149/M25108	Timesaver Off-Site Secretarial, Inc.	Committee/Board Meeting Expense	395.00
71134	10/29/19	tro002	19-07	Cathy Troendle	Educational Program	304.64
71135	10/29/19	usb002	Oct 2019	U.S. Bank	September/October Credit Card	1,122.88
71136	10/29/19	van001	Oct 2019	Vanguard Cleaning Systems of Minnesota	Utilities/Bldg.Contracts	550.00
71137	10/29/19	vik001	3177897	Viking Industrial Center	Water QM Staff	108.60
71138	10/29/19	voy001	869293423943	US Bank Voyager Fleet Sys.	Vehicle Fuel	412.86
71139	10/29/19	was002	4628/4617/4664/4645	Washington Conservation District	Water QM/Stewardship/Outside Supp.	4,994.00
<b>Total</b>						<b><u><u>\$504,671.78</u></u></b>
<b>Accounts Payable</b>						
EFT	09/06/19	myp001	09/06/19	Septeber 6th Payroll Fee	4110-101-000	71.80
EFT	09/20/19	myp001	09/20/19	September 20th Payroll Fee	4110-101-000	71.00
Dir.Dep.	10/04/19	---	Payroll Expense-Net	October 4th Payroll	4010-101-000	25,320.28
EFT	10/04/19	int002	Internal Rev.Serv.	October 4th Federal Withholding	2001-101-000	8,623.04
EFT	10/04/19	mnd001	MN Revenue	October 4th State Withholding	2003-101-000	1,664.24
EFT	10/04/19	per001	PERA	October 4th PERA	2011-101-000	4,851.42
EFT	10/04/19	emp002	Empower Retirement	Employee Def.Comp. Contributions	2016-101-000	2,425.00
EFT	10/04/19	emp002	Empower Retirement	Employee IRA Contributions	2018-101-000	375.00
Dir.Dep.	10/18/19	---	Payroll Expense-Net	October 18th Payroll	4010-101-000	25,377.08
EFT	10/18/19	int002	Internal Rev.Serv.	October 18th Federal Withholding	2001-101-000	8,567.00
EFT	10/18/19	mnd001	MN Revenue	October 18th State Withholding	2003-101-000	1,638.54
EFT	10/18/19	per001	PERA	October 18th PERA	2011-101-000	4,827.50
EFT	10/18/19	emp002	Empower Retirement	Employee Def.Comp. Contributions	2016-101-000	2,425.00
EFT	10/18/19	emp002	Empower Retirement	Employee IRA Contributions	2018-101-000	375.00
<b>Payroll/Benefits</b>						<b><u><u>\$86,611.90</u></u></b>
<b>Total</b>						<b><u><u>Accounts Payable/Payroll/Benefits: \$591,283.68</u></u></b>

**Ramsey Washington Metro Watershed Dist.**  
**Cash Disbursements Journal**  
**For the Period From Oct 1, 2019 - Oct 31, 2019**

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
10/01/19	EFT	met003	MetLife-Group Benefits			\$1,615.20	
				4040-101-000	Employee Benefits-General		1,398.12
				2015-101-000	Employee Health-General		217.08
10/10/19	EFT	hea002	HealthPartners			10,825.13	
				4040-101-000	Employee Benefits-General		9,186.12
				2015-101-000	Employee Health-General		1,639.01
10/14/19	70501V	car003	Tina Carstens			(2,031.49)	
				4040-101-000	Employee Benefits-General		(623.46)
				4020-101-000	Employee Expenses-General		(516.66)
				4350-101-000	Training & Education-General		(891.37)
10/14/19	70585V	qwe001	CenturyLink	4650-101-000	Project Operations-General	(228.61)	
10/15/19	71078	aws001	AWS Service Center	4342-101-000	Utilities/Bldg. Contracts	209.14	
10/15/19	71079	ben002	Benefit Extras, Inc.	4040-101-000	Employee Benefits-General	90.00	
10/15/19	71080	car003	Tina Carstens			2,031.49	
				4040-101-000	Employee Benefits-General		623.46
				4020-101-000	Employee Expenses-General		516.66
				4350-101-000	Training & Education-General		891.37
10/15/19	71081	fle001	Flemings Auto Service	4820-101-000	Vehicle Maint.-General	24.15	
10/15/19	71082	gru001	Gruber's Power Equipment	4670-101-000	Natural Resources Project-General	52.54	
10/15/19	71083	hom001	Home Debot Credit Services			231.36	
				4530-101-000	Water QM Staff-General		64.23
				4670-101-000	Natural Resources Project-General		167.13
10/15/19	71084	ins001	Instrumental Research, Inc.	4530-101-000	Water QM Staff-General	1,575.00	
10/15/19	71085	lit001	Little Sioux Prairie Company	4670-101-000	Natural Resources Project-General	157.66	
10/15/19	71086	mnd004	MN DNR Fisheries	4670-101-000	Natural Resources Project-General	250.00	
10/15/19	71087	pre003	Premium Waters, Inc.	4342-101-000	Utilities/Bldg. Contracts	46.00	
10/15/19	71088	san003	Sandstrom Land Management	4630-516-000	Construction Imp.-Maint. & Repair	682.50	
10/15/19	71089	usb005	US Bank Equipment Finance	4335-101-000	Printing-General	323.40	
10/15/19	71090	van001	Vanguard Cleaning Systems of Minnesota	4342-101-000	Utilities/Bldg. Contracts	550.00	
10/29/19	71091	ada002	Adam's Pest Control, Inc.	4343-101-000	Bldg./Site Maintenance	79.00	
10/29/19	71092	ahl001	Paige Ahlborg			244.44	
				4040-101-000	Employee Benefits-General		64.68
				4020-101-000	Employee Expenses-General		128.76
				4338-101-000	Dues & Publications-General		51.00
10/29/19	71093	cad001	allstream	4530-101-000	Water QM Staff-General	65.55	
10/29/19	71094	att002	AT & T Mobility -ROC	4530-101-000	Water QM Staff-General	80.45	

**Ramsey Washington Metro Watershed Dist.**  
**Cash Disbursements Journal**  
**For the Period From Oct 1, 2019 - Oct 31, 2019**

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
10/29/19	71095	bar001	Barr Engineering			216,087.93	
				4121-101-000	Engineering Admin-General Fund		7,585.16
				4129-101-000	Project Feasibility-General		2,584.00
				4123-101-000	Engineering-Review-General		2,885.50
				4129-101-000	Project Feasibility-General		46.50
				4129-101-000	Project Feasibility-General		32,003.50
				4129-101-000	Project Feasibility-General		173.00
				4129-101-000	Project Feasibility-General		1,527.00
				4129-101-000	Project Feasibility-General		3,655.50
				4129-101-000	Project Feasibility-General		8,042.85
				4129-101-000	Project Feasibility-General		9,438.60
				4129-101-000	Project Feasibility-General		3,819.50
				4520-101-000	Water QM-Engineering		4,753.42
				4520-101-000	Water QM-Engineering		937.50
				4520-101-000	Water QM-Engineering		2,581.01
				4520-101-000	Water QM-Engineering		3,206.02
				4520-101-000	Water QM-Engineering		3,006.00
				4124-101-000	Engineering-Flood Damage		4,175.00
				4661-101-000	SLMP/TMDL Studies		278.00
				4128-520-000	Engineering-Flood Damage		14,983.50
				4695-101-000	Research Projects-General		688.00
				4695-101-000	Research Projects-General		8.50
				4650-101-000	Project Operations-General		260.00
				4128-553-000	Engineering-Wakefield		9,068.26
				4128-518-000	Engineering-School/Commer Retrofit		14,018.84
				4128-518-000	Engineering-School/Commer Retrofit		84.00
				4128-518-000	Engineering-School/Commer Retrofit		3,132.00
				4682-529-000	Stewardship Grant Fund		2,910.34
				4128-518-000	Engineering-School/Commer Retrofit		4,052.48
				4682-529-000	Stewardship Grant Fund		22,401.00
				4128-554-000	Engineering-Willow Pond		1,283.50
				4695-101-000	Engineering-Research Projects		1,920.00
				4128-516-000	Engineering-Maint. & Repair		49,665.95
				4128-516-000	Engineering-Maint. & Repair		913.50
10/29/19	71096	bar004	Deborah Barnes			45.80	
				4040-101-000	Employee Benefits-General		40.00
				4020-101-000	Employee Expenses-General		5.80

**Ramsey Washington Metro Watershed Dist.**  
**Cash Disbursements Journal**  
**For the Period From Oct 1, 2019 - Oct 31, 2019**

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
10/29/19	71097	blo001	Simba Blood			139.22	
				4040-101-000	Employee Benefits-General		80.00
				4020-101-000	Employee Expenses-General		59.22
10/29/19	71098	car007	Carp Solutions, LLC	4670-101-000	Natural Resources Project-General	6,580.00	
10/29/19	71099	cit001	City of Little Canada	4342-101-000	Utilities/Bldg. Contracts	125.93	
10/29/19	71100	cit002	City of Maplewood	4682-529-000	Stewardship Grant Fund	20,200.00	
10/29/19	71101	cit011	City of Roseville			2,821.00	
				4310-101-000	Telephone-General		304.00
				4325-101-000	IT/Website/Software		2,517.00
10/29/19	71102	com004	Comcast	4342-101-000	Utilities/Bldg. Contracts	61.93	
10/29/19	71103	don001	Matthew Doneux			182.68	
				4040-101-000	Employee Benefits-General		40.00
				4020-101-000	Employee Expenses-General		24.36
				4670-101-000	Natural Resources Project-General		118.32
10/29/19	71104	fit002	Mary Fitzgerald			160.60	
				4040-101-000	Employee Benefits-General		100.00
				4020-101-000	Employee Expenses-General		60.60
10/29/19	71105	fre001	Freshwater Society	4683-101-000	Outside Program Support	1,000.00	
10/29/19	71106	fre002	Anne Frenchick	4682-529-000	Stewardship Grant Fund	390.46	
10/29/19	71107	gal001	Galowitz Olson, PLLC			4,031.00	
				4131-520-000	Attorney-Flood Damage		438.00
				4131-101-000	Attorney General-General		3,593.00
10/29/19	71108	gil001	Gilbert Mechanical Contractors, Inc.	4343-101-000	Bldg./Site Maintenance	558.50	
10/29/19	71109	haw001	Hawkin's, Inc.	4530-101-000	Water QM Staff-General	13,532.00	
10/29/19	71110	inn002	Innovative Office Solutions, LLC	4372-101-000	Events	109.59	
10/29/19	71111	int001	Office of MN, IT Services	4310-101-000	Telephone-General	57.48	
10/29/19	71112	kel004	Keller Properties	4682-559-000	Stewardship Grant Fund	10,953.00	
10/29/19	71113	kib001	Kyle W. Kubitza	4020-101-000	Employee Expenses-General	56.04	
10/29/19	71114	lar002	Andrew S. Larson	4020-101-000	Employee Expenses-General	55.68	
10/29/19	71115	mar007	James Marquardt	4682-529-000	Stewardship Grant Fund	16,500.00	
10/29/19	71116	mel001	Michelle L. Melser	4020-101-000	Employee Expenses-General	63.08	
10/29/19	71117	mid003	Roseville Midway Ford	4820-101-000	Vehicle Maint.-General	789.91	
10/29/19	71118	min008	Minnesota Native Landscapes, Inc.			25,486.25	
				4630-516-000	Construction Imp.-Maint. & Repair		245.00
				4630-516-000	Construction Imp.-Maint. & Repair		14,121.25
				4630-516-000	Construction Imp.-Maint. & Repair		930.00
				4630-516-000	Construction Imp.-Maint. & Repair		10,190.00
10/29/19	71119	nat004	Natural Environments Corporation	2024-101-000	Dev. Escrow-General Fund	100.00	
10/29/19	71120	nor019	North Park Condominium Assoc. Inc.	4682-529-000	Stewardship Grant Fund	56,267.50	



**Ramsey Washington Metro Watershed Dist.**  
**Cash Disbursements Journal**  
**For the Period From Oct 1, 2019 - Oct 31, 2019**

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
10/29/19	71121	nsp001	Xcel Energy			289.16	
				4650-101-000	Project Operations-General		179.24
				4342-101-000	Utilities/Bldg. Contracts		96.49
				4630-554-000	Construction Imp.-Willow Pond		13.43
10/29/19	71122	out001	Outdoor Lab Landscape Design, Inc.			4,505.72	
				4682-529-000	Stewardship Grant Fund		820.00
				4630-516-000	Construction Imp.-Maint. & Repair		3,685.72
10/29/19	71123	pac001	Pace Analytical Services, Inc.	4530-101-000	Water QM Staff-General	10,462.00	
10/29/19	71124	par007	Parkview United Church of Christ	4682-529-000	Stewardship Grant Fund	2,050.00	
10/29/19	71125	pas002	Sage Passi			159.51	
				4040-101-000	Employee Benefits-General		60.50
				4020-101-000	Employee Expenses-General		93.52
				4370-101-000	Educational Program-General		5.49
10/29/19	71126	pet001	Peterson Companies, Inc.	4630-554-000	Construction Imp.-Willow Pond	1,221.70	
10/29/19	71127	qwe001	CenturyLink	4650-101-000	Project Operations-General	228.99	
10/29/19	71128	ram002	Ramsey County			77,044.21	
				4682-529-000	Stewardship Grant Fund		17,856.00
				4530-101-000	Water QM Staff-General		44,608.21
				4670-101-000	Natural Resources Project-General		14,580.00
10/29/19	71129	red002	Redpath & Company, Ltd.	4110-101-000	Auditor/Accounting	4,248.52	
10/29/19	71130	reg002	Regents of the University of Minnesota	4695-101-000	Research Projects-General	2,915.00	
10/29/19	71131	sel001	Tim Melser	4343-101-000	Bldg./Site Maintenance	275.00	
10/29/19	71132	stu001	Studio Lola	4320-101-000	Office Supplies-General	155.50	
10/29/19	71133	tim002	Timesaver Off-Site Secretarial, Inc.	4365-101-000	Committee/Board Meeting Expense	395.00	
10/29/19	71134	tro002	Cathy Troendle	4370-101-000	Educational Program-General	304.64	
10/29/19	71135	usb002	U.S. Bancorp			1,122.88	
				4670-101-000	Natural Resources Project-General		69.90
				4320-101-000	Office Supplies-General		25.14
				4325-101-000	IT/Website/Software		95.39
				4320-101-000	Office Supplies-General		28.97
				4350-101-000	Training & Education-General		125.79
				4350-101-000	Training & Education-General		70.44
				4343-101-000	Bldg./Site Maintenance		46.61
				4320-101-000	Office Supplies-General		66.40
				4343-101-000	Bldg./Site Maintenance		22.98
				4320-101-000	Office Supplies-General		89.71
				4320-101-000	Office Supplies-General		45.51
				4320-101-000	Office Supplies-General		15.87
				4320-101-000	Office Supplies-General		38.92

**Ramsey Washington Metro Watershed Dist.**  
**Cash Disbursements Journal**  
**For the Period From Oct 1, 2019 - Oct 31, 2019**

Date	Check #	Vendor ID	Name	Account ID	Account Description	Amount	Check Detail
				4320-101-000	Office Supplies-General		9.98
				4320-101-000	Office Supplies-General		26.44
				4372-101-000	Events		12.21
				4530-101-000	Water QM Staff-General		109.10
				4365-101-000	Committee/Board Meeting Expense		128.43
				4530-101-000	Water QM Staff-General		18.85
				4320-101-000	Office Supplies-General		15.90
				4343-101-000	Bldg./Site Maintenance		35.34
				4530-101-000	Water QM Staff-General		25.00
10/29/19	71136	van001	Vanguard Cleaning Systems of Minnesota	4342-101-000	Utilities/Bldg. Contracts	550.00	
10/29/19	71137	vik001	Viking Industrial Center	4530-101-000	Water QM Staff-General	108.60	
10/29/19	71138	voy001	US Bank Voyager Fleet Sys.	4830-101-000	Vehicle Fuel-General	412.86	
10/29/19	71139	was002	Washington Conservation District			4,994.00	
				4530-101-000	Water QM Staff-General		111.00
				4682-529-000	Stewardship Grant Fund		1,708.00
				4683-101-000	Outside Program Support		3,175.00
						<b>\$504,671.78</b>	
			<b>Accounts Payable Total:</b>				
EFT	09/06/19	myp001	Payroll Fees	4110-101-000	Septeber 6th Payroll Fee	71.80	
EFT	09/20/19	myp001	Payroll Fees	4110-101-000	September 20th Payroll Fee	71.00	
Dir.Dep.	10/04/19	---	Payroll Expense-Net	4010-101-000	October 4th Payroll	25,320.28	
EFT	10/04/19	int002	Internal Revenue Service	2001-101-000	October 4th Federal Withholding	8,623.04	
EFT	10/04/19	mnd001	MN Revenue	2003-101-000	October 4th State Withholding	1,664.24	
EFT	10/04/19	per001	PERA	2011-101-000	October 4th PERA	4,851.42	
EFT	10/04/19	emp002	Empower Retirement	2016-101-000	Employee Def.Comp. Contributions	2,425.00	
EFT	10/04/19	emp002	Empower Retirement	2018-101-000	Employee IRA Contributions	375.00	
Dir.Dep.	10/18/19	---	Payroll Expense-Net	4010-101-000	October 18th Payroll	25,377.08	
EFT	10/18/19	int002	Internal Revenue Service	2001-101-000	October 18th Federal Withholding	8,567.00	
EFT	10/18/19	mnd001	MN Revenue	2003-101-000	October 18th State Withholding	1,638.54	
EFT	10/18/19	per001	PERA	2011-101-000	October 18th PERA	4,827.50	
EFT	10/18/19	emp002	Empower Retirement	2016-101-000	Employee Def.Comp. Contributions	2,425.00	
EFT	10/18/19	emp002	Empower Retirement	2018-101-000	Employee IRA Contributions	375.00	
						<b>\$86,611.90</b>	
			<b>TOTAL:</b>				
						<b>\$591,283.68</b>	



**Summary of Professional Engineering Services During the Period  
September 7, 2019 through October 18, 2019**

	Total Engineering Budget (2019)	Total Fees to Date (2019)	Budget Balance (2019)	Fees During Period	District Accounting Code	Plan Implementation Task Number
<b>Engineering Administration</b>						
General Engineering Administration	\$76,000.00	\$63,909.30	\$12,090.70	\$7,585.16	4121-101	DW-13
RWMWD Health and Safety/ERTK Program	\$2,000.00	\$759.00	\$1,241.00		4697-101	DW-13
Educational Program/Educational Forum Assistance	\$20,000.00	\$18,343.10	\$1,656.90	\$2,584.00	4129-101	DW-11
<b>Engineering Review</b>						
Engineering Review	\$55,000.00	\$47,273.66	\$7,726.34	\$2,885.50	4123-101	DW-13
<b>Project Feasibility Studies</b>						
Owasso County Park Stormwater Master Plan and Detailed Design: Phase 1 and Phase 2	\$50,000.00	\$6,641.20	\$43,358.80	\$46.50	4129-101	DW-6
Beltline Resiliency and Phalen Chain Water Level Management Study	\$217,000.00	\$131,876.62	\$85,123.38	\$32,003.50	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	\$52,061.50	\$37,938.50	\$173.00	4129-101	DW-9
Snail, Grass, and West Vadnais outlet permitting with the MndNR	\$100,000.00	\$41,953.76	\$58,046.24	\$1,527.00	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	\$37,601.50	\$32,398.50	\$3,655.50	4129-101	DW-9
Climate Adaption Workshops with Member Cities	\$100,000.00	\$255.00	\$99,745.00		4129-101	DW-9
Hillcrest Golf Course (multi-use)	\$25,000.00	\$8,575.35	\$16,424.65	\$8,042.85	4129-101	DW-6
Wetland Restoration site search. BWSR criteria needed to help guide this idea.	\$25,000.00	\$27,067.60	-\$2,067.60	\$9,438.60	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		4129-101	DW-5
Twin Lake Outlet	\$50,000.00	\$3,819.50	\$46,180.50	\$3,819.50	4129-101	DW-9
Contingency*	\$20,000.00	\$3,233.00	\$16,767.00		4129-101	
<b>GIS Maintenance</b>						
GIS Maintenance	\$5,000.00	\$341.50	\$4,658.50		4170-101	DW-13
<b>Monitoring Water Quality/Project Monitoring</b>						
Lake Water Quality Monitoring (Misc QA/QC)	\$10,000.00	\$2,923.68	\$7,076.32		4520-101	DW-2
Auto lake monitoring system for Grass Lake	\$20,000.00	\$6,378.42	\$13,621.58	\$4,753.42	4520-101	DW-18
Auto lake monitoring system for Owasso Lake	\$20,000.00	\$6,548.54	\$13,451.46	\$937.50	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	\$4,563.01	\$15,436.99	\$2,581.01	4520-101	DW-18
Auto lake monitoring system for Wabasso Lake	\$20,000.00	\$8,024.52	\$11,975.48	\$3,206.02	4520-101	DW-18
Special Project BMP Monitoring (Maplewood Mall, Frost Kennard Spent Lime Filter, Willow Pond CMAC)	\$25,000.00	\$25,116.07	-\$116.07	\$3,006.00	4520-101	DW-12
<b>Permit Processing, Inspection and Enforcement</b>						
Permit Application Inspection and Enforcement	\$10,000.00	\$3,055.94	\$6,944.06		4122-101	DW-7
Permit Application Review	\$55,000.00	\$35,708.50	\$19,291.50	\$4,175.00	4124-101	DW-7
<b>Lake Studies/WRPPs/TMDL Reports</b>						
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	\$2,614.00	\$7,386.00	\$278.00	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		\$74,532.77	-\$74,532.77	\$14,983.50	4128-520	
Contingency for Lake Studies	\$5,000.00	\$0.00	\$5,000.00		4661-101	
<b>Research Projects</b>						
New Technology Mini Case Studies (average 6 per year)	\$12,000.00	\$11,848.00	\$152.00		4695-101	DW-12
Kohlman Permeable Weir Test System - Implement Monitoring Plan	\$15,000.00	\$11,015.10	\$3,984.90	\$688.00	4695-101	DW-12
Iron aggregate pond application research project	\$20,000.00	\$478.57	\$19,521.43	\$8.50	4695-101	DW-12
<b>Project Operations</b>						
2018 Tanners Alum Facility Monitoring	\$15,000.00	\$13,918.75	\$1,081.25	\$260.00	4650-101	TaL-3
<b>Capital Improvements</b>						
Wakefield Park/Frost Avenue Stormwater Project	\$175,000.00	\$67,194.96	\$107,805.04	\$9,068.26	4128-553	WL-1
Commercial Sites Retrofit Projects 2018 (Targeted Retrofits)	\$55,000.00	\$28,309.54	\$26,690.46	\$14,018.84	4128-518	DW-6
School Sites Retrofit Projects 2018 (Targeted Retrofits)	\$55,000.00	\$20,008.50	\$34,991.50	\$84.00	4128-518	DW-6
Church Sites Retrofit Projects 2018 (Targeted Retrofit)	\$55,000.00	\$16,015.50	\$38,984.50	\$3,132.00	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	\$46,018.10	\$3,981.90	\$2,910.34	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	\$65,644.28	\$34,355.72	\$4,052.48	4128-518	DW-1, DW-8
Markham Pond Aeration Project and Grant Reporting	\$1,000.00	\$6,002.48	-\$5,002.48		4128-551	KC-1
Aldrich Arena Plans and Specifications	\$125,000.00	\$166,044.26	-\$41,044.26	\$22,401.00	4682-529	DW-6
Willow Pond CMAC Implementation	\$100,000.00	\$131,346.61	-\$31,346.61	\$1,283.50	4128-554	BeL-4
<b>CIP Project Repair &amp; Maintenance</b>						
Kohlman Lake Macrophyte Mgmt	\$5,000.00	\$7,232.00	-\$2,232.00	\$1,920.00	4695-101	KL-3
Routine CIP Inspection and Unplanned Maintenance Identification	\$75,000.00	\$127,795.36	-\$52,795.36	\$49,665.95	4128-516	DW-5
2019 CIP Maintenance and Repairs	\$150,000.00	\$93,998.35	\$56,001.65	\$913.50	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** \$216,087.93

**TOTAL PAYABLE FOR PERIOD 09/07/2019 - 10/18/2019** **\$216,087.93**

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

**CMAC FILTRATION BMP AT WILLOW POND**  
**Progress Payment Number 5**

1.0	Total Completed Through This Period:	<u>\$301,982.32</u>		
2.0	Total Completed Previously Completed:		<u>\$300,696.32</u>	
3.0	Total Completed This Period:			<u>\$1,286.00</u>
4.0	Amount Previously Retained:		<u>\$15,034.82</u>	
5.0	Amount Retained This Period (See Note 1):			<u>\$64.30</u>
6.0	Total Amount Retained (See Note 2):		<u>\$15,099.12</u>	
7.0	Retainage Released Through This Period:			<u>\$0.00</u>
8.0	Total Retainage Remaining:		<u>\$15,099.12</u>	
9.0	Amounts Previously Paid:	<u>\$285,661.50</u>		
10.0	Amount Due This Estimate:			<u><u>\$1,221.70</u></u>

Note 1: At rate of 5%.

Note 2: Maximum amount is 5% of current Contract Price (\$279,049.00)

SUBMITTED BY:

Name: Luke Kowarsch Date: 10/24/2019  
 Title: Vice President of Construction  
 Contractor: Peterson Companies, Inc.

Signature: 

RECOMMENDED BY:

Name: Brad Lindaman Date: 10/24/2019  
 Title: District Engineer  
 Engineer: Barr Engineering Company

Signature: 

APPROVED BY:

Name: Marj Ebensteiner Date: \_\_\_\_\_  
 Title: President  
 Owner: Ramsey-Washington Metro Watershed District

Signature: \_\_\_\_\_

**CMAC FILTRATION BMP AT WILLOW POND**  
**RAMSEY-WASHINGTON METRO WATERSHED DISTRICT**  
**Summary of Work Completed Through October 24, 2019 for Progress Payment Number 5**

Item	Description	Unit	Estimated Quantity	Unit Price	Extension	(1) Total Completed Through This Period		(2) Total Completed Previous Period		(3) Total Completed This Period	
						Quantity	Amount	Quantity	Amount	Quantity	Amount
A	Mobilization/Demobilization	L.S.	1	37,080.09	37,080.09	1	\$37,080.09	1	\$37,080.09	0	\$0.00
B	Erosion Control Construction Entrance	Each	1	2,500.00	2,500.00	1	\$2,500.00	1	\$2,500.00	0	\$0.00
C	Erosion Control Silt Fence	L.F.	884	4.00	3,536.00	640	\$2,560.00	640	\$2,560.00	0	\$0.00
D	Double Row Floatation Silt Curtain	L.F.	164	11.74	1,925.36	164	\$1,925.36	164	\$1,925.36	0	\$0.00
E	Inlet Protection	Each	1	125.00	125.00	1	\$125.00	1	\$125.00	0	\$0.00
F	Erosion Control Blanket	S.Y.	90	3.50	315.00	2048	\$7,168.00	2048	\$7,168.00	0	\$0.00
G	Traffic Control	L.S.	1	2,000.00	2,000.00	1	\$2,000.00	1	\$2,000.00	0	\$0.00
H	Control of Water	L.S.	1	23,666.12	23,666.12	1	\$23,666.12	1	\$23,666.12	0	\$0.00
I	Tree Removal (8" diameter or greater)	Each	6	375.81	2,254.86	21	\$7,892.01	21	\$7,892.01	0	\$0.00
J	Clear and Grub	S.Y.	1,003	6.17	6,188.51	1,003	\$6,188.51	1,003	\$6,188.51	0	\$0.00
K	Remove & Salvage Topsoil (P)	S.Y.	673	4.14	2,786.22	673	\$2,786.22	673	\$2,786.22	0	\$0.00
L	Remove and Dispose of 12" RCP	L.F.	9	48.67	438.03	9	\$438.03	9	\$438.03	0	\$0.00
M	Sawcut, Remove and Dispose of Asphalt Trail	S.Y.	40	8.65	346.00	40	\$346.00	40	\$346.00	0	\$0.00
N	60 inch Precast Manhole with Access Door	Each	1	10,041.00	10,041.00	1	\$10,041.00	1	\$10,041.00	0	\$0.00
O	Precast Concrete Weir and FRP Stop Log	L.S.	1	8,291.00	8,291.00	1	\$8,291.00	1	\$8,291.00	0	\$0.00
P	48 inch Precast Manholes with Casting and Frame (Neenah R-1537)	Each	2	4,570.50	9,141.00	2	\$9,141.00	2	\$9,141.00	0	\$0.00
Q	48-inch Precast Manhole with Access Door	Each	1	6,386.00	6,386.00	1	\$6,386.00	1	\$6,386.00	0	\$0.00
R	12 inch Corrugated Polyethylene Pipe (CPEP) Dual-Wall (Smooth Interior)	L.F.	176	32.74	5,762.24	179	\$5,860.46	179	\$5,860.46	0	\$0.00
S	12" CMP FES	Each	1	760.00	760.00	2	\$1,520.00	2	\$1,520.00	0	\$0.00
T	Trash Guard for 12" CMP FES	Each	1	66.00	66.00	1	\$66.00	1	\$66.00	0	\$0.00
U	12 inch Ductile Iron Pipe (DIP)	L.F.	71	73.03	5,185.13	75	\$5,477.25	75	\$5,477.25	0	\$0.00
V	12 inch Cast Iron Plug Valve with Epoxy Lining & Coating w/Box ASM	Each	1	4,896.00	4,896.00	1	\$4,896.00	1	\$4,896.00	0	\$0.00
W	Install 12 inch Butterfly Valve and Electrical Actuator (provided by others)	L.S.	1	1,576.00	1,576.00	1	\$1,576.00	1	\$1,576.00	0	\$0.00
X	Existing Pipe Connection	Each	1	1,314.00	1,314.00	1	\$1,314.00	1	\$1,314.00	0	\$0.00
Y	Stormwater Filter Piping and Fittings, All Complete	L.S.	1	11,011.00	11,011.00	1	\$11,011.00	1	\$11,011.00	0	\$0.00
Z	Insulate Existing Sanitary Sewer	Each	1	599.00	599.00	1	\$599.00	1	\$599.00	0	\$0.00
AA	Common Excavation for Filter (P)	C.Y.	376	64.72	24,334.72	376	\$24,334.72	376	\$24,334.72	0	\$0.00
AB	Off-site Disposal of Excavated Material (P)	C.Y.	284	16.27	4,620.68	284	\$4,620.68	284	\$4,620.68	0	\$0.00
AC	Geosynthetic Clay Liner (P)	S.Y.	662	43.12	28,545.44	662	\$28,545.44	662	\$28,545.44	0	\$0.00
AD	Drain Filter	Ton	93	60.18	5,596.74	95	\$5,717.10	95	\$5,717.10	0	\$0.00
AE	Plastic Netting	S.Y.	275	3.11	855.25	275	\$855.25	275	\$855.25	0	\$0.00
AF	Spent Lime	L.S.	1	7,206.00	7,206.00	1	\$7,206.00	1	\$7,206.00	0	\$0.00
AG	Class III Riprap	Ton	5	302.99	1,514.95	18.5	\$5,605.32	18.5	\$5,605.32	0	\$0.00
AH	Asphalt Trail Paving	S.Y.	40	78.00	3,120.00	40	\$3,120.00	40	\$3,120.00	0	\$0.00
AI	Electrical installation	L.S.	1	12,500.00	12,500.00	1	\$12,500.00	1	\$12,500.00	0	\$0.00
AJ	Instrumentation Installation and Controls	L.S.	1	5,144.00	5,144.00	1	\$5,144.00	0.75	\$3,858.00	0.25	\$1,286.00
AK	Helical Piles with Void Filling Material	L.S.	1	8,127.00	8,127.00	1	\$8,127.00	1	\$8,127.00	0	\$0.00
AL	Import Common Topsoil Borrow	C.Y.	45	23.94	1,077.30	0	\$0.00	0	\$0.00	0	\$0.00

**CMAC FILTRATION BMP AT WILLOW POND  
RAMSEY-WASHINGTON METRO WATERSHED DISTRICT  
Summary of Work Completed Through October 24, 2019 for Progress Payment Number 5**

Item	Description	Unit	Estimated Quantity	Unit Price	Extension	(1) Total Completed Through This Period		(2) Total Completed Previous Period		(3) Total Completed This Period	
						Quantity	Amount	Quantity	Amount	Quantity	Amount
AM	Shoreline Seed Mix (Furnish & Install)	S.Y.	41	19.00	779.00	41	\$779.00	41	\$779.00	0	\$0.00
AN	Woodland Seed Mix (Furnish & Install)	S.Y.	1,355	3.00	4,065.00	2007	\$6,021.00	2007	\$6,021.00	0	\$0.00
AO	Tree with Trunk Protection, #20 Container	Each	4	585.00	2,340.00	7	\$4,095.00	7	\$4,095.00	0	\$0.00
AP	#2 Container Shrub	Each	30	65.00	1,950.00	60	\$3,900.00	60	\$3,900.00	0	\$0.00
AQ	Shrub Protection Fencing	LF	320	5.40	1,728.00	506	\$2,732.40	506	\$2,732.40	0	\$0.00
AR	12 inch Backflow Preventer	Each	1	2,138.00	2,138.00	1	\$2,138.00	1	\$2,138.00	0	\$0.00
AS	Sedimentation Log	LF	60	5.00	300.00	154	\$770.00	154	\$770.00	0	\$0.00
AT	Trail Protection	L.S.	1	13,830.36	13,830.36	1	\$13,830.36	1	\$13,830.36	0	\$0.00
AU	15" CMP FES	Each	1	1,087.00	1,087.00	1	\$1,087.00	1	\$1,087.00	0	\$0.00
<b>TOTAL BASE BID</b>					<b>279,049.00</b>	<b>TOTAL EXT. =</b>	<b>\$301,982.32</b>	<b>\$300,696.32</b>		<b>\$1,286.00</b>	

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

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

Page: 1  
October 22, 2019  
File No: 9M

	Balance
General Account	\$3,085.00
RWMWD CAPITAL IMPROVEMENTS PROGRAM	\$308.00
Maplewood Mall Project	\$200.00
Twin Lakes Litigation	\$438.00
	<u>\$4,031.00</u>

\* \* \* \* \*

# Permit Program

\* \* \* \* \*



# Permit Application Coversheet

Date November 06, 2019

Project Name Snail Lake Beach Improvements Project Number 19-46

Applicant Name Brett Blumer, Ramsey County Parks & Recreation

Type of Development Park/Green Space

## Property Description

This project is located adjacent to the Snail Lake Park beachside pavilion. The applicant is proposing to implement improvements to the beach in response to high water levels that have inundated the area. Improvements include removal of flooded turf areas, replacing with beach sand, and replacement/relocation of an ADA concrete walk. The total site area is 0.45 acre. Work is proposed below the 100-year floodplain elevation, triggering District Rules D and F. The applicant has quantified cut and fill to demonstrate there is no loss of floodplain storage. The proposed beach width will match the width prior to the high water levels.

## Watershed District Policies or Standards Involved:

- |   |   |
|---|---|
| <input type="checkbox"/> <i>Wetlands</i>              | <input checked="" type="checkbox"/> <i>Erosion and Sediment Control</i> |
| <input type="checkbox"/> <i>Stormwater Management</i> | <input checked="" type="checkbox"/> <i>Floodplain</i>                   |

## Water Quantity Considerations

The proposed grading plan is sufficient to prevent adverse impacts to the floodplain.

## 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 issues.

## Staff Recommendation

Staff recommends approval of this permit with the special provisions.

## Attachments:

- Project Location Map
- Project Grading Plan

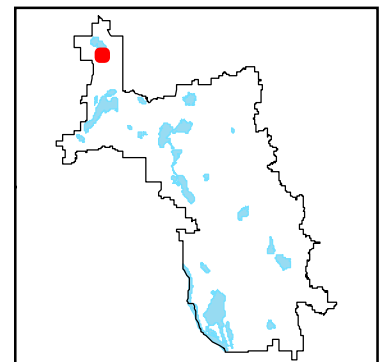
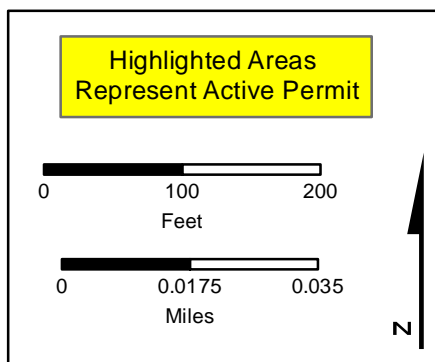


# #19-46 Snail Lake Beach Improvements



Wetlands	
<span style="color: red;">■</span>	Manage A
<span style="color: green;">■</span>	Manage B
<span style="color: blue;">■</span>	Manage C
<span style="color: lightblue;">■</span>	Lake
<span style="color: gray;">■</span>	Sediment Pond
<span style="color: purple;">■</span>	Not Assessed

	RWMWD Boundary
	Flow Arrows
	Major Flow Arrows
	Subwatersheds
	Creeks
	Permits
	Washington Co Parcels





19-46

### Special Provisions

1. The applicant shall revise the Stormwater Pollution Prevention Plan (SWPPP).
  - A. Remove notes referencing infiltration Best Management Practice (BMP).
  - B. Ensure accuracy of watershed district contact information.
2. The applicant shall submit a final, signed set of construction plans.

**SUGGESTED MEANS AND METHODS**  
OWNER RECOMMENDS THAT THE WORK REMOVALS IN THE WATER BE REMOVED PRIOR TO ICE UP. IMPORTED SAND CAN THEN BE PLACED IN THE WINTER ON THE ICE TO ENSURE EVEN DISTRIBUTION AND COVERAGE.

WORK ABOVE THE WATER MAY TAKE PLACE ANY TIME. CONCRETE CURB AND FLATWORK ARE SUBJECT TO MNDOT CONCRETE ALLOWABLE TEMPERATURE SPECIFICATION.

**GENERAL GRADING PLAN NOTES:**

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

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

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

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

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

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

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

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

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

**ASPHALT ROADWAY, PARKING LOTS AND OTHER ITEMS - LAYOUT NOTES:** CONCRETE CURBS, SIDEWALK, 100YR FLOOD ELEVATION, AND CONSTRUCTION LIMITS SHALL BE FIELD STAKED BY CONTRACTOR. CONTRACTOR WILL NEED APPROVAL BY RAMSEY COUNTY LANDSCAPE ARCHITECT PRIOR TO COMMENCING CONSTRUCTION. CONTRACT ITEMS LAD OUT AND INSTALLED INCORRECTLY WITHOUT PRIOR REVIEW BY RAMSEY COUNTY REPRESENTATIVE WILL BE REMOVED AND REINSTALLED AT CONTRACTORS OWN EXPENSE.

