Riley-Purgatory-Bluff Creek Watershed District

Board of Managers Regular Meeting
Wednesday, May 2, 2018
7:00 pm Regular Board Meeting
DISTRICT OFFICE
18681 Lake Drive East
Chanhassen

Tentative Agenda

1. **Call to Order**

2. **7:00 pm Approval of the Agenda** (Additions/Corrections/Deletion) **Action**

3. **Hennepin County Updates** **Information**

4. **Matters of general public interest** **Information**

   Welcome to the Board Meeting. Anyone may address the Board on any matter of interest in the watershed. Speakers will be acknowledged by the President; please come to the podium, state your name and address for the record. Please limit your comments to no more than three minutes. Additional comments may be submitted in writing. Generally, the Board of Managers will not take official action on items discussed at this time, but may refer the matter to staff for a future report or direct that the matter be scheduled on a future agenda.

5. **Reading and approval of minutes** **Action**
   Board of Manager Meeting, March 15, 2018

6. **Consent Agenda**
   (The consent agenda is considered as one item of business. It consists of routine administrative items or items not requiring discussion. Any manager may remove an item from the consent agenda for action.)
   a. Accept Staff Report
   b. Accept Engineer's Report (with attached Inspection Report)
   c. Approve permit 2018-001 Minnesota Panera Store #6038 in Chanhassen with staff recommendations
   d. Approve permit 2018-017 Eden Prairie Schools Administrative Service Center Parking Lot Expansion in Eden Prairie with staff recommendations
   e. Approve permit modification to permit 2015-010 Children's Learning Adventure in Chanhassen with staff recommendations.
   f. Approve Residential Cost Share Grant for Stoner Raingarden project

g. Approve Scenic Heights Elementary School Forest Restoration Project – Pay Application #1
h. Authorize Administrator to enter into Grant Agreement with Metropolitan Council for Watershed Outlet Monitoring Program

7. Citizen Advisory Committee **Information**

8. Action Items **Action**
   a. Accept March Treasurer's Report
   b. Approve Paying of the Bills
   c. Authorize administrator to enter into a grant agreement with the University of Minnesota on the Stormwater Pond Proposal from Dr John Gulliver
   d. Enter into Cooperative Agreement with the City of Chanhassen for Lake Susan Park Pond
   e. Authorize Administrator to Award Lake Susan Park Pond Project to Peterson Company with Engineer's recommendation
   f. Authorize administrator to purchase vehicle for Wetland Survey and Education and Outreach programs
   g. Conditional approval LSWMP for Chanhassen until conditions are met
   h. Approve Memorandum Supporting and Providing Explanation of Proposed Revisions of the Riley-Purgatory-Bluff Creek Watershed District and authorize distribution of draft rules for public comment.

9. Discussion Items **Information**

   a. Local Government Cost-Share Application - Eden Prairie, Rustica Raingarden
   b. HOA Cost-Share Application - Fairway Woods II water quality landscaping

10. Upcoming Events **Information**

- Citizen Advisory Committee monthly meeting, May 21, 6:00 pm, 18681 Lake Drive East, Chanhassen.
- Public Hearing and Regular Board Meeting, June 6, 7:00 pm, 18681 Lake Drive East, Chanhassen

MEETING MINUTES

Riley-Purgatory-Bluff Creek Watershed District

April 4, 2018, Board of Managers Workshop and Monthly Meeting

PRESENT:

Managers:	Richard Chadwick, Secretary
	Jill Crafton, Treasurer
	Dorothy Pedersen, Vice President
	Dick Ward
	Leslie Yetka, President
Staff:	Claire Bleser, District Administrator
	Zach Dickhausen, Water Resources Technician
	Terry Jeffery, Project and Permit Coordinator
	Michelle Jordan, Community Outreach Coordinator
	Joshua Maxwell, Water Resources Coordinator
	Louis Smith, Attorney (Smith Partners)
	Scott Sobiech, Engineer (Barr Engineering Company)

Other attendees:	Brian Beck, Wenck*	Peggy Moeller, Redpath & Co.*
	Paul Bulger, CAC	Vanessa Strong, City of Chanhassen*
	Greg Hawks, Chanhassen Resident	Laurie Susla, LLCA
	Larry Koch, Chanhassen Resident	Lori Tritz, CAC
	Ryan Majkrzak, LRIA	David Ziegler, CAC; Eden Prairie Resident
	Sharon McCotter, CAC*	

*Indicates attendance only at Monthly Meeting

1. Workshop

President Yetka called to order the Wednesday, April 4, 2018, Board of Managers Workshop at 5:35 p.m. in the District Office, 18681 Lake Drive East, Chanhassen, MN 55317.