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

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

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

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

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

CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL STORM DRAIN INLETS

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

**OTHER NOTES**  
N.T.C. = NOT IN CONTRACT

**RAMSEY COUNTY**  
Parks & Recreation  
2015 VAN DYKE STREET  
MAPLEWOOD, MN 55109  
TEL 651/748-2500  
FAX 651/748-4500

**CONTACT INFORMATION:**  
By: Eric Murray, Landscape Architect  
2015 Van Dyke Street  
Maplewood, MN 55109  
North Star Design Group, Inc.  
651.748.2500

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

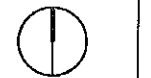
Registration: Landscape Architect  
State: Minnesota  
Number: 02947  
Signature: E. Murray

NO.	DATE	DESCRIPTION
1	9/16/19	REVIEW DOCUMENTS

DESIGN PHASE:  
**REVIEW DOCUMENTS**

**SNAIL LAKE BEACH IMPROVEMENTS PROJECT**  
RAMSEY COUNTY PARKS AND RECREATION DEPARTMENT  
VADNAIS SNAIL LAKE REGIONAL PARK

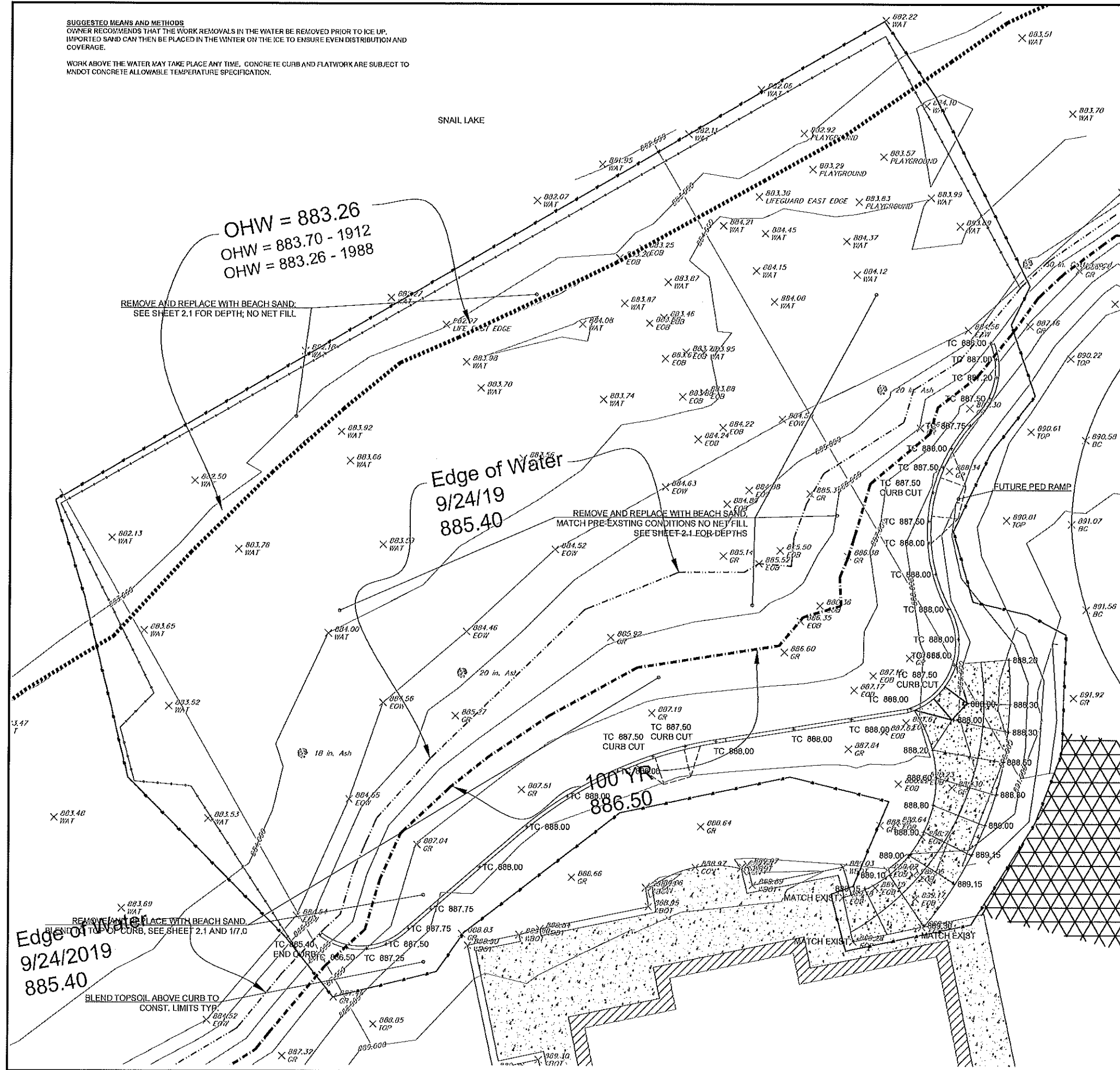
DATE: OCTOBER 2019  
DESIGNED BY: BGS  
DRAWN BY: BGS  
CHECKED BY: BGS



TITLE  
**GRADING PLAN**

**BD 4.0**

SHEET 5 OF 18



- TC = TOP OF CURB
- OHW LINE - ELEVATION XXX.XX
- EDGE OF WATER - 9-24-2019 ELEVATION 885.40
- 100 YR FLOOD LINE - ELEVATION 886.50
- CONSTRUCTION LIMITS
- FLOATING SILT CURTAIN
- CONSTRUCTION ACCESS (MUD MATS)



OHW = 883.26  
OHW = 883.70 - 1912  
OHW = 883.26 - 1988

REMOVE AND REPLACE WITH BEACH SAND.  
SEE SHEET 2.1 FOR DEPTH; NO NET FILL

Edge of Water  
9/24/19  
885.40

REMOVE AND REPLACE WITH BEACH SAND.  
MATCH PRE-EXISTING CONDITIONS NO NET FILL  
SEE SHEET 2.1 FOR DEPTHS

100 YR  
886.50

Edge of Water  
9/24/2019  
885.40

BLEND TOPSOIL ABOVE CURB TO  
CONST. LIMITS TYP.

# Permit Application Coversheet

Date November 06, 2019

Project Name Valley Creek-Woodlane Redevelopment Project Number 19-47

Applicant Name Aaron Diederich, Lupe Development Partners

Type of Development Mixed Use

## Property Description

This project is located on the southwest corner of Valley Creek Road and Woodlane Drive in the City of Woodbury. The applicant is proposing to redevelop portions of the site in order to construct a mixed use development including retail, a restaurant, and a medical office building with associated parking and landscaping. The total site area is 5.75 acres. Two underground filtration systems are proposed to meet stormwater treatment requirements. Pretreatment will include 4' sumps and Preserver energy dissipation devices. Filtration is being proposed due to poor soils.

## Watershed District Policies or Standards Involved:

- |  |   |
|--|---|
| <input type="checkbox"/> <i>Wetlands</i>                         | <input checked="" type="checkbox"/> <i>Erosion and Sediment Control</i> |
| <input checked="" type="checkbox"/> <i>Stormwater Management</i> | <input type="checkbox"/> <i>Floodplain</i>                              |

## 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

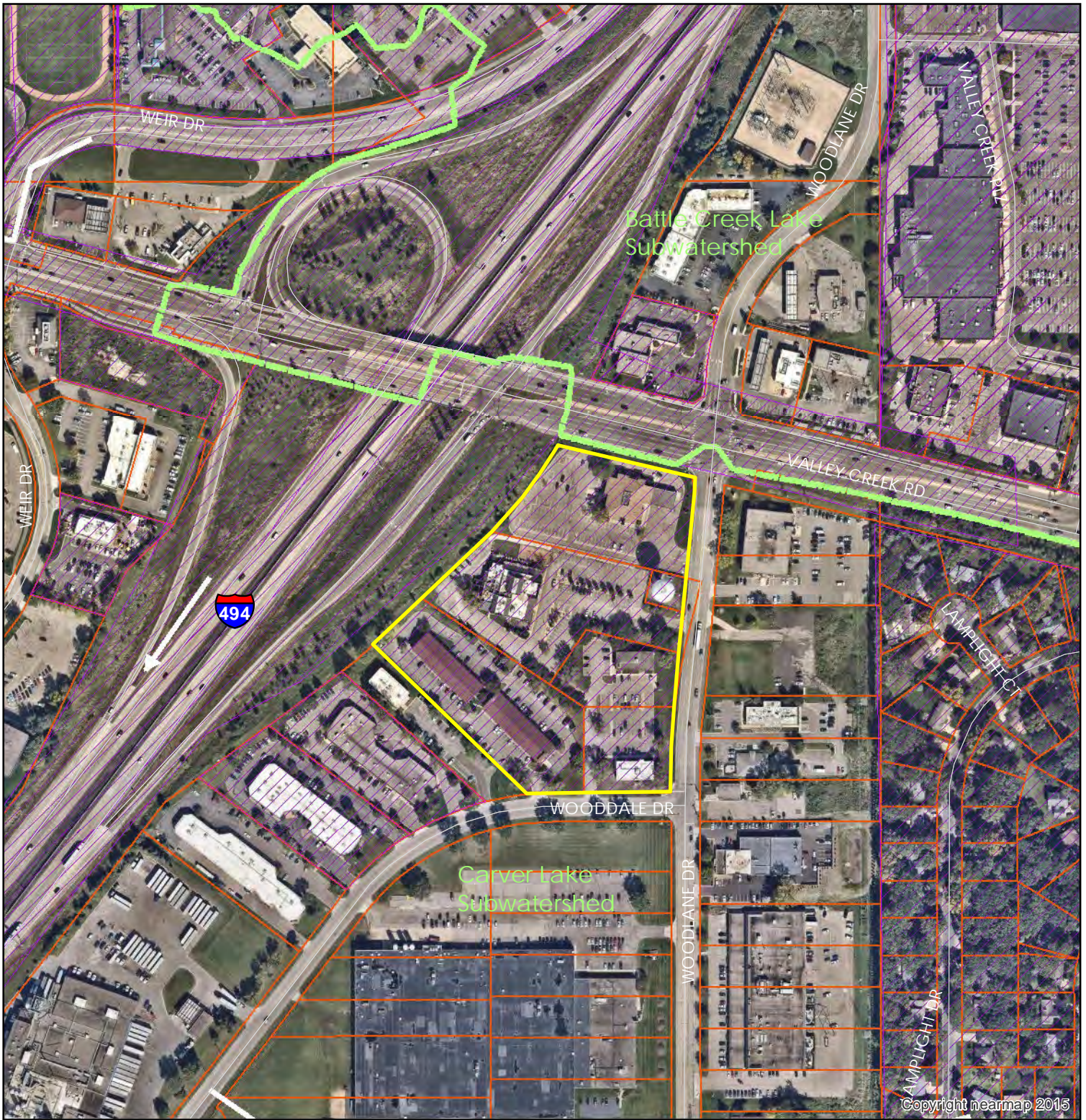
Staff recommends approval of this permit with the special provisions.

## Attachments:

- Project Location Map
- Project Grading Plan



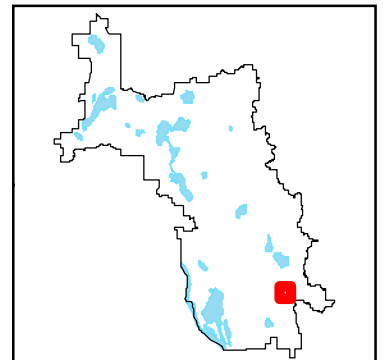
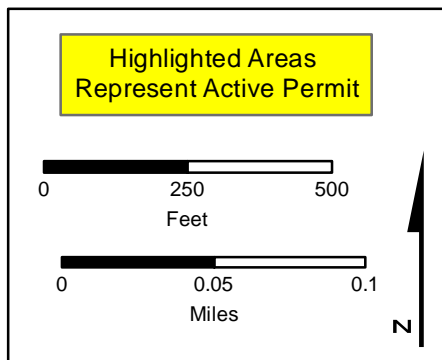
# #19-47 Valley Creek-Woodlane Redevelopment



**Wetlands**

<span style="color: red;">■</span>	Manage A
<span style="color: green;">■</span>	Manage B
<span style="color: blue;">■</span>	Manage C
<span style="color: lightblue;">■</span>	Lake
<span style="color: gray;">■</span>	Sediment Pond
<span style="color: purple;">■</span>	Not Assessed

	RWMWD Boundary
	Flow Arrows
	Major Flow Arrows
	Subwatersheds
	Creeks
	Permits
	Washington Co Parcels

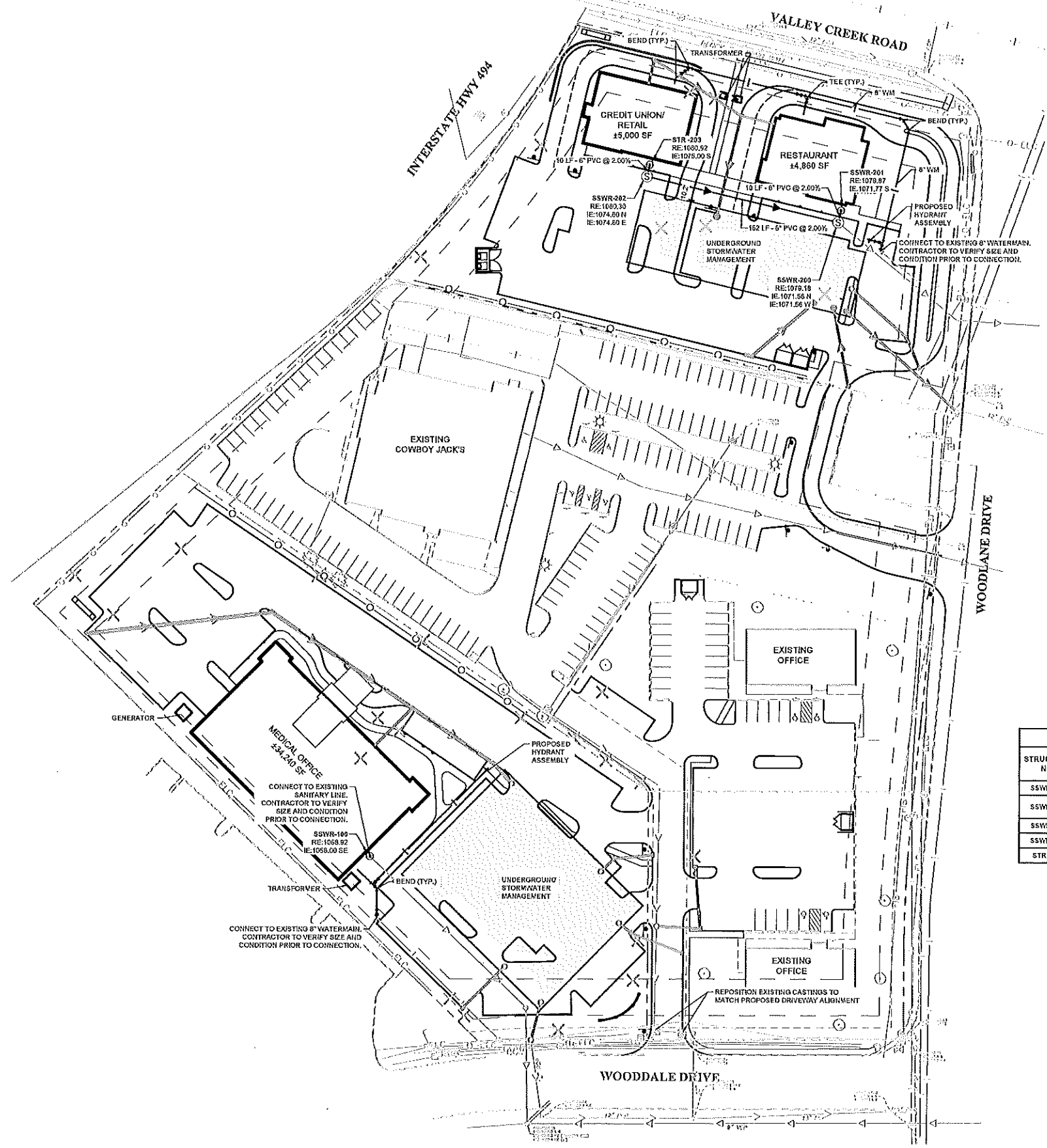




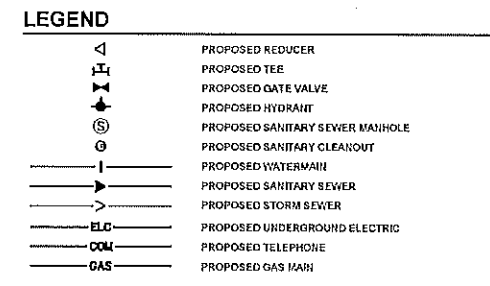
### Special Provisions

1. The applicant shall provide Stormtech details referenced on plan Sheet 502.
2. The applicant shall submit the final, signed set of construction plans.
3. The applicant shall submit an executed maintenance agreement for the proposed stormwater facilities.
4. The applicant shall submit a draft, site-specific Best Management Practice (BMP) Operations & Maintenance Plan.
5. The applicant shall provide contact information for the trained erosion control coordinator responsible for implementing the Stormwater Pollution Prevention Plan (SWPPP).
6. The applicant shall submit a copy of the approved Minnesota Pollution Control Agency's NPDES Construction Permit coverage for the project.

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

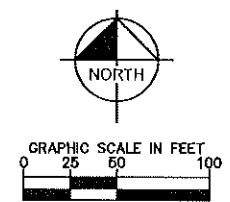


SANITARY SEWER SCHEDULE							
STRUCTURE NO.	STRUCTURE/CASTING TYPE	RIM/GATE ELEVATION	INVERT ELEVATION	PIPE SIZE IN	PIPE SLOPE IN	INVERT ELEVATION OUT	PIPE SLOPE OUT
SSWR-100	CLEANOUT	1068.92				SE 1068.00	8" 2.00%
SSWR-200	48" SSWR MH	1078.18	N 1071.56 W 1071.66	8"	2.00%		
SSWR-201	CLEANOUT	1079.07				S 1071.77	8" 2.60%
SSWR-202	48" SSWR MH	1080.39	N 1074.80	6"	2.00%	E 1074.90	6" 2.00%
STR-203	CLEANOUT	1080.92				S 1075.09	6" 2.00%



- ### UTILITY PLAN NOTES
- ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
  - SANITARY SEWER PIPE SHALL BE AS FOLLOWS:  
8" PVC SDR35 PER ASTM D-3034, FOR PIPES LESS THAN 12' DEEP  
8" PVC SDR28 PER ASTM D-3034, FOR PIPES MORE THAN 12' DEEP  
6" PVC SCHEDULE 40 PER ASTM D-3034  
DUCTILE IRON PIPE PER AWWA C150
  - WATER LINES SHALL BE AS FOLLOWS:  
6" AND LARGER DUCTILE IRON PIPE PER AWWA C150  
SMALLER THAN 6" EITHER COPPER TUBE TYPE "K" PER ANSI B16.22 OR PVC, 200 PSI, PER ASTM D1784 AND D2211.
  - MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
  - ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH RESTRAINTS SUCH AS THRUST BLOCKING, WITH STAINLESS STEEL OR COBALT BLUE BOLTS, OR AS INDICATED IN THE CITY SPECIFICATIONS AND PROJECT DOCUMENTS.
  - ALL UTILITIES SHOULD BE KEPT TEN (10) FEET (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE OR STRUCTURE).
  - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 7'-5" COVER ON ALL WATERLINES.
  - IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES, OR ANY OBSTRUCTION (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE 5'-0" OR 6'-0" WITH MECHANICAL JOINTS AT LEAST 10 FEET ON EITHER SIDE OF THE CENTER LINE OF THE CROSSING. THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE FASTENERS AS REQUIRED TO PROVIDE A MINIMUM OF 18" VERTICAL SEPARATION, MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI Z1.11 (AWWA C-151) (CLASS 50).
  - ALL UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
  - TOPS OF MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS, IN GREEN AREAS, WITH WATERTIGHT LIDS.
  - ALL CONCRETE FOR ENCASUREMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
  - EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
  - REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
  - CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE CITY OF WOODBURY AND/OR STATE OF MINNESOTA WITH REGARD TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
  - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
  - CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES.
  - CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
  - CONTRACTOR SHALL REFERENCE ARCH/MEP PLANS FOR SITE LIGHTING AND ELECTRICAL PLAN.
  - BACKFLOW DEVICES (DDCV AND PRZ ASSEMBLIES) AND METERS ARE LOCATED IN THE INTERIOR OF THE BUILDING, REF. ARCH/MEP PLANS.
  - ALL ON-SITE WATERMANS AND SANITARY SEWERS SHALL BE PRIVATELY OWNED AND MAINTAINED.
  - ALL WATERMAIN STUBOUTS SHALL BE MECHANICALLY RESTRAINED WITH REACTION BLOCKING.

**PRIVATE UTILITY NOTE:**  
COORDINATION WITH PRIVATE UTILITY COMPANIES IS OBLIGATORY. SERVICE ROUTING TO EACH OF THE PROPOSED BUILDINGS WILL BE PROVIDED ONCE SERVICE MAPS ARE PROVIDED BY THE UTILITY COMPANIES.



PRELIMINARY - NOT FOR CONSTRUCTION

VALLEY CREEK REDEVELOPMENT  
PREPARED FOR LUPE DEVELOPMENT  
WOODBURY, MINNESOTA

UTILITY PLAN

KHA PROJECT: 180734023  
DATE: 07/24/2019  
SCALE: AS SHOWN  
DESIGNED BY: BMM  
DRAWN BY: EIS  
CHECKED BY: WDM

THIS DRAWING IS THE PROPERTY OF KIMLEY-HORN AND ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF KIMLEY-HORN AND ASSOCIATES, INC.

**Kimley»Horn**  
2019 KIMLEY-HORN AND ASSOCIATES, INC.  
2650 UNIVERSITY AVENUE WEST, SUITE 208N, ST. PAUL, MN 55114  
PHONE: 651-464-4187  
WWW.KIMLEY-HORN.COM

No.	REVISIONS	DATE	BY



# Permit Application Coversheet

Date November 06, 2019

Project Name Elim Care Assisted Living

Project Number 19-48

Applicant Name Andrew Centanni, Elim Care

Type of Development Residential

## Property Description

This project is located on County Road C East between Clarence Street and Hazelwood Street in the City of Maplewood. The applicant is proposing to redevelop the western portion of the site to construct an assisted living facility with associated parking, sidewalks, and landscaping. The total site area is 7.9 acres. Three infiltration basins are proposed to meet stormwater treatment requirements. Pretreatment will include sumped catch basins. Future development to the east will need to submit a separate permit application and account for their own stormwater.

## Watershed District Policies or Standards Involved:

- |  |   |
|--|---|
| <input type="checkbox"/> <i>Wetlands</i>                         | <input checked="" type="checkbox"/> <i>Erosion and Sediment Control</i> |
| <input checked="" type="checkbox"/> <i>Stormwater Management</i> | <input type="checkbox"/> <i>Floodplain</i>                              |

## 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

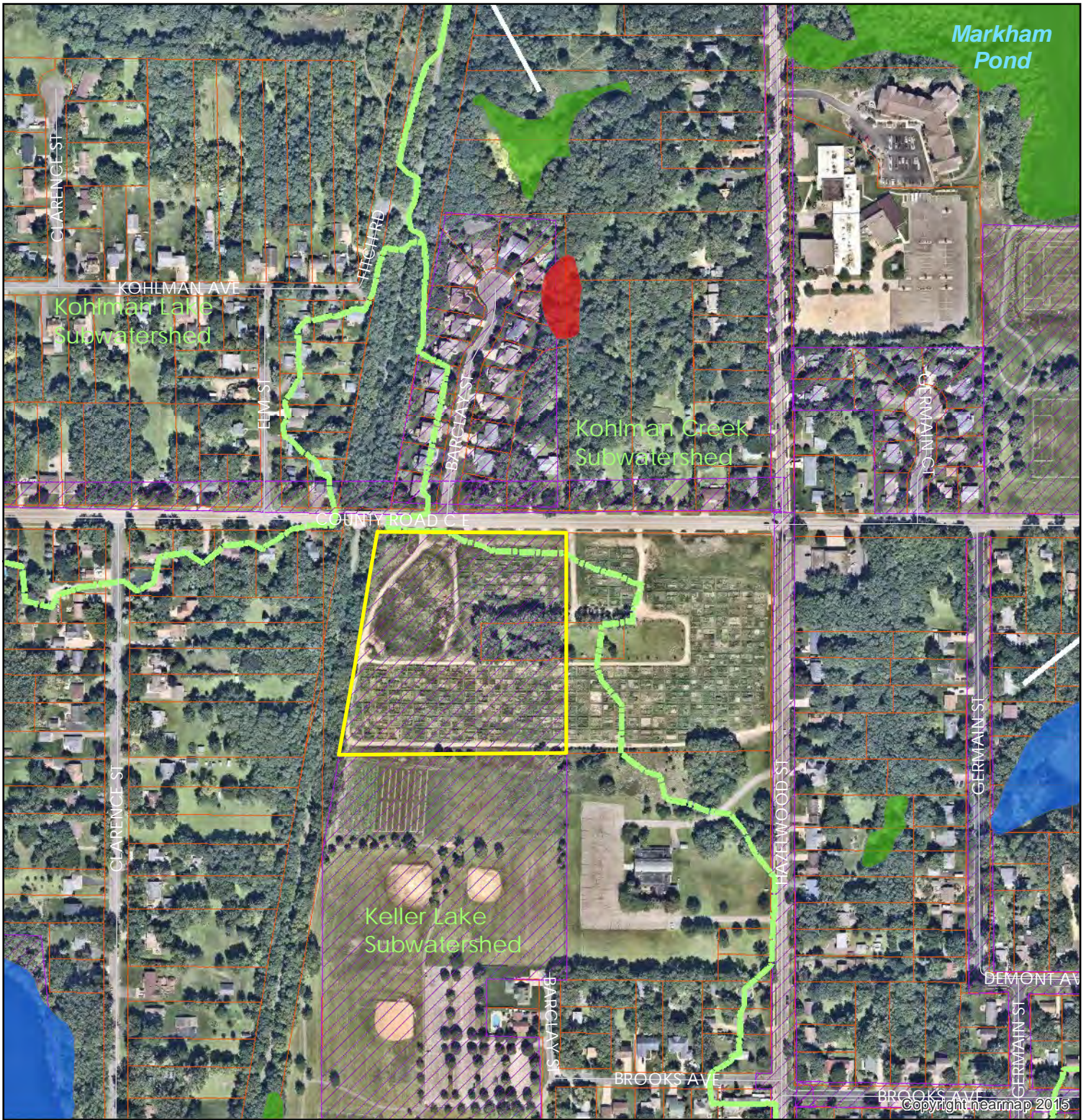
Staff recommends approval of the permit with the special provisions.

## Attachments:

- Project Location Map
- Project Grading Plan



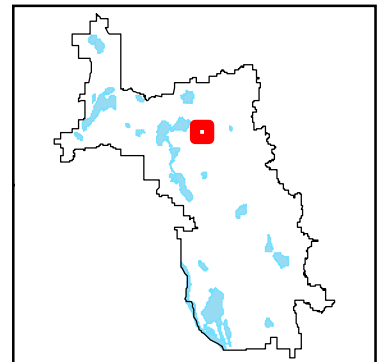
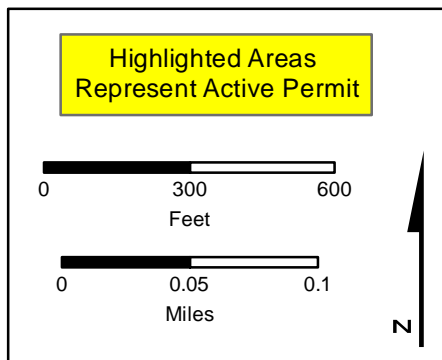
# #19-48 Elim Care Assisted Living



**Wetlands**

<span style="color: red;">■</span>	Manage A
<span style="color: green;">■</span>	Manage B
<span style="color: blue;">■</span>	Manage C
<span style="color: lightblue;">■</span>	Lake
<span style="background-color: gray;">■</span>	Sediment Pond
<span style="background-color: purple;">■</span>	Not Assessed

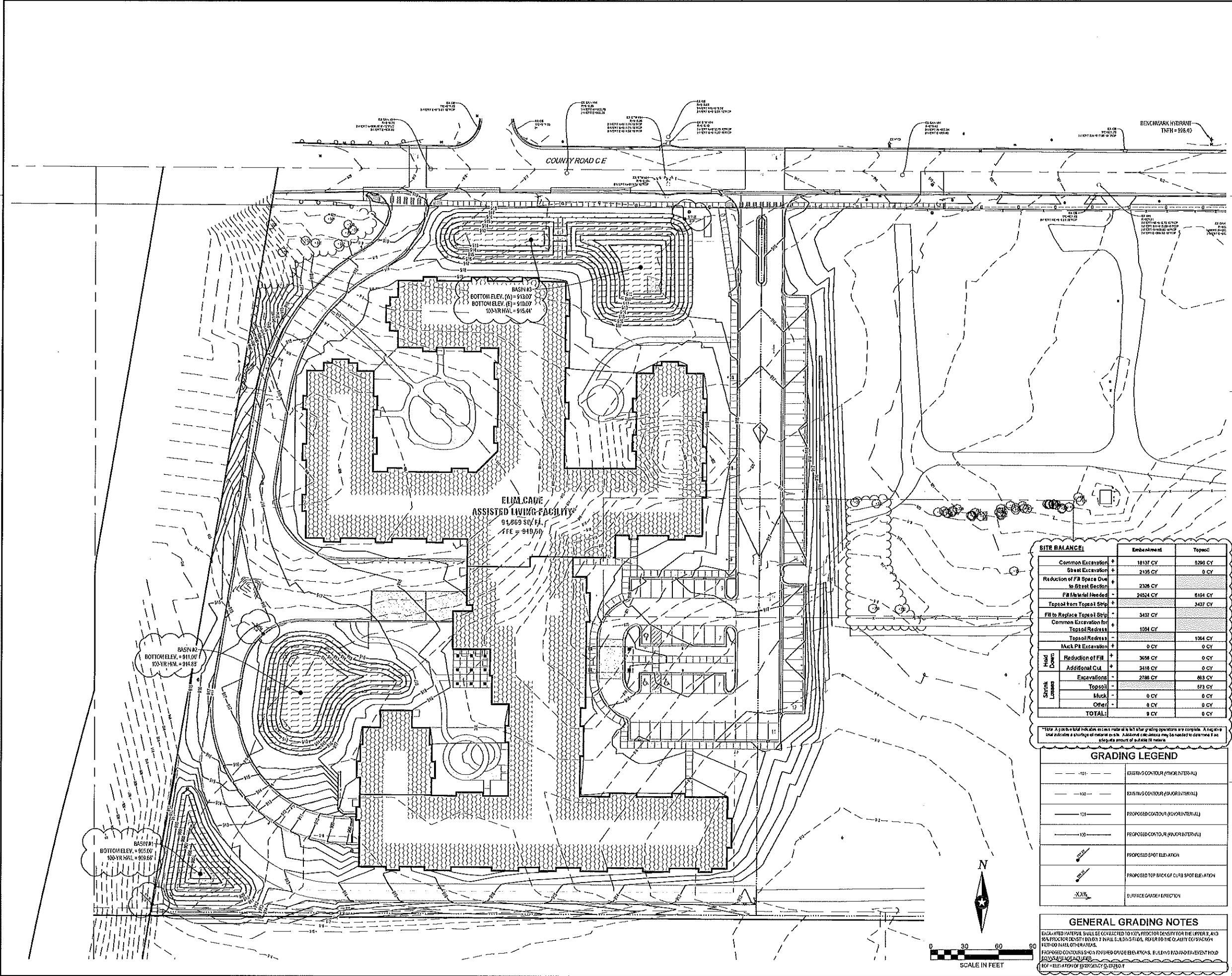
	RWMWD Boundary
	Flow Arrows
	Major Flow Arrows
	Subwatersheds
	Creeks
	Permits
	Ramsey Co Parcels





Special Provisions

1. The applicant shall submit the final geotechnical report.
2. The applicant shall submit the escrow fee of \$39,500.
3. The applicant shall submit the final, signed plans set.
4. The applicant shall submit an executed joint maintenance agreement with the City of Maplewood.
5. The applicant shall submit contact information for the trained erosion control coordinator responsible for implementing the Stormwater Pollution Prevention Plan (SWPPP).
6. The applicant shall submit a copy of the approved Minnesota Pollution Control Agency's NPDES Construction Permit coverage for the project.



NOTE:  
THE CLARITY OF THESE PLANS DEPENDS UPON COLOR COPIES, IF THIS TEXT DOES NOT APPEAR IN COLOR, THIS IS NOT AN ORIGINAL PLAN SET AND MAY RESULT IN MISINTERPRETATION.

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

DATE: \_\_\_\_\_ LIC. NO. \_\_\_\_\_  
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SITE BALANCE		
	Excavated	Topsoil
Common Excavation	+ 18137 CY	5298 CY
Street Excavation	+ 2135 CY	0 CY
Reduction of FB Space Due to Street Section	+ 2328 CY	0 CY
Fill Material Needed	- 24524 CY	6194 CY
Topsoil from Topsoil Strip	-	3437 CY
Fill to Replace Topsoil Strip	+ 3437 CY	-
Common Excavation for Topsoil Redress	+ 1084 CY	-
Topsoil Redress	-	1084 CY
Muck PB Excavation	+ 0 CY	0 CY
Reduction of Fill	+ 3658 CY	0 CY
Additional Cut	+ 2418 CY	0 CY
Excavations	- 2788 CY	683 CY
Topsoil	-	573 CY
Muck	- 0 CY	0 CY
Other	- 0 CY	0 CY
<b>TOTAL:</b>	<b>9 CY</b>	<b>8 CY</b>

\*Note: A positive total indicates excess material left after grading operations are complete. A negative total indicates a shortage of material on site. Additional calculations may be needed to determine if an adequate amount of suitable fill material.

GRADING LEGEND	
--- 101 ---	EXISTING CONTOUR (MAJOR INTERVAL)
--- 100 ---	EXISTING CONTOUR (MAJOR INTERVAL)
--- 111 ---	PROPOSED CONTOUR (MAJOR INTERVAL)
--- 120 ---	PROPOSED CONTOUR (MAJOR INTERVAL)
● 90.00	PROPOSED SPOT ELEVATION
● 90.00	PROPOSED TOP BACK OF CURB SPOT ELEVATION
→ X.XX%	SURFACE GRADE DIRECTION

**GENERAL GRADING NOTES**  
EXCAVATED MATERIAL SHALL BE COMPACTED TO 100% PROCTOR DENSITY FOR THE UPPER 3', AND 90% PROCTOR DENSITY BELOW 3' WITH 6" LAYERS, REFER TO THE QUALITY CONTROL PLAN FOR FURTHER DETAILS.  
PROPOSED CONTOURS SHOW FINISHED GRADE ELEVATIONS. ELEVATIONS DO NOT REPRESENT HOLD POINTS OR SPOT ELEVATIONS.  
ELEVATION OF EMERGENCY QUANTITY

PROJECT	
<b>ELIM CARE ASSISTED LIVING FACILITY</b>	
MAPLEWOOD	MINNESOTA
REVISION SCHEDULE	
DATE	DESCRIPTION
10/25/2012	CITY WATERSHED COMMENTS
BY	BY
	BAG

PROJECT NO.	19-23219
FILE NAME	23219 CA-GRADE
DRAWN BY	PJJ
DESIGNED BY	PJJ
REVIEWED BY	RNS
ORIGINAL ISSUE DATE	10/19/19
CLIENT PROJECT NO.	

TITLE	
<b>OVERALL GRADING PLAN</b>	
SHEET	
<b>C4-10</b>	

PRELIMINARY NOT FOR CONSTRUCTION



# RAMSEY-WASHINGTON

## METRO WATERSHED DISTRICT

### MEMORANDUM

**Date:** November 6, 2019  
**To:** Board of Managers and Staff  
**From:** Nicole Soderholm, Permit Coordinator  
**Subject:** October Enforcement Action Report

During October 2019:

<b>Number of Violations:</b>	<b>15</b>
Install/Maintain Inlet Protection	1
Install/Maintain Perimeter Control	3
Install/Maintain Construction Entrance	2
Sweep Streets	3
Stabilize Exposed Soils	1
Remove Discharged Sediment	1
Maintain/Protect Permanent BMPs	1
Install/Maintain Energy Dissipation	1
Maintain Temporary Sediment Basin	2

#### Activities:

Permitting assistance to private developers and public entities, permit review with Barr Engineering, miscellaneous inquiries, ongoing ESC site inspections and reporting, WCA administration/procedures, pre-application planning meetings, permit BMP maintenance inspections, permit close-out inspections, Design of Construction SWPPP recertification training, preconstruction meetings, stormwater reuse workshop, MN Water Resources Conference, Stewardship Grant Team meeting

#### Project Updates:

Permit #19-15 Spooner Park Improvements, Little Canada

Site work is complete at Spooner Park in Little Canada. Staff completed a final inspection of the site on Oct 24<sup>th</sup> and confirmed the site is stabilized. A filtration basin was constructed to meet permit requirements, and it is draining as intended. The project engineer indicated an

as-built plans set will be available by the end of the month in order to facilitate final closure of the watershed permit.

Permit #17-23 Rose Place Townhomes, Roseville

Staff completed a site inspection on Oct 24<sup>th</sup> and noted that there are active erosion issues and soil sloughing in areas that have been sodded. Additionally, the infiltration basins are holding water and are not functioning as designed. The contractor was notified that this has resulted in a non-compliant inspection as the basins have been in disrepair for months with multiple notices to complete corrective actions. The contractor responded that work to repair the infiltration basins will occur in late Oct/early Nov but that he does not plan on fixing the erosion areas noted by staff. The contractor was reminded that the permit will not be closed until all areas are graded/constructed per plan and that there is no active erosion. Residents have complained about the site, and staff will continue to monitor progress. City staff are also aware of the situation.

Permit #19-39 Wooddale Flex Building, Woodbury

Work began this month at the Wooddale Flex Building site in the City of Woodbury. Staff met with the contractor and contractor's representative for an initial site inspection on Oct 29<sup>th</sup> and discussed erosion control. The site was in compliance at the time of the inspection, but the contractor was notified that due to the time of year, planning should take place for winter stabilization of inactive soils. The contractor is anticipating grading the site and hauling excess soil this fall followed by work on the new office building through the winter months.

Permit #18-16 Little Canada Elementary Addition

Site work is wrapped up at Little Canada Elementary. Staff completed a final inspection of the site on Oct 24<sup>th</sup>. A filtration basin was constructed to meet permit requirements and is draining as intended. Staff are waiting on as-built plans and removal of sediment that has accumulated upstream of the filtration basin before the permit can be closed.

Permit #19-21 Meadowood Berm, Woodbury

Staff completed a final inspection of the flood control berm in a residential neighborhood off Upper Afton Road in Woodbury. There appears to be a small amount of water ponding on the far side of the berm, suggesting it is not graded such that water is properly conveyed to the outlet. The contractor noted this is on their final punchlist to address, and an as-built survey will be required prior to permit close-out.

Permit #14-20 Roseville Garden Station

The City of Roseville completed work to repair the infiltration basins this month as the contractor and developer could not accomplish this by their given deadline. The city and watershed will be pulling money from the permit holder's escrow funds to cover the cost of the work. Punchlist items remain on the permit which will continue to stay open for the time being. Vegetation establishment may not be verified until next year since the growing season has ended.

**Permits Closed in October 2019:**

17-29 RWMWD 2018 CIP

19-31 3108 W Owasso Blvd, Roseville

\* \* \* \* \*

# Stewardship Grant Program

\* \* \* \* \*

## Stewardship Grant Program Budget Status Update

November 6, 2019

Homeowner	Coverage	Number of Projects	Funds Allocated
Habitat Restoration and rain garden w/o hard surface drainage	50% Cost Share \$15,000 Max	8	\$19,564.65
Rain garden w/hard surface drainage, pervious pavement, green roof	75% Cost Share \$15,000 Max	8	\$64,926.25
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	5	\$25,900
Shoreland Restoration (below 100-year flood elevation w/actively eroding banks)	100% Cost Share \$100,000 Max	2	\$240,000
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/LVMP Development	50% Cost Share \$15,000 Max	2	\$15,000
Maintenance	50% Cost Share \$5,000 Max for 5 Years	23	\$19,200
Consultant Fees			\$237,400
<b>Total Allocated</b>			<b>\$922,990.90</b>

2019 Stewardship Grant Program Budget	
Budget	\$1,250,000
Total Funds Allocated	\$984,090.90
<b>Total Available Funds</b>	<b>\$265,909.10</b>



\* \* \* \* \*

# Action Items

\* \* \* \* \*

# Request for Board Action

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**Board Meeting Date:** November 6, 2019

**Agenda Item No.:** 8A

**Preparer:** Tina Carstens, Administrator

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**Item Description:** 2020 CIP Maintenance and Repair Project Authorization to Finalize Design and Prepare the Bidding Documents and Advertise for Bids.

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## **Background:**

Annually, the District completes a project to maintain the existing infrastructure owned and operated by the District, and to assist and facilitate stormwater pond cleanouts to allow other public entities to meet their municipal separate storm sewer system (MS4) requirements.

As the 2019 project is being closed out staff are wrapping up the 2020 CIP Maintenance/Repair project preliminary design and are seeking authorization from the board at the November 6 meeting to proceed with the bidding process. More information will be provided at the board meeting regarding proposed plans and costs. If the board deems it appropriate they should consider a motion that “approves the preliminary design, estimate of probable costs, and expected schedule, and directs the staff to prepare the bidding documents and advertise the project for bid”. Staff will present bids for the work at the December board meeting and a January construction start is expected.

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## **Applicable District Goal and Action Item:**

**Goal: Achieve quality surface water** – The District will maintain or improve surface water quality to support healthy ecosystems and provide the public with a wide range of water-based benefits.

**Action Items:** Maintain District projects and consider opportunities to support the maintenance activities of others.

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## **Staff Recommendation:**

Staff recommends that the Board approve the preliminary design, estimated costs, and proposed project schedule, and direct staff to finalize the design and bidding documents and advertise the project for bid.

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## **Financial Implications:**

The CIP Maintenance and Repair project is included in the 2020 preliminary budget. Staff will present the engineer’s cost estimate for this upcoming project at the meeting.

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## **Board Action Requested:**

Approve the preliminary design, estimated costs, and proposed project schedule, and direct staff to finalize the design and bidding documents and advertise the project for bid.

**CONTRACT DOCUMENTS**

**CAPITAL IMPROVEMENT PROJECT MAINTENANCE/REPAIRS 2020  
RAMSEY-WASHINGTON METRO WATERSHED DISTRICT**

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**Drawings**

G-01	Site Location and Sheet Index
G-02	Stormwater Pollution Prevention Plan (SWPPP)
G-03	Erosion Control Details
C-01	PFS Basins Paver Cleaning/Sweeping & Barrier Wall Repair
C-02	5 <sup>th</sup> Street Wetland Weir Maintenance
C-03	Tanners Wetland Weir Maintenance & Timber Replacement
C-04	Gervais Mill Pond Filter Maintenance
C-05	Lower Afton Road Drainageway Sediment Removal
C-06	West Vadnais Lake Wetland Berm Repair
C-07	Casey Lake Boat Landing and Inlet Sediment Removal
C-08	Maplewood Pond Cleanout – McKnight Ponds
C-09	Maplewood Pond Cleanout – Ivy and Ferndale
C-10	Maplewood Pond Cleanout - Maryland
C-11	Shoreview Pond Cleanout - Stahl
C-12	Shoreview Pond Cleanout - Tudor
C-13	Shoreview Pond Cleanout – Reiland
C-14	Little Canada Pond Cleanout - Sextant

**Appendices**

Appendix A:	Pond Sediment Core Samples and Test Results
Appendix B:	Erosion Control Inspection Log

# RAMSEY-WASHINGTON METRO WATERSHED DISTRICT

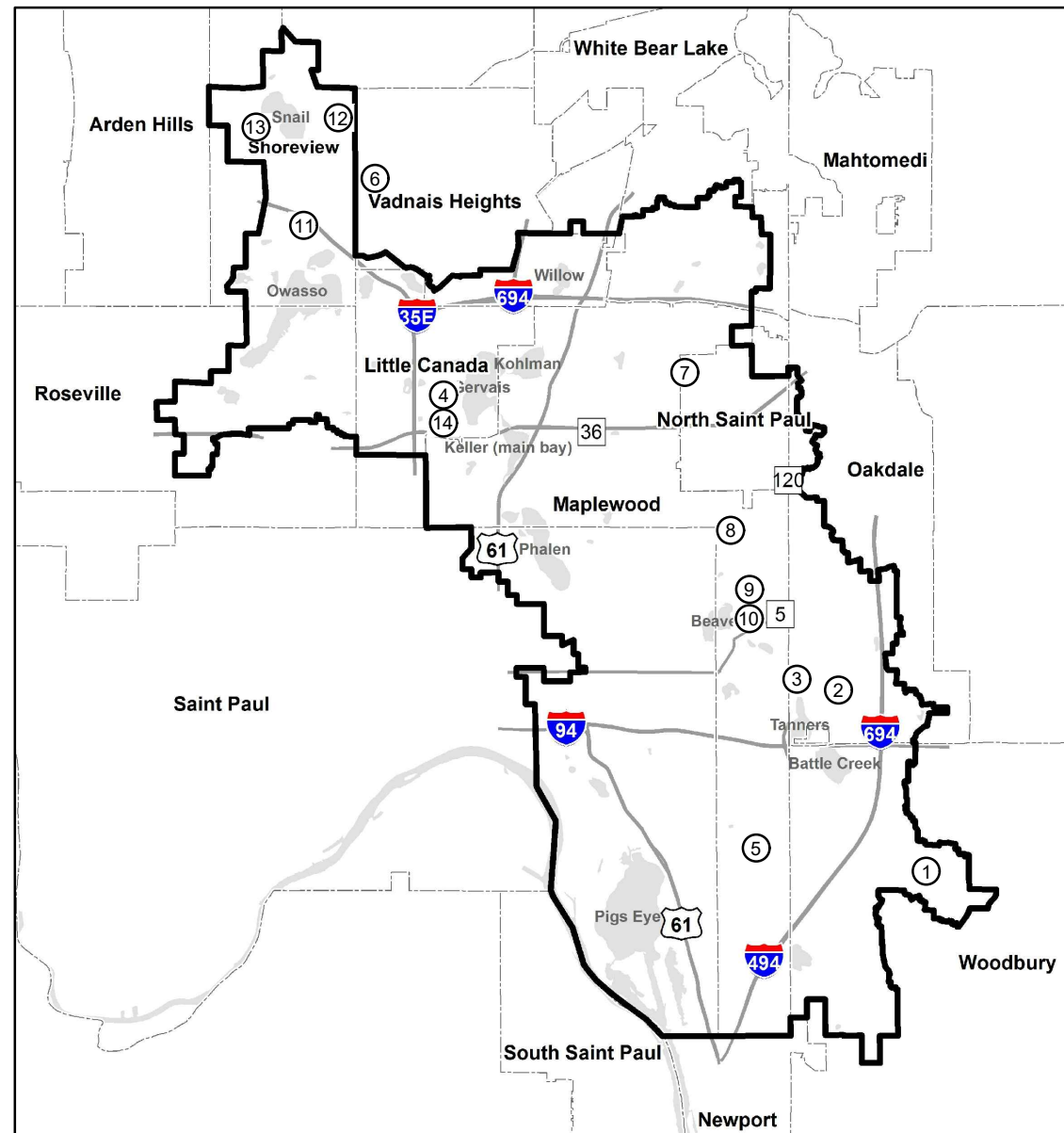
## CAPITAL IMPROVEMENT PROJECT (CIP) MAINTENANCE/REPAIRS 2020

### AREA REFERENCE

### LITTLE CANADA, MINNESOTA

#### SITE NO. MAINTENANCE AND REPAIRS INDEX

- ① TAMARACK SWAMP  
WOODBURY
- ② 5TH STREET WETLAND  
OAKDALE
- ③ TANNERS WETLAND  
OAKDALE
- ④ GERVAIS MILL PARK  
LITTLE CANADA
- ⑤ LOWER AFTON ROAD  
MAPLEWOOD
- ⑥ W VADNAIS LAKE  
VADNAIS HEIGHTS
- ⑦ CASEY LAKE  
NORTH ST PAUL
- ⑧ MCKNIGHT PONDS  
MAPLEWOOD
- ⑨ IVY AND FERNDAL POND  
MAPLEWOOD
- ⑩ MARYLAND POND  
MAPLEWOOD
- ⑪ STAHL POND  
SHOREVIEW
- ⑫ TUDOR POND  
SHOREVIEW
- ⑬ REILAND POND  
SHOREVIEW
- ⑭ SEXTANT  
LITTLE CANADA



VICINITY MAP

#### SHEET INDEX

G-GENERAL  
C-CIVIL

#### SHEET NO.

#### TITLE

G-01	SITE LOCATION AND SHEET INDEX
G-02	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
G-03	EROSION CONTROL DETAILS
C-01	PFS BASINS PAVER CLEANING/SWEEPING & BARRIER WALL REPAIR
C-02	5TH STREET WETLAND WEIR MAINTENANCE
C-03	TANNERS WETLAND WEIR MAINTENANCE & TIMBER REPLACEMENT
C-04	GERVAIS MILL POND FILTER MAINTENANCE
C-05	LOWER AFTON ROAD DRAINAGEWAY SEDIMENT REMOVAL
C-06	W VADNAIS LAKE EMBANKMENT IMPROVEMENTS
C-07	CASEY LAKE SEDIMENT REMOVAL
C-08	MAPLEWOOD POND CLEANOUT - MCKNIGHT PONDS
C-09	MAPLEWOOD POND CLEANOUT - IVY AND FERNDAL
C-10	MAPLEWOOD POND CLEANOUT - MARYLAND
C-11	SHOREVIEW POND CLEANOUT - STAHL
C-12	SHOREVIEW POND CLEANOUT - TUDOR
C-13	SHOREVIEW POND CLEANOUT - REILAND
C-14	LITTLE CANADA POND CLEANOUT - SEXTANT



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1-800-252-1166

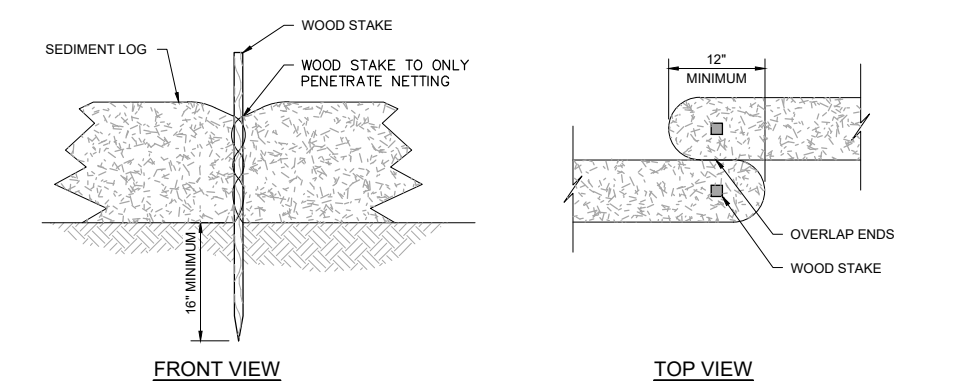
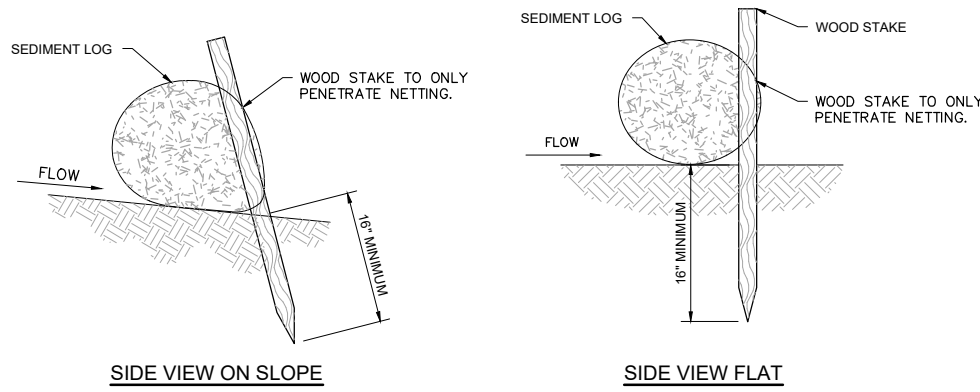
CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD-LOCATING ALL SITE UTILITIES, PRIVATE AND PUBLIC, PRIOR TO STARTING THE WORK. ALL UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER.

ISSUED FOR  
PROJECT APPROVAL

CADD USER: Greg Nelson; FILE: M:\DESIGN\2020\202002237\_G01\_COVER.DWG; PLOT SCALE: 1:2; PLOT DATE: 10/30/2019 8:48 AM

				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.				CLIENT BID CONSTRUCTION				10/30/19				Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com				Scale AS SHOWN Date 10/29/2019 Drawn GWB/EPF Checked GGM Designed BARR Approved				CAPITAL IMPROVEMENT PROJECT (CIP) MAINTENANCE/REPAIRS 2020				BARR PROJECT No. 23/62-0282.37			
				PRINTED NAME BRADLEY J. LINDAMAN												RAMSEY-WASHINGTON METRO WATERSHED DISTRICT				CLIENT PROJECT No.											
				SIGNATURE				RELEASED TO/FOR				DATE RELEASED				SITE LOCATIONS AND SHEET INDEX				DWG. No. G-01											
				DATE																REV. No. A											

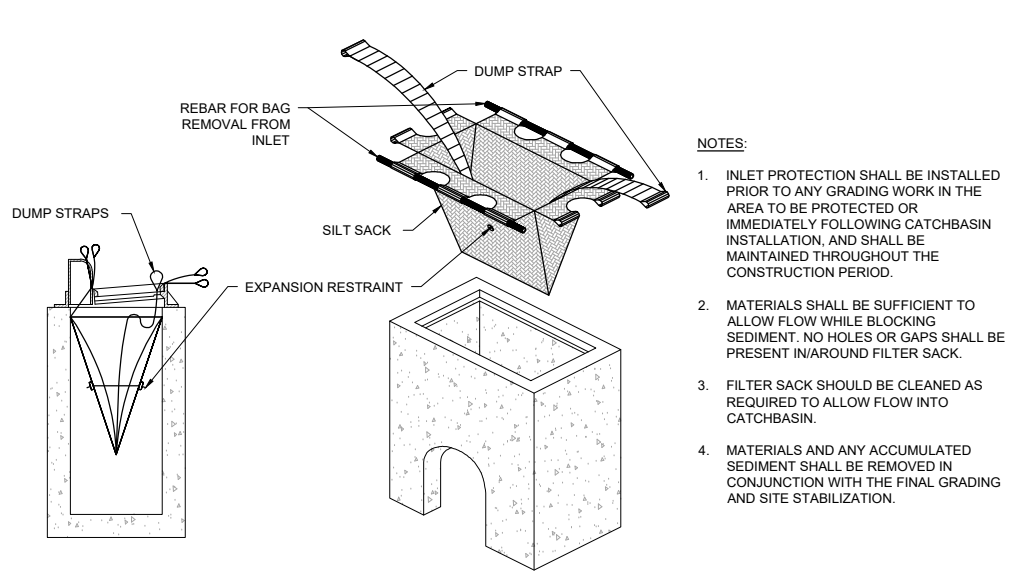




**NOTES:**

1. SEDIMENT LOG SHOULD BE INSTALLED ALONG CONTOURS (CONSTANT ELEVATION).
2. NO GAPS SHALL BE PRESENT UNDER SEDIMENT LOG. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN REACHING 1/2 OF LOG HEIGHT.
4. SEDIMENT LOG SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIRED OR REPLACED AS REQUIRED.

**1** DETAIL: EROSION LOG - STAKING  
NOT TO SCALE



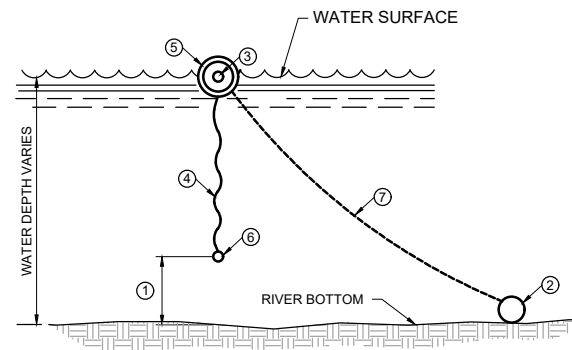
**NOTES:**

1. INLET PROTECTION SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED OR IMMEDIATELY FOLLOWING CATCHBASIN INSTALLATION, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
2. MATERIALS SHALL BE SUFFICIENT TO ALLOW FLOW WHILE BLOCKING SEDIMENT. NO HOLES OR GAPS SHALL BE PRESENT IN/AROUND FILTER SACK.
3. FILTER SACK SHOULD BE CLEANED AS REQUIRED TO ALLOW FLOW INTO CATCHBASIN.
4. MATERIALS AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.

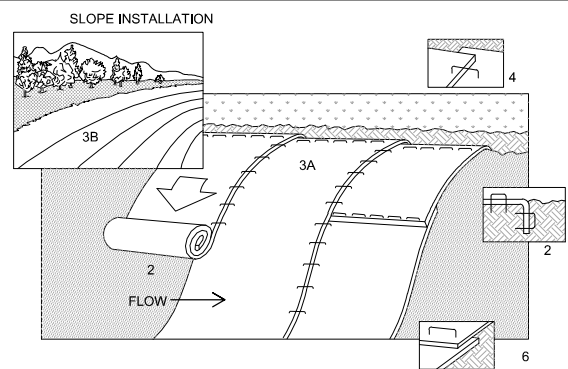
**2** DETAIL: INLET PROTECTION - FILTER SACK  
NOT TO SCALE

**NOTES:**

1. 6" MAXIMUM FOR WATER DEPTHS UP TO 3'-0" DEEP AND 1'-0" MAXIMUM FOR DEPTHS OVER 3'-0".
2. 24 LB (MIN.) ANCHOR @ 100'-0" O.C. SPACING (MAX.) ELIMINATE ANCHOR AND ANCHOR CABLE FOR WATER DEPTHS LESS THAN 3'-0" OR DISTANCE BETWEEN SHORE ANCHORS FOR TENSION CABLE OF LESS THAN 100'-0".
3. 5/16"Ø (MIN.) TENSION CABLE. ANCHOR TENSION CABLE AT BOTH SIDES WITH STEEL POSTS OF DIAMETER AND LENGTH TO PREVENT BENDING AND PULL-OUT.
4. 22 OZ VINYL COATED NYLON FABRIC CURTAIN.
5. FLOAT - 8" MINIMUM DIAMETER PLASTIC SEGMENTS.
6. CURTAIN WEIGHT - CONTINUOUS GALVANIZED STEEL CHAIN 5/16"Ø (MIN.), OR SEGMENTS OF 5/16"Ø STEEL CABLE 24" LONG @ 12" O.C. BETWEEN PIECES. CURTAIN WEIGHT TO BE HEAVY ENOUGH TO HOLD CURTAIN VERTICAL IN CURRENT AND WAVES FOR TYPICAL SITE.
7. 5/16"Ø (MIN.) GALVANIZED CABLE. ATTACH CABLE TO TENSION CABLE AND ANCHOR.



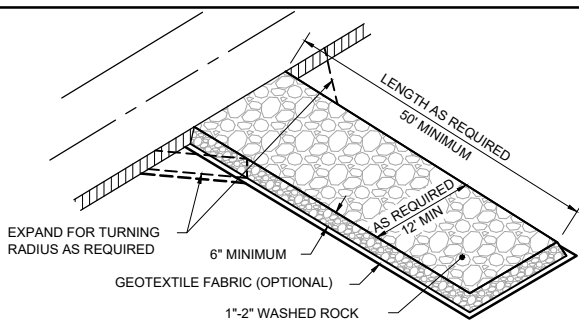
**4** DETAIL: FLOTATION SILT CURTAIN  
NOT TO SCALE



**NOTES:**

1. REFER TO MANUFACTURER RECOMMENDATIONS FOR STAPLE PATTERNS FOR SLOPE INSTALLATIONS.
2. PREPARE SOIL BY LOOSENING TOP 1-2 INCHES AND APPLY SEED (AND FERTILIZER WHERE REQUIRED) PRIOR TO INSTALLING BLANKETS. GROUND SHOULD BE SMOOTH AND FREE OF DEBRIS.
3. BEGIN (A) AT THE TOP OF THE SLOPE AND ROLL THE BLANKETS DOWN OR (B) AT ONE END OF THE SLOPE AND ROLL THE BLANKETS HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP, WITH THE UPHILL BLANKET ON TOP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
6. BLANKET MATERIALS SHALL BE AS SPECIFIED OR AS APPROVED BY ENGINEER.

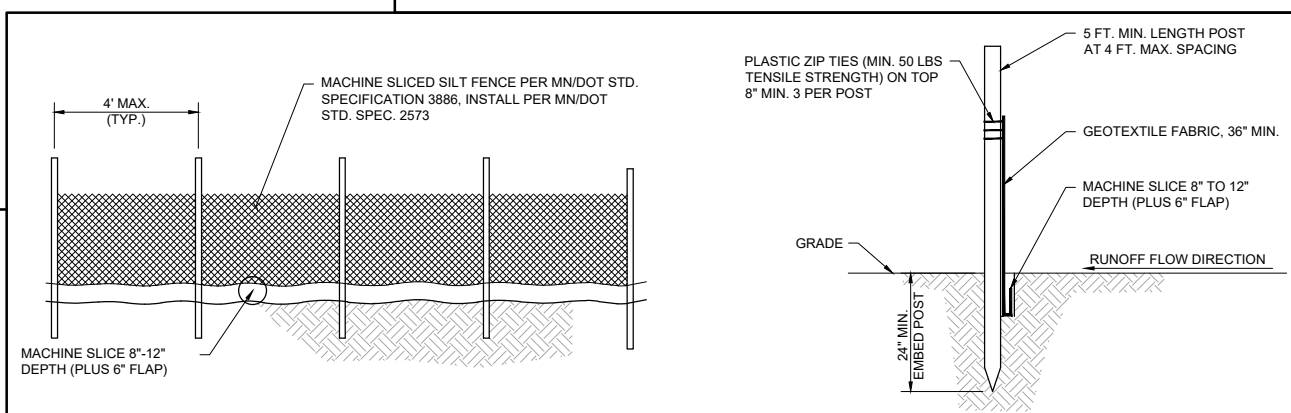
**5** DETAIL: EROSION CONTROL BLANKET - INSTALLATION  
NOT TO SCALE



**NOTES:**

1. ENTRANCE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIRED OR REPLACED AS REQUIRED TO PREVENT TRACKING OFFSITE.
2. ENTRANCE SHALL BE REMOVED IN CONJUNCTION WITH FINAL GRADING AND SITE STABILIZATION.
3. PROTECTION OF CURB & GUTTER, TRAILS AND SIDEWALKS DUE TO CONSTRUCTION ENTRANCE LOCATION SHALL BE CONSIDERED INCIDENTAL.

**6** DETAIL: ROCK CONSTRUCTION ENTRANCE  
NOT TO SCALE



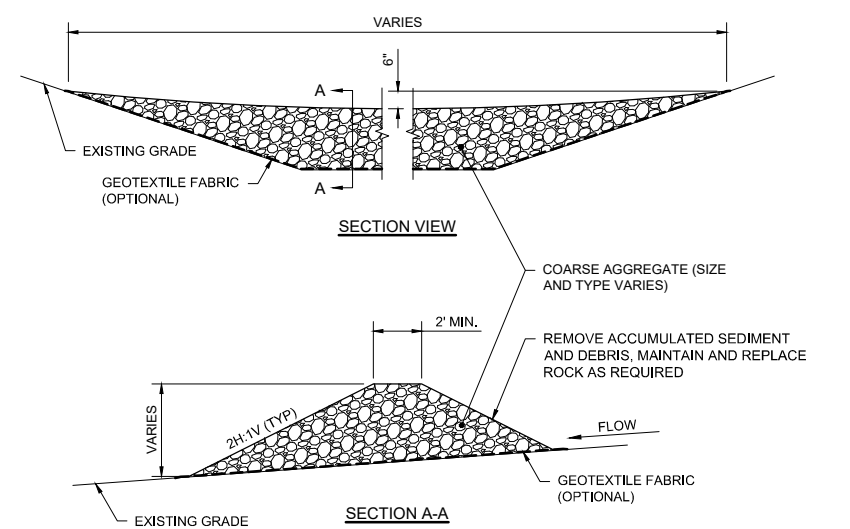
**NOTES:**

1. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. SILT FENCE AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. SILT FENCE INSTALLATION AND MATERIALS SHALL MEET THE REQUIREMENTS OF MN/DOT SPECIFICATIONS 2573 AND 3886.
3. NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SILT FENCE. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
4. WHEN SEDIMENT BUILD UP REACHES 1/3 OF FENCE HEIGHT, THE SILT FENCE SHOULD BE REMOVED OR A SECOND SILT FENCE INSTALLED UPSTREAM OF THE EXISTING FENCE AT A SUITABLE DISTANCE.
5. WHEN SPLICES ARE NECESSARY MAKE SPLICE AT POST ACCORDING TO SPLICE DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180 DEGREES TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL. CUT THE FABRIC NEAR THE BOTTOM OF THE POSTS TO ACCOMMODATE THE 6 INCH FLAP. THEN DRIVE BOTH POSTS AND BURY THE FLAP. COMPACT BACKFILL.

**7** DETAIL: SILT FENCE - MACHINE SLICED  
NOT TO SCALE

**GOPHER STATE ONE CALL**  
CALL BEFORE YOU DIG.  
1-800-252-1166

CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD-LOCATING ALL SITE UTILITIES, PRIVATE AND PUBLIC, PRIOR TO STARTING THE WORK. ALL UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER.



**NOTES:**

1. AGGREGATE SIZE MAY VARY AND DEPENDING ON CHANNEL SIZE, FLOW, SEDIMENT LOAD OR OTHER SITE CONDITIONS. AGGREGATE USED SHOULD BE RELATIVELY FREE OF SEDIMENT PRIOR TO INSTALLATION.
2. ROCK FILTER DIKE SHALL BE CLEANED OR REPLACED WHEN SEDIMENT BUILD UP REACHES 1/2 OF THE DIKE HEIGHT. ALTERNATIVELY A SECOND ROCK FILTER DIKE MAY BE INSTALLED DOWNSTREAM OF THE EXISTING DIKE AT A SUITABLE DISTANCE.
3. ROCK FILTER DIKE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ROCK, GEOTEXTILE AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.

**3** DETAIL: ROCK FILTER DIKE  
NOT TO SCALE

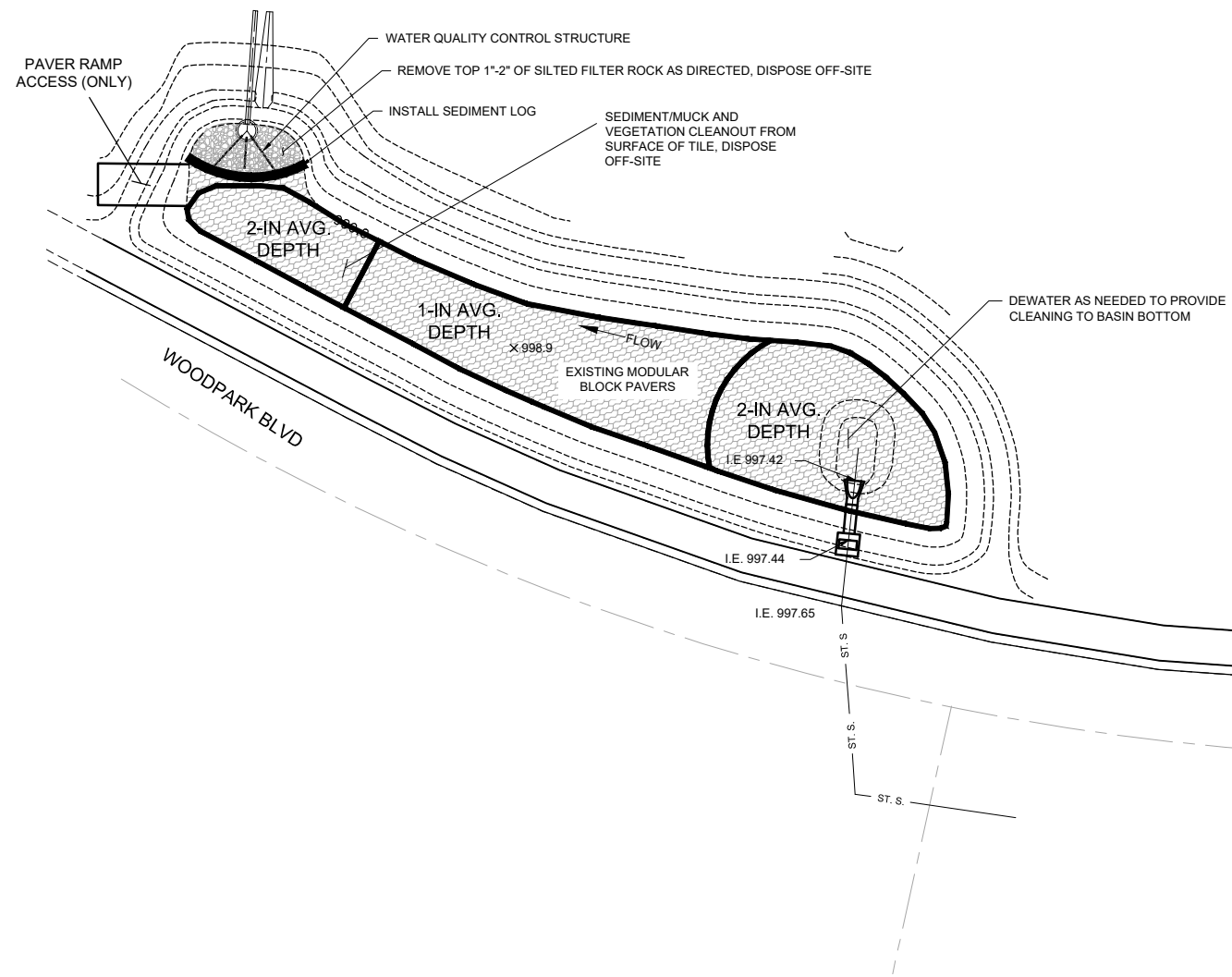
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I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		CLIENT BID CONSTRUCTION	10/30/19					Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435	Scale AS SHOWN	CAPITAL IMPROVEMENT PROJECT (CIP) MAINTENANCE/REPAIRS 2020	BARR PROJECT No. 23/62-0282.37	
PRINTED NAME BRADLEY J. LINDAMAN	SIGNATURE	RELEASED TO/FOR	A	B	C	0	1	2	3		CLIENT PROJECT No.	
DATE	LICENSE # 22178	DATE RELEASED					Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com	Drawn GWB/EPF	Checked GGN		Designed BARR	DWG. No. G-03

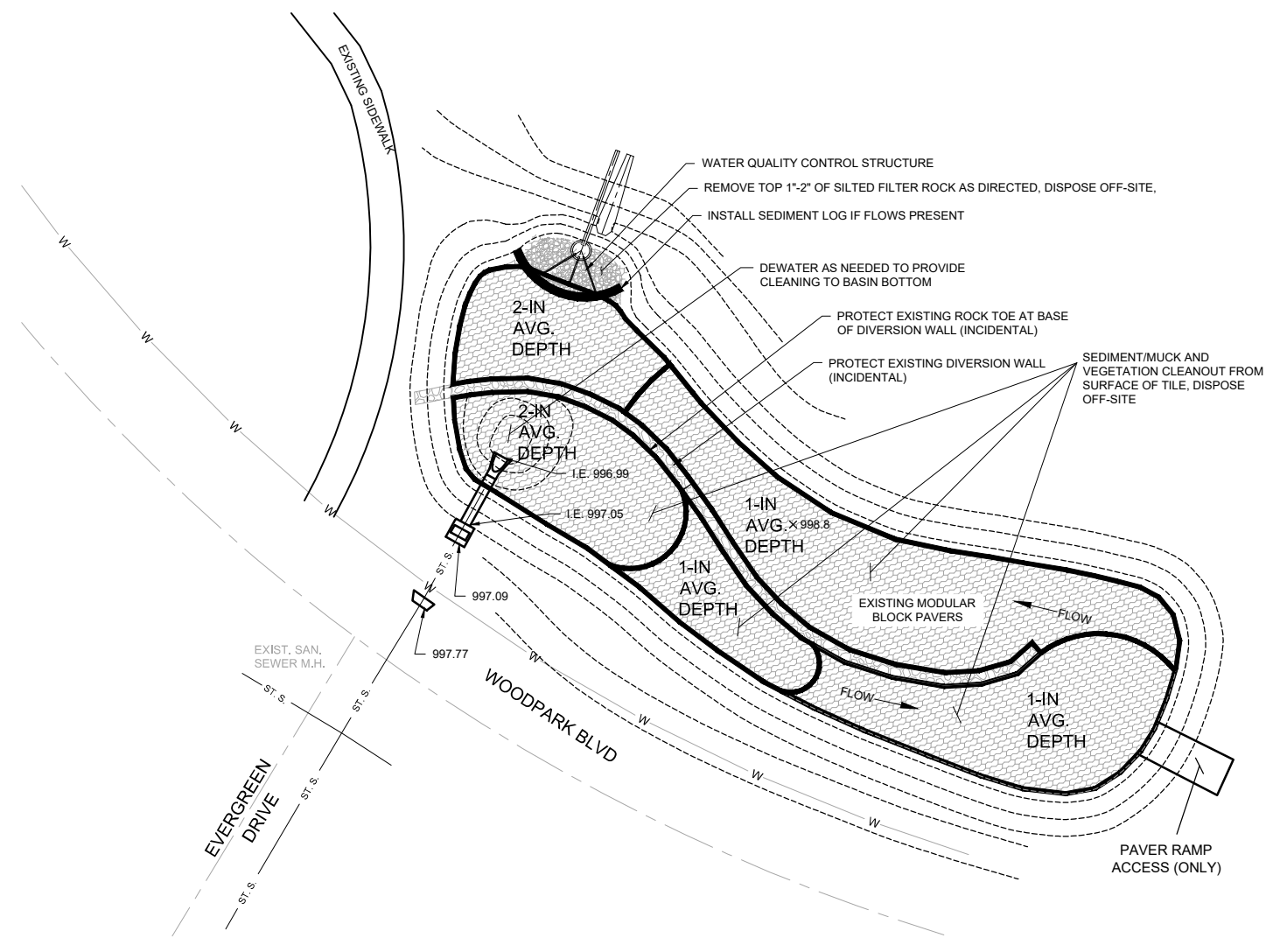


EROSION CONTROL DETAILS		ISSUED FOR PROJECT APPROVAL
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1 PLAN: EXISTING WEST BASIN SITE  
 SCALE IN FEET



2 PLAN: EXISTING EAST BASIN SITE  
 SCALE IN FEET

NOTES:

1. NOTIFY DAVE VLASIN, RAMSEY WASHINGTON METRO WATERSHED DISTRICT, AT 651-792-7972 PRIOR TO BEGINNING ANY AND ALL CONSTRUCTION ACTIVITIES TO INSPECT EROSION/SEDIMENT CONTROL PRACTICES.
2. SPECIFIED EROSION/SEDIMENT CONTROL PRACTICES SHOWN ARE THE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.
3. ALL NATIVE VEGETATION SURROUNDING BASINS SHALL BE PROTECTED. DAMAGE TO NATIVE RESTORATION AREAS SHALL BE REPAIRED IN-KIND AND MAINTAINED AT THE COST OF THE CONTRACTOR.
4. PIPE DISCHARGE BASIN POOLS TO BE CLEANED TO DEPTHS SHOWN ON PLANS.
5. ROCK OUTFALL STRUCTURES TO BE PROTECTED. DRAIN TILES EXIST ADJACENT TO PAVERS AND SHALL BE PROTECTED.
6. DISTURBANCE TO TURF TO BE RESTORED WITH SEED AND MULCH BLANKET AS DIRECTED BY THE OWNER.



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 CALL BEFORE YOU DIG.  
 1-800-252-1166

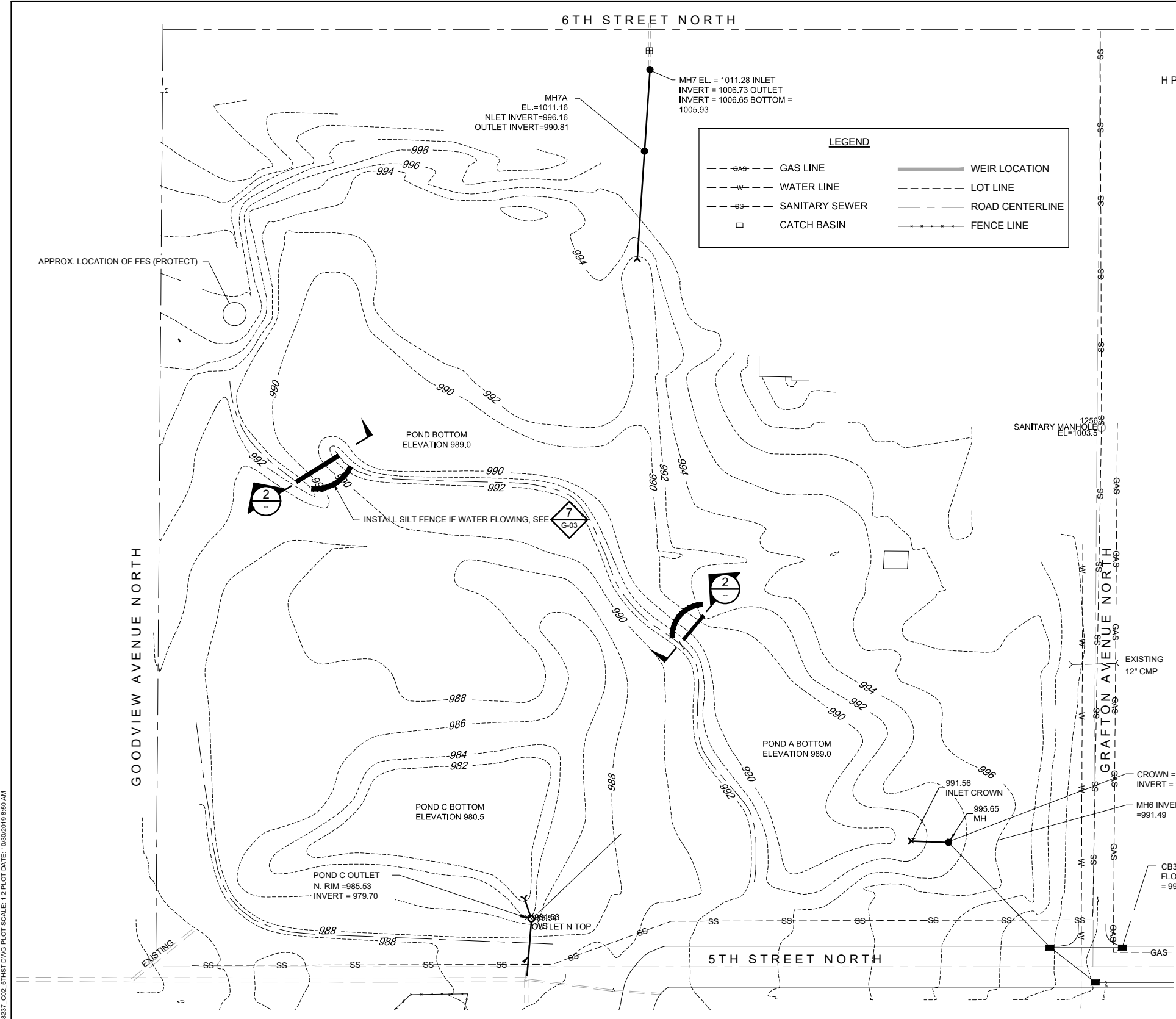
CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD-LOCATING ALL SITE UTILITIES, PRIVATE AND PUBLIC, PRIOR TO STARTING THE WORK. ALL UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER.

ISSUED FOR PROJECT APPROVAL

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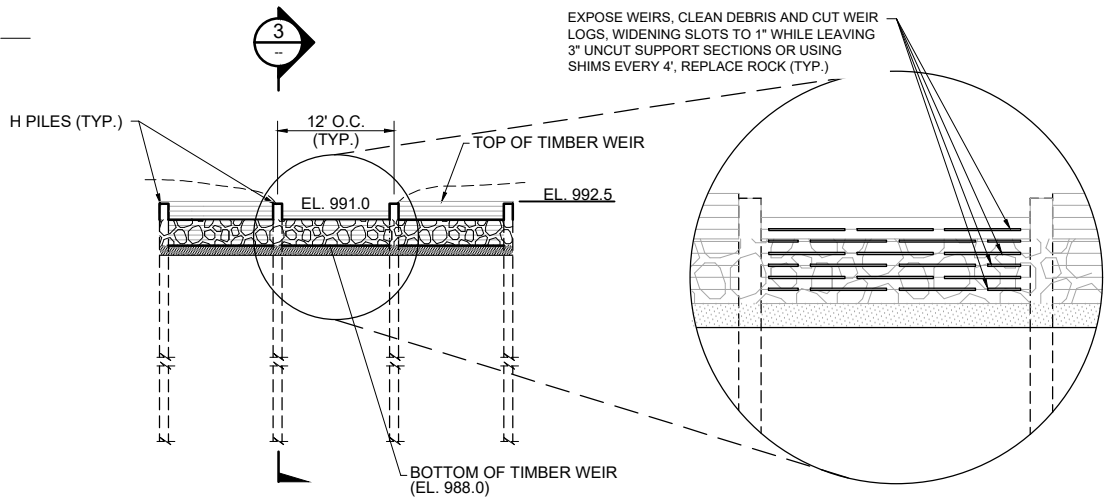
BARR: \\s\cadd\2011\AutoCAD\2011\AutoCAD\2011\_Template.dwt Plot at 1 10/30/2019 14:03:50

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: BRADLEY J. LINDAMAN SIGNATURE: _____ DATE: _____ LICENSE # 22178				CLIENT: 10/30/19 BID: _____ CONSTRUCTION: _____ RELEASED TO/FOR: A B C 0 1 2 3 DATE RELEASED: _____				Project Office: <b>BARR ENGINEERING CO.</b> 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com		Scale: AS SHOWN Date: 10/29/2019 Drawn: GWB/EPF Checked: GGN Designed: BARR Approved: _____		CAPITAL IMPROVEMENT PROJECT (CIP) MAINTENANCE/REPAIRS 2020 SITE 1 - PFS BASINS PAVER CLEANING/SWEEPING & BARRIER WALL REPAIR		BARR PROJECT No. 23/62-0282.37 CLIENT PROJECT No. DWG. No. C-01 REV. No. A	
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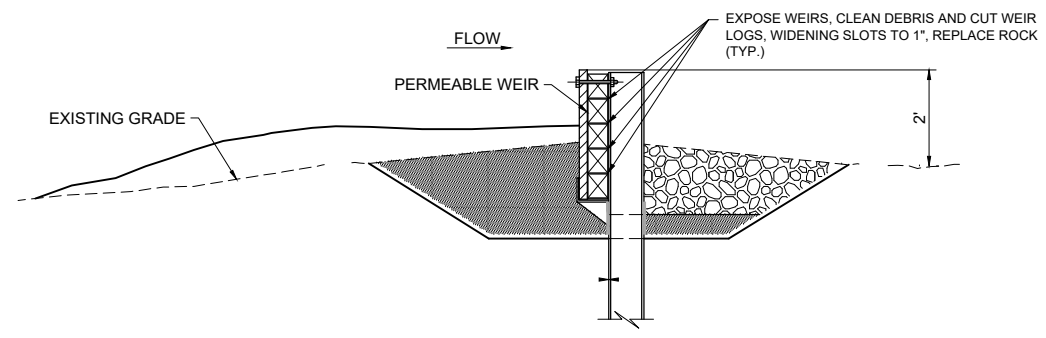


**LEGEND**

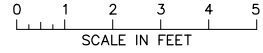
--- GAS ---	GAS LINE	---	WEIR LOCATION
--- W ---	WATER LINE	---	LOT LINE
--- SS ---	SANITARY SEWER	---	ROAD CENTERLINE
□	CATCH BASIN	---	FENCE LINE



**2 PROFILE: 5TH STREET WETLAND PERMEABLE WEIR**  
NOT TO SCALE



**3 SECTION: 5TH STREET WETLAND PERMEABLE WEIR**  
1/2"=1'-0"



**GENERAL NOTES:**

1. NOTIFY DAVE VLASIN, RAMSEY WASHINGTON METRO WATERSHED DISTRICT, AT 651-792-7972 PRIOR TO BEGINNING ANY AND ALL CONSTRUCTION ACTIVITIES TO INSPECT EROSION/SEDIMENT CONTROL PRACTICES.
2. SPECIFIED EROSION/SEDIMENT CONTROL PRACTICES SHOWN ARE THE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.
3. PARKING LOT, PATHWAYS AND ALL ASSOCIATED FACILITIES MUST BE PROTECTED. CONTRACTOR RESPONSIBLE FOR REPAIRING ALL DAMAGED CAUSED.
4. INSTALLATION OF EROSION CONTROL DEVICES SHALL BE CONDUCTED PRIOR TO ALL WORK IF WATER FLOWING THROUGH WEIRS.
5. ACCESS TO WEIRS BY FOOT ONLY.



GOPHER STATE ONE CALL:  
CALL BEFORE YOU DIG.  
1-800-252-1166

CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD-LOCATING ALL SITE UTILITIES, PRIVATE AND PUBLIC, PRIOR TO STARTING THE WORK. ALL UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER.