RPBCWD RULES REVISIONS

Mr. Jeffery went through the revisions to the rules and introduced a new rule, Rule N: Enforcement.

Engineer Sobiech pointed out the addition of item 2.2e about land-disturbing activities that do not involve creating new impervious surface or do not disturb existing impervious surface.

Staff introduced the topic of storm water management to protect channels. Engineer Sobiech explained that during the 10-year plan refresh process, stakeholders identified streambank erosion as an area of concern. Using PowerPoint visuals, he showed examples of observed problems with streambanks along the watershed's three creeks. He noted that more than 50% of the streambanks in the watershed are in either poor or severe condition.

Engineer Sobiech reviewed current watershed regulation in relation to rainfall events, and he summarized potential channel protection options. Engineer Sobiech went into detail about a flow duration curve option that could be based on actual observed flows or simulated hourly flows using actual climatic data. He showed a table with a side-by side comparison of storm water management considerations under the current District rules versus the version staff discussed with the TAC. Engineer Sobiech reported that the TAC raised several considerations such as how city street projects would be impacted. Engineer Sobiech introduced an alternative approached to storm water management to protect channels: a hybrid approach. He explained the hybrid approach.

Engineer Sobiech stated that there are four options to consider regarding the storm water management to protect channels:

- The approach that staff discussed with the TAC
- The hybrid approach
- Do nothing
- Other ideas

Engineer Sobiech requested feedback and direction from the Board. There was discussion of a regional approach, in which the District undertakes Capital projects to address the channel erosion instead of taking a regulatory approach. Managers asked questions and offered comments. Staff responded.

Attorney Smith noted that other metro-area watersheds do not have channel erosion issues to the degree that this watershed has them. He asked staff several questions including whether staff has an idea of how the approaches discussed would impact developers. Mr. Jeffery responded that staff has not yet investigated how developers would be impacted.

Mr. Jeffery asked the Board if the revised rules should be held until the topic of channel erosion could be included or if the Board wants to move forward with the revised rules as presented tonight and subsequently approach the channel erosion issue. The Board discussed this point. Mr. Jeffery said that he hears that the Board wants to move forward with the rules and keep investigating the channel erosion topic. The Board agreed. Mr. Jeffery said that staff will come to the May Board meeting with a request for the Board's approval for staff to distribute the revised rules for agency and stakeholder review. The Board agreed.

RPBCWD 2018 Work Plan

Administrator Bleser pointed out that the Board received the District's 2018 work plan and asked if there are any questions about it. No questions were raised.

Manager Yetka adjourned the workshop at 6:55 p.m.

2. Regular Monthly Meeting Call to Order

President Yetka called to order the Wednesday, April 4, 2018, Board of Managers Meeting at 7:03 p.m. in the District Office, 18681 Lake Drive East, Chanhassen, MN 55317.

3. Approval of the Agenda

President Yetka noted the addition of item 10H – Local Surface Water Management Plan from Bloomington. Manager Ward requested the removal of Consent Agenda item H - Approve and authorize administrator to enter

into agreement with Wenck Associates for Alum Plans and Specification for Lotus and Rice Marsh Lake proposal. President Yetka added it to the agenda as Action Item 10i.

Manager Ward moved to approve the agenda as amended. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

4. Redpath & Company Presentation of Annual Audit

Administrator Bleser introduced Peggy Moeller of Redpath & Company and noted that Ms. Moeller was the lead in the annual audit.

Ms. Moeller listed the reports provided in the annual audit including: Opinion on the Fair Presentation of the Financial Statements, Report on Internal Controls, Minnesota Legal Compliance Report, and Communication to Those Charged with Governance. Ms. Moeller summarized the audit process, reports, and communication with the District. She responded to questions.

Manager Crafton moved to accept the audit. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

Administrator Bleser announced that the audit is posted on the District's website in the annual report section of the library.

5. Wenck Presentation on Alum Treatment Dose Estimates for Lotus Lake

Administrator Bleser introduced Brian Beck of Wenck & Associates to present the findings about Lotus Lake alum treatment dose estimates. Mr. Beck gave a primer on internal lake loading of phosphorous. He provided data about Lotus Lake's internal phosphorous release. Mr. Beck recommended an alum treatment of Lotus Lake in two application phases. Displaying PowerPoint slides, Mr. Beck showed where on the lake Wenck recommends applying the alum and in what dosage. He reported that the cost estimate for the alum treatment, split into two applications, is $260,000. He explained that focusing the application on deep areas will provide the best cost-benefit for the project. Mr. Beck summarized that the alum application on Lotus Lake should be applied in two half doses that are a minimum of one to two years apart and are followed up with sediment monitoring.