ISSUED FOR  
PROJECT APPROVAL

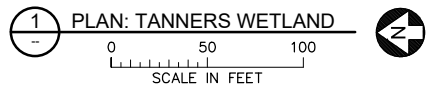
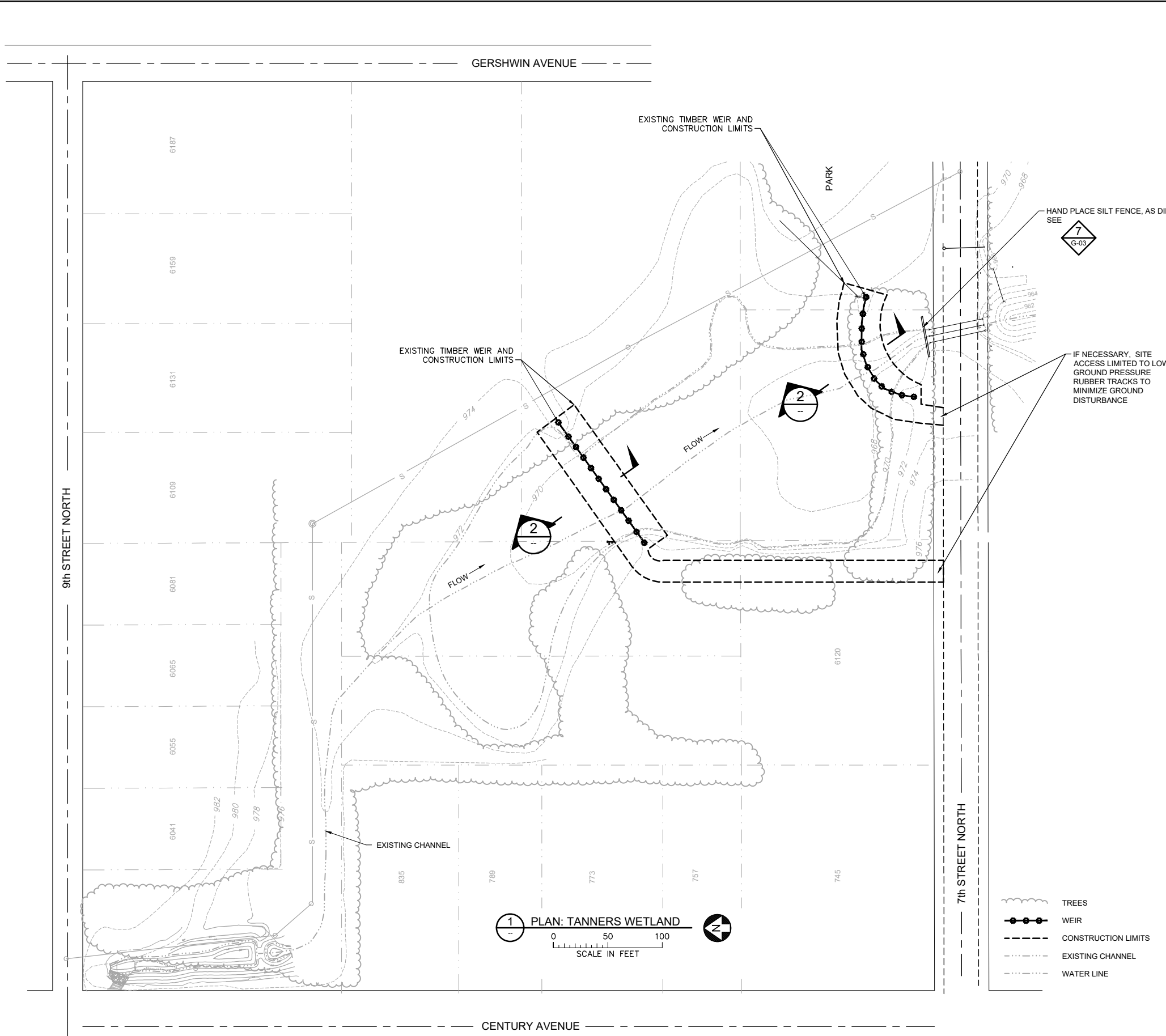
**1 PLAN: 5TH STREET WETLAND**  
SCALE IN FEET

CADD USER: Greg Nelson FILE: M:\DESIGN\236282\002\_5THST.DWG PLOT SCALE: 1:2 PLOT DATE: 10/29/2019 8:50 AM

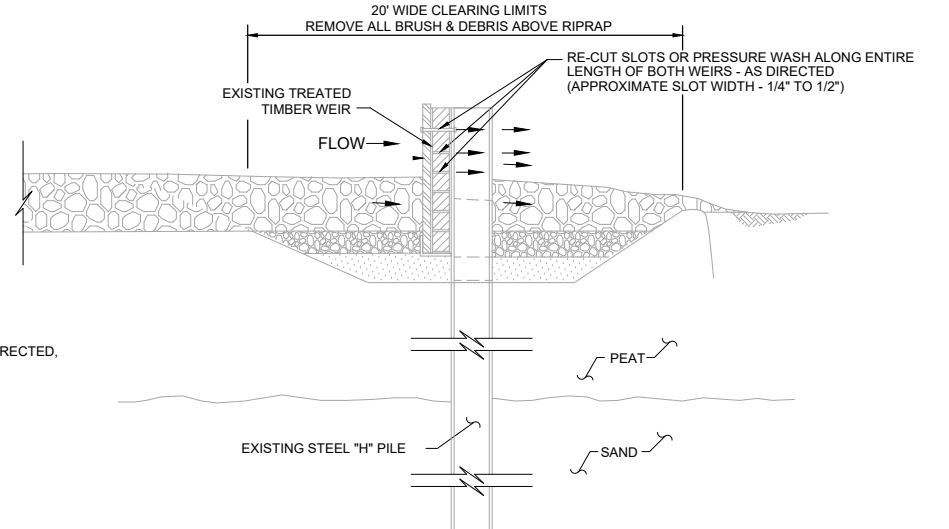
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINTED NAME: BRADLEY J. LINDAMAN SIGNATURE: _____ DATE: _____ LICENSE # 22178		CLIENT: 10/30/19 BID: _____ CONSTRUCTION: _____ RELEASED TO/FOR: _____ DATE RELEASED: _____		<b>BARR</b> Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com		Scale: AS SHOWN Date: 10/29/2019 Drawn: GWB/EPF Checked: GGN Designed: BARR Approved: _____		<b>RAMSEY-WASHINGTON</b> METRO WATERSHED DISTRICT		CAPITAL IMPROVEMENT PROJECT (CIP) MAINTENANCE/REPAIRS 2020 SITE 2 5TH STREET WETLAND WEIR MAINTENANCE		BARR PROJECT No. 23/62-0282.37 CLIENT PROJECT No. _____ DWG. No. C-02 REV. No. A	
NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION								



CADD USER: Greg Nelson FILE: M:\DESIGN\30262982\_002\3026298237\_C03\_7THSTWEIRS.DWG PLOT SCALE: 1:2 PLOT DATE: 10/29/2019 8:50 AM



- TREES
- WEIR
- CONSTRUCTION LIMITS
- EXISTING CHANNEL
- WATER LINE



**NOTE:**  
 1. BRUSH AND DEBRIS REMOVAL WITHIN CLEARING LIMITS SHALL BE CONSIDERED INCIDENTAL TO RE-CUTTING SLOTS OR PRESSURE WASHING WEIR MAINTENANCE.

**2 SECTION: EXISTING TIMBER WEIR AND RIPRAP ACCESS PAD**  
 NO SCALE

**GENERAL NOTES:**

1. NOTIFY DAVE VLASIN, RAMSEY WASHINGTON METRO WATERSHED DISTRICT, AT 651-792-7972 PRIOR TO BEGINNING ANY AND ALL CONSTRUCTION ACTIVITIES TO INSPECT EROSION/SEDIMENT CONTROL PRACTICES.
2. SPECIFIED EROSION/SEDIMENT CONTROL PRACTICES SHOWN ARE THE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.
3. CONSTRUCTION LIMITS TO BE STAKED BY ENGINEER PRIOR TO MOBILIZATION TO THIS SITE.
4. PARKING LOT, PATHWAYS AND ALL ASSOCIATED FACILITIES MUST BE PROTECTED. CONTRACTOR RESPONSIBLE FOR REPAIRING ALL DAMAGED CAUSED.
5. CONTRACTOR RESPONSIBLE TO LOCATE ALL EXISTING UTILITIES.
6. RESTORE ALL DISTURBANCE AREAS WITH NATIVE SEED (AS DIRECTED BY OWNER) AND EROSION CONTROL BLANKET.
7. INSTALLATION OF EROSION CONTROL DEVICES SHALL BE CONDUCTED PRIOR TO ALL WORK INSIDE THE WATER BODY.



**GOPHER STATE ONE CALL**  
 CALL BEFORE YOU DIG.  
 1-800-252-1166

CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD-LOCATING ALL SITE UTILITIES, PRIVATE AND PUBLIC, PRIOR TO STARTING THE WORK. ALL UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER.

**ISSUED FOR PROJECT APPROVAL**

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION

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: **BRADLEY J. LINDAMAN**  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LICENSE # 22178

CLIENT	BID	CONSTRUCTION	RELEASED TO/FOR	DATE RELEASED
10/30/19				

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

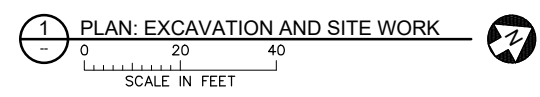
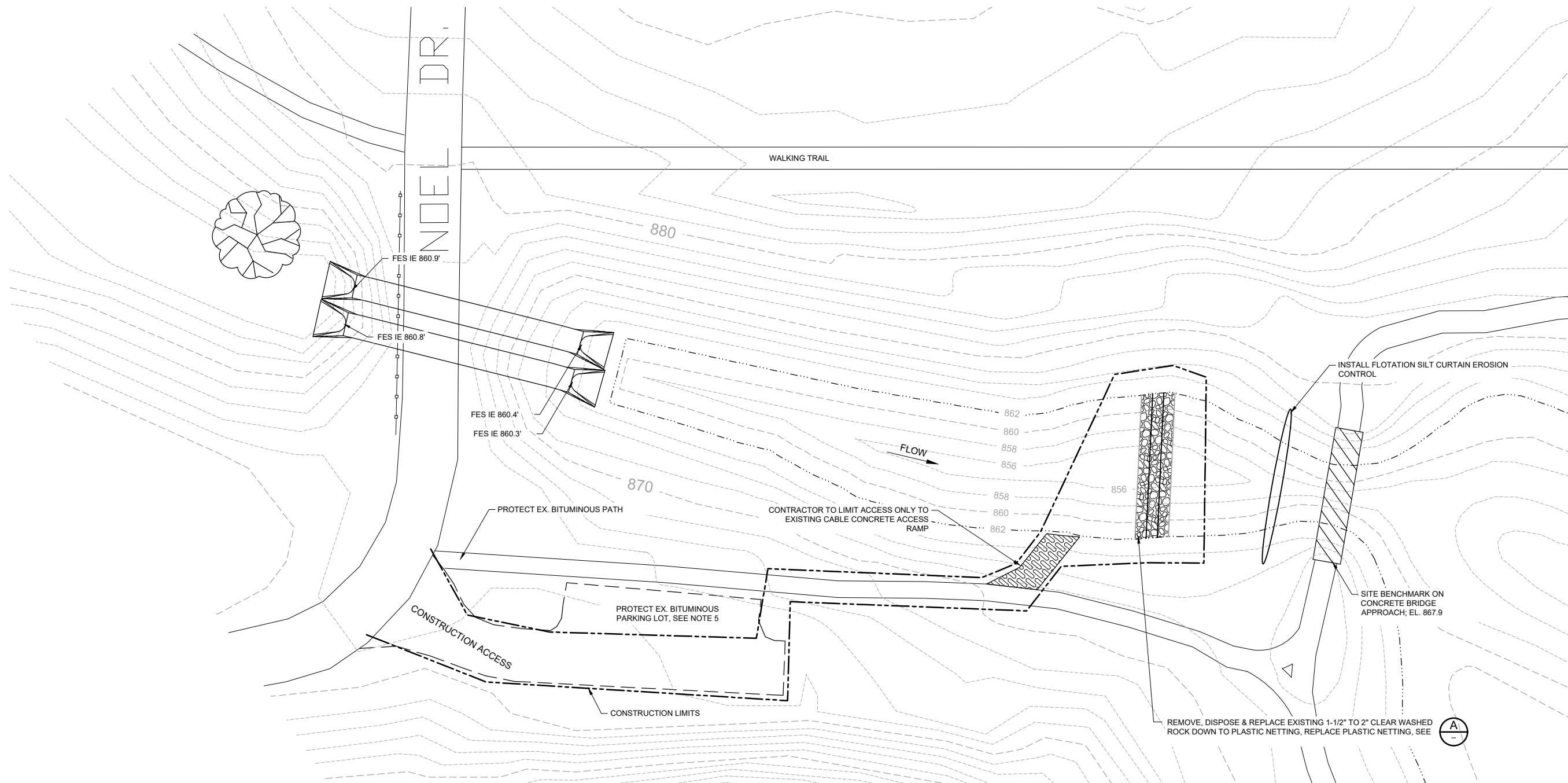
Scale	AS SHOWN
Date	10/29/2019
Drawn	GW/EFP
Checked	GGN
Designed	BARR
Approved	



**CAPITAL IMPROVEMENT PROJECT (CIP) MAINTENANCE/REPAIRS 2020**  
 SITE 3  
 TANNERS WETLAND WEIR MAINTENANCE

BARR PROJECT No.	23/62-0282.37
CLIENT PROJECT No.	
DWG. No.	C-03
REV. No.	A

CADD USER: Greg Nelson FILE: M:\DESIGN\23620282\_00\23620282\_00\_CIP\_GERVAISFILTER.DWG PLOT SCALE: 1:2 PLOT DATE: 10/30/2019 8:50 AM

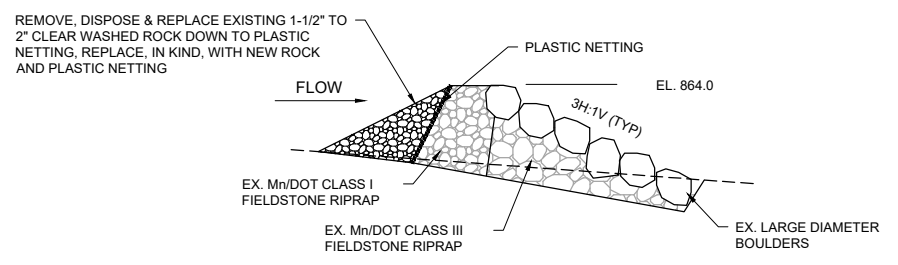


- NOTES:**
1. INSTALLATION OF EROSION CONTROL DEVICES SHALL BE CONDUCTED PRIOR TO ALL WORK INSIDE THE WATER BODY.
  2. CONTRACTOR RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS OUTSIDE OF CONSTRUCTION LIMITS. ONLY AREAS WITHIN LIMITS WILL BE CONSIDERED FOR PAYMENT.
  3. RESTORE ALL DISTURBED AREAS WITH SEED AND EROSION CONTROL BLANKET AS DIRECTED BY OWNER.
  4. NO PARKING ON NOEL DRIVE WITHOUT APPROVAL FROM THE CITY OF LITTLE CANADA PUBLIC WORKS DEPT.
  5. EXISTING BITUMINOUS PARKING LOT RESURFACED IN 2018. CURB & GUTTER, BITUMINOUS PARKING LOT, AND WALKING PATH TO BE PROTECTED DURING WORK. CONTRACTOR RESPONSIBLE FOR ANY DAMAGE FOUND, INCLUDING SURFACE SCUFFING AND SCRAPING.
  6. SITE IS LOCATED IMMEDIATELY NORTHEAST OF THE RAMSEY WASHINGTON METRO WATERSHED DISTRICT OFFICES AT 2665 NOEL DRIVE, LITTLE CANADA, MN.



GOPHER STATE ONE CALL:  
CALL BEFORE YOU DIG.  
1-800-252-1166

CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD-LOCATING ALL SITE UTILITIES, PRIVATE AND PUBLIC, PRIOR TO STARTING THE WORK. ALL UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER.



**A SECTION: EX. PERMANENT SEDIMENT CONTROL DIKE**  
SCALE IN FEET

ISSUED FOR  
PROJECT APPROVAL

					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: BRADLEY J. LINDAMAN SIGNATURE: _____ DATE: _____ LICENSE # 22178					CLIENT: 10/30/19 BID: _____ CONSTRUCTION: _____ RELEASED TO/FOR: _____ DATE RELEASED: _____					<b>BARR</b> Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com					Scale: AS SHOWN Date: 10/29/2019 Drawn: GWB/EPF Checked: GGN Designed: BARR Approved: _____					CAPITAL IMPROVEMENT PROJECT (CIP) MAINTENANCE/REPAIRS 2020 SITE 4 GERVAIS MILL POND FILTER MAINTENANCE					BARR PROJECT No. 23/62-0282.37 CLIENT PROJECT No. _____ DWG. No. C-04 REV. No. A				
NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION																													

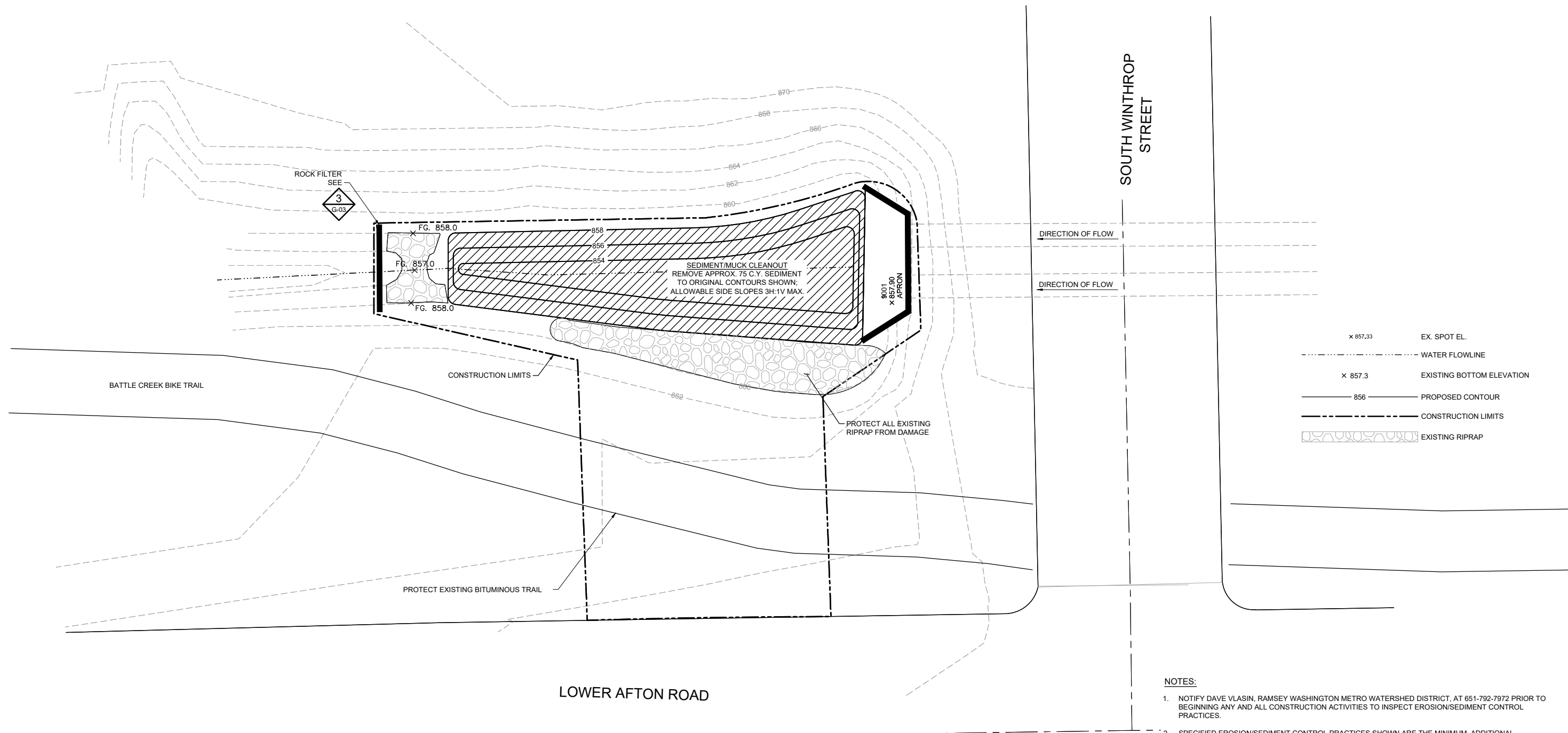
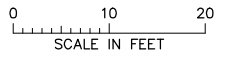
CADD USER: Greg Nelson; FILE: M:\DESIGN\236282\236282\_001\LOWERAFTON\_WINTHROP.DWG PLOT SCALE: 1:2 PLOT DATE: 10/30/2019 8:51 AM



**GOPHER STATE ONE CALL**  
 CALL BEFORE YOU DIG.  
 1-800-252-1166

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**1 PLAN: LOWER AFTEON ROAD DRAINAGEWAY SEDIMENT EXCAVATION**



- x 857.33 EX. SPOT EL.
- WATER FLOWLINE
- x 857.3 EXISTING BOTTOM ELEVATION
- PROPOSED CONTOUR
- CONSTRUCTION LIMITS
- [Pattern] EXISTING RIPRAP

**NOTES:**

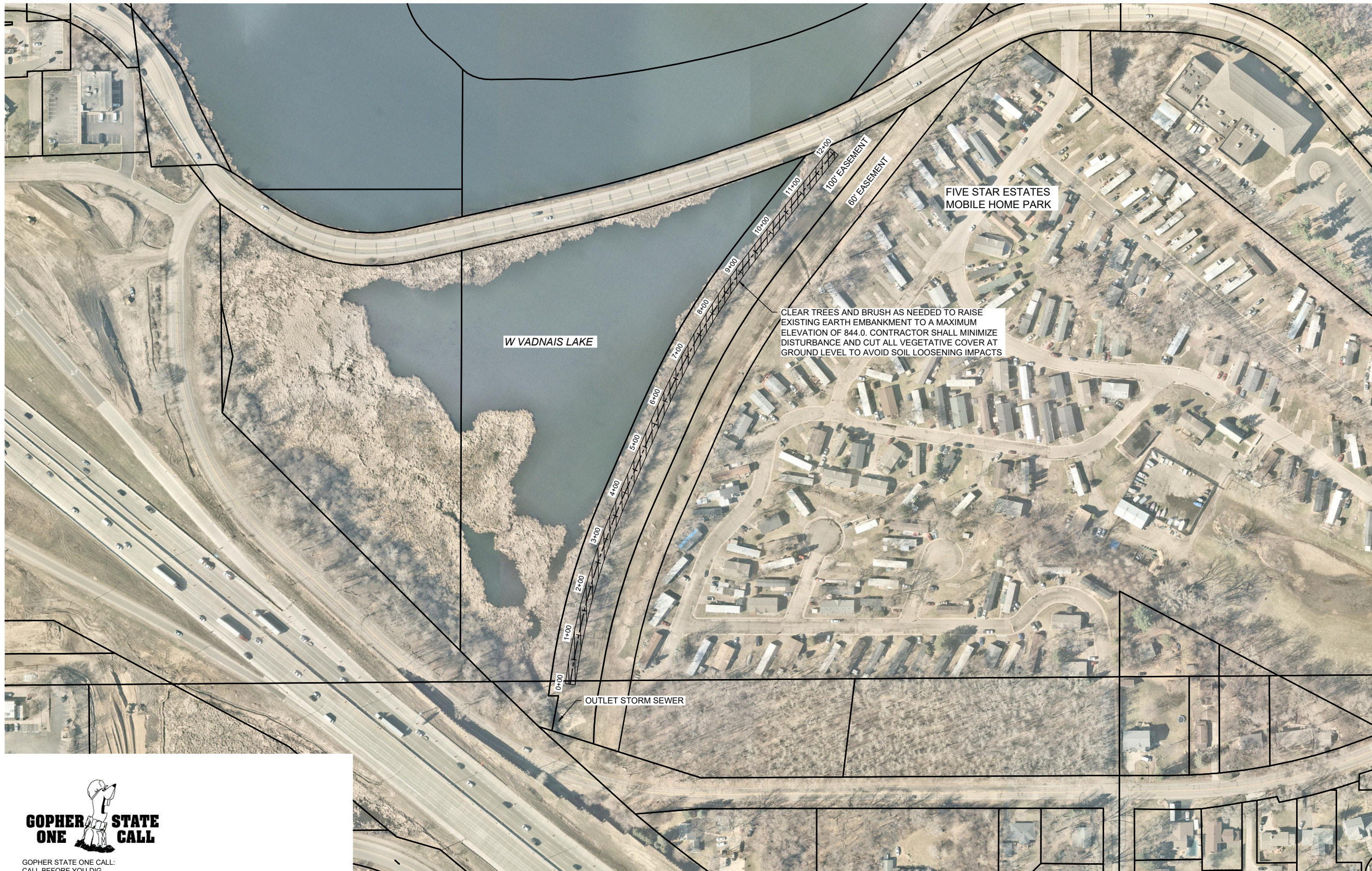
1. NOTIFY DAVE VLASIN, RAMSEY WASHINGTON METRO WATERSHED DISTRICT, AT 651-792-7972 PRIOR TO BEGINNING ANY AND ALL CONSTRUCTION ACTIVITIES TO INSPECT EROSION/SEDIMENT CONTROL PRACTICES.
2. SPECIFIED EROSION/SEDIMENT CONTROL PRACTICES SHOWN ARE THE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND FIELD VERIFYING ALL UTILITIES.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS. ONLY RESTORATION
5. ONLY AREAS WITHIN THE CONSTRUCTION LIMITS WILL BE CONSIDERED FOR PAYMENT.
6. RESTORE DISTURBED SLOPES WITH NATIVE SEED (AS DIRECTED BY OWNER) AND STRAW MULCH BLANKET.

ISSUED FOR  
 PROJECT APPROVAL

				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.				CLIENT 10/30/19				Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435				Scale AS SHOWN		CAPITAL IMPROVEMENT PROJECT (CIP) MAINTENANCE/REPAIRS 2020				BARR PROJECT No. 23/62-0282.37	
				PRINTED NAME BRADLEY J. LINDAMAN				CONSTRUCTION				Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com				Date 10/29/2019						CLIENT PROJECT No.	
				SIGNATURE				RELEASED TO/FOR				Phased Release Schedule: A B C 0 1 2 3				Checked GGN		SITE 5 - LOWER AFTEON ROAD DRAINAGEWAY SEDIMENT REMOVAL				DWG. No. C-05	
NO.				BY				DATE				DATE RELEASED				Designed BARR						REV. No. A	

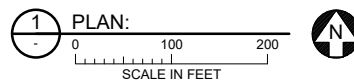


CADD USER: Greg Nelson FILE: M:\DESIGN\230228237\_CON\_WVADNAI\_EMB.DWG PLOT SCALE: 1:2 PLOT DATE: 10/30/2019 8:51 AM



**GOPHER STATE ONE CALL**  
 CALL BEFORE YOU DIG.  
 1-800-252-1166

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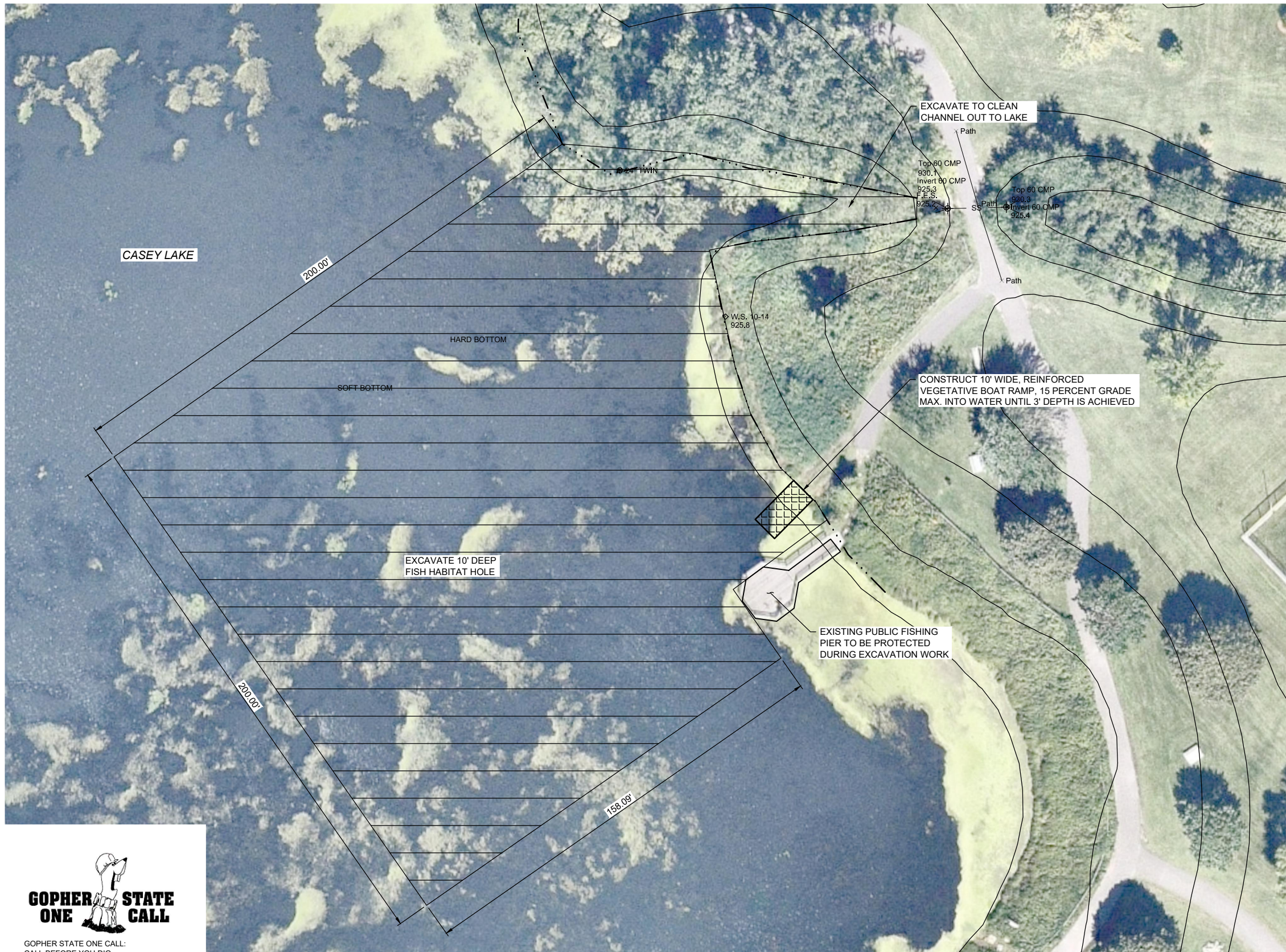


ISSUED FOR  
PROJECT APPROVAL

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NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION																													







**SURVEY LEGEND**

- ⊕ SURVEY MONUMENT
- ⊕ FOUND IRON PIPE
- ⊕ GPS CONTROL POINT
- ⊕ VERTICAL BENCHMARK
- ⊕ CONTROL HUB \ LATH
- ⊕ DOWNSPOUT
- ⊕ POWER POLE
- ⊕ GUY WIRE
- ⊕ LIGHT POLE
- ⊕ HYDRANT
- ⊕ GATE VALVE
- ⊕ SIGN POST
- ⊕ DECIDUOUS TREE
- ⊕ CONIFEROUS TREE
- ⊕ SANITARY MANHOLE
- ⊕ STORM SEWER MANHOLE
- ⊕ FIBER OPTIC BOX
- ⊕ ELECTRICAL BOX
- ⊕ COMMUNICATIONS BOX
- ⊕ MONITORING WELL
- ⊕ SOIL BORING
- ⊕ STAFF GAGE
- ⊕ PIZOMETER
- x — x — PROPERTY LINE
- x — x — FENCE LINE
- x — x — BACK OF CURB LINE
- x — x — FLOW LINE
- x — x — CENTER LINE
- GAS — GAS — GAS LINE
- UE — UE — UNDERGROUND ELECTRIC
- FO — FO — FIBER OPTIC LINE
- SAN — SAN — SANITARY SEWER LINE
- SS — SS — STORM SEWER LINE
- ⊗ BATHYMETRIC POINTS
- 800 — MAJOR CONTOUR
- 801 — MINOR CONTOUR
- ··· — WATER'S EDGE
- ··· — SOFT TO HARD BOTTOM CHANGE

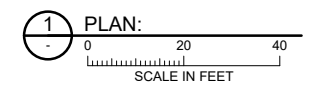
NOTE:  
 1) BOTTOM CHANGED FROM A SAND BOTTOM TO WEEDS AND SOFT BOTTOM.  
 2) NO DELTA IN AREA. BOTTOM WAS JUST A SAND/SILT

**BASIS OF DRAWING FILE:**  
 DATE OF SURVEY: 2019-10-14  
 ORIGIN/DATE OF BASE: RAMSEY COUNTY/2019  
 COORDINATE SYSTEM: RAMSEY COUNTY  
 HORIZONTAL DATUM: NAD83 (2011) REF. VRS SYSTEM  
 VERTICAL DATUM: NAVD88 REF. VRS SYSTEM  
 ADDITIONAL FILE INFORMATION:



**GOPHER STATE ONE CALL**  
 CALL BEFORE YOU DIG.  
 1-800-252-1166

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NOTE:  
 POND EXCAVATION SLOPES AND DEPTHS TO BE REVIEWED AND APPROVED BY CITY STAFF PRIOR TO FINAL DRAWINGS FOR CONSTRUCTION

ISSUED FOR PROJECT APPROVAL

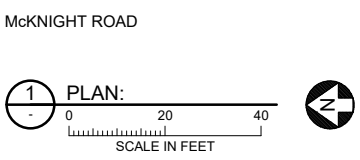
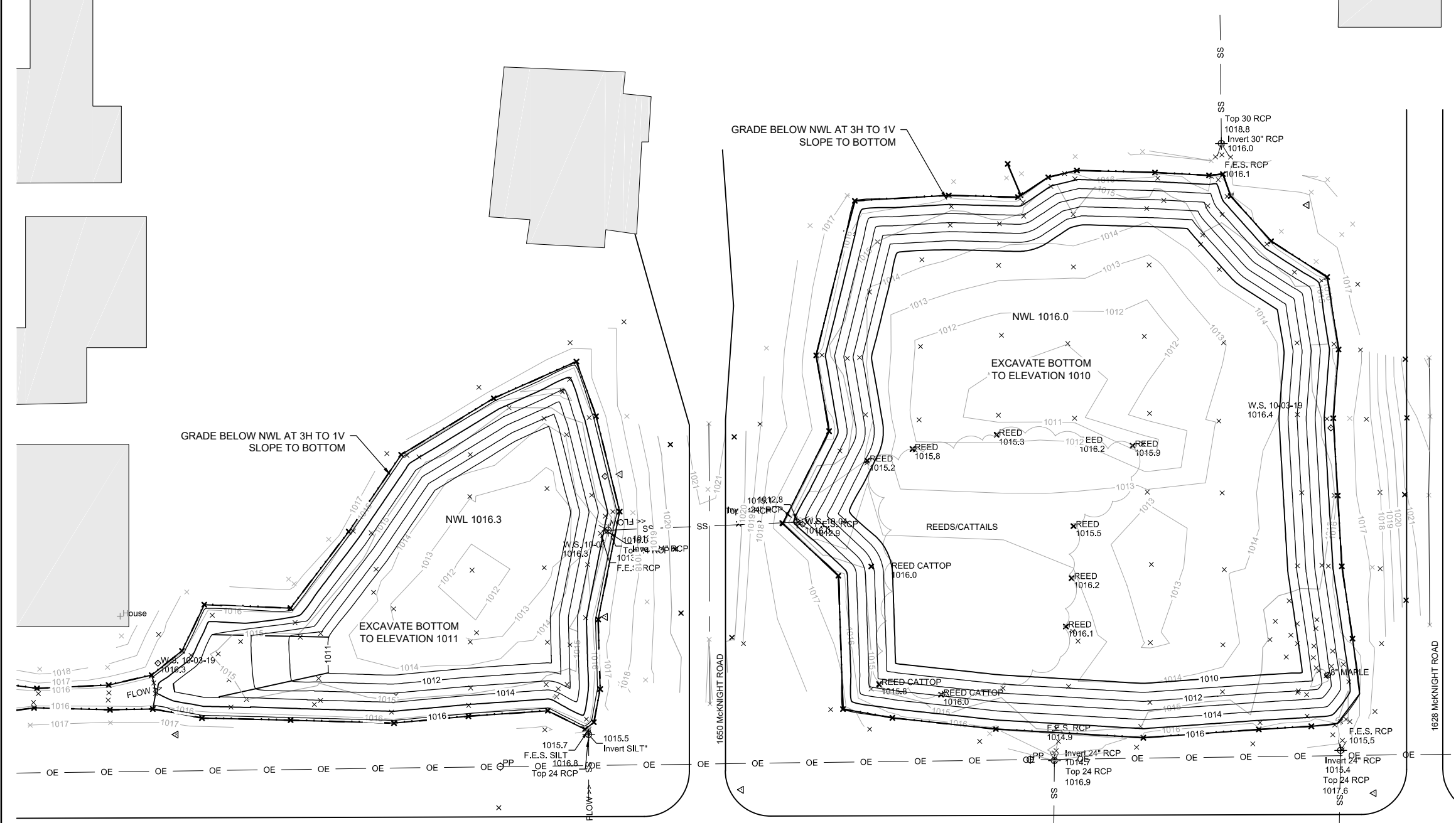
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NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION	A	B	C	0	1	2	3	SITE 7 CASEY LAKE SEDIMENT REMOVAL										

CADD USER: Greg Nelson FILE: M:\DESIGN\230282\230282\_003\CASEY\_LK\_SED\_REM.DWG PLOT SCALE: 1:2 PLOT DATE: 10/30/2019 8:51 AM



**SURVEY LEGEND**

- ⊙ SURVEY MONUMENT
- ⊕ FOUND IRON PIPE
- ⊕ GPS CONTROL POINT
- ⊕ VERTICAL BENCHMARK
- ⊕ CONTROL HUB \ LATH
- ⊕ DOWNSPOUT
- ⊕ POWER POLE
- ⊕ GUY WIRE
- ⊕ LIGHT POLE
- ⊕ HYDRANT
- ⊕ GATE VALVE
- ⊕ SIGN POST
- ⊕ DECIDUOUS TREE
- ⊕ CONIFEROUS TREE
- ⊕ SANITARY MANHOLE
- ⊕ STORM SEWER MANHOLE
- ⊕ FIBER OPTIC BOX
- ⊕ ELECTRICAL BOX
- ⊕ COMMUNICATIONS BOX
- ⊕ MONITORING WELL
- ⊕ SOIL BORING
- ⊕ STAFF GAGE
- ⊕ PIZOMETER
- X — X — PROPERTY LINE
- X — X — FENCE LINE
- — — — — BACK OF CURB LINE
- — — — — FLOW LINE
- — — — — CENTER LINE
- — — — — GAS LINE
- — — — — UNDERGROUND ELECTRIC
- — — — — FIBER OPTIC LINE
- — — — — SANITARY SEWER LINE
- — — — — STORM SEWER LINE
- 800 — MAJOR CONTOUR
- 801 — MINOR CONTOUR
- — — — — WATER'S EDGE
- — — — — GRID LINES (25')



**NOTE:**  
POND EXCAVATION SLOPES AND DEPTHS TO BE REVIEWED AND APPROVED BY CITY STAFF PRIOR TO FINAL DRAWINGS FOR CONSTRUCTION

**BASIS OF DRAWING FILE:**  
 DATE OF SURVEY:  
 ORIGIN/DATE OF BASE:  
 COORDINATE SYSTEM: EXAMPLE-Minnesota State Plane, North Zone  
 HORIZONTAL DATUM: EXAMPLE-NAD83  
 VERTICAL DATUM: EXAMPLE-North American Vertical Datum of 1988  
 ADDITIONAL FILE INFORMATION:



**GOPHER STATE ONE CALL**  
 CALL BEFORE YOU DIG.  
 1-800-252-1166

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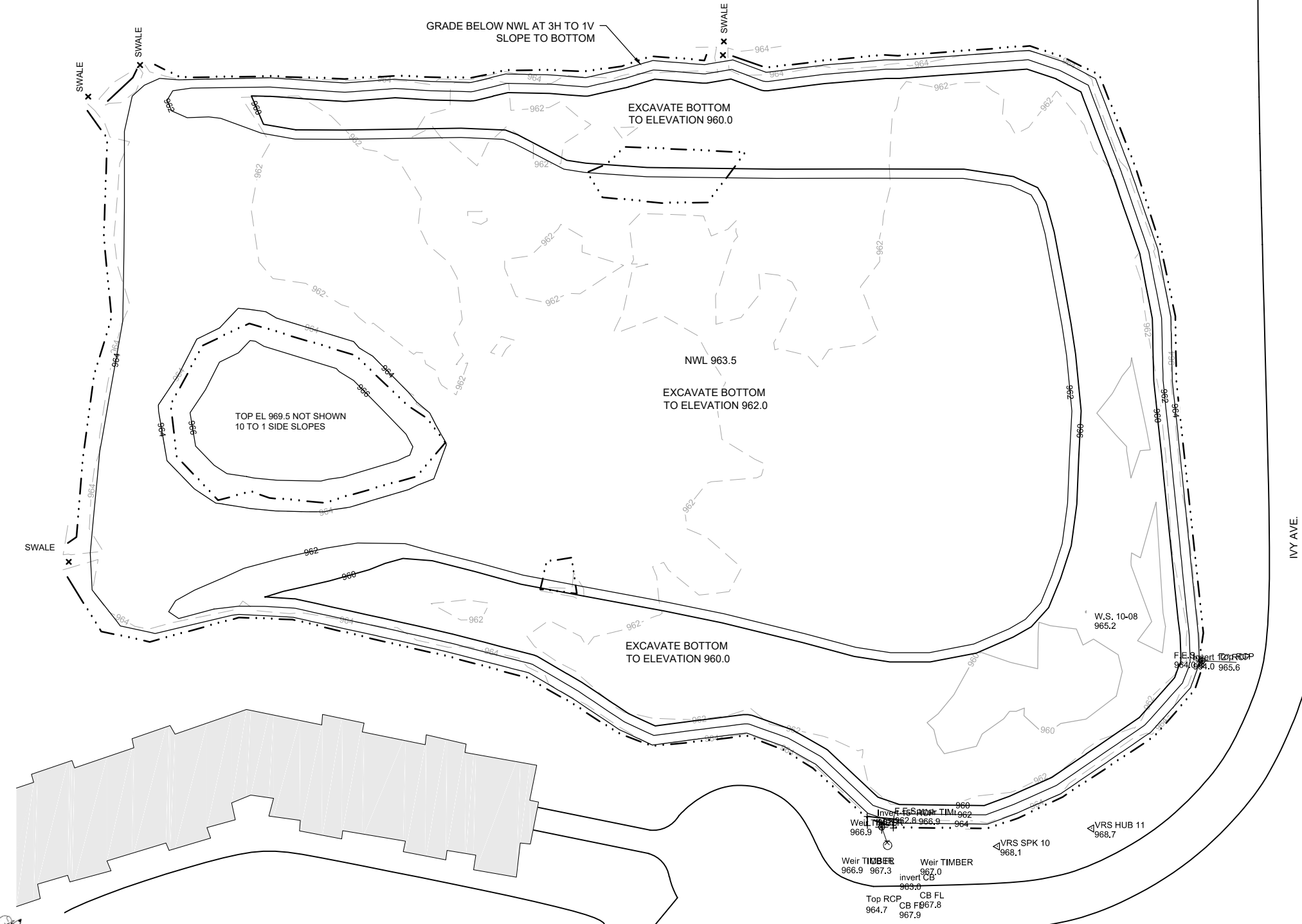
ISSUED FOR  
PROJECT APPROVAL

CADD USER: Greg Nelson FILE: M:\DESIGN\23620282\_01\23620282\_01\_MCKNIGHT.DWG PLOT SCALE: 1:2 PLOT DATE: 10/30/2019 8:52 AM

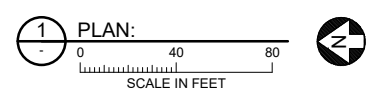
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NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION																										

# SURVEY LEGEND

- SURVEY MONUMENT
  - FOUND IRON PIPE
  - GPS CONTROL POINT
  - VERTICAL BENCHMARK
  - CONTROL HUB \ LATH
  - DOWNSPOUT
  - POWER POLE
  - GUY WIRE
  - LIGHT POLE
  - HYDRANT
  - GATE VALVE
  - SIGN POST
  - DECIDUOUS TREE
  - CONIFEROUS TREE
  - SANITARY MANHOLE
  - STORM SEWER MANHOLE
  - FIBER OPTIC BOX
  - ELECTRICAL BOX
  - COMMUNICATIONS BOX
  - MONITORING WELL
  - SOIL BORING
  - STAFF GAGE
  - PIZOMETER
- 
- PROPERTY LINE
  - FENCE LINE
  - BACK OF CURB LINE
  - FLOW LINE
  - CENTER LINE
- 
- GAS LINE
  - UNDERGROUND ELECTRIC
  - FIBER OPTIC LINE
  - SANITARY SEWER LINE
  - STORM SEWER LINE
- 
- BATHYMETRIC POINTS
- 
- MAJOR CONTOUR
  - MINOR CONTOUR
  - WATER'S EDGE
  - GRID LINES (50')



GOPHER STATE ONE CALL:  
CALL BEFORE YOU DIG.  
1-800-252-1166



**NOTE:**  
POND EXCAVATION SLOPES AND DEPTHS TO BE REVIEWED AND APPROVED BY CITY STAFF PRIOR TO FINAL DRAWINGS FOR CONSTRUCTION

BASIS OF DRAWING FILE:	
DATE OF SURVEY:	2019-10-08
ORIGIN/DATE OF BASE:	RAMSEY COUNTY/2019
COORDINATE SYSTEM:	RAMSEY COUNTY
HORIZONTAL DATUM:	NAD83 (2011) REF. VRS SYSTEM
VERTICAL DATUM:	NAVD88 REF. VRS SYSTEM
ADDITIONAL FILE INFORMATION:	

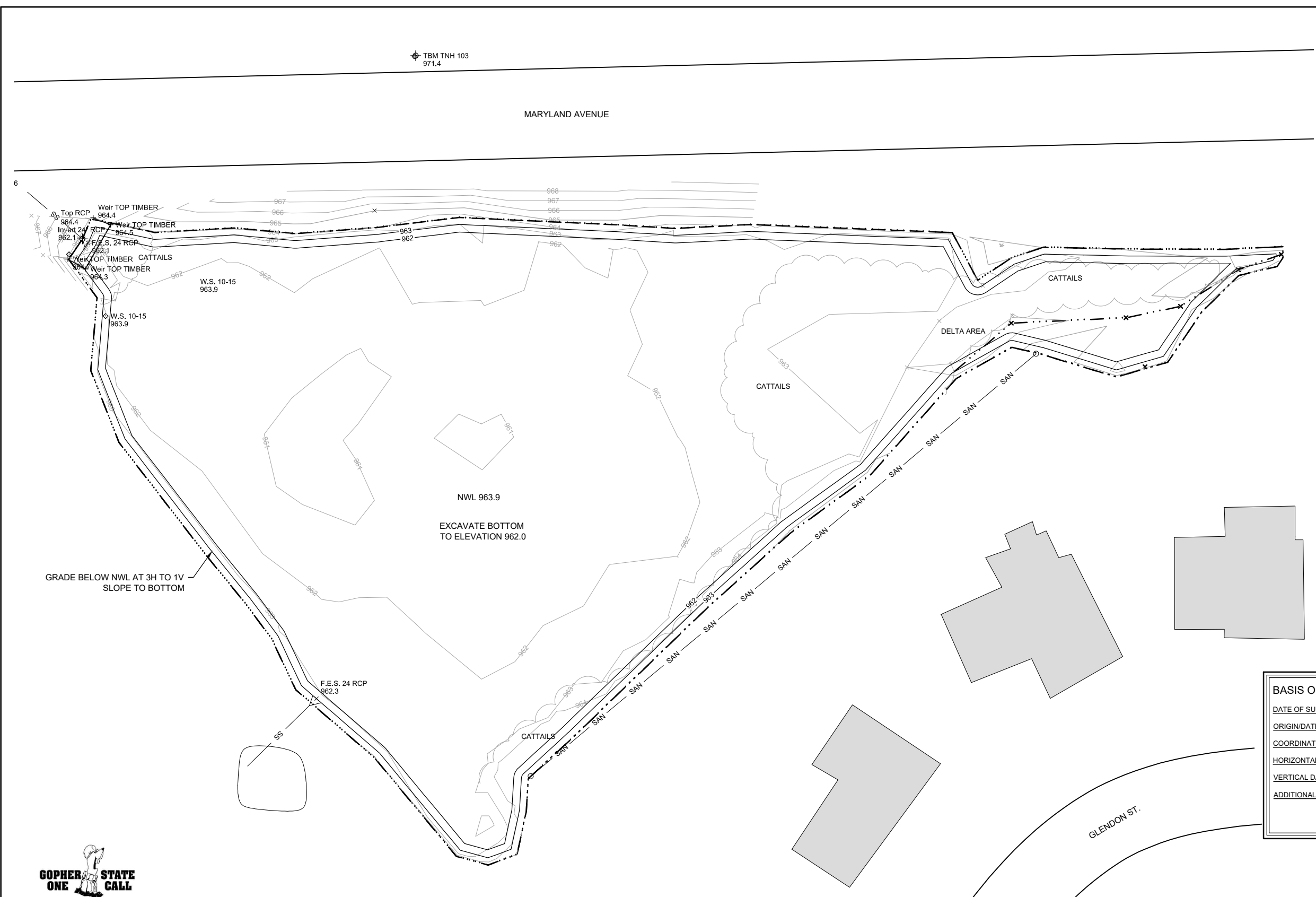
ISSUED FOR  
PROJECT APPROVAL

CADD USER: Greg Nelson FILE: M:\DESIGN\23028237\_CIP\_09\_IVY.DWG PLOT SCALE: 1:1 PLOT DATE: 10/30/2019 8:52 AM

				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.				CLIENT BID CONSTRUCTION				10/30/19				Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com				Scale AS SHOWN		CAPITAL IMPROVEMENT PROJECT (CIP) MAINTENANCE/REPAIRS 2020 SITE 9 MAPLEWOOD POND CLEANOUT - IVY				BARR PROJECT No. 23/62-0282.37			
PRINTED NAME BRADLEY J. LINDAMAN				RELEASED TO/FOR				DATE RELEASED				Date 10/30/2019		CLIENT PROJECT No.															
SIGNATURE												Checked GGN		DWG. No. C-09															
DATE												Designed BARR		REV. No. A															
NO.				BY				CHK.				APP.				DATE													

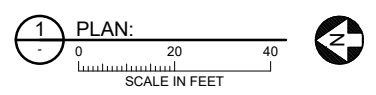
**SURVEY LEGEND**

- ⊙ SURVEY MONUMENT
- ⊕ FOUND IRON PIPE
- ⊕ GPS CONTROL POINT
- ⊕ VERTICAL BENCHMARK
- ⊕ CONTROL HUB \ LATH
- ⊕ DOWNSPOUT
- ⊕ POWER POLE
- ⊕ GUY WIRE
- ⊕ LIGHT POLE
- ⊕ HYDRANT
- ⊕ GATE VALVE
- ⊕ SIGN POST
- ⊕ DECIDUOUS TREE
- ⊕ CONIFEROUS TREE
- ⊕ SANITARY MANHOLE
- ⊕ STORM SEWER MANHOLE
- ⊕ FIBER OPTIC BOX
- ⊕ ELECTRICAL BOX
- ⊕ COMMUNICATIONS BOX
- ⊕ MONITORING WELL
- ⊕ SOIL BORING
- ⊕ STAFF GAGE
- ⊕ PIZOMETER
- — — — — PROPERTY LINE
- — — — — FENCE LINE
- — — — — BACK OF CURB LINE
- — — — — FLOW LINE
- — — — — CENTER LINE
- — — — — GAS LINE
- — — — — UNDERGROUND ELECTRIC
- — — — — FIBER OPTIC LINE
- — — — — SANITARY SEWER LINE
- — — — — STORM SEWER LINE
- ⊗ BATHYMETRIC POINTS
- — — — — MAJOR CONTOUR
- — — — — MINOR CONTOUR
- — — — — WATER'S EDGE



GOPHER STATE ONE CALL:  
CALL BEFORE YOU DIG.  
1-800-252-1166

CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD-LOCATING ALL SITE UTILITIES, PRIVATE AND PUBLIC, PRIOR TO STARTING THE WORK. ALL UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER.



**NOTE:**  
POND EXCAVATION SLOPES AND DEPTHS TO BE REVIEWED AND APPROVED BY CITY STAFF PRIOR TO FINAL DRAWINGS FOR CONSTRUCTION

<b>BASIS OF DRAWING FILE:</b>	
DATE OF SURVEY:	2019-10-15
ORIGIN/DATE OF BASE:	RAMSEY COUNTY/2019
COORDINATE SYSTEM:	RAMSEY COUNTY
HORIZONTAL DATUM:	NAD83 (2011) REF. VRS SYSTEM
VERTICAL DATUM:	NAVD88 REF. VRS SYSTEM
ADDITIONAL FILE INFORMATION:	

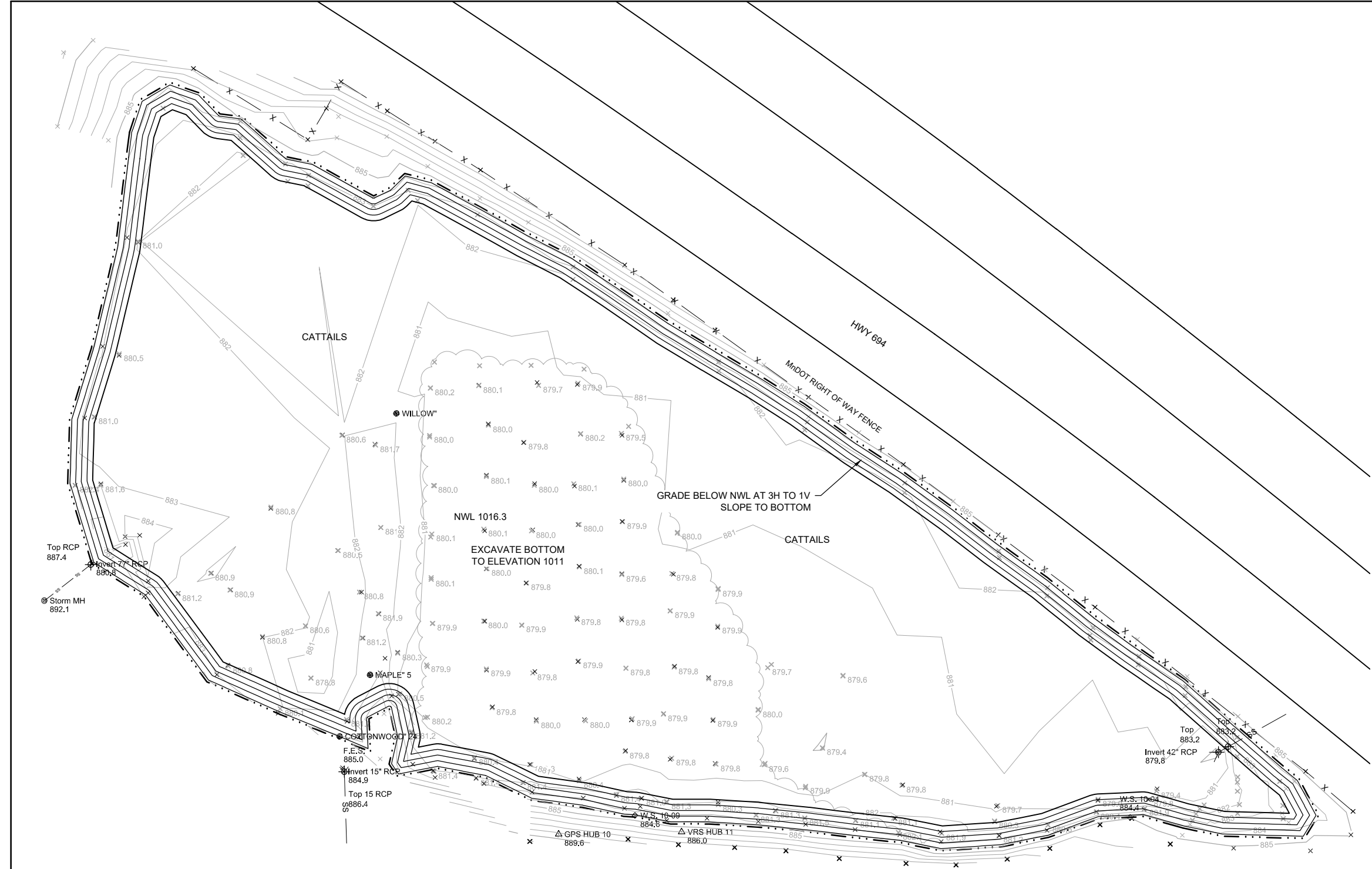
ISSUED FOR  
PROJECT APPROVAL

CADD USER: Greg Nelson FILE: \\LDES\IGN\23620282\_01\23620282\_37\_C10\_MW\_MARYLAND.DWG PLOT SCALE: 1:2 PLOT DATE: 10/30/2019 8:52 AM

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: BRADLEY J. LINDAMAN SIGNATURE: _____ DATE: _____ LICENSE # 22178		CLIENT: 10/30/19 BID: _____ CONSTRUCTION: _____ RELEASED TO/FOR: A B C 0 1 2 3 DATE RELEASED: _____	<b>BARR</b> Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com	Scale: AS SHOWN Date: 10/30/2019 Drawn: GWB/EPF Checked: GGN Designed: BARR Approved: _____	<b>RAMSEY-WASHINGTON</b> METRO WATERSHED DISTRICT	CAPITAL IMPROVEMENT PROJECT (CIP) SITE 10 MAPLEWOOD POND CLEANOUT - MARYLAND	BARR PROJECT No. 23/62-0282.37 CLIENT PROJECT No. DWG. No. C-10 REV. No. A
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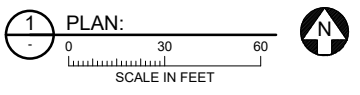
CADD USER: Greg Nelson FILE: \\MDES\IGN\23620282\_01\23620282\_01\_C11\_SV\_STAHL.DWG PLOT SCALE: 1:2 PLOT DATE: 10/30/2019 8:52 AM



**SURVEY LEGEND**

- ⊙ SURVEY MONUMENT
- ⊕ FOUND IRON PIPE
- ⊕ GPS CONTROL POINT
- ⊕ VERTICAL BENCHMARK
- ⊕ CONTROL HUB \ LATH
- ⊕ DOWNSPOUT
- ⊕ POWER POLE
- ⊕ GUY WIRE
- ⊕ LIGHT POLE
- ⊕ HYDRANT
- ⊕ GATE VALVE
- ⊕ SIGN POST
- DECIDUOUS TREE
- CONIFEROUS TREE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
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- COMMUNICATIONS BOX
- ⊕ MONITORING WELL
- ⊕ SOIL BORING
- ⊕ STAFF GAGE
- ⊕ PIZOMETER
- X — X — PROPERTY LINE
- X — X — FENCE LINE
- — — — — BACK OF CURB LINE
- — — — — FLOW LINE
- — — — — CENTER LINE
- GAS — GAS — GAS LINE
- UE — UE — UNDERGROUND ELECTRIC
- FO — FO — FIBER OPTIC LINE
- SAN — SAN — SANITARY SEWER LINE
- SS — SS — STORM SEWER LINE
- × BATHYMETRIC POINTS
- 800 — MAJOR CONTOUR
- 801 — MINOR CONTOUR
- ····· — WATER'S EDGE

**BASIS OF DRAWING FILE:**  
 DATE OF SURVEY: 2019-10-04 & 09  
 ORIGIN/DATE OF BASE: RAMSEY COUNTY/2019  
 COORDINATE SYSTEM: RAMSEY COUNTY  
 HORIZONTAL DATUM: NAD83 (2011) REF. VRS SYSTEM  
 VERTICAL DATUM: NAVD88 REF. VRS SYSTEM  
 ADDITIONAL FILE INFORMATION:



**NOTE:**  
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GOPHER STATE ONE CALL  
 CALL BEFORE YOU DIG.  
 1-800-252-1166

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ISSUED FOR  
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NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION	A	B	C	0	1	2	3	RAMSEY-WASHINGTON METRO WATERSHED DISTRICT											

### SURVEY LEGEND

- ⊗ SURVEY MONUMENT
- ⊕ FOUND IRON PIPE
- ⊕ GPS CONTROL POINT
- ⊕ VERTICAL BENCHMARK
- ⊕ CONTROL HUB \ LATH
- ⊕ DOWNSPOUT
- ⊕ POWER POLE
- ⊕ GUY WIRE
- ⊕ LIGHT POLE
- ⊕ HYDRANT
- ⊕ GATE VALVE
- ⊕ SIGN POST
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- ⊕ COMMUNICATIONS BOX
- ⊕ MONITORING WELL
- ⊕ SOIL BORING
- ⊕ STAFF GAGE
- ⊕ PIZOMETER
- X — X — PROPERTY LINE
- X — X — FENCE LINE
- X — X — BACK OF CURB LINE
- X — X — FLOW LINE
- X — X — CENTER LINE
- GAS — GAS — GAS LINE
- UE — UE — UNDERGROUND ELECTRIC
- FO — FO — FIBER OPTIC LINE
- SAN — SAN — SANITARY SEWER LINE
- SS — SS — STORM SEWER LINE
- ⊗ BATHYMETRIC POINTS
- 800 — MAJOR CONTOUR
- 801 — MINOR CONTOUR
- ··· — WATER'S EDGE
- ··· — GRID LINES (25')

CONTROL POINTS				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
2	VRS SPK 2	895.94	203908.3242	571501.0775
101	TP SPK 101	896.48	203880.4832	571501.0825

**BASIS OF DRAWING FILE:**

DATE OF SURVEY: 2019-09 19&20

ORIGIN/DATE OF BASE: RAMSEY COUNTY/2019

COORDINATE SYSTEM: RAMSEY COUNTY

HORIZONTAL DATUM: NAD83 (2011) REF. VRS SYSTEM

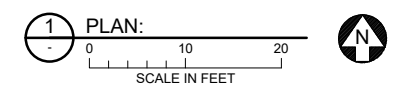
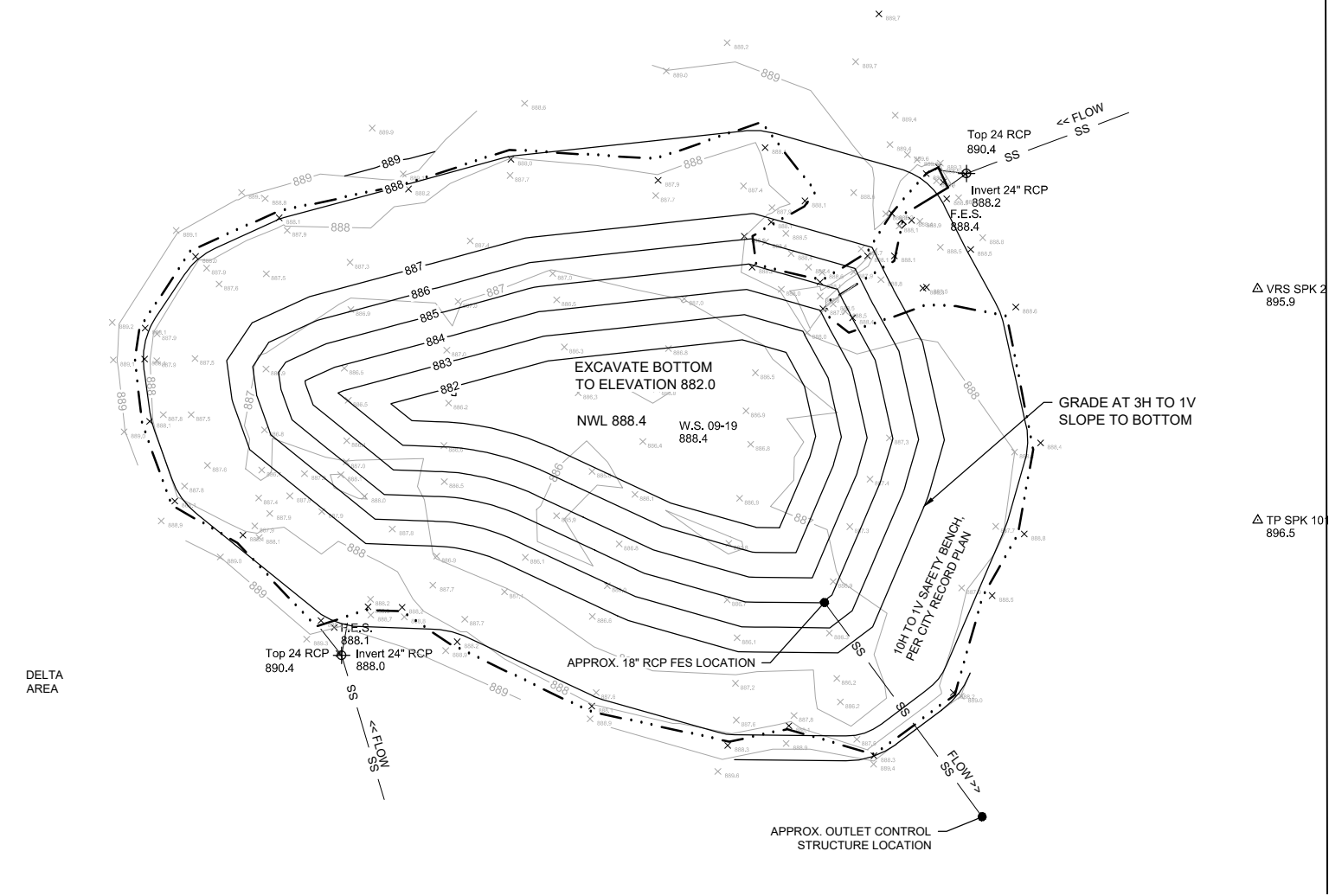
VERTICAL DATUM: NAVD88 REF. VRS SYSTEM

ADDITIONAL FILE INFORMATION:

BATHYMETRY SURVEY: JFN

SET 2 CONTROL POINTS GPS 2 AND 101

ROBOT SURVEY W/TOPCON PS STATION



**NOTE:**  
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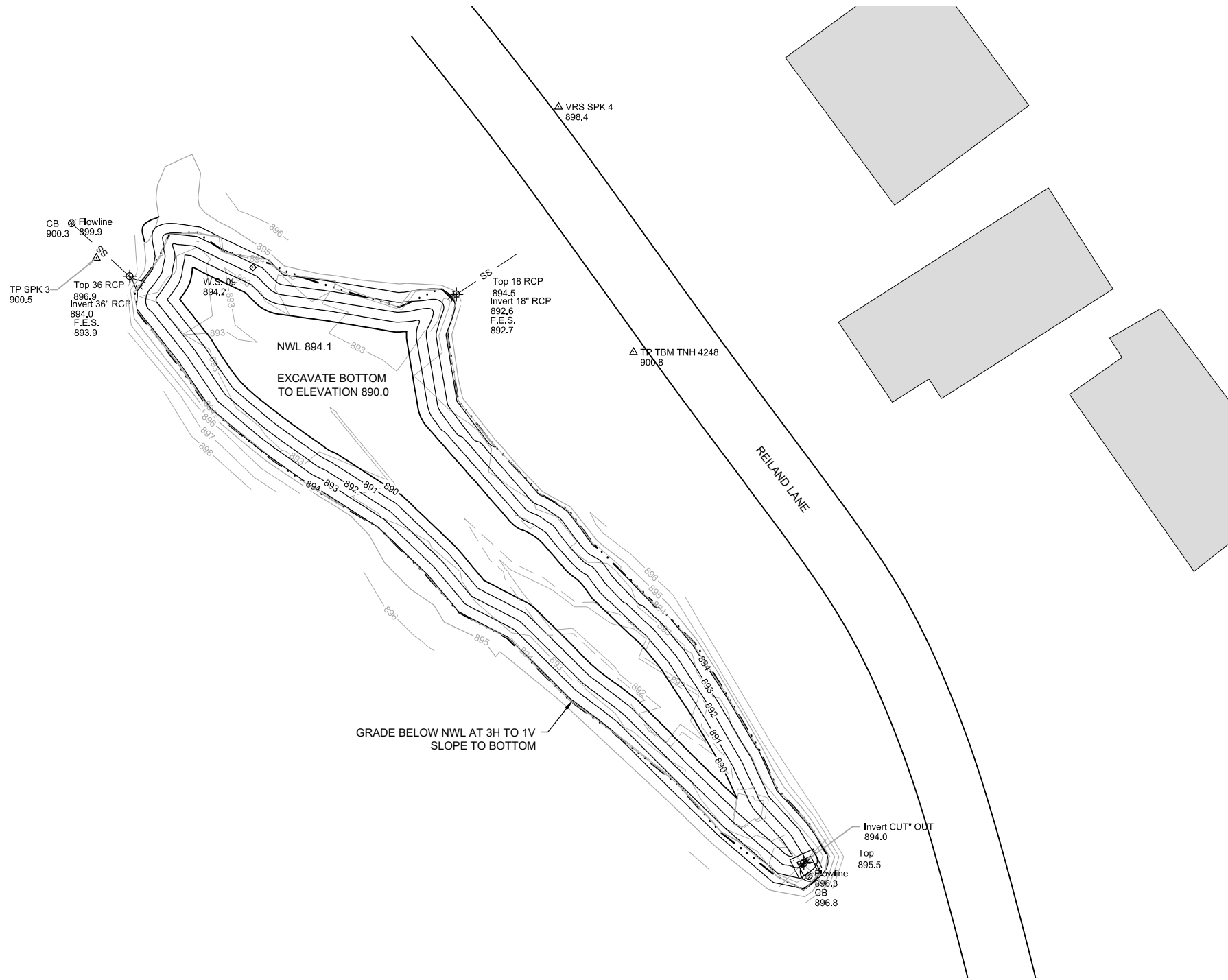
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				PRINTED NAME BRADLEY J. LINDAMAN				RELEASED TO/FOR				A B C 0 1 2 3				Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com				Date 10/30/2019				Drawn GWB/EPF				CLIENT PROJECT No.							
				SIGNATURE				DATE RELEASED								Checked GNN				Designed BARR				DWG. No. C-12				REV. No. A							
NO.				BY				CHK				APP.				DATE				REVISION DESCRIPTION				Approved				SITE 12 SHOREVIEW POND CLEANOUT - TUDOR							

CADD USER: Greg Nelson FILE: M:\DESIGN\23028237\_C12\_SV\_TUDOR.DWG PLOT SCALE: 1:12 PLOT DATE: 10/30/2019 8:52 AM

### SURVEY LEGEND

- ⊗ SURVEY MONUMENT
  - ⊕ FOUND IRON PIPE
  - ⊕ GPS CONTROL POINT
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  - ⊕ CONTROL HUB \ LATH
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  - SS — SS — STORM SEWER LINE
- 
- ⊗ BATHYMETRIC POINTS
- 
- 800 — MAJOR CONTOUR
  - 801 — MINOR CONTOUR
  - · · · · · WATER'S EDGE
  - — — — — GRID LINES (100')



CONTROL POINTS				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
3	TP SPK 3	900.46	201736.2103	565878.2612
4	VRS SPK 4	898.38	201782.1196	566018.6009
105	TP PK 105	905.18	201963.5308	565882.1494
201	TP TBM TNH 4248	900.82	201707.5847	566041.3628

#### BASIS OF DRAWING FILE:

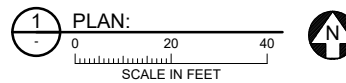
DATE OF SURVEY: 2019-09 19&20  
 ORIGIN/DATE OF BASE: RAMSEY COUNTY/2019  
 COORDINATE SYSTEM: RAMSEY COUNTY  
 HORIZONTAL DATUM: NAD83 (2011) REF. VRS SYSTEM  
 VERTICAL DATUM: NAVD88 REF. VRS SYSTEM  
 ADDITIONAL FILE INFORMATION:

ISSUED FOR  
PROJECT APPROVAL



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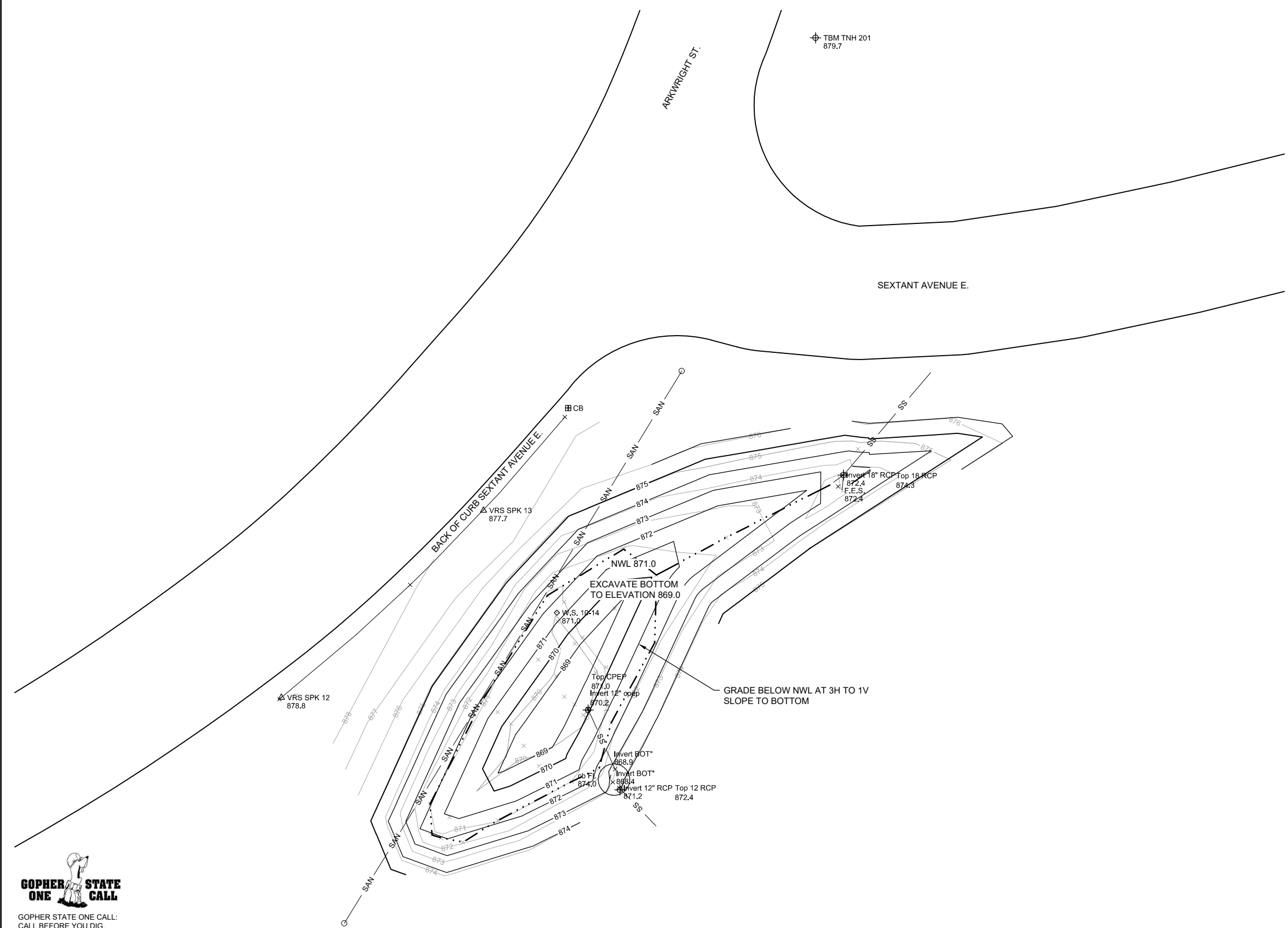
NOTE:  
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CADD USER: Greg Nelson FILE: M:\DESIGN\236282\236282\_001\236282\236282\_C13\_SV\_REILAND.DWG PLOT SCALE: 1:2 PLOT DATE: 10/30/2019 8:53 AM

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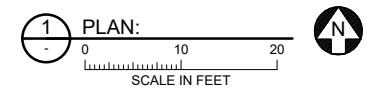
**SURVEY LEGEND**

- ⊕ SURVEY MONUMENT
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- GAS LINE
- UE UNDERGROUND ELECTRIC
- FO FIBER OPTIC LINE
- SAN SANITARY SEWER LINE
- SS STORM SEWER LINE
- × BATHYMETRIC POINTS
- 800 MAJOR CONTOUR
- 501 MINOR CONTOUR
- WATER'S EDGE
- GRID LINES (50)



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<b>BASIS OF DRAWING FILE:</b>	
DATE OF SURVEY:	2019-10-14
ORIGIN/DATE OF BASE:	RAMSEY COUNTY/2019
COORDINATE SYSTEM:	RAMSEY COUNTY
HORIZONTAL DATUM:	NAD83 (2011) REF. VRS SYSTEM
VERTICAL DATUM:	NAVD88 REF. VRS SYSTEM
ADDITIONAL FILE INFORMATION:	

ISSUED FOR  
PROJECT APPROVAL

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION

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PRINTED NAME: **BRADLEY J. LINDAMAN**

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_ LICENSE # 22178

CLIENT	10/30/19						
BID							
CONSTRUCTION							
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

**BARR** Engineering Co.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435

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	10/29/2019
Drawn	GWB/EPF
Checked	GGN
Designed	BARR
Approved	



**CAPITAL IMPROVEMENT PROJECT (CIP)  
MAINTENANCE/REPAIRS 2020**

**SITE 14  
LITTLE CANADA POND CLEANOUT - SEXTANT**

BARR PROJECT No.	23/62-0282.37
CLIENT PROJECT No.	
DWG. No.	C-14
REV. No.	A

CADD USER: Greg Nelson FILE: M:\DESIGN\236282\236282\_001\236282\236282\_C14\_LC\_SEXTANT DWG.PLOT SCALE: 1:2 PLOT DATE: 10/29/2019 8:53 AM

\* \* \* \* \*

# Administrator's Report

\* \* \* \* \*

## MEMO

**TO:** Board of Managers and Staff  
**FROM:** Tina Carstens, Administrator  
**SUBJECT:** November Administrator's Report  
**DATE:** October 31, 2019

### A. Meetings Attended

Monday, September 30	10:30 AM	Permit Pre-Application Meeting
Tuesday, October 1	7:30 AM	U of M Class Tour
Wednesday, October 2	6:30 PM	Board Meeting
Monday, October 7	8:00 AM	MWMO Second Interview Panel
Wednesday, October 9	10:00 AM	Fall MAWA Meeting
Friday, October 11	3:00 PM	Capitol Region WD Grand Opening
Monday, October 14	9:30 AM	Flood Disaster Area Funding
Tuesday, October 15	ALL DAY	Water Resources Conference
Wednesday, October 16	ALL DAY	Water Resources Conference
Tuesday, October 22	10:00 AM	Meet with City of Little Canada
Wednesday, October 23	9:30 AM	Stewardship Grant Team Meeting
Monday, October 28	1:00 PM	2020 Benefits Meeting
Tuesday, October 29	10:30 AM	Gold Line Project Meeting
Wednesday, October 30	9:00 AM	Meet with MnDOT

### B. Upcoming Meetings and Dates

Watershed Excellence Awards	Thursday, November 14, 2019
MAWD Annual Meeting	December 5 – 7, 2019
December Board Meeting	Wednesday, December 11, 2019
Board Workshop Meeting re: Beltline Resiliency	December – TBD
Staff and Board Holiday Luncheon	December – TBD

**C. MAWD Annual Meeting Information and Delegate Designation**

Attached is the annual meeting packet information that I received and was directed to pass along to you. In the packet is the annual meeting notice, the resolutions packet, strategic plan and 2020 budget.

Also included in the packet is the 2019 annual meeting delegate appointment form. Each year the district appoints two managers to serve as delegates at the annual meeting. If there are three managers attending, then we can also appoint an alternate. We will need to know who is considering attending the annual meeting so we can vote on those delegate designations.

Please review the strategic plan, budget and resolutions packet and come prepared to discuss. The district's delegates can then use that discussion as guidance when voting at the annual meeting.

As you may recall, we submitted a resolution suggestion regarding establishing more state funding for flood risk mitigation projects. That resolution went to the MAWD resolutions committee where they voted to not support the resolution as written. As we talked about at our meeting last month, the committee did not like the Twin Cities metro area allocation suggestion. The feedback I have received from the committee stated that a change to the resolution could be made on the floor at the annual meeting to exclude that line in the resolution and there may be more support.



Minnesota Association of Watershed Districts, Inc.  
[www.mnwatershed.org](http://www.mnwatershed.org)

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**Minnesota Association of Watershed Districts, Inc.  
2019 Annual Convention and Trade Show  
December 5-7, 2018  
Arrowwood Resort, Alexandria MN**

**MAWD Annual Meeting Materials**

Enclosed are the following items:

1. Notice of Annual Meeting
2. Delegate Appointment Form – please return to [mnwatershed@gmail.com](mailto:mnwatershed@gmail.com)
3. Proposed Fiscal Year 2020 Budget
4. 2019 Resolutions Packet
5. 2020-2022 Strategic Plan

This packet has been distributed to administrators via email. Administrators – please distribute copies to your managers. No paper copies of this packet will be sent via the U.S. Postal Service.

Note: a full meeting packet, including an agenda, previous meeting minutes, and reports, will be distributed to watershed administrators and made available on the MAWD website no later than one week prior to the Annual Meeting.

**We are looking forward to seeing you at this year's convention!**

**PLEASE BRING THE RESOLUTIONS PACKET WITH YOU TO THE CONVENTION.  
EXTRA COPIES WILL NOT BE AVAILABLE ON SITE. THANK YOU!!**





Minnesota Association of Watershed Districts, Inc.  
[www.mnwatershed.org](http://www.mnwatershed.org)

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## MN Association of Watershed Districts, Inc. 2019 Annual Meeting Notice

NOTICE IS HEREBY GIVEN that the 2019 Annual Meeting of the Minnesota Association of Watershed Districts, Inc. will be held at the Arrowwood Conference Center, Alexandria, MN, beginning at 8:00 a.m. on Friday, December 6, 2019 for the following purposes:

1. To receive and accept the reports of the President, Secretary, and Treasurer regarding the business of the association of the past year;
2. To receive the report of the auditor;
3. To consider and act upon the proposed Fiscal Year 2020 budget;
4. To consider and act upon proposed resolutions;
5. To consider and act upon the proposed 2020-2022 Strategic Plan;
6. To hold elections as required by the bylaws for the MAWD Board of Directors;
7. To consider and act upon any other business that may properly come before the membership.

Sincerely,

*Mary Texer 10/30/19*

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Mary Texer  
Secretary



## MN Association of Watershed Districts, Inc. 2019 Delegate Appointment Form

The \_\_\_\_\_ hereby certifies that it is  
*name of watershed organization*

a watershed district or watershed management organization duly established and in good standing pursuant to Minnesota Statutes 103B or 103D and is a member of the MN Association of Watershed Districts, Inc. (MAWD) for the year 2019.