He responded to questions. Administrator Bleser commented that the District is looking at possibly implementing the alum treatment for Rice Marsh Lake and Lotus Lake starting in fall 2018.

6. Matters of General Public Interest

President Yetka read aloud the procedures for this portion of the meeting and opened the floor for matters of general public interest.

Ms. Laurie Susla, Chanhassen resident, asked Mr. Beck how Wenck selected the alum application sites on Lotus Lake. Mr. Beck responded. Ms. Susla asked the Board and staff to include the workshop materials in the Board meeting packet posted on the District's website.

Mr. Paul Bulger, CAC member and Eden Prairie resident, said that he would have appreciated seeing the workshop materials in the printed Board packet or the packet posted online. He commented that he has a difficult time finding materials on the District's website, for example he could not locate the groundwater report. Mr. Bulger asked if the District could use its IT consultant to speed up the process of updating the District's website.

Administrator Bleser and Ms. Michelle Jordan responded to questions and comments raised in the Matters of Public Interest, including providing information about Website updates.

7. Reading and Approval of Minutes

a. March 15, 2018, RPBCWD Board of Managers Public Hearing and Monthly Meeting

Manager Crafton moved to approve the minutes as presented. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

8. Consent Agenda

Mr. Jeffery clarified Consent Agenda item f – Approve Permit 2018-007 Lake Lucy Lane Drainage Improvement Project in Chanhassen with staff recommendations. President Yetka read aloud the Consent Agenda: 7a. Accept Staff Report; 7b - Accept Engineer's Report (with Attached Inspection Report); 7c – Approve and Release 2017 Annual Report; 7d – Approve Permit Modification to Permit 2018-008 Staring Lake Park Play Court with Staff Recommendation; 7e -Approve Permit 2017-073 Preserve Village in Eden Prairie with Staff Recommendations; 7f – Approve Permit 2018-007 Lake Lucy Lane Drainage Improvement Project in Chanhassen with Staff Recommendation; 7g – Approve Permit Modification to Permit 2017-069 Eden Prairie Center Scheels Redevelopment; 7i - Approve and Authorize Administrator to Enter into Agreement with Wenck Associates for Hyland Lake Alum Dose and Cost Estimate Proposal; 7j – Award Chanhassen High School Reuse Project to Peterson Company Pending the City of Chanhassen Executing Cooperative Agreement with Engineer's Recommendation.

Manager Crafton moved to approve the Consent Agenda as amended to remove item 7h. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

9. Citizen Advisory Committee (CAC)

Mr. Zielger, CAC president, reported that the CAC has formed two new subcommittees: the Chloride Reduction subcommittee and the Wetlands subcommittee. He noted that the information in the Board packets is more useful and easier to read if the documents are posted online in color.

10. Action Items

a. Accept February Treasurer's Report

Manager Crafton read aloud the District's statement on internal controls. Manager Ward moved to accept the February Treasurer's report. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

b. Approve Paying of Bills

Manager Crafton moved to pay the bills. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

c. Resolution 2018-02 Ordering Submission of RPBCWD's 10-Year Plan to BWSR

President Yetka read aloud the resolving paragraphs of resolution 2018-02 ordering the submission of the RPBCWD's 10-year plan to the Minnesota Board of Water and Soil Resources.

Manager Ward moved to adopt Resolution 2018-02. Manager Chadwick seconded the motion. Upon a roll call vote, the motion carried 5-0.

Manager	Ay	Nay	Abstain	Absent
Chadwick	X			
Crafton	X			
Pedersen	X			
Ward	X			
Yetka	X			

d. Lake Susan Park Pond Project

Administrator Bleser reported that bids came back higher than estimated, so now the District is in discussion with the City of Chanhassen to request that the City increases its funding contribution for the project. Administrator Bleser said that the District is asking the City to increase its funding commitment by an additional $50,000, to be matched by the District increasing its funding of the project by an additional $75,000. She announced that staff will bring this project back to the Board at its May meeting.

e. City of Chaska's Local Surface Water Management Plan

Administrator Bleser reported that a table in the City of Chaska's Local Surface Water Management Plan is not updated. She stated that staff recommends the Board conditionally approve the LSWMP subject to the City updating