The \_\_\_\_\_ hereby further certifies  
*name of watershed organization*

the following individuals have been appointed as delegates, or as an alternate delegate, all of whom are managers in good standing with the District.

**Delegate #1:** \_\_\_\_\_

**Delegate #2:** \_\_\_\_\_

**Alternate:** \_\_\_\_\_

Authorized by: \_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Title

\*\* Please return this form to [mnwatershed@gmail.com](mailto:mnwatershed@gmail.com) at your earliest convenience. \*\*

	FY2020	FY2019	FY2019	FY2018	FY2017	FY2016
	Oct '19-Sep '20	Oct '18-Sep '19	Oct '18-Sep '19	Oct '17-Sep '18	Nov '16- Sep '17	Nov '15-Oct '16
<b>INCOME</b>	<b>FY 2020 PROPOSED</b>	<b>FY 2019 BUDGET</b>	<b>FY 2019 ACTUAL</b>	<b>FY 2018 ACTUAL</b>	<b>FY2017 ACTUAL (11 months)</b>	<b>FY 2016 ACTUAL</b>
Dues - Watershed District Members	221,500	216,600	214,668	218,421	117,590	121,412
Dues - Associate Members (WMOs)	2,500	2,500	2,000			
Annual Convention						
Annual Meeting Registrations	55,000	55,000	57,525	59,129	52,068	49,390
Annual Trade Show and sponsorships	40,000	25,000	43,700	21,655	22,250	11,495
Pre Conference Workshop: Drainage	6,500	6,500	13,430	6,800	5,595	9,010
Pre Conference Workshop: Administration	2,400	2,400	0	2,550	775	600
Pre Conference Workshop: Managers	2,400	2,400	0	2,295	2,950	4,250
Legislative Day at the Capitol	8,000	9,000	6,275	8,185	8,325	7,450
Summer Tour	18,000	17,500	18,100	18,891	21,469	14,390
MAWD Workshops	2,500	2,500	0	0	2,720	3,000
Interest	100	100	51	77	111	241
<b>TOTAL REVENUES</b>	<b>358,900</b>	<b>339,500</b>	<b>355,749</b>	<b>338,003</b>	<b>233,853</b>	<b>221,238</b>
<b>EXPENSES</b>						
<b>Administration &amp; Program Management</b>						
General Administration - Staff	67,500	70,000	62,099	70,747	62,311	81,345
Benefits /Taxes for Salaried Employees	30,000	30,000	16,136	15,069		
General Administration - Contract	20,000	12,000	0			
Communications, Conferences - Contract	32,000	36,000	39,753	48,835	33,750	10,000
<b>Legislative Affairs</b>						
Lobbying - Staff (includes Administrative Lobbying)	30,000	24,500	29,926			
Lobbying - Contracted Services	40,000	40,000	40,258	48,251		
Lobbyist Expenses	1,000	1,000	1,174	1,395	3,647	1,754
<b>Professional Services</b>						
Legal Fees	2,000	2,000	0	1,377	1,308	
Accounting and Review of Financial Procedures	8,000	6,000	6,850	4,650	4,100	3,550
Insurance	1,800	1,800	1,783	1,645	1,645	1,551
<b>Office Expenses</b>						
Rent	4,800	3,600	3,200	2,400		
Mileage and General Office Expenses	11,250	11,250	11,741	11,965	4,257	3,994
Dues, Other Organizations	500	500	440			
Memorials	250	250	0	50		
<b>Board and Committee Meeting</b>						
Per Diems and Expenses - Directors	20,000	20,000	14,100	16,448	22,092	26,400
Board and Committee Meeting Expenses	1,000	1,500	774	1,081	1,440	1,471
<b>Special Projects</b>						
WD Handbook, Surveys, rebranding, etc	6,000	1,600	0		1,361	7,250
<b>Education and Events</b>						
Annual Convention						
Annual Meeting	45,000	40,000	44,640	45,073	39,208	37,079
Annual Trade Show	5,000	8,500	3,270	8,631	6,322	9,569
Pre Conference Workshop: Drainage	4,000	2,500	3,967	2,871	1,817	2,993
Pre Conference Workshop: Administration	1,200	1,000	1,140	587	339	
Pre Conference Workshop: Managers	1,500	1,000	1,445	1,754	580	2,288
Legislative Breakfast	5,500	5,500	5,133	6,246	7,045	7,177
Summer Tour	12,500	12,500	7,795	9,483	16,000	14,402
Credit Card Processing Fees	3,700	3,500	4,042	3,020	3,323	2,791
Special Workshops	2,500	2,500	0		2,271	
Partner Event Participation	0	500				1,153
<b>TOTAL EXPENSES</b>	<b>357,000</b>	<b>339,500</b>	<b>299,665</b>	<b>301,578</b>	<b>212,816</b>	<b>214,767</b>
<b>REVENUES OVER (LESS THAN) EXPENSES</b>	<b>1,900</b>	<b>0</b>	<b>56,084</b>	<b>36,425</b>	<b>21,037</b>	<b>6,471</b>
<b>STATEMENT OF NET POSITION</b>						
Assets, Cash and Equivalents, actual			323,522	217,704	154,113	140,033
Deposits received, deferred			(54,109)		(4,799)	(11,385)
Liabilities, accounts payable, taxes payable			(29,973)	(34,352)	(2,387)	(2,760)
<b>ENDING NET ASSETS</b>			<b>239,440</b>	<b>183,352</b>	<b>146,927</b>	<b>125,888</b>

# Memorandum

DATE: October 30, 2019  
TO: MAWD Members  
FROM: Emily Javens, MAWD Executive Director  
RE: **2019 Resolutions**



The Resolutions Committee met on October 4, 2019 at Minnehaha Creek Watershed District to review the resolutions submitted by members. They debated each resolution and voted whether to recommend each resolution for adoption or not. All votes were unanimous. The MAWD Board of Directors accepted the committee's report on October 25, 2019.

Please review the enclosed materials, discuss at your November board meetings, and be prepared to debate and vote on these resolutions at the MAWD annual business meeting to be held December 6, 2019. Each watershed organization in good standing with MAWD is allowed 2 votes per WD/WMO. (See the enclosed delegate form for more information.) A summary of the committee recommendations is shown below.

#### Members of the committee included:

- Chairs: Sherry Davis White, MAWD Board of Directors, Resolutions Committee Chair  
Mary Texer, MAWD Board of Directors, Governance Committee Chair
- Region 1: Linda Vavra, Bois de Sioux WD Manager  
Jamie Beyer, Bois de Sioux WD Administrator
- Region 2: Ruth Schaefer, Middle Fork Crow River WD Manager  
Margaret Johnson, Middle Fork Crow River WD Administrator
- Region 3: Fred Corrigan, Prior Lake – Spring Lake WD Manager  
Becky Christopher, Minnehaha Creek WD Staff

#	Resolution Title	Committee Recommendation
1	Request the DNR enact legislation and policies to streamline the permitting process	<b>SUPPORT</b>
2	Default Classification for Artificial Watercourses That Serve as Public Drainage Ditches	<b>SUPPORT</b>
3	Heron Lake Watershed District General Operating Levy Adjustment	<b>SUPPORT</b>
4	Resolution to Clarify County Financing Obligation and Authorize Watershed District General Obligation Bonds for Public Drainage Projects	<b>SUPPORT</b>
5	Watershed District Membership on Wetland Technical Evaluation Panels	<b>SUPPORT</b>
6	MAWD Opposition to Any Legislation That Establishes Watershed District Spending Requirements by Political Regions or Boundaries	<b>SUPPORT</b>
7	Incorporating Nutrient Management into State Funded Practices	<b>OPPOSE AS WRITTEN</b>
8	Incorporating Soil Management Best Practices into Groundwater Appropriation	<b>OPPOSE AS WRITTEN</b>
9	Support for Managing Water Flows in the Minnesota River Basin Through Increased Water Storage and Other Strategies and Practices	<b>SUPPORT</b>
10	Chinese Mystery Snail Designation Change and Research Needs	<b>SUPPORT</b>
11	Resolution to Ban the Use of Pesticides and Herbicides that are Known Carcinogens on Residential and Commercial Lawns	<b>OPPOSE AS WRITTEN</b>
12	Resolution to Limit Wake Boat Activities that Directly Cause Shoreline Erosion and Spread Aquatic Invasive Species	<b>OPPOSE AS WRITTEN</b>
13	Additional State Funding to Watershed Management Organizations to Implement Flood Risk Mitigation Projects	<b>OPPOSE AS WRITTEN</b>

# BACKGROUND INFO on PROPOSED RESOLUTION #1

## Request the DNR enact legislation and policies to streamline the permitting process

**Proposing District:** Bois de Sioux WD  
**Contact Name:** Jamie Beyer  
**Phone Number:** 320-563-4185  
**Email Address:** [bdswd@runestone.net](mailto:bdswd@runestone.net)

### Background that led to submission of this resolution:

Climate change is manifesting as increased precipitation in our region. The increased precipitation is adding to our historical flood pressure. Lake water levels are rising, and there is a renewed importance to ensure unimpeded stream flows. We need proactive management by the DNR on two key issues:

- 1) **Lake Drawdowns:** We began dealing with flood issues in January 2019. We believe that the weight of ice on a chain of lakes forced water into drainage ditches - which caused flooding issues for downstream property owners. Our District spent a great deal of time and money opening-up frozen drainage ditches, because the flow of water was so significant and threatened public roads and private residences. We fear, with water levels at continued elevated levels, flooding will be repeated in 2020. Waterbodies in our area need to be more actively managed by the DNR, with regular, planned drawdowns, in order to prevent future flood damages to property and infrastructure.
- 2) **Public Water Stream Clean-outs:** We have areas in the watershed that rely on streams to convey excess surface water, and currently some streamflows are impeded due to sediment and plant debris. In these areas, clean-outs are needed to protect streamflow. We have had groups of private landowners experience great frustration and failure in navigating the permitting process (with its associated costs) over the past 2 years.

The DNR has provided us with district climate change information, and our on-going projects are being developed in response to changing environmental conditions; we would like to see the same climate change information act as a catalyst for the DNR's physical management of waterbodies.

### Ideas for how this issue could be solved:

Support legislation and policies that require DNR lake level management action and applicant permitting success.

### Anticipated support or opposition from other governmental units?

Unknown

### This issue is of importance (Check one):

- To the entire State:  - In areas of need of active water management  
Only our Region:   
Only our District:

# PROPOSED 2019 MAWD RESOLUTION #1

## Request the DNR enact legislation and policies to streamline the permitting process

Submitted by: Bois de Sioux Watershed District

**WHEREAS**, the DNR manages waterbody water levels and permits for public water drainage outlet clean-outs; and

**WHEREAS**, Minnesota Statute 103G.245 defines actions under which a permit is required for work proposed in Public Waters; and,

**WHEREAS**, in the Red River Valley, we are noting increased precipitation trends and rising water levels in many waterbodies, which increases the threat of flood damage to neighboring properties and infrastructure; and,

**WHEREAS**, the DNR acknowledges that they have a responsibility to adapt to climate change; and,

**WHEREAS**, private and public landowners have run into difficulty completing the DNR permit process and have reported that the current DNR permitting process is: 1. Potentially very expensive and difficult to predict, and that also means lengthy. The application fee is \$300 - \$3,000 and payment is no guarantee of permit approval. It is unclear when an EAW will be required, and how extensive the EAW will need to be – and costs could be from \$10,000 - \$30,000 if the EAW requirement is not clearly defined. 2. Not always based on scientific data. In some cases, soil borings are not being taken by third-party organizations and industry standards.

**THEREFORE, BE IT RESOLVED** that MAWD supports legislation, rules, and/or agency policies to streamline the DNR permitting process by increasing responsiveness, decreasing the amount of time it takes to approve permits, providing a detailed fee schedule prior to application, and conducting water level management practices that result in the DNR reacting more quickly to serious, changing climate conditions.

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### Notes:

After discussion, the committee recommended the membership vote in favor of this resolution.

## **BACKGROUND INFO on PROPOSED RESOLUTION #2**

### **Default Classification for Artificial Watercourses That Serve as Public Drainage Ditches**

<b>Proposing District:</b>	Bois de Sioux WD	Bois de Sioux WD
<b>Contact Name:</b>	Linda Vavra	Jamie Beyer
<b>Phone Number:</b>	320-760-1774	320-563-8510
<b>Email Address:</b>	<a href="mailto:lvavra@fedtel.net">lvavra@fedtel.net</a>	<a href="mailto:bds wd@runestone.net">bds wd@runestone.net</a>

#### **Background that led to submission of this resolution:**

In December 2018, our watershed was selected to begin MPCA's Use Attainment Assessment (UAA) to evaluate and categorize watercourses for Tiered Aquatic Life Use (TALU) Standards. We have been told that these standards have been implemented by the State of Minnesota to fulfill EPA WOTUS requirements.

To date, our District has spent \$10,000 attending and responding to these meetings. And we have not completed the process.

Our frustration and severe concern is with the default inclusion of man-made, non-tidal drainage ditches excavated on dry land, that were given the default categorization of Class 2 Aquatic Life and Recreational Use under the Dayton administration.

Our watershed is at the headwaters of the Red River Valley, and is extremely prone to flooding - in winter, spring, and summer. Drainage ditches are vital public infrastructure, protecting private property and public property (which includes our roads, highways and bridges) from flood damage. Our watershed is a drainage ditch authority for 65 systems in Grant, Traverse, and Wilkin County. The majority of our drainage systems are in need of significant repairs and/or improvements. These projects are expensive and complicated. Repairs/ improvements are funded by private landowners, whose properties were assessed when the ditches were constructed, and have since been assessed for maintenance on an annual basis.

Recently, we have seen great local support and participation in repairing/improving District drainage systems. Over the past four years, landowners have initiated three major repairs/improvements - at a potential cost to themselves of over \$3,060,000.

Often times, ditches that are out-of-repair have sedimented and eroded sides; instead of moving water, the out-of-repair ditches hold water, which encourages the growth of cattails, which further catches sediment and further holds back water. The more water a ditch is holding, the less capacity it has to accept and move new water during high precipitation events. This is where the conflict with UAA and TALU enters: ditches in good repair will be ephemeral in nature, not supporting fish and macroinvertebrates (which will result in an "impaired water"), and ditches in need of repair may meet fish and macroinvertebrate standards (which may prevent us from repairing them and returning them to their designed ephemeral state).

#### **Ideas for how this issue could be solved:**

The State of Minnesota could abandon the overregulation instituted by the Dayton administration and recognize the EPA's own exclusions: Rule Text § 230.3(s)(2)(iii): "The following are not 'waters of the United States... the following ditches: (A) Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary. (B) Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands. (C) Ditches that do not flow, either directly or through another water, into [a traditional navigable water, interstate water, or the territorial seas.

<https://www.jswcd.org/files/c141e89d1/Clean+Water+Rule+Factsheet.pdf>

For manmade drainage ditches excavated on dry land, the State of Minnesota could replace the default Class 2 Aquatic Life and Recreational Use with a default Class 7 Limited Resource Value Water. Per Administrative Rule 7050.0227, Class 7 does have water quality standards for E.coli, dissolved oxygen, pH and toxic pollutants.

We are open to other suggestions!

**Anticipated support or opposition from other governmental units?**

We have met with MPCA many times and expressed our concern over the past 10 months, but there has been no acknowledgment or suggestion on how we can protect, maintain, and ensure fulfillment of our duty to repair our drainage system infrastructure. In fact, at the last meeting we were at the question was raised by MPCA staff - why would we want to repair a ditch, if it is supporting biology?

**This issue is of importance (Check one):**

- To the entire State:  - areas of the state that rely on manmade drainage systems to protect
- Only our Region:  infrastructure and property from excess precipitation.
- Only our District:



## PROPOSED 2019 MAWD RESOLUTION #2

### Default Classification for Artificial Watercourses That Serve as Public Drainage Ditches

Submitted by: Bois de Sioux Watershed District

**WHEREAS**, Minnesota Statute 103G.005 defines three watercourses: natural watercourses, altered natural watercourses, and artificial watercourses; and

**WHEREAS**, some natural watercourses are used as public drainage systems; and

**WHEREAS**, some altered natural watercourses are used as public drainage systems; and

**WHEREAS**, some public roadside drainage systems are 100% manmade, designed and built for one, limited purpose: to convey excess precipitation, alleviating flood damages to public and private property and it is this category that are considered artificial watercourses because they lack natural stream features and do not provide stream habitat by their design; and

**WHEREAS**, the U.S. Supreme Court recognized the unique nature of drainage ditches on June 19, 2006 in its *Rapanos* decision, stating that for Clean Water Act implementation, Waters of the United States does not automatically apply to ditch systems in which water flows intermittently or ephemerally. The EPA itself advises:

“In addition, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not waters of the United States because they are not tributaries or they do not have a significant nexus to downstream traditional navigable waters.”

<https://www.epa.gov/sites/production/files/2016-04/documents/rapanosguidance6507.pdf>

**WHEREAS**, Minnesota Pollution Control Agency is implementing its Clean Water Act Tiered Aquatic Life Uses (TALU) for all watercourses in Minnesota based on the assumption that all waters by default should be categorized by Minnesota Pollution Control Agency as Class 2 Waters (Aquatic Life and Recreation); the Class 2 label declares universally that all waters by default “support or may support aquatic biota, bathing, boating, or other recreational purposes and for which quality control is or may be necessary to protect aquatic or terrestrial life or their habitats or the public health, safety, or welfare” per Minnesota Administrative Rules 7050.0140 Subp. 3; and

**WHEREAS**, the default Class 2 Aquatic Life standard is applied by Minnesota Pollution Control Agency to public roadside drainage systems that are artificial watercourses, 100% manmade, even though these roadside drainage systems were not designed to provide habitat, and – in fact – when are in optimal operation, only hold water ephemerally when they provide flood control, storing excess precipitation until it can be metered downstream; and

**WHEREAS**, when applied to a public roadside drainage systems that are artificial watercourses, 100% manmade, the Class 2 Aquatic Life standard mandates 10-year cycle biological monitoring and testing under TALU that is lengthy and time-consuming for state and particularly local government agencies - and ultimately very expensive for state and local taxpayers; and

**WHEREAS**, Minnesota Pollution Control Agency does acknowledge in its own Rules that some watercourses should be exempt from needless TALU regulation. According to Minnesota Administrative Rules, Class 7 waters (limited resource value waters) are those that demonstrate that:

- A. *the existing and potential faunal and floral communities are severely limited by natural conditions as exhibited by poor water quality characteristics, lack of habitat, or lack of water;*
- B. *the quality of the resource has been significantly altered by human activity and the effect is essentially irreversible; or*

*C. there are limited recreational opportunities, such as fishing, swimming, wading, or boating, in and on the water resource.*

**THEREFORE, BE IT RESOLVED** that MAWD supports removal of the default Class 2 categorization for public drainage systems that are artificial watercourses and supports a default Class 7 categorization for public drainage systems that are artificial watercourses.

**Notes:**

After discussion, the committee recommended the membership vote in favor of this resolution.

# **BACKGROUND INFO on PROPOSED RESOLUTION #3**

## **Heron Lake Watershed District General Operating Levy Adjustment**

**Proposing District:** Heron Lake Watershed District  
**Contact Name:** Jan Voit, District Administrator  
**Phone Number:** 507-793-2462  
**Email Address:** [jvoit@hlwdonline.org](mailto:jvoit@hlwdonline.org)

**Background that led to submission of this resolution:**

1. The general operating levy limit, as set by Minnesota Statutes 103D.905, Subd. 3, is 0.048 percent of the taxable market value or \$250,000, whichever is less. This legislation has not changed since 2001 – 18 years.
2. The general operating levy is used to pay for manager per diems, staff, building rent, supplies, equipment, consultants, monitoring, project implementation, and matching funds for grants.
3. Workload and responsibilities for watershed districts have grown substantially since 2001. In addition to general operations, work related to developing Watershed Restoration and Protection Strategies, increasing community involvement, acquiring tools for targeting and prioritizing best management practices installation, and implementing One Watershed One Plan are undertaken to fulfill a watershed district’s mission and goals.
4. Competition for grant funds has increased significantly. Matching funds for grants have always been committed through the general operating levy. Because of the current levy limit, providing matching funds has become more difficult.
5. The HLWD has long-term water sampling sites at three locations within the watershed. Year to year data varies based on weather patterns and land use change. The data from 2003 to 2017 shows a decline in Total Suspended Solids, Orthophosphorus, and Total Phosphorus.
6. Current levy limits constrain capacity to issue general obligation bonds to finance projects in public drainage systems.
7. The HLWD took several years to reach the general operating levy of \$250,000 cap has remained unchanged for the last 18 years, which shows the managers’ fiscal responsibility.

**Ideas for how this issue could be solved:**

Increasing the general operating levy is the only long-term solution to provide sustainable funding for personnel and projects within the watershed. Having the revenue to provide grant match would also be beneficial.

**Anticipated support or opposition from other governmental units?**

The Minnesota Association of Watershed Districts and Board of Water and Soil Resources support adjusting the general operating levy to allow watershed districts to fulfill their responsibilities as required by statute.

**This issue is of importance (Check one):**

- To the entire State: \_\_\_\_\_
- Only our Region: \_\_\_\_\_
- Only our District:   X

**PROPOSED 2019 MAWD RESOLUTION #3**  
**Heron Lake Watershed District General Operating Levy Adjustment**  
**Submitted by: Heron Lake Watershed District**

**WHEREAS**, the Heron Lake Watershed District (HLWD) generates revenue through a general operating levy as authorized for watershed districts under MN Statute 103D.901 subdivision 1. This statute caps each watershed district's levy at 0.048% of the estimated market value (EMV) or \$250,000, whichever is less, regardless of the size or tax capacity of each district;

**WHEREAS**, if the levy was only limited to the 0.048% EMV cap, HLWD would be allowed to levy \$951,007 in 2020, but is instead limited to \$250,000;

**WHEREAS**, the \$250,000 limit authorized by the legislature in 2001 is equal to \$361,000 in today's dollars and that amount does not take into account the additional workload created for watershed districts by new state water management programs over the past 19 years;

**WHEREAS**, the HLWD uses the general levy to not only fund operational expenses such as rent, equipment, and supplies, it also uses the money to pay for staff time and laboratory analysis to monitor our lakes and streams for water quality issues, conduct community education and outreach activities, prioritize the best location for best management practices, and will be needed to implement activities planned for and documented in the new statewide One Watershed One Plan initiative;

**WHEREAS**, the HLWD must also use this levy when it wants to construct pollution or flood reduction projects or to provide match dollars for state or federal implementation grants to build these same projects;

**WHEREAS**, the HLWD has successfully brought in \$3,205,672 in grants while only taxing \$4,364,322 locally from 1996 to 2018. This represents \$0.77 of additional funds coming into the district for every \$1 taxed. This is also equivalent to \$14.54 taxed over the course of 23 years and \$10.69 brought in for each of the approximately 300,000 acres in the HLWD;

**WHEREAS**, an unchanged \$250,000 annual budget has ultimately led to staff reductions and an increasingly diminished capacity to be able to provide match dollars required when applying for grants to build the projects and activities desired and vetted by its local citizens;

**WHEREAS**, the HLWD has also found that current levy limits constrain its capacity to issue general obligation bonds to finance projects in public drainage systems;

**WHEREAS**, the Minnesota Association of Watershed Districts (MAWD) assists districts with legislation that is needed by its members to provide adequate service to its residents;

**THEREFORE, BE IT RESOLVED** that MAWD supports an increase in Heron Lake Watershed District's general operating levy cap from \$250,000 to an amount not to exceed \$500,000.

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**Notes:**

After discussion, the committee recommended the membership vote in favor of this resolution.

# **BACKGROUND INFO on PROPOSED RESOLUTION #4**

## **Resolution to Clarify County Financing Obligation and Authorize Watershed District General Obligation Bonds for Public Drainage Projects**

**Proposing District:** Heron Lake Watershed District  
**Contact Name:** Jan Voit, District Administrator  
**Phone Number:** 507-793-2462  
**Email Address:** [jvoit@hlwdonline.org](mailto:jvoit@hlwdonline.org)

**Background that led to submission of this resolution:**

The Heron Lake Watershed District (HLWD) has served as a drainage authority for numerous public drainage systems for decades and until recently relied on county bonding to finance its drainage projects. Recently, one county has conditioned its willingness to bond for a drainage project on the HLWD surrendering its role as drainage authority. Integrated management of the watershed and public drainage systems within it are central to our mission and there is no statutory authority to require a watershed district to abandon its role as a drainage authority. Watershed districts outside the metro area have levy limits that constrain their ability to issue general obligation bonds pledging their full faith and credit.

**Ideas for how this issue could be solved:**

We have identified two possible solutions:

1. Clarify that an affected county must finance a watershed district project establishment and construction by issuance of bonds payable from assessments, backed by the full faith and credit of the watershed district; and further provide for adequate tax levy authority to assure the watershed district's credit capacity.
2. Authorize watershed districts to finance drainage project establishment and construction by issuance of bonds payable from assessments, backed by the full faith and credit of the watershed district; and further provide for adequate tax levy authority to assure the watershed district's credit capacity.

**Anticipated support or opposition from other governmental units?**

Most counties have cooperative relationships with watershed districts functioning as drainage authorities and work together in financing drainage projects. Some counties may feel that they wish to take over drainage management and therefore may not support this clarification in the drainage code and watershed law.

**This issue is of importance (Check one):**

To the entire State:  \_\_\_\_\_  
Only our Region: \_\_\_\_\_  
Only our District: \_\_\_\_\_

**PROPOSED 2019 MAWD RESOLUTION #4**  
**Resolution to Clarify County Financing Obligation and Authorize Watershed**  
**District General Obligation Bonds for Public Drainage Projects**  
**Submitted by: Heron Lake Watershed District**

**WHEREAS**, watershed districts serve as public drainage authorities under the Minnesota Drainage Code (chapter 103E) and are responsible to construct projects to establish, improve, and extend public drainage systems and provide outlets for such systems;

**WHEREAS**, projects are funded by multi-year assessment of benefited lands and financing typically is required to pay costs of project establishment and construction in advance of assessments;

**WHEREAS**, watershed districts may issue bonds, but those not within the seven-county metropolitan area have a limited ad valorem taxing authority and therefore lack adequate capacity to pledge full faith and credit for such bonds, beyond a limited principal amount that is insufficient for a project of substantial scope;

**WHEREAS**, limited ad valorem taxing authority means that project financing bonds issued by watershed districts will have limited marketability and impose higher interest costs on projects, as will long term commercial loans in place of bonds;

**WHEREAS**, the Drainage Code (Minnesota Statutes §103E.635) states that a county may finance a watershed district drainage project by issuing bonds payable from assessments and backed by the full faith and credit of the county;

**WHEREAS**, some counties have taken the position that under this Drainage Code language, financing watershed district drainage projects by bond issuance or by another method is a matter for county discretion, and in certain cases have elected not to provide such financing;

**WHEREAS**, without the certainty of project financing at an acceptable rate of interest, a watershed district cannot responsibly begin to accrue project establishment costs, cannot contract for project construction, and therefore cannot fulfill its statutory responsibilities as drainage authority;

**THEREFORE, BE IT RESOLVED** that MAWD supports legislation to achieve one or both of the following:

- (a) To clarify that an affected county must finance a watershed district drainage project on project establishment and request of the watershed district; and
- (b) To authorize watershed districts to finance drainage project establishment and construction by issuance of bonds payable from assessments and backed by the full faith and credit of the watershed district; and further provide for adequate tax levy authority to assure the watershed district's credit capacity.

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**Notes:**  
After discussion, the committee recommended the membership vote in favor of this resolution.

# **BACKGROUND INFO on PROPOSED RESOLUTION #5**

## **Watershed District Membership on Wetland Technical Evaluation Panels**

**Proposing District:** Prior Lake-Spring Lake Watershed District  
**Contact Name:** Diane Lynch  
**Phone Number:** 952-440-0067  
**Email Address:** dlynch@plslwd.org

**Background that led to submission of this resolution:**

Minnesota Statute 103G.2242 Wetland Subdivision 2. Evaluation states that:

- a. Questions concerning the public value, location, size or type of a wetland shall be submitted to and determined by a Technical Evaluation Panel (TEP) after on-site inspection
- b. The TEP is composed of technical professional employees of the Minnesota Board of Soil and Water Resources, local soil and water conservation district, and Minnesota Department of Natural Resources for projects affecting public waters or wetland adjacent to public waters

- 1. Technical professional employees of watershed districts may be invited to attend and comment on the questions, but their comments are not considered with the same value as official TEP representatives.
- 2. Watershed districts have rules that affect draining, filling, excavating or otherwise altering wetlands.
- 3. Wetlands play a vital role in the health of watersheds.
- 4. Technical professional employees of watershed districts offer an important perspective regarding protecting wetlands within their watersheds.

**Ideas for how this issue could be solved:**

Initiate legislation to amend the statute to require technical representatives of watershed districts to be on the TEP.

**Anticipated support or opposition from other governmental units?**

We would expect watershed districts to support it.

**This issue is of importance (Check one):**

- To the entire State:  \_\_\_\_\_
- Only our Region: \_\_\_\_\_
- Only our District: \_\_\_\_\_



**PROPOSED 2019 MAWD RESOLUTION #5**  
**Watershed District Membership on Wetland Technical Evaluation Panels**  
**Submitted by: Prior Lake-Spring Lake Watershed District**

**WHEREAS**, the Prior Lake-Spring Lake Watershed District (PLSLWD) is a watershed management organization and political subdivision of the State of Minnesota established under and operating with powers and purposes set forth at Minnesota Statutes Chapters 103B and 103D; and

**WHEREAS**, the District has rules that affect drilling, filling, excavating or otherwise altering wetlands; and

**WHEREAS**, by state statute, questions concerning the public value, location, size or type of wetland are required to be submitted to and determined by a Technical Evaluation Panel (TEP); and

**WHEREAS**, technical professional employees of watershed districts are not official members of a TEP; and

**WHEREAS**, wetlands play a vital role in the health of watersheds

**THEREFORE, BE IT RESOLVED** that MAWD supports 2020 state legislation to require technical representatives of watershed districts to be official members of wetland technical evaluation panels (TEPs).

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**Notes:**

After discussion, the committee recommended the membership vote in favor of this resolution.

# **BACKGROUND INFO on PROPOSED RESOLUTION #6**

## **MAWD Opposition to Any Legislation That Establishes Watershed District Spending Requirements by Political Regions or Boundaries**

**Proposing District:** Rice Creek Watershed District  
**Contact Name:** Nick Tomczik  
**Phone Number:** 763-398-3079  
**Email Address:** [ntomczik@ricecreek.org](mailto:ntomczik@ricecreek.org)

### **Background that led to submission of this resolution:**

During the 2019 legislative session, HF 2314 and SF 2372 were introduced that set spending requirements on the Rice Creek Watershed District based on a county's boundaries. No action was taken on either bill since the initial introductions and addition of authors. Since it was the first year of the biennium, it is possible the bills could be acted on during the 2020 legislative session. It is also possible that other counties or communities could attempt to get legislation that restricts spending to political boundaries in another watershed.

Any legislation that restricts watershed district spending by political regions or boundaries interferes with a district's fundamental responsibility to implement critical flood control and water quality projects.

Water does not follow political boundaries. Watershed districts were established to reduce the political nature of water and ensure fair and equitable management. Projects are consistently developed and selected based on priorities including flooding, AIS management, stormwater management, mandated water goals, and critical regional issues.

### **Efforts to address flooding, drainage, and water quality on a county or political basis have failed in the past.**

- The Watershed Act demonstrates the legislature's determination that water resources are best managed on a watershed basis and not at the city or county levels.
- The State's efforts and commitment to One Watershed One Plan policies demonstrate the continued need for watershed-based solutions.
- Restricting watershed spending by county or political boundary is in direct conflict with the purpose and basis of the Metropolitan Surface Water Management Act and other watershed management laws.

### **Any legislation that establishes watershed district spending requirements by county or political boundaries would disrupt watershed-based planning and implementation in watershed districts.**

- Using district-wide taxes to fund programs and projects allows districts to fund the highest priority watershed-based regional solutions based on science, hydrology, and critical input from partners.
- Restricting watershed spending by county or political boundary jeopardizes the ability to do regional projects.

### **Implementing projects based on political boundaries instead of watersheds decreases the ability to implement multi-county solutions. Water management issues are not county-specific.**

- Restricting regional or multi-county solutions decreases efficiency and increases implementation costs and delays
- Drainage system repairs would become more difficult because District-wide tax funds for trunk conveyance maintenance and minor drainage system maintenance activities would be restricted or unavailable
- District-wide funding policies would need replacement
- One county's water management issues are often best addressed in another county

Restricting watershed spending by county or political boundaries will likely cause a domino-effect with other communities and counties demanding that funds collected within their political boundaries be spent within those boundaries or at the very least demanding their funds not be spent in the restricting counties or communities. Such legislation could increase the costs and timelines for implementation of critical projects. Opposition to such legislation would align with the purpose

and basis for the State’s watershed management laws and promote the highest priority regional solutions based on science, hydrology, and critical input from partners. This is the very foundation of watershed-based management.

**Ideas for how this issue could be solved:**

Effective communication and outreach to stakeholders and legislative delegations is critical to their understanding that water resources are best managed on a watershed basis and not at the city or county levels. Emphasis should be given to:

1. The success of implementing highest priority regional watershed-based solutions based on science, hydrology, and critical input from partners;
2. Watershed management plans as a tool for identifying those highest priority solutions;
3. The increased cost to all communities without watershed-based funding and implementation; and
4. The potential increase in damage due to flooding or water quality impairments caused by delays in implementing projects without watershed-based funding.

Any legislation restricting spending by watershed districts based political boundaries (instead of resource priorities) would contradict the State’s One Watershed One Plan policies, the Metropolitan Surface Water Management Act, and the State’s other watershed management laws.

**Anticipated support or opposition from other governmental units?**

Watershed districts, watershed management organizations, and state agencies and organizations with water management interests should support efforts to maintain non-political, watershed-based funding and management of water resources.

Opposition may come from a few individual counties with an interest in restricting watershed-based prioritization and spending efforts and individuals who do not want watershed-based management of the resource.

**This issue is of importance (Check one):**

To the entire State:   X  

Only our Region:           

Only our District:

**PROPOSED 2019 MAWD RESOLUTION #6**  
**MAWD Opposition to Any Legislation that Establishes Watershed District**  
**Spending Requirements by Political Regions or Boundaries**  
**Submitted by: Rice Creek Watershed District**

**WHEREAS**, many watershed districts use district-wide taxes to fund programs and projects; and

**WHEREAS**, many watershed districts fund the highest priority regional solutions based on science, hydrology, and critical input from partners; and

**WHEREAS**, the Watershed Act demonstrates the legislature’s determination that water resources are best managed on a watershed basis and not at the city or county levels; and

**WHEREAS**, the Watershed Act, the Watershed Act Metropolitan Surface Water Management Act, and other watershed management laws established watershed districts to reduce the political nature of water and ensure fair and equitable management of the resource; and

**WHEREAS**, the State’s One Watershed One Plan policies demonstrate a continued need for watershed-based solutions; and

**WHEREAS**, HF2314 and SF 2372 were introduced during the 2019 legislative session to set spending requirements on the Rice Creek Watershed District based on a county boundary; and

**WHEREAS**, any legislation that restricts watershed district spending by county or political boundaries interferes with a district’s fundamental responsibility to implement critical flood control and water quality projects; and

**WHEREAS**, any legislation that restricts watershed district spending by county or political boundaries jeopardizes the ability to do regional projects; and

**WHEREAS**, no action was taken on HF 2314 and SF 2372, however this legislation could be considered during 2020 or legislation could be introduced that would similar affects in other regions across the state.

**THEREFORE, BE IT RESOLVED** that MAWD opposes legislation that establishes spending requirements or restricts watershed district spending by political regions or boundaries.

**Notes:**

After discussion, the committee recommended the membership vote in favor of this resolution.

# **BACKGROUND INFO on PROPOSED RESOLUTION #7**

## **Incorporating Nutrient Management into State Funded Practices**

**Proposing District:** Comfort Lake-Forest Lake Watershed District  
**Contact Name:** Mike Kinney, District Administrator  
**Phone Number:** (651) 395-5855  
**Email Address:** Michael.Kinney@clflwd.org

**Background that led to submission of this resolution:**

The State of MN DNR offers a variety of financial incentives to agricultural producers for conservation and water quality purposes. The MN Pollution Control Agency (MPCA) 2014 Minnesota Nutrient Reduction Strategy report indicates a 2025 goal of reducing nitrogen loading by 20% and a 2040 goal of reducing nitrogen by 45% in order to meet water quality standards for the Mississippi River.

**Ideas for how this issue could be solved:**

The CLFLWD proposes this resolution in order to utilize agricultural incentive programs to make measurable progress toward the MPCA’s nitrogen reduction goals. Further, implementation of certain practices, namely maximum return to nitrogen (MRTN) and nutrient management plans, have economic benefits for the agricultural producers themselves. Therefore, benefits resulting from the proposed resolution are twofold: measurable reductions in nitrogen loading and cost savings for agricultural producers.

**Anticipated support or opposition from other governmental units?**

CLFLWD anticipates support from MN Department of Agriculture and the Board of Water and Soil Resources. Given the economic benefit of the proposed resolution, strong opposition is not anticipated from producers.

**This issue is of importance (Check one):**

- To the entire State:  \_\_\_\_\_
- Only our Region: \_\_\_\_\_
- Only our District: \_\_\_\_\_

**PROPOSED 2019 MAWD RESOLUTION #7**  
**Incorporating Nutrient Management into State Funded Practices**  
**Submitted by: Comfort Lake-Forest Lake Watershed District**

**WHEREAS**, the State of MN DNR offers a variety of financial incentives to agricultural producers for conservation and water quality purposes;

**WHEREAS**, the MN Pollution Control Agency 2014 Minnesota Nutrient Reduction Strategy report indicates a 2025 goal of reducing nitrogen loading by 20% and a 2040 goal of reducing nitrogen by 45% in order to meet water quality standards for the Mississippi River;

**WHEREAS**, there are demonstrated and effective tools and best management practices to help maximize profits for growing row crops while limiting environmental impact;

**WHEREAS**, the concept of “maximum return to nitrogen” (MRTN) refers to the rate of nitrogen (N) application that maximizes net economic return;

**WHEREAS**, soil fertility specialists from six state universities (Illinois, Iowa, Michigan, Minnesota, Ohio, and Wisconsin) have used data from ongoing research trials to create a method to calculate MRTN at selected prices of N and corn;

**WHEREAS**, MRTN and nutrient management plans reduce nitrogen impacts to surface water and groundwater resources and avoid overapplication of nitrogen, while also serving the economic interests of agricultural producers;

**WHEREAS**, implementation of the MRTN and nutrient management plans by agricultural producers is considered a best business practice and thus should not require taxpayer funds to implement;

**WHEREAS**, the Minnesota state agencies can calculate excess nitrogen losses by comparing crop needs to the amount of nitrogen imported into the state, so as to establish a goal for reduction;

**THEREFORE, BE IT RESOLVED** that MAWD supports the goal of implementing the concept of “maximum return to nitrogen (MRTN)” and nutrient management plans generally into management of all fields that receive state financial support.

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**Notes:**

After discussion, the committee recommended the membership NOT vote in favor of this resolution as written for the following reasons:

- More information is needed.
- This isn't applicable to northwest Minnesota.
- MRTN values are determined for corn and soybean fields, not ALL fields.
- Blanket mandates are usually problematic since conditions vary widely across the state.

# **BACKGROUND INFO on PROPOSED RESOLUTION #8**

## **Incorporating Soil Management Best Practices into Groundwater Appropriation**

**Proposing District:** Comfort Lake-Forest Lake Watershed District  
**Contact Name:** Mike Kinney, District Administrator  
**Phone Number:** (651) 395-5855  
**Email Address:** Michael.Kinney@dfllwd.org

**Background that led to submission of this resolution:**

The MN DNR issues permits for groundwater appropriation pursuant to Minnesota Statute 103G.271 and has the authority to place reasonable conditions on appropriations authorized by permit. Agricultural producers obtain high-capacity appropriation permits to irrigate crops as a consequence of low soil water levels. Groundwater conservation is a high priority issue for the state of MN.

**Ideas for how this issue could be solved:**

There are demonstrated and effective best management practices to retain water in the soil profile and otherwise reduce needed irrigation volumes. Management options such as cover crops, no-till, strip-till, and other methods maintain or improve water holding capacity of the soil during the growing season. Prairie and wetland restoration efforts enhance groundwater recharge and are important components of the rural landscape. Other approaches such as improving irrigation efficiency are not specifically addressed by the resolution but may be elements of the discussion. Reducing groundwater appropriation and avoiding unnecessary irrigation serve the economic interests of agricultural producers.

**Anticipated support or opposition from other governmental units:**

The MN Department of Natural Resources likely would support the goals but may have concerns about implementation within its permitting program. Given the economic benefit of the best practices promoted by the proposed resolution, strong opposition is not anticipated from producers.

**This issue is of importance (Check one):**

- To the entire State:  \_\_\_\_\_
- Only our Region: \_\_\_\_\_
- Only our District: \_\_\_\_\_



# PROPOSED 2019 MAWD RESOLUTION #8

## Incorporating Soil Management Best Practices into Groundwater Appropriation

Submitted by: Comfort Lake-Forest Lake Watershed District

**WHEREAS**, the MN DNR issues permits for groundwater appropriation pursuant to Minnesota Statute 103G.271, and has the authority to place reasonable conditions on appropriations authorized by permit;

**WHEREAS**, agricultural producers obtain high-capacity appropriation permits to irrigate crops as a consequence of low soil water levels;

**WHEREAS**, there are demonstrated and effective best management practices to retain water in the soil profile and otherwise reduce needed irrigation volumes;

**WHEREAS**, management options such as cover crops, no-till, strip-till, and other methods maintain or improve water holding capacity of the soil during the growing season;

**WHEREAS**, prairie and wetland restoration efforts enhance groundwater recharge and are important components of the rural landscape;

**WHEREAS**, reducing groundwater appropriation and avoiding unnecessary irrigation serve the economic interests of agricultural producers;

**THEREFORE, BE IT RESOLVED** that MAWD supports incorporation of soil management best management practices into groundwater appropriations permitting.

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### Notes:

After discussion, the committee recommended the membership NOT vote in favor of this resolution as written for the following reasons:

- This may not apply in all cases and represent unreasonable expenses in all cases.
- There is currently a requirement in the permit application (<https://files.dnr.state.mn.us/waters/forms/irr-app.pdf>) to submit a plan approved by the local Soil and Water Conservation District before an appropriation permit is issued.

From page 2 of the permit application: "18. SOIL & WATER CONSERVATION PLAN: Indicate if a conservation plan, approved by the SWCD, has been developed for the acreage you propose to irrigate. An approved soil and water conservation plan or a written statement from the SWCD is required before a water appropriation permit can be issued. Please contact the SWCD regarding the development of a soil and water conservation plan."

# **BACKGROUND INFO on PROPOSED RESOLUTION #9**

## **Support for Managing Water Flows in the Minnesota River Basin Through Increased Water Storage and Other Strategies and Practices**

**Proposing District:** Lower Minnesota River Watershed District  
**Contact Name:** Linda Loomis  
**Phone Number:** 763-545-4659  
**Email Address:** naiadconsulting@gmail.com

**Background that led to submission of this resolution:**

The Lower Minnesota River Watershed District (LMRWD) is the local sponsor for the US Army Corps of Engineers maintenance of the navigation channel in the Minnesota River. As the local sponsor the LMRWD has seen the amount of sediment increase significantly. The increase in sediment has increased the cost for the LMRWD to manage dredge material that is removed from the river to maintain navigation.

Numerous studies of the MN River Basin attribute the increase in sediment to an increase in the flow of water from increased agriculture drainage; increased impervious surfaces created by municipal development and increased precipitation patterns.

The LMRWD was approached by the Minnesota River Congress to ask for support for its initiative to increase the amount of water storage in the MN River Basin and seek funding for this initiative at the state and federal levels. The LMRWD agreed to support the MN River Congress and the Board of Managers felt it was appropriate to request support from MAWD for this initiative.

**Ideas for how this issue could be solved:**

The Minnesota River Congress is approaching organizations responsible for managing water in the MN River Basin, such as Counties and SWCDs (drainage authorities) to solicit support. Several MASWCD Areas have adopted resolutions of support for increasing water storage. In addition, several area legislators have agreed to introduce legislation to commit state funding to support CREP programs or develop a new program similar to CREP to take land that could be used for water storage out of production.

**Anticipated support or opposition from other governmental units?**

The Minnesota River Congress is a coalition of many organizations in the MN River Basin and many of the governmental units are part of the coalition. There may be oppositions from any group that feels their own funding may be lessened because of this program.

**This issue is of importance (Check one):**

To the entire State:  \_\_\_\_\_  
Only our Region: \_\_\_\_\_  
Only our District: \_\_\_\_\_

## PROPOSED 2019 MAWD RESOLUTION #9

### Support for Managing Water Flows in the Minnesota River Basin Through Increased Water Storage and Other Strategies and Practices

Submitted by: Lower Minnesota River Watershed District

**WHEREAS**, virtually all of the natural water storage that once existed on the landscape in the form of prairie potholes, wet meadows, and even small lakes in the Minnesota River Basin has been eliminated; and

**WHEREAS**, increased agricultural drainage and increased impervious surfaces in municipal areas along with significantly increased precipitation patterns is dramatically increasing water flow in our rivers and streams; and

**WHEREAS**, high water levels in rivers and streams flood adjacent low-lying areas, erode stream banks, create backups on existing tile and ditch systems, and increase sediment transfer downstream; and

**WHEREAS**, many acres of farm fields are flooded each year, sometimes multiple times each year, by river and stream flooding thereby preventing planting or destroying growing crops; and

**WHEREAS**, storing water in upstream areas of the landscape will mitigate and slow the amount of water moving into rivers and streams and reduce flooding and erosion; and

**WHEREAS**, storing water in upstream areas of the landscape and other strategies such as improving soil health will mitigate and slow the amount of water moving into rivers and streams and reduce flooding and erosion; and

**WHEREAS**, the Minnesota River Congress, [a citizen-led group focusing on the natural resource and economic health of the Minnesota River Basin] is spearheading an initiative to increase water storage on the landscape using recommendations from the Collaborative for Sediment Source Reduction (CSSR) study as a basis for its initiative; and

**WHEREAS**, the Minnesota River Congress is planning to introduce legislation at the state and federal levels to secure significant funding, specifically for surface water storage on the landscape in the Minnesota River Watershed.

**THEREFORE, BE IT RESOLVED** that MAWD supports efforts to manage the flow of water in the Minnesota River Basin and the Minnesota River Congress in its efforts to increase water storage on the landscape; and

**BE IT FURTHER RESOLVED** that MAWD supports the Minnesota River Congress in its efforts to secure state and federal programs targeted specifically to increase surface water storage in the Minnesota River Watershed.

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#### Notes:

After discussion, the committee recommended the membership vote in favor of this resolution.

# BACKGROUND INFO on PROPOSED RESOLUTION #10

## Chinese Mystery Snail Designation Change and Research Needs

**Proposing District:** Pelican River Watershed District  
**Contact Name:** Tera Guetter, Administrator  
**Phone Number:** 218-846-0436  
**Email Address:** Tera.Guetter@arvig.net

### Background that led to submission of this resolution:

Chinese Mystery snails are present in most major recreational lakes within the Pelican River Watershed District and are a concern to area residents. Populations have increased to high density levels where shorelines can have up to 2-3 ft of washed up shells, fouling up beaches and causing odor problems. These species are used in aquariums, but when improperly disposed of in public waters, they cause recreational, ecological, and economical damage in our waters.

Goal: The State of MN will conduct research to control populations of Chinese Mystery Snails and to change the Minnesota designation from a regulated species to a prohibited species.

### Ideas for how this issue could be solved:

Research to control populations below nuisance levels and to change the designated status from regulated to prohibited to prevent use in aquariums and unintended release into public waters.

### Anticipated support or opposition from other governmental units?

### This issue is of importance (Check one):

To the entire State:  \_\_\_\_\_

Only our Region: \_\_\_\_\_

Only our District: \_\_\_\_\_

**PROPOSED 2019 MAWD RESOLUTION #10**  
**Chinese Mystery Snail Designation Change and Research Needs**  
**Submitted by: Pelican River Watershed District**

**WHEREAS**, Aquatic Invasive species cause recreational, economic and ecological damage—changing how residents and visitors use and enjoy Minnesota waters;

**WHEREAS**, the presence and spread of Chinese Mystery Snails, an aquatic invasive species, is a matter of growing concern in the State of Minnesota, transcending state and international lines;

**WHEREAS**, Chinese mystery snails are native to East Asia, but were brought into the U.S. in the late 19th century as a possible food source, and appeared in Minnesota in the early 2000's and have now spread to more than 27 states and the Great Lakes;

**WHEREAS**, Chinese Mystery Snails are an ecological threat as they can achieve very high densities and adversely affect aquatic food webs by competing with native snails for food and habitat and transmit harmful parasites and diseases that harm native mussels and waterfowl;

**WHEREAS**, Chinese Mystery Snails are an economic nuisance as they can die-off in large numbers and foul beaches and clog water-intake pipes;

**WHEREAS**, it is paramount to prevent the spread of Chinese Mystery Snail to un-infested waterways;

**WHEREAS**, Chinese Mystery Snail is designated as a regulated invasive species (MN DNR) in Minnesota and it is legal to buy, sell, transport, and possess, but may not be introduced into a free-living state, such as released into public waters;

**WHEREAS**, there is no known effective population control for Chinese mystery snails in natural water bodies at this time;

**THEREFORE, BE IT RESOLVED** that MAWD supports Chinese Mystery Snail prevention and control research and to change the Chinese Mystery Snail designated status in Minnesota as a regulated species to a prohibited species.

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**Notes:**

After discussion, the committee recommended the membership vote in favor of this resolution.

# BACKGROUND INFO on PROPOSED RESOLUTION #11

## Resolution to Ban the Use of Pesticides and Herbicides that are Known Carcinogens on Residential and Commercial Lawns

**Proposing District:** Riley Purgatory Bluff Creek Watershed District  
**Contact Name:** Claire Bleser, Administrator  
**Phone Number:** 952-607-6512  
**Email Address:** cbleser@rpbcwd.org

### Background that led to submission of this resolution:

Riley Purgatory Bluff Creek Watershed District seeks to address groundwater health challenges through the strategies included in its 2018 10-Year Watershed Management Plan to promote the sustainable management of groundwater resources. The District recognizes that groundwater can be contaminated by fertilizer and pesticide applications, and that surface water and groundwater resources are interdependent. (10-Year Plan, 2.3.6.2, 2-21). While these relationships are challenging to quantify, contaminated water from one source can impact the water quality of the other. The District is focused on prevention of groundwater contamination through best management practices, recognizing that groundwater clean-up, when feasible, is both expensive and complex.

Pesticides and herbicides used on both commercial and residential lawns have been linked to human health problems, and some studies have connected pesticides and herbicides with carcinogenic properties, including promotion of tumors.<sup>1</sup> A variety of pesticide and herbicide products pose health concerns, and some pesticides include known endocrine-disrupting compounds that affect how natural hormones function in the body and interfere with the body's regulation of the endocrine system.<sup>2</sup>

There are two primary pathways to pesticide and herbicide exposure, both directly and via drinking water through groundwater contamination. Contaminated surface water moving through the soil carries pollutants into groundwater resources, resulting in an underground plume of polluted groundwater that may become unsuitable for drinking water.<sup>3</sup> In Minnesota, pesticides shown to disrupt hormone activity have been detected in surface waters.<sup>4</sup>

Some municipalities in Canada have restricted pesticide use for aesthetic purposes, including on golf courses, due to health effects concerns including the relation between surface-applied pesticide exposure and occurrence of cancer.<sup>5</sup> A 2006 study reviewing medical literature on herbicide and pesticide exposure notes that "the balance of epidemiological research suggests the 2,4-D [a common herbicide used to kill weeds in grass] can be persuasively linked to cancers, neurological impairment and reproductive problems. These may arise from 2,4-D itself, from breakdown products or dioxin contamination, or from a combination of chemicals."<sup>6</sup> The University of Texas MD Anderson Cancer Center also notes that, although evidence is limited, the International Agency for Research on

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<sup>1</sup> Dich, J., Zahm, SH, Adami, HO. (1997). Pesticides and Cancer. *Cancer Causes Control*. May; 8(3), 420-43.

<sup>2</sup> Swackhamer, D. et al. (2010). Understanding Sources of Aquatic Contaminants of Emerging Concern. LCCMR Project Addendum. Available online: [https://www.lccmr.leg.mn/documents/peer\\_review/2010/addendums/subd\\_5a\\_swackhamer\\_v1.pdf](https://www.lccmr.leg.mn/documents/peer_review/2010/addendums/subd_5a_swackhamer_v1.pdf).

<sup>3</sup> See Joyce Latimer, Mike Goatley, Greg Evanylo, Bonnie Appleton. (2009). Groundwater Quality and the Use of Lawn and Garden Chemicals by Homeowners. Virginia Tech and Virginia State University: Virginia Cooperative Extension. Available online: <https://www.pubs.ext.vt.edu/426/426-059/426-059.html>.

<sup>4</sup> Swackhamer, D. et al. (2010). Understanding Sources of Aquatic Contaminants of Emerging Concern. LCCMR Project Addendum. Available online: [https://www.lccmr.leg.mn/documents/peer\\_review/2010/addendums/subd\\_5a\\_swackhamer\\_v1.pdf](https://www.lccmr.leg.mn/documents/peer_review/2010/addendums/subd_5a_swackhamer_v1.pdf).

<sup>5</sup> Loren D. Knopper & David R.S. Lean. (2010) Carcinogenic and Genotoxic Potential of Turf Pesticides Commonly used on Golf Courses. *Journal of Toxicology and Environmental Health, Part B*. Vol. 7, 2004: 4, 267-279. Available online: <https://www.tandfonline.com/doi/full/10.1080/10937400490452697?scroll=top&needAccess=true>.

<sup>6</sup> Meg Sears, C. Robin Walker, Richard HC van der Jagt, Paul Claman. (2006) Pesticide assessment: Protecting public health on the home turf. *Pediatrics & Child Health*, vol. 11: 4, 229-234. Available online: <https://academic.oup.com/pch/article/11/4/229/2648275>.

Cancer linked certain herbicides, such as those containing glyphosate (2,4-D) with an increased risk of cancer.<sup>7</sup> According to the non-profit group Beyond Pesticides, of the 36 most commonly used lawn care pesticides registered prior to 1984, “14 are probable or possible carcinogens, 15 are linked with birth defects, 21 with reproductive defects, 24 with neurotoxicity, 22 with liver or kidney damage, and 3 are sensitizers and/or irritants.”<sup>8</sup> Additionally, “[a] child in a household using home and garden pesticides is 6.5 times more likely to develop leukemia than in a home that does not.” A 2012 National Institute of Health study of companion animals exposed to lawn care products demonstrated an association between use of specific law care products and a greater risk of canine malignant lymphoma.<sup>9</sup>

**Ideas for how this issue could be solved:**

We have identified one potential solution:

1. Ban the use of carcinogenic pesticides and herbicides on residential and commercial lawns and encourage adoption of alternatives such as PRFCT lawns.

**Anticipated support or opposition from other governmental units?**

Minnesota Department of Health lists pesticides as a chemical of special concern to children’s health and many be interested in partnering on legislation. The Minnesota Department of Agriculture offers voluntary turfgrass pesticide use Best Management Practices “to bring awareness to homeowners and lawn care companies on proper and judicious use of pesticides for homeowners, lawn care companies, and golf course managers to help protect water resources, humans, and non-target organisms including pollinators.” These BMPs include using non-chemical pest control methods.

**This issue is of importance (Check one):**

- To the entire State:   X
- Only our Region:
- Only our District:

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<sup>7</sup> Kellie Bramlet. (2016) Lawn Care and Your Cancer Risk. University of Texas MS Anderson Cancer Center. Available online:

<https://www.mdanderson.org/publications/focused-on-health/lawncare-cancer-risk.h26Z1590624.html>.

<sup>8</sup> Beyond Pesticides. Commonly Asked Questions About Chemical Lawn Care. Available online: <https://www.beyondpesticides.org/programs/lawns-and-landscapes/overview/faq-chemical-lawn-care>.

<sup>9</sup> Takashima-Uebelhoer BB, Barber LG, Zagarins SE, Procter-Gray E, Gollenberg AL, Moore AS, Bertone-Johnson ER. (2012) Household chemical exposures and the risk of canine malignant lymphoma, a model for non-Hodgkin’s lymphoma. 112:171-176. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/22222006>.



**PROPOSED 2019 MAWD RESOLUTION #11**  
**Resolution to Ban the Use of Pesticides and Herbicides that are Known**  
**Carcinogens on Residential and Commercial Lawns**  
**Submitted by: Riley Purgatory Bluff Creek Watershed District**

**WHEREAS**, watershed districts engage in conserving the state’s natural resources “by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources.” Minn. Stat. 103D.201, subd. 1;

**WHEREAS**, human and environmental health concerns arise from the use of health harming and potentially carcinogenic pesticides and herbicides on commercial and residential lawns because surface application exposes humans and animals to potential carcinogens, and surface water carries pesticide and herbicide pollution through soil and into groundwater sources that can affect drinking water and environmental health;

**WHEREAS**, eliminating the use of specific pesticides and herbicides on lawns will reduce surface interaction with these health-harming, potential carcinogens, and limit their entry into groundwater;

**WHEREAS**, the Minnesota Department of Health lists pesticides as a chemical of special concern to children’s and the Minnesota Department of Agriculture promotes turfgrass pesticide use BMPs including using non-chemical pest controls;

**THEREFORE, BE IT RESOLVED** that MAWD supports legislation that would ban the use of carcinogenic pesticides and herbicides on residential and commercial lawns.

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**Notes:**

After discussion, the committee recommended the membership NOT vote in favor of this resolution as written for the following reason:

- The committee felt this resolution was not our fight.

# **BACKGROUND INFO on PROPOSED RESOLUTION #12**

## **Resolution to Limit Wake Boat Activities that Directly Cause Shoreline Erosion and Spread Aquatic Invasive Species**

**Proposing District:** Riley Purgatory Bluff Creek Watershed District  
**Contact Name:** Claire Bleser, Administrator  
**Phone Number:** 952-607-6512  
**Email Address:** cbleser@rpbcwd.org

### **Background that led to submission of this resolution:**

Riley Purgatory Bluff Creek Watershed District seeks to address erosion and shoreland health challenges through the water quality strategies included in its 2018 10-Year Watershed Management Plan, issues that fall within one of the plan's primary focus areas: improving and protecting water quality. In its Watershed Management Plan, the District maintains that healthy shoreland areas are a key element of healthy hydrologic systems and provide habitat to support wildlife viability. Shoreland benefits can be compromised by erosion and sedimentation, among other resource threats. The District seeks to minimize the negative impacts of erosion and sedimentation – decreasing water depth, degrading water quality, smothering of fish and wildlife habitat – that result in major contributions to water pollution, recognizing that erosion and sedimentation are often accelerated by human activities. The District also seeks to minimize the spread and reduce the adverse ecological impacts of aquatic invasive species (AIS).

Public groups and the scientific community have observed water quality issues, including scouring of lake bottoms by boat waves, sediment disturbance and damage to aquatic plants, damage to shoreline areas, and negative impacts to aquatic animals, that are linked to the large wakes created by wake boats on lakes. The current design of many wake boat ballast tanks does not enable the tanks to be completely drained or fully decontaminated, presenting an additional concern about transport of AIS. While most of the discussion has focused on wake boats, the same issues may arise with any water craft designed or operated in a manner to create wakes larger than wakes created by ordinary boats, including but not limited to boats with ballast, fins, trim tabs, or similar design features.

A 2019 University of Minnesota Aquatic Invasive Species Research Center study showed that that large volume water holding ballast tanks of wake boats, which have the capacity to take on the most water of similar recreational boats, provide zebra mussels and larvae the greatest opportunity for inter-lake transport. These boats are not designed to fully drain all ballast tank water.<sup>10</sup>

A 2018 report from the Oregon State Legislature summarizes studies on the various effects of wake boats, noting that boat speed is a primary factor in influencing wave size.<sup>11</sup> Also cited in this report is a report by the Scientific and Technical Advisory Committee to the Chesapeake Bay Program that demonstrates a positive correlation between the size of boat wakes and the extent of shoreline erosion as well as sediment resuspension and nearshore turbidity.<sup>12</sup>

A report to the City Council of Prior Lake, Indiana assesses environmental impacts from high speed boats on the

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<sup>10</sup> Dave Orrick. (2019) Zebra Mussel's Best Friend: Wakeboard Boats, New U Study Finds. Livewell also Tested. Accessed through the Minnesota Aquatic Invasive Species Research Center (MAISRC), <https://www.maisrc.umn.edu/news/wakeboards>.

<sup>11</sup> Item E: Staff report on safety around wake sports statewide. (2018) Oregon State Legislature. Available online: <https://olis.leg.state.or.us/liz/2018R1/Downloads/CommitteeMeetingDocument/144261>.

See also Sara MercierBlais & Yves Prairie. (2014) Project evaluation of the impact of the waves created by the type of boats wakeboat on the shores of Lake Memphremagog and Lovering; Ruprecht, Glamore, Cogland. (2015) Wakesurfing: Some Wakes are More Equal than Others. Available online: [https://www.researchgate.net/publication/294799932\\_Wakesurfing\\_Some\\_Wakes\\_are\\_More\\_Equal\\_than\\_Others](https://www.researchgate.net/publication/294799932_Wakesurfing_Some_Wakes_are_More_Equal_than_Others).

<sup>12</sup> Id. See also USDA NRCS. (1997) Slope Protection for Dams and Lakeshores: Minnesota Technical Note 2 (reviewing shoreline erosion processes and causes).

state’s lakes. The report summarizes studies focused on ecological impacts caused by waves, including shore and bank erosion, decreased water clarity, water quality degradation, and harm to aquatic plant and animal species. Shallow waters feel the most direct impacts of boat wakes, as well as shoreline areas adjacent to less than 1,000 feet of open water, making near-shore habitat where water depth is approximately 10 feet or less– the littoral zone—the most important to protect.<sup>13</sup>

In spring 2019, Vermont considered legislation presented in Senate Bill 69 “to restrict or prohibit the use of wake boats in certain public waters.”<sup>14</sup> The bill as introduced proposes to limit wake boat speed within 200 feet of shoreline, imposing a \$500 fine per violation, and proposes to restrict use of wake boats in certain public waters based on the size of the water body, the use of adjacent land, scenic beauty, or other recreational factors.<sup>15</sup> While the bill did not progress in the 2019 session, it may be re-introduced during a future session.

**Ideas for how this issue could be solved:**

We have identified three potential concurrent solutions:

1. Limiting wake boats to areas of lakes sufficiently distanced from shorelines to allow boat-generated waves to adequately dissipate and lessen energy before coming into impact with lake shorelines; and
2. Banning wake boats wakes in shallow lake areas where waves created by wake boats detrimentally impact sediment, aquatic vegetation, and aquatic habitat; and
3. Requiring wake boats to be designed, and existing boats to be modified, to enable complete drainage and decontamination of ballast tanks to stop the spread of AIS.

**Anticipated support or opposition from other governmental units?**

Minnesota DNR is already engaged in an education campaign, “Own Your Wake – for Everyone’s Sake,” encouraging responsible boat use near shorelines. DNR also actively promotes state AIS law, requiring boat ballast tanks to be emptied by a shoreline or waterway before being transported. We anticipate seeking DNR support for and leadership of legislation reflecting joint ideas of how to solve issues caused by wake boating.

**This issue is of importance (Check one):**

- To the entire State:  \_\_\_\_\_
- Only our Region: \_\_\_\_\_
- Only our District: \_\_\_\_\_

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<sup>13</sup> City of Prior Lake, Agenda Item #16. Information Item: A review of environmental impacts from high speed boats on Indiana’s public freshwater lakes; Administrative Cause no. 10-029V. Available online: <https://www.cityofpriorlake.com/documents/WSUM/info17.pdf>.

<sup>14</sup> Bruce Durgin. (2019) Wakeboard Boats Believed to Damage Lakes. The Federation of Vermont Lakes and Ponds. Available online: <http://vermontlakes.org/wp-content/uploads//FOVLAP-Newsletter-Spring-2019-Final-digital.pdf>

<sup>15</sup> Vermont Legislature (2019). Bill as Introduced: S.69. Available online: <https://legislature.vermont.gov/Documents/2020/Docs/BILLS/S-0069/S-0069%20As%20Introduced.pdf>

# PROPOSED 2019 MAWD RESOLUTION #12

## Resolution to Limit Wake Boat Activities that Directly Cause Shoreline Erosion and Spread Aquatic Invasive Species

Submitted by: Riley Purgatory Bluff Creek Watershed District

**WHEREAS** watershed districts engage in conserving the state’s natural resources “by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources.” Minn. Stat. 103D.201, subd. 1;

**WHEREAS** wake boats driven in Minnesota lakes result in scouring of lake bottoms, disturbance of lake sediment and damage to aquatic plants, erosion of lake shoreline, disturbance of and damage to aquatic animals, and transfer of water in boat ballast tanks – many of which are not designed to drain completely or to be decontaminated – that results in transfer of aquatic invasive species (AIS) among Minnesota lakes;

**WHEREAS** opportunities to limit the water quality impacts of wake boats include: restricting where within and in what waterbodies wake boats are allowed; defining the depth of water in which wake boats are allowed to create a wake; and requiring wake boats to be designed, and existing boats to be modified, to enable complete drainage and decontamination of ballast tanks to stop the spread of AIS

**WHEREAS** the Minnesota Department of Natural Resources is engaged in an education campaign, "Own Your Wake - for Everyone's Sake," encouraging responsible boat use near shorelines, and also actively promotes state AIS law, requiring boat ballast tanks to be emptied by a shoreline or waterway before being transported;

**WHEREAS** other states have begun to regulate wake boat minimum distance from shoreline requirements and limit in what water bodies wake boating may take place; these regulations can serve as guidelines for regulations in Minnesota;

**THEREFORE, BE IT RESOLVED** that supports legislation to achieve one or more of the following:

- a) limiting wake boating to areas of lakes sufficiently distanced from shorelines to allow boat generated waves to adequately dissipate and lessen energy before coming into impact with lake shorelines;
- b) banning wake boats wakes in shallow lake areas where waves created by wake boats detrimentally impact sediment, aquatic vegetation, and aquatic habitat; and
- c) requiring new and existing wake boats to be able to completely drain and decontaminate their ballast tanks.

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**Notes:**

After discussion, the committee recommended the membership NOT vote in favor of this resolution as written for the following reasons:

- The study appears to have not been done by professionals, but a committee.
- Currently, boat safety issues are enforced by the DNR’s conservation officers and county water patrols. Watershed districts do not have any ability to enforce.

# **BACKGROUND INFO on PROPOSED RESOLUTION #13**

## **Additional State Funding to Watershed Management Organizations to Implement Flood Risk Mitigation Projects**

**Proposing District:** Ramsey-Washington Metro Watershed District  
**Contact Name:** Tina Carstens, Administrator  
**Phone Number:** 651-792-7960  
**Email Address:** tina.carstens@rwmwd.org

**Background that led to the submission of this resolution:**

The extreme wet year and the increase in heavy precipitation is causing watershed districts to spend significantly more time and resources to mitigate and prevent flooding. The Minnesota Twin Cities area has now reached the wettest year on record. The last 5 years have been the wettest 5 years ever. The last 10 years have been the wettest 10 years ever. The intensity of rain events is also increasing.

Watersheds across the state are faced with challenges in leading and supporting our partners on reducing the flood risk to our residents. Our established flood levels are outdated because of the changes in precipitation. Our infrastructure is undersized. Homes, roads, and properties are flooding and the cost to address these challenges is enormous.

The Ramsey-Washington Metro Watershed District alone is conducting feasibility studies that estimate tens of millions of dollars in new infrastructure needed to address the concern. While state funding is available, the need across the state outweighs the allocation of funds and often times metro and/or urban infrastructure needs do not reach a top priority project and therefore are not funded through existing state funding resources.

**Ideas for how this issue could be solved:**

First, Minnesota watershed management organizations could compile their needs for flood risk mitigation planning and projects similar to what has been done for water quality project needs for the Clean Water Fund. If state officials saw the need across the state, they would be able to justify a greater allocation.

Different funding resources for different kinds of flood risk mitigation would address the needs in the metro/urban areas. This is due to the built nature of the environment which makes it more difficult and more costly to implement projects. And then ultimately, the state dedicating more money to this need would allow watersheds and our local government partners to address this issue.

**Anticipated support or opposition from other governmental units?**

We would anticipate that watersheds across the state as well as our local government partners would be in favor of more financial support for flood risk reduction.

**This issue is of importance (Check one):**

To the entire State:   X    
Only our Region:             
Only our District:

# **PROPOSED 2019 MAWD RESOLUTION #13**

## **Additional State Funding to Watershed Management Organizations to Implement Flood Risk Mitigation Projects**

**WHEREAS**, watershed management organizations in partnership with other local units of government engage in working to control and/or alleviate damage from floodwaters;

**WHEREAS**, the Twin Cities metro area has measured the wettest precipitation year on record and is also experiencing the wettest 5- and 10-year period on record;

**WHEREAS**, watershed management organizations are experiencing impacts on our built and natural systems due to prolonged high-water levels and rain flood events;

**WHEREAS**, current public infrastructure in our urban, built up environments is not adequate to handle the increase in rainfall and the change in intensity of our rainstorms;

**WHEREAS**, the dollars required to address the watershed management organization and local units of government needs are considerably more than what is currently allocated for flood risk mitigation;

**WHEREAS**, the current funding parameters and prioritization make it difficult for metro area applicants to qualify for the dollars allocated for this purpose;

**NOW, THEREFORE, BE IT RESOLVED;** that MAWD supports additional state funding be allocated for watershed management organizations to implement flood risk mitigation projects with consideration given to a dedicated allocation for the Twin Cities metro area.

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**Notes:**

After discussion, the committee recommended the membership NOT vote in favor of this resolution as written for the following reason:

- Including a special allocation for the Twin Cities area furthers the divide between the rural and metro MAWD members that we are actively trying to close.



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## Memo

DATE: September 5, 2019  
TO: MAWD Board  
FROM: Mary Texer, Strategic Plan Committee Chair  
**RE: Proposed 2020-2022 MAWD Strategic Plan**

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### Introduction

As you read this report and the Strategic Plan that follows please note that the plan focuses on MAWD and its activities. At this point in time the shortened timeframe (3 years instead of a more traditional 5 to 10) reflects our work getting MAWD better situated to serve its membership as a whole. In order to create a plan with a longer timeframe the membership, not just the committee, needs to create a vision for the organization. This could be done as part of the Annual Meeting in 2020 or 2021.

The Strategic Plan focuses on the what we should be doing and not on how we will do it. After the Plan is accepted by the membership, specific “hows” will be developed along with assigning responsibility to various MAWD committees. This will promote accountability and measurability.

In any case the Strategic Plan needs to be reviewed and possibly revised annually to ensure it is a living document that meets the desires of the organization and not just a dusty tome on a shelf.

### Background

The MAWD Strategic Planning Committee met March 13, March 28 and April 15 at the offices of the Capitol Region Watershed District. Committee Members were:

- Craig Leiser, Manager, Browns Creek
- Daniel Money, Administrator, Two Rivers
- Dennis Kral, Manager, Pelican River
- Dick Ward, Manager, Riley Purgatory Bluff Creek
- Emily Javens, Executive Director, MAWD
- Mary Texer, Manager, Capitol Region
- Michelle Overholser, Administrator, Yellow Medicine
- Phil Belfiori, Former Administrator, Rice Creek
- Jackie Anderson, Manager, Comfort Lake Forest Lake

The committee reviewed the 2016-2019 Strategic Plan and determined that MAWD has accomplished all of the items in the current plan including:

- Split MAWD leadership duties into two positions – an Executive Director and a Lobbyist
  - Executive Director started full time on 1/1/2018
  - Lobbying Contract with Media and Government Affairs was secured through the 2017-18 biennium
- Provided more training opportunities for staff and managers
- Provided a regular presence at the Capitol and with state agencies, both in and out of session

- Provided regular communications on session activities
- Provided members with regular communications on legislative and state agencies' activities
- Developed a new MAWD website and social media presence
- Contracted for services to run the following events: Annual Meeting and Summer Tour
- Communicated training opportunities throughout the year
- Established a formal (permanent) MAWD office and contacted for administrative services at Capitol Region Watershed District
- Contracted for lobbying services for 2019-2020 Biennium

The 2018 Strategic Planning Committee decided that prior to developing the 2020-2022 Strategic Plan a new membership survey was needed. This survey was announced at the 2018 Annual Meeting and administered in December 2018/January 2019. The results of the survey were presented to and accepted by the MAWD Board at the February 2019 Board Meeting. The 2019 Strategic Planning Committee took the results of this survey and developed a Strategic Plan for 2020-2022.

Before crafting the Strategic Plan, the committee identified what they saw as MAWD's values. These are the guiding principles for MAWD's operations in all areas and are reflected in the Values Table below. This table was approved by the MAWD Board at its June meeting.

## MAWD Values

Category	Words	Consolidated Statement
How we treat each other and our membership	<ul style="list-style-type: none"> <li>• Integrity</li> <li>• Communication</li> <li>• Respect</li> <li>• In it together</li> <li>• Be fair</li> <li>• Shared knowledge/meetings</li> </ul>	We will treat all with integrity, respect, and fairness.
How we conduct our business	<ul style="list-style-type: none"> <li>• Relevance</li> <li>• Government Awareness</li> <li>• Protect good governance</li> <li>• Gather Stakeholder Input</li> <li>• Fiscally responsible</li> <li>• Independence</li> <li>• Present, discuss, agree on priorities</li> <li>• Collaboration</li> </ul>	We will conduct our business in a fiscally responsible, collaborative, and open manner.
What we want	<ul style="list-style-type: none"> <li>• Fishable Swimmable Drinkable</li> <li>• Quality</li> <li>• Protect</li> <li>• Enhance water quality in Minnesota</li> <li>• Advance land management practices that protect water quality and conserve soil resources</li> <li>• Promote water and land practices that enhance biodiversity</li> <li>• Seek government policies that enhance sound water management</li> </ul>	<p>We will promote and advocate for legislation and policies that</p> <ul style="list-style-type: none"> <li>• Enhance water quality in Minnesota</li> <li>• Advance land management practices that protect water quality and conserve soil resources</li> <li>• Promote water and land practices that enhance biodiversity</li> <li>• Enhance sound watershed management</li> <li>• Provide adequate and equitable drainage and flood damage reduction</li> <li>• Result in fishable, swimmable, and drinkable water for all</li> </ul>
How we approach problems	<ul style="list-style-type: none"> <li>• Science-based</li> <li>• Consider alternatives</li> <li>• Forward thinking</li> <li>• Problem solving</li> <li>• Analyze</li> <li>• Creative</li> <li>• Know priorities</li> <li>• Expertise</li> <li>• History of issues</li> <li>• Technical knowledge</li> </ul>	We approach water-based problems and issues using science-based analysis and available expertise.
How we share our knowledge	<ul style="list-style-type: none"> <li>• Educate citizens about water quality</li> <li>• Educate</li> <li>• Promote water stewardship</li> <li>• Community response</li> <li>• Community acceptance and endorsing</li> <li>• Respond to Issues</li> </ul>	<p>MAWD promotes and provides education for members and citizens that</p> <ul style="list-style-type: none"> <li>• Promotes good water stewardship</li> <li>• Educates about water quality</li> </ul>

Based on the above, the following is the Strategic Plan proposed for 2020-2022.

**PROPOSED MAWD Strategic Plan - DRAFT  
2020-2022**

**I. History & Purpose:** Minnesota Watershed Districts (WDs) were established with the Minnesota Watershed Act, M.S., Chapter 103 D in 1955. From inception it was felt that Minnesota WDs should be run by people somewhat removed from the political process, so they would be able to make tough and possibly unpopular decisions without a complete focus on political consequences. To facilitate this, it was agreed that the position of WD Manager would be appointed, rather than elected. Land use and zoning powers remained with elected city and county officials.

While the boundaries of WDs are determined by hydrologic lines of demarcation, rather than political boundaries, water does not follow political boundaries. The organizations are established by local petition to the Board of Water and Soil Resources (BWSR), a state agency. After filing of an establishment petition, the Board has the authority to establish a WD, define the boundaries, and appoint the first board of managers (Board) as defined under Minnesota Statutes 103D.101. All subsequent Board are appointed by the associated County Boards of Commissioners as defined under Minnesota Statutes 103D.311.

WDs responsibilities have changed from their original objectives of focusing solely upon water quantity. WDs have now assumed responsibility for a wide variety of water-related concerns, especially those related to water quality, including wetlands, wetland restoration, and groundwater management. The science associated with water quality and quantity issues continues to grow and as a result, awareness and application of these technologies is a significant consideration for WD Boards and staff.

Another important component of watershed work is engaging the public in its efforts through education, outreach, and cost-sharing grants.

WDs work with multiple state agencies, such as BWSR, Minnesota Department of Natural Resources, Minnesota Department of Health, Minnesota Department of Agriculture, and Minnesota Pollution Control Agency. They work with federal agencies, such as Natural Resources Conservation Service, United States Army Corps of Engineers, United States Department of Agriculture, United States Environmental Protection Agency and United States Fish and Wildlife Service. They also work with cities, counties, and such organizations as Soil and Water Conservation Districts (SWCDs) and regional governments, such as the Metropolitan Council. At all times a WD must be responsive to the community or communities they serve as well as citizen groups, which may from time to time seek assistance. This includes organizations, such as Lake Associations or Community Development organizations of many types.

To capitalize on watershed districts combined knowledge and to share information, the Minnesota Association of Watershed Districts (MAWD) was incorporated August 26, 1971.

**II. Core Values:**

- Integrity
- Communication
- Collaboration
- Relevance
- Science-based

**III. State Mandate:** Per Minnesota State Statute 103D.201 subdivision 1, WDs are “to conserve the natural resources of the state by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources.”

**IV. Mission:** MAWD provides relevant educational opportunities, information, training, and advocacy for WDs and Water Management Organizations (WMOs).

**V. Vision:** Establish MAWD as the leading resource and advocate regarding water and watershed management.

**VI. Strategic Planning Committee Membership and Intent:** The purpose of the Strategic Plan is to establish goals to move MAWD to achieving its Mission and Vision.

The MAWD Board of Directors (BOD) determined that the effective membership of this committee should consist of a

- A Chair from the MAWD Board of Directors,
- Three (3) WD or WMO Managers representing the three MAWD Regions of the state
- Three (3) current WD or WMO Administrators (MAWA) also representing the three MAWD Regions of the State

The Strategic Planning Committee is charged to develop a Strategic Plan every three (3) years with annual reviews and updates in the intervening years. The first Strategic Plan covered 2016 through 2019; the second Strategic Plan covers from 2020 through 2022. Each Strategic Plan will be presented to the MAWD BOD for comment and to the membership for approval at the annual meeting.

## **VII. Strategic Goals**

Based on input from the MAWD membership via a membership survey taken in December 2018, goals need to focus in three (3) areas:

- Education and Training
- Communication and Collaboration
- Lobbying and Advocacy

MAWD activities will be done in support of these focus areas.

### **Education and Training**

Activities in this area address the education and training needs of Board Managers, Administrators, and staff. MAWD will partner with such agencies and organizations as BWSR, SWCDs, and the University of Minnesota to offer timely and affordable educational opportunities. This includes new incumbent training in the three target groups.

Ongoing activities include:

- Continue to partner with other agencies and organizations to offer timely and affordable educational opportunities.
- Continue to expand training to MAWD members to engage with their elected officials. This includes State and Federal Representatives and Senators as well as local officials.

New initiatives include:

- Identify and advertise online/eLearning courses and training opportunities.

### **Communication and Collaboration**

Activities in this area focus on keeping MAWD membership informed of developments with water issues and collaboration between MAWD and other agencies and groups.

Ongoing activities include:

- Continue to expand MAWD's social media presence to increase visibility and impact.
- Continue to improve communications to MAWD members regarding MAWD's legislative efforts and general advocacy. This would be done prior to, during, and after the legislative session.
- Continue weekly video and written updates during the session and periodically off session.

New initiatives include:

- Expand MAWD's presence in the press with the goal of educating the public about water organizations and their activities.
- Post official MAWD documents in such a way as to increase accessibility by MAWD members.
- Post the WD Handbook on line in a more searchable format that is easier to update and reference.
- Post reports from individuals representing MAWD on various state boards on the MAWD website after each meeting. This includes, but is not limited to:
  - BWSR Board
  - Clean Water Council
  - Water Roundtable
  - Drainage Work Group
- Publish quarterly financial reports to promote financial transparency between MAWD and its membership.
- Develop brochures and handouts in the following areas:
  - Annual legislative agenda
  - Benefits of watershed management
  - How to form a WD

### **Lobbying and Advocacy**

Activities in this area focus on lobbying on issues the membership identifies in their legislative agenda and advocating for MAWD and water organizations. These activities take place year-round and not just during the legislative session.

Ongoing activities include:

- Continue work to establish MAWD as a leadership organization – the experts with regard to water management.
- Continue to improve and increase the effectiveness of the MAWD legislative agenda preparation and lobbying activities.
- Continue to actively collaborate with State Agencies and other organizations as appropriate on legislative issues.
- Continue to actively support watershed management and the formation of new watershed organizations.

New initiatives include:

- Establish regional chapters in Regions I and II to promote more local information sharing and education.
- Implement MAWD's Sunset Policy for resolutions.
- Ensure that legislative positions are in alignment with the MAWD mission, vision, and core values.
- Develop State and Federal Policy statements that reflect MAWD's legislative positions and post these on the MAWD website.



\* \* \* \* \*

# Project and Program Status Reports

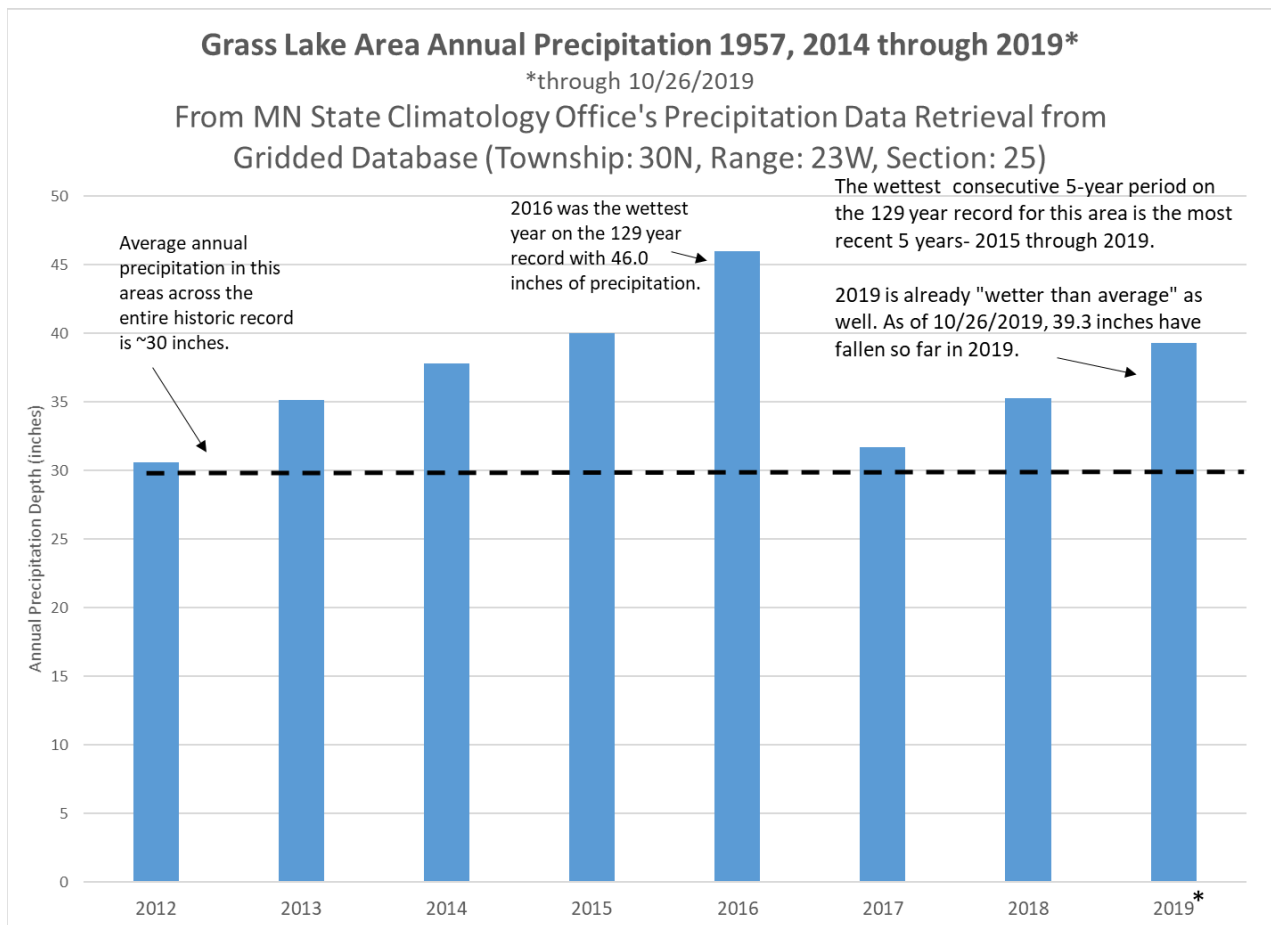
\* \* \* \* \*

## Memorandum

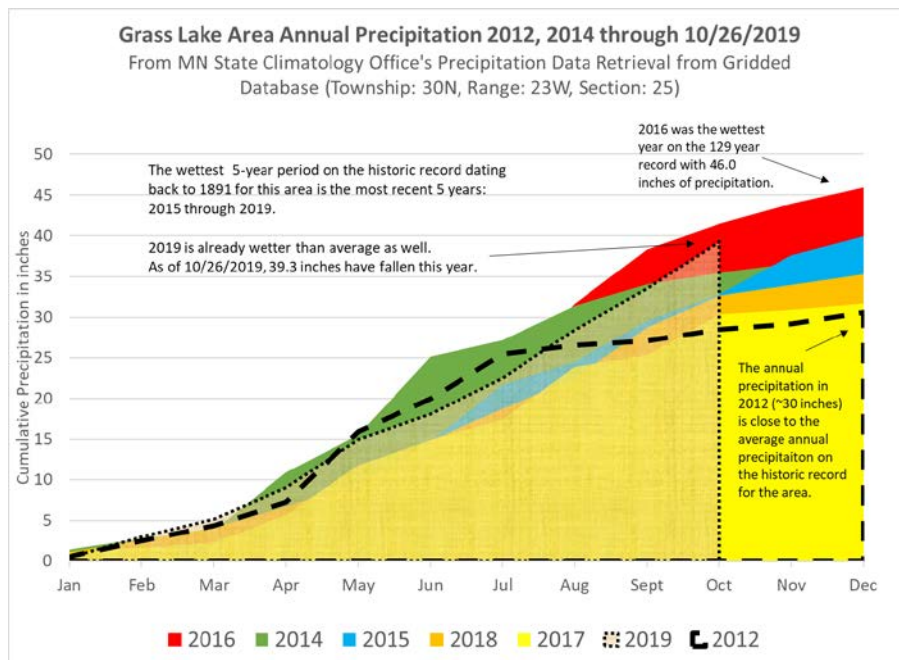
**To:** Board of Managers and Staff  
**From:** Tina Carstens and Brad Lindaman  
**Subject:** Project and Program Status Report – November 2019  
**Date:** October 31, 2019

### Grass/Snail Lake area flood risk: (Barr project managers: Brad Lindaman and Erin Anderson Wenz; RWMWD project manager: Tina Carstens)

2019 will finish as another very wet year in the RWMWD, and the seventh consecutive year with above-average precipitation. This precipitation data is specific to the Grass Lake area vs the MSP airport or NWS Chanhassen Office information that you will see and hear reported on.

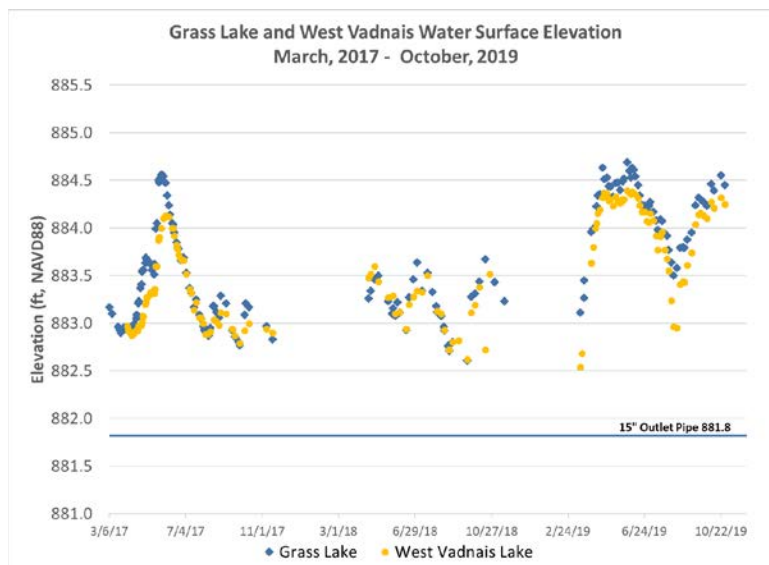


In fact, 2019 still has the potential to overtake 2016 as the wettest year on historical record, as it approaches the 2016 precipitation depth by the end of October this year.

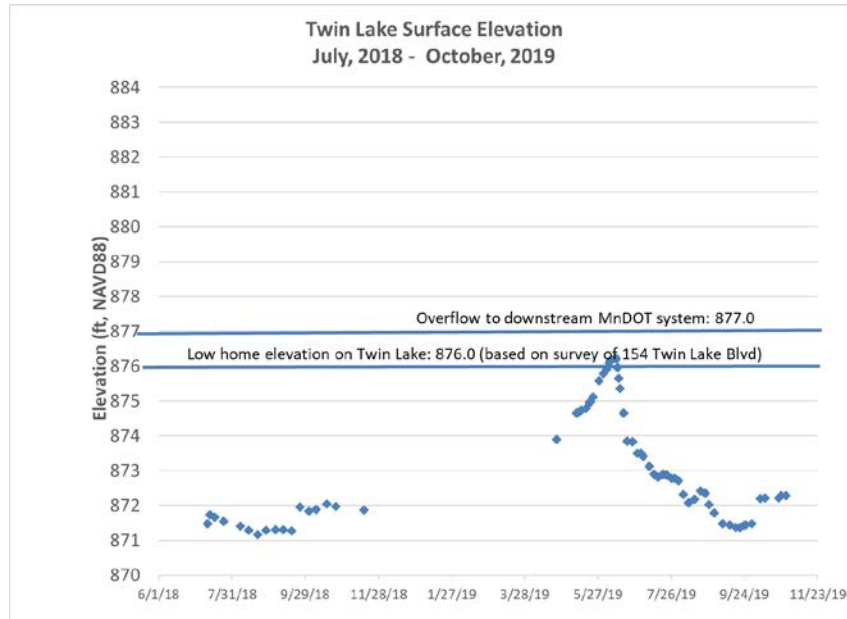


**Cumulative monthly precipitation for the Grass Lake area 2012 and 2014 through 2019**

In addition, 2019's steady rainfall kept levels in Grass Lake and West Vadnais Lake above 883.0 for most of the summer, and are currently above 884.0 as we head into November. In early October, levels in West Vadnais Lake were yet again high enough to overflow to the 24-inch Five Star Estates pipe and into Twin Lake for the second time this year. As RWMWD mobilizes to implement the bypass system that collects these overflows and pumps (up to 5 cubic feet per second) away from the 24-inch pipe, the City of Little Canada is continuing to pump to maintain levels in Twin Lake.



**Grass Lake and West Vadnais Lake measured water levels, March 2017 through October 2019**



**Twin Lake measured water levels, July 2018 through October 2019**

Upstream, Grass Lake has overflowed to the north intermittently throughout 2019.



**Grass Lake overflow on October 22, 2019**



**Looking north toward the stop logs at the pedestrian tunnel on October 22, 2019**

**Grass Lake and wetland A measured water levels, March 2017 through October 2019.**

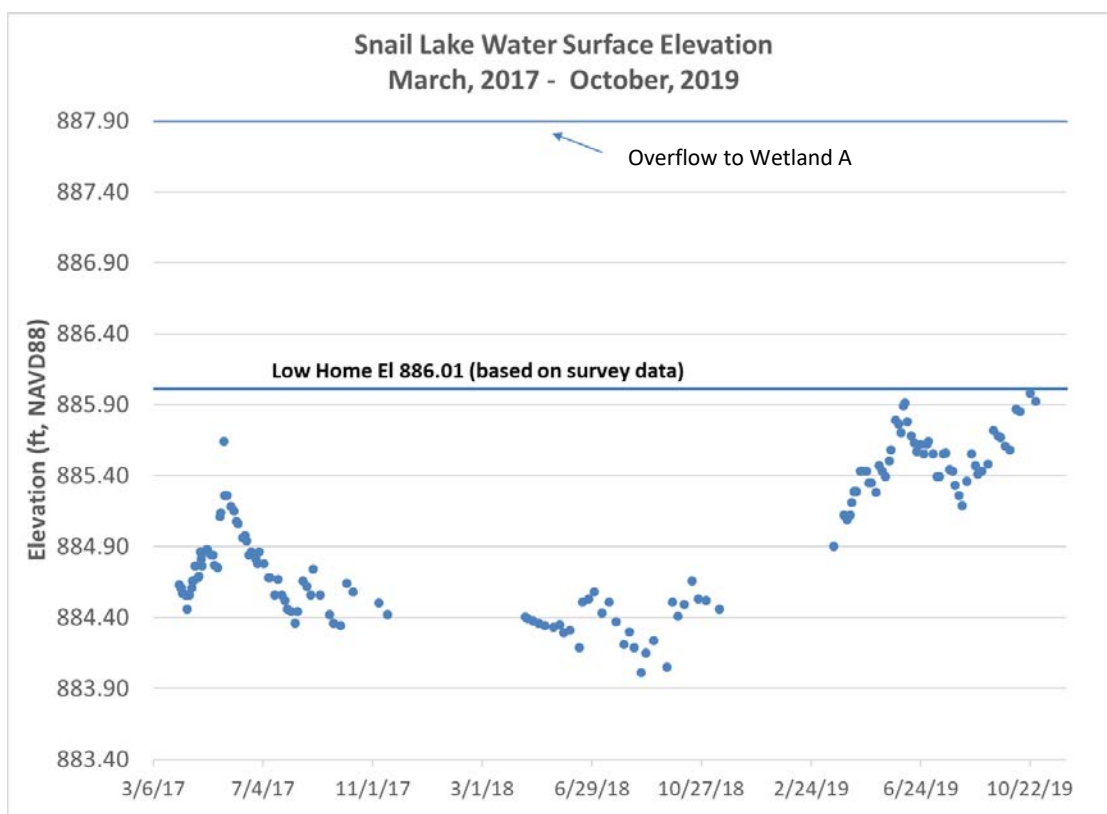
Looking downstream to the Phalen Chain, water levels in Kohlman, Keller and Gervais Lake sustained high water levels above the Keller weir control structure for the entire season. The level in Gervais Lake came within 0.9 feet of the lowest home for a period in August.

### Assessing and communicating flood risk in the Grass Lake area

Using a regional XP-SWMM model, Barr looked at two different types of events while assessing flood risk in the Grass Lake area: the 100-year, 96-hour storm event (8.32 inches in 96 hours) and 10-day snowmelt events (with a range of water depths, depending on the snowpack when melting begins). For the 100-year, 96-hour storm, starting elevations for Grass Lake, wetland A, and adjacent wetlands are assumed to be 884.1 (the Grass Lake overflow elevation), assuming that these areas have already equilibrated. (Note that this has not yet happened in reality.) This information has been communicated to the City of Shoreview for consideration in work planned in and around the Suzanne Pond area in 2020.

For snowmelt scenario modeling, starting elevations are the actual elevations in the water bodies at the time that snowmelt starts. Last March, Barr presented a series of model runs to the RWMWD's member cities to help them plan for potential flooding from snowmelt. Because water levels in the Grass Lake area will likely freeze at relatively higher levels this year, we will begin creating a series of snowmelt scenarios for RWMWD member cities to consider in early 2020.

Snail Lake remained at elevations between 885 and 886 this year. We continue to monitor the lake and to assess future risk of overflow.



Snail Lake measured water levels, March 2017 through October 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.*

As mentioned above, September and October rainfalls caused West Vadnais Lake water levels to rise and begin overflowing to Twin Lake through the 24-inch pipe within the Five Star Estates property, in October. The overflow led the City of Little Canada to restart its temporary Twin Lake pumping operation on October 10; the city will continue pumping to manage the Twin Lake water level until the temporary bypass of West Vadnais Lake overflow is installed.

A West Vadnais bypass consisting of a sump, bypass pipe, and pump system was planned for installation during winter 2019-2020 to prepare for the 2020 snowmelt. Colder temperatures and frozen conditions will allow the excavation, water management, and installation to be completed most efficiently with the least amount of disturbance. In addition, prior to the September and October rain events, West Vadnais Lake was not overtopping, and water levels were actually in decline; thus, it was appropriate to wait until winter. However, since West Vadnais Lake is overflowing once again, the RWMWD decided that this effort could not wait until winter and initiated installation of the bypass.

As of the writing of this report, Northern Dewatering has delivered and set up most of the discharge pipe. Fitzgerald Excavating is managing water near the work area to install the sump manhole structure. Due to the large amount of surface water and groundwater that needs to be controlled, and to confirm that nearby homes are protected, sheet pile is being installed to maintain the excavation walls and create a coffer dam to enable dewatering of the excavation area so that the sump manhole can be properly installed. To install the sheet pile, a nearby power line may need to be relocated. Optimistically, we believe that the bypass system will be operational in early November.

Permits from the Minnesota Department of Transportation and Department of Natural Resources (DNR) have already been obtained. In the meantime, the city continues to manage the water level in Twin Lake by pumping directly from the water body. Once the bypass pumping is set up and operational, we anticipate that the city will stop and remove the pump in Twin Lake.

An update will be provided at the November 6 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*



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*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 purpose of the Beltline resiliency study is to evaluate system-level modifications to reduce flood risk to habitable structures in flood-prone areas tributary to the Beltline storm sewer. System modifications are intended to demonstrate one option for mitigating flood risk that does not include purchasing flood-prone property. Other options may be considered. Prior to implementation, therefore, additional feasibility studies will likely be necessary to further evaluate system modifications included in the study to verify that the cost-effective and optimal modification has been identified.

This month, Barr continued to develop documentation for system modifications included in the resiliency study. Supporting documentation includes discussion of the study's purpose, methodology, potential system modifications, general sequencing considerations, planning-level cost estimates, and assumptions. A draft of the documentation will be provided for the staff to review ahead of the board workshop meeting on the topic later this year.

Feasibility studies for the Owasso Basin bypass concept, the Willow Creek flood reduction concept, and the Ames Lake area concept are included in the draft 2020 engineering budget.

**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.*

Barr provided responses to DNR comments and updated models to the DNR on August 29. The resubmittal included updates to supporting documentation to address DNR comments, minor updates to the models, and plans or survey information for inundation areas shown on the FEMA floodplain maps. In addition, we submitted preliminary floodway models for Kohlman Creek and the Lake Wabasso outlet. We received approval for the hydrology input parameters on October 1 and are still waiting on final approval from the DNR for hydraulic model input parameters. As a result of the extended DNR comment period, the process for providing the DNR information to update the floodplain maps was extended and will now continue through winter 2020.

**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.*

On October 9, the public comment period closed for the environmental assessment worksheet (EAW) evaluating the impact of lowering the 15-inch outlet from West Vadnais Lake by 0.8 feet to provide additional live storage. Comments were received from nine parties. As the responsible government unit for the EAW, the Vadnais Lake Area Water Management Organization's board was required to decide whether project impacts were adequately addressed in the EAW or if an environmental impact statement (EIS) is required. The board issued a negative declaration of EIS at its October 23 meeting, meaning that the EAW was sufficient and an EIS is not required.

Next steps for this project include proceeding with project design and preparing project permits as design advances. An additional step includes further coordination with Jessie Farrell, Vadnais Heights' city engineer, to address requests for more information submitted during the EAW public comment process.

**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.*

Draft figures are still under review by the RWMWD. Barr will discuss RWMWD staff comments on October 30. After receiving comments, we will finalize the three sets of figures. One set illustrates the uncertainty in the 100-year floodplain, one illustrates annual flood risk, and one shows flood risk over a 30-year period. The maps will be used in community outreach activities with the cities and other entities in the RWMWD.

**Hillcrest Golf Course (multi-use) (Barr project manager: Erin Anderson Wenz; RWMWD project manager: Paige Ahlborg)**

*The purpose of this project is to provide a memo and figures identifying and describing the existing land, water, and stormwater conditions throughout the Hillcrest Golf Course site that will help the City of Saint Paul create the Hillcrest master plan. The plan will determine future land uses and a new street network for the 112-acre former golf course on Saint Paul's East Side. In July, the Saint Paul city council approved bonds for the Saint Paul Port Authority to purchase the site.*

This period, Barr attended an internal kickoff meeting and visited the site. Team members from the RWMWD, Barr, WSB, and the Saint Paul Port Authority walked through the 112-acre site on October 11 and 14, inspecting drainage systems, wetlands, and other notable natural features. This and other existing information about the site is being compiled for use in the city's planning process. Work will continue through November and December.



Team members inspect a pond that collects local



Team members walk the 112-acre golf course site.

### **Wetland restoration site search (Barr project manager: Karen Wold; RWMWD project manager: Paige Ahlborg)**

*The purpose of this project is to conduct a desktop review to identify potential wetland restoration sites throughout the RWMWD. This project was initiated because the Minnesota Wetland Conservation Act rules and statute are changing their focus to allow wetland replacement in areas outside of the RWMWD, there are no wetland banks within the RWMWD, and the RWMWD has a “no net loss” policy for wetlands within its boundaries.*

Last month, the RWMWD managers were shown where the 143 potential wetland restoration sites (per the scope of that study) are located. As mentioned, our desktop analysis looked for sites that:

- are undeveloped (open space or farmed)
- have hydric soil
- the National Wetland Inventory describes as having been ditched, drained, or partially drained
- are hydric soil areas that are not identified as wetland in the Minnesota Routine Assessment Method for Evaluating Wetland Function or the National Wetland Inventory
- are hydric soil areas adjacent to existing wetlands
- are Restorable Wetland Inventory areas identified by the Natural Resources Research Institute

This phase focused on identifying areas where more water could be brought to a previously drained area to restore a historic wetland. This is a more traditional approach to wetland restoration planning.

As discussed at the September 16 board workshop, and again at the October board meeting, wetlands that are experiencing extended flooding may or may not be impacted in a negative way. Flooding of the wetland may merely be changing the type of the wetland, and may possibly be determined through standard assessment methods to be, in some cases, an improvement. The managers asked that more information be provided on the impact of prolonged flooding on wetlands by reassessing wetlands in the Grass Lake area. This period, Barr reviewed past wetland assessments for 16 wetlands in the Grass Lake area and, using the same assessment method, compared those wetlands to their current, flooded conditions. A technical memo describing results and conclusions from this effort are currently under review, and a memo of the findings will be presented to the board in the near future.

### **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.*

In early October, Peterson Company installed the concrete pads at Lake Wabasso, Lake Owasso, Lake Phalen, and West Vadnais Lake. Metal cabinets have been installed at Wabasso and Owasso. The contractor is currently running the wiring and sensor conduit. As that step is completed, the equipment can be installed. Assuming continued progress, we expect that all equipment will be installed by the end of November.

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Formal approval was obtained on October 22 from Ramsey County Parks and Recreation to build a lake-level monitoring station at Snail Lake—the last station awaiting approval. The RWMWD is scheduling with Peterson Co. to install a shelter, conduit, and electrical power.

Equipment for West Vadnais Lake and Snail Lake has been ordered, and delivery is expected in the next couple weeks. All equipment orders are now complete.

**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.*

Planting of the replacement trees at Maplewood Mall began in the first week of September and was completed in four days. Nature has provided adequate water to the trees since planting; they are expected to establish well. A payment request will likely be submitted in October.

Also this period, restoration work began in four different rain gardens at Maplewood Mall that were no longer draining properly (Beam, Southlawn, Southwest, and one of the West gardens). Work is expected to be completed by early November.

**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, and VLAWMO. The project consists 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.*

As previously mentioned, to accommodate a schedule that includes a summer effectiveness-monitoring period, Barr was granted an extension to the overall project schedule. This past month, we also received approval of our updated work plan, which extends the schedule through October 2020.

**Iron-aggregate pond application research project (Barr project manager: Tyler Olsen; RWMWD project manager: Eric Korte)**

*The purpose of this project is to provide monitoring and data evaluation support for the University of Minnesota's St. Anthony Falls Laboratory's research project at Shoreview Commons Pond (on the City of Shoreview city hall campus). The project involves evaluating the effectiveness of adding iron aggregate to pond sediments to control the internal load of phosphorus from rich pond sediments.*

This project saw no new activity. The project team—including members from the RWMWD, Barr, City of Shoreview, and St. Anthony Falls Laboratory—decided to wait for winter 2019-2020 for safe working conditions to spread iron.

## 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.*

Construction is underway, and weekly construction meetings are taking place. Barr and the RWMWD have attended several of the meetings. The first phase of the road reconstruction project is complete. Veit is beginning the second half of the project and has started excavating the east basin. There appears to be good sand at basin subgrade elevation on the south end of the basin. The contractor is starting storm sewer installation in the park, as well as excavating for the west basin. The RWMWD portion of the construction cost is approximately \$550,000. Construction was planned to be complete by November 1; however, rain has caused some delays.

### **Targeted retrofit projects (Barr project manager: Matt Kumka and Leslie DellAngelo; 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 continues at Redeemer Lutheran Church in White Bear Lake. This project includes a rain garden and shoreline buffer installation. Work on both projects is expected to be complete before winter. The design survey was completed for the Target stores and Motel 6. Conceptual designs for the two Target retail sites are nearly finished. This month, we will present conceptual designs to the RWMWD and Target representatives. We will also develop conceptual designs for the Motel 6 retrofit.

### **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.*

Barr completed final inspection and review of planting at the site in mid-September. Trees and shrubs were reviewed for overall health. One tree and 12 shrubs were marked for replacement.

Representatives from the RWMWD, Barr, and Kodru Mooney troubleshot the backflow preventer for the wetland downstream. The backflow preventer had previously been removed because it was not operating as advertised (i.e., kept water levels in the downstream wetland too high). We determined that an incorrect, smaller backflow-preventer valve was delivered to the site. The valve was likely stretched beyond its limit and did not function properly. A new valve was ordered, delivered, and installed at the site. The new backflow preventer should be monitored to verify that it is working as advertised.

Additional progress was made on the proposed drain design for the valve manhole. Preliminary drawings were discussed with the contractor. Further correspondence is needed to finalize the plan.

As a final matter, Barr is proceeding with installation of a cedar split-rail fence to reduce foot and bike traffic in the filtration area. The City of Roseville approved the proposed fence design. Installation will likely be completed by Minnesota Native Landscapes, outside of this project's scope, 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.*

Previously, Barr developed a conceptual wetland restoration plan for the project area. The plan has been discussed with the RWMWD and City of Shoreview. A fair amount of debris (old blacktop and concrete) is buried in the area where wetland is proposed to be restored. We are currently investigating the feasibility of stacking and capping this debris with clean soil on site. The alternative is to export the material to a construction landfill, which would be expensive. Current thinking is to build an attractive high point on the site that would serve as an amenity for people and desirable prairie and pollinator habitat. Next steps are to refine the design and establish potential costs.

**Aldrich Arena stormwater retrofit (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.*

Rain garden grading, repair, and reconstruction is ongoing. Barr and the RWMWD are frequently on site to observe construction as needed. Plantings will be installed in 2020. This project, led by the county's design-build contract (Loeffler), has multiple stakeholders. As such, the project has required careful and continuous correspondence from Barr and the RWMWD.

## **CIP project repair and maintenance**

**Kohlman Lake macrophyte management (Barr project manager: Keith Pilgrim; RWMWD project manager: Bill Bartodziej)**

*The purpose of this project is to develop a calibrated model that can be used to evaluate the effect of aquatic plant growth and aquatic plant harvesting on Kohlman Lake water quality.*

The intended outcomes of this project are to 1) develop a working, calibrated model that can be used for Kohlman Lake and other RWMWD lakes to better understand the effect of aquatic plants and aquatic plant harvesting on lake water quality; and 2) publish the results of this study for Kohlman Lake and potentially other RWMWD lakes. The model has been rebuilt, and results are being tabulated. The modeling and data-processing aspect of this study should be complete by the end of 2019.



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**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.*

Due to continued high-water conditions in the Grass Lake area, change-order work to address site grading and restoration has been on hold. It will need to be delayed until 2020.

**CIP maintenance/repairs 2020 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.*

Preliminary design for the CIP maintenance/repairs 2020 project is complete, and a draft set of drawings and a specification outline are included with this board packet. An estimate of probable construction costs, along with other project expenses and a likely project schedule, will be presented at the November 6 board meeting.

## **Project operations**

**2019 Tanners Lake alum-facility monitoring (Barr project manager: Meg Rattei; RWMWD project manager: Eric Korte)**

*The purpose of this project is to complete monitoring and reporting required by the general National Pollutant Discharge Elimination/State Disposal System permit for MS4s.*

Barr is collecting samples for the facility as required by the MS4 permit until shutdown in November.

### New technology review: In-Situ harmful algal bloom monitoring

<b>Innovative technology</b>	In-Situ has developed a system to support long-term continuous monitoring for harmful algal blooms, which should assist stakeholders with early detection and warning to promote community safety.
<b>Use</b>	<ul style="list-style-type: none"> <li>▪ handheld water-quality monitoring for up to eight parameters simultaneously</li> <li>▪ long-term, deployed water-quality monitoring for up to eight parameters simultaneously</li> <li>▪ algal sensors to detect potential harmful algal-bloom species</li> </ul>
<b>Benefits of technology</b>	<ul style="list-style-type: none"> <li>▪ continuous monitoring to detect growth of harmful algal blooms early that may be missed with spot sampling</li> <li>▪ exchangeable sensors to monitor various water-quality needs with one system</li> <li>▪ drift-resistant sensors with simplified calibration for accurate, reliable data</li> <li>▪ anti-fouling wipers for longer deployments and harsher environments</li> <li>▪ reduced monitoring and maintenance costs through reduced sensor drift (less calibration) and anti-fouling cleaning systems (less missed data)</li> <li>▪ telemetry integration with HydroVu platform to provide real-time access to remote monitoring data without having to download in the field</li> <li>▪ 24/7 support with your mobile application and seven-day turnaround on maintenance when needed</li> </ul>
<b>Drawbacks</b>	Higher upfront costs
<b>Suppliers/contacts</b>	<ul style="list-style-type: none"> <li>▪ U.S. sales: sales@in-situ.com, 970-498-1500</li> <li>▪ Eric Robinson, Application Development Manager, erobinson@in-situ.com</li> </ul>
<b>Conclusion</b>	The In-Situ harmful algal-bloom monitoring system is a long-term, deployable setup that can be used for early blue-green algae detection. In freshwater systems where early detection is key for community safety, the In-Situ system can be used to monitor and view algal species data in real-time. The system has higher equipment costs, but the low-maintenance and wireless-connection data collection should help to reduce monitoring costs.

#### Technology description

In-Situ is offering a deployed, long-term monitoring system for harmful algal-bloom detection to help users monitor water quality more consistently and have a method for early detection. Early detection and warning for harmful algal-bloom growth can help stakeholders act efficiently and promote community safety.

The deployed monitoring system developed by In-Situ was developed to be “plug and play.” All components (multi-parameter sonde, sensors, telemetry) are from the same company, which allows the equipment to be installed quickly and seamlessly (Figure 1).



**Figure 1: In-Situ offers a complete package for long-term harmful algal-bloom monitoring.**

## Components

### *Aqua TROLL 600*

Various sensors can be installed and interchanged on In-Situ’s Aqua TROLL 600 Multiparameter Sonde due to the universal sensor ports located on the system. The base sensor configuration includes dissolved oxygen, pH/redox, turbidity, conductivity, temperature, and pressure. Additional sensors can be added to measure ammonium, chloride, nitrate, and blue-green algae. Up to five parameters can be monitored simultaneously. Additionally, the system has an integrated toolkit with ISD12 communication and a built-in LCD screen. The multiprobe enables wireless data collection when used as a handheld or can be integrated with control systems and telemetry for long-term installation (Figure 2). Furthermore, the Sonde has low power consumption with 9-plus months of battery life. For harmful algal bloom monitoring, In-Situ recommends deploying the Aqua TROLL 600 with conductivity, temperature, dissolved oxygen, and blue-green algal sensors.



**Figure 2: In-Situ Aqua TROLL 600 Multiparameter Sonde can be used as a handheld or combined with control systems and telemetry for long-term, remote deployment.**

### *Tube 300R telemetry system*

The Tube 300R telemetry system transmits data for a single instrument (e.g., Aqua TROLL 600) on a cellular network with automated data logging and event alarms for remote data collection. The system is easily integrated into In-Situ's HydroVu Data Services for real-time evaluation of site data and conditions.

### *Blue-green algae fluorometers*

The blue-green algae fluorometers are designed to provide data reliably and with low maintenance:

- **integrated optical compensation:** The fluorometers are patented with integrated optical compensation, which reduces sensor drift and allows for fewer field visits for recalibration. Based on field studies, In-Situ states that calibration should only be required at the start and end of the monitoring season. Fewer calibration requirements should allow for fewer field visits and reduced monitoring costs.
- **isolated optical frequencies:** The fluorometers are designed with isolated optical frequencies, which allows for the use of multiple fluorometers on a single monitoring station. Most other sampling systems do not utilize various optical frequencies; therefore, sensors cannot be placed next to one another on the same platform because "cross talk" would affect the sensors' readings. Isolated optical frequencies allow for enhanced customization of sampling stations, especially when searching for various water-quality conditions in the field.
- **ambient light reduction:** The fluorometers have ambient light reduction built into the sensor system, which reduces sunlight skew. This allows users to place the monitoring station at the location that best fits their needs, rather than having to account for environmental influences.
- **low-interference spectral bands:** Each fluorometer has tight spectral bands, which allows the user to get more data collection specificity. Tight spectral bands help monitor specific wavelengths of interest.
- **antifouling systems:** The flat-face design and double-sided wipers with slipper clutch of the monitoring probe helps keep the sensor clean and requires less maintenance. The copper probe guards also reduce biofouling.

### **What do the blue-green algae fluorometers monitor?**

To capture when harmful algal blooms start to grow in water bodies, it can be helpful to monitor for constituents that allow the user to specialize for specific species. For many water-quality monitoring programs, the main constituent used to quantify water-body productivity is chlorophyll-a. However, chlorophyll-a is found in all photosensitizing organisms. While chlorophyll-a concentrations can be helpful to measure overall biomass or production of a water body, the results do not give a clear picture to define the severity of harmful algal-bloom growth. In-Situ recommends that specialized fluorometers be installed at sites where early detection of harmful algal blooms is needed. These fluorometers measure:

- Phycocyanin (PC)
  - Phycobiliprotein found in algae and cyanobacteria in freshwater and saltwater
  - Fluorometer can be calibrated to detect specific species of harmful algal blooms
  - In-Situ runs a calibration against seven common harmful algal-bloom species, but additional calibrations can be added by the user

- Phycoerythrin (PE)
  - Phycobiliprotein found in red algae, brown algae, and cyanobacteria
  - Most applicable for brackish and marine environments
  - Fluorometer can be calibrated to various species

### How do sensors compare to laboratory tests?

Fluorometers are as accurate as the user calibration. The user can work with the sensors to dial them into a specific monitoring location and a specific set of harmful algal-bloom species. This requires some initial work upfront to set the calibration, but then the fluorometers are very accurate.

### Why long-term monitoring and not grab samples?

- Catch events missed by grab samples leads to early detection before toxin development.
- Equipment continuity
  - Long-term deployment enables the same sensors to be used at the same location. Fluorometer output can vary between different fluorometers, especially if calibrated to different species. Spot monitoring can induce errors if the same sensors are not used.
  - Technician sampling styles are not always consistent, which may require additional data processing to conclude if sample variations are due to environmental changes or technician sampling variations.
  - Long-term deployment enables the sampling location to remain consistent. Spot sampling does not guarantee that the same location is sampled each time.
  - If the frequency of field visits can be reduced, user safety increases.
- Deployed sampling can be more affordable than spot sampling (Figure 3)
  - Modern deployments have far fewer site visits.
  - Sensors drift less, so less calibration is needed (i.e., fewer site visits).
  - Telemetry costs have decreased, reducing upfront costs.
  - Expensive solar arrays are no longer required in most cases, reducing upfront costs.
  - Integration can be accomplished by users (i.e., deployment does not need to be completed by the manufacturer), reducing upfront costs.

### The Real Cost of Sampling



Figure 3: In-Situ qualitative cost comparison between spot sampling and deployed sampling

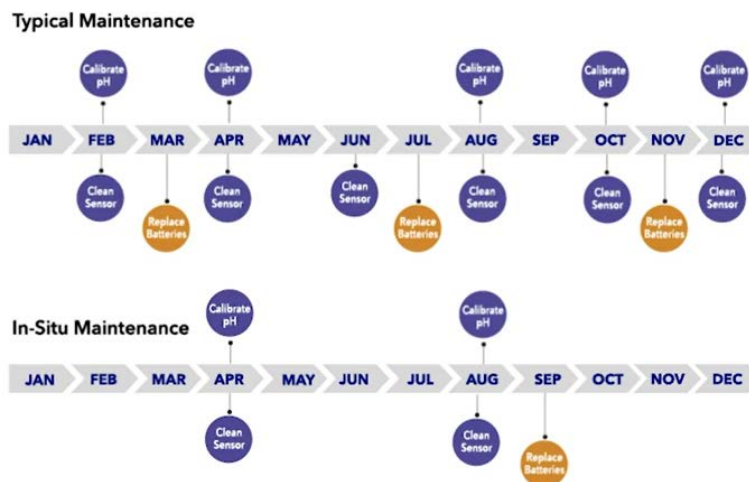
**Cost**

Aqua TROLL 600 Multiparameter Sonde (Sonde, sensor installation tools, maintenance supplies, NIST traceable factory calibration, quick-start guide)	\$3,675
Aqua TROLL wiper	\$915
Conductivity/temperature sensor	\$731
pH/redox sensor	\$621
Dissolved oxygen sensor	\$915
Phycocyanin fluorometer	\$1,835
Wireless connection equipment	\$1,007
<b>Total</b>	<b>~\$9,700</b>

**Maintenance**

Maintenance kits are available from In-Situ for calibration of the fluorometer sensors. Support documentation and/or phone applications are available to describe and show how to best calibrate the sensors. Support is also available 24/7.

As mentioned previously, the deployed monitoring system is designed to be low-maintenance. The sensors are equipped with antifouling systems and are patented with features that reduce sensor skew, which lowers the number of field visits required for cleaning and calibration. In-Situ’s suggested maintenance schedule for its deployed monitoring system is shown in figure 4.



**Figure 4: In-Situ’s posted maintenance schedule compared to traditional systems**

Sensor replacement will vary by location, environmental conditions, and sensor maintenance. In-Situ advertises that sensor cycling should be on the magnitude of years.

**Conclusion**

The In-Situ harmful algal-bloom monitoring system is a long-term, deployable setup that can be used for early blue-green algae detection. In freshwater systems where early detection is key for community safety, the In-Situ system can be used to monitor and view algal species data in real time. The system has higher equipment costs, but low maintenance and wireless data collection should help reduce monitoring costs.



## Natural Resources Update – Bill Bartodziej and Simba Blood

### Lake Phalen Shore Restoration

In September, Saint Paul Parks & Recreation, Conservation Corps Minnesota (CCM), Tree Trust, Ramsey County Corrections, and NR staff all came together to work on restoring a shore segment on Lake Phalen. The restoration area is between the boat ramp and the observation platform on the north end of the lake. This segment is in a location where it will help to build a stronger connection with the Keller Creek Restoration and large, established shore restoration expanses on Phalen.

The first step in the process was to remove buckthorn, invasive honeysuckle, green ash, and a few boxelder. Crews worked a couple of days with chainsaws to clear the shore slope areas. St. Paul staff picked up the cut material with a large truck equipped with a hydraulic clamshell bucket. NR staff covered exposed soil areas with cover crop seed (oats and winter wheat) and prairie straw. After all of the clearing was completed, oaks and seven other native tree species were planted by Tree Trust staff. Next spring, NR and St. Paul staff will seed and plant the slope area with a diverse prairie and shoreland mix.

We provided technical input and some in-kind labor to supervise the buckthorn and tree removal. Tree Trust provided the plant material. St. Paul paid for the Ramsey County Corrections inmate crew and the CCM crews. This partnership resulted in a very economical project that will really improve the ecological connections in the Phalen Chain.









**Buckthorn, invasive honeysuckle and green ash being removed from the Phalen shore.**



**Eight native tree species were introduced after the site preparation work was completed.**



## Public Involvement and Education Program – Sage Passi

### October is a Great Time to Get Outdoors!!!



Four third grade classes had the opportunity to explore the native garden at Farnsworth Aerospace and study the diversity of species planted over the years. Master Water Steward, Michelle Natarajan (photo above right) and a team of Master Gardeners assisted the youth with their exploration and research. Five classrooms at Central Park Elementary studied the wildflowers and grasses that we have growing at our Watershed office site with samples we brought into their rooms. We also invited two St. John of Little Canada 6<sup>th</sup> and 7<sup>th</sup> classes to our office to see our BMPs and study the native plants on our site.

### L’Etoile du Nord Fourth Graders Hike to Beaver Lake and “Follow the Flow”



L’Etoile du Nord fourth graders made their annual walking field trip to Beaver Lake to “follow the flow” by tracing how water moves from adjacent streets to storm drains, to Beaver Lake, then into the Beltline and onto the Mississippi River. Along the way they stopped at a residence to see a rain garden and trench drain in a driveway and watched a demonstration of two models that illustrated the difference in run-off between a storm drain and a rain garden. Across from the lake they made a stop to sweep up dirt, sand and leaves accumulating near storm drains in the street, then walked across the street to the inlet that directs water from these drains into the lake. As a final step they hiked to the south end of the lake to see the outlet that takes water from Beaver Lake into the Beltline.

### **Hazel Park Preparatory Academy Students Participate in a Citizen Science Project**



Sage assisted Hazel Park Preparatory Academy teachers and 8<sup>th</sup> grade students in collecting data about the survival of new trees planted in the flood plain at Crosby Park in a collaboration with the Science Museum and Mississippi Park Connection. Volunteers in the park have been planting catalpa, silver maple, and swamp white oak to replace trees lost to Emerald ash borer. The Park is beginning a study of the long-term survival rates of these trees, in light of extended stretches of flooding in the park and in anticipation of the effects of climate change.

### **Master Water Stewards Organize STEM Saturday Event at Stafford Library in Woodbury**



On October 19, Stephanie Wang, Anna Barker and Sage Passi coordinated a rotation of hands-on STEM water activities for children and their parents at the Woodbury Library that included a demonstration of the groundwater model and Woodbury’s water tower, creating individual water conservation promises, tasting samples at a water bar, and investigating what happens when run-off goes down a storm drain versus into a rain garden.



## Clean-ups are a Big Hit with Kids



In a mad dash to fit in our field days before the snow flies, we organized clean-ups in a parking lot at a church across the street from Farnsworth, in the parking lot next to the Wildlife Rehabilitation Center and the parking lot at Central Park in Roseville. Five 5<sup>th</sup> and 6<sup>th</sup> grade classes from Central Park Elementary and one fourth grade Farnsworth class were involved in these storm sewer clean-ups.

## Current Team of Master Water Stewards “Graduate” and Our New Team Comes On Board



Our current six Master Water Stewards graduated at the “Confluence of Master Stewards” at the State Fair Grounds on October 8. We now have 4 (and 1 pending) new Master Water Steward who all attended the first class on October 15. They include Lee Bauer, Samantha Rademacher, Phil Gelbach and Adam Wilke (all of Roseville) and Mary Wandrei (Shoreview).

Three of the new stewards participated in a watershed tour on October 19 with visits to several BMP sites in Roseville and Shoreview. We look forward to working with all of you!

Sage with Lee Bauer and Phil Gelbach on the watershed tour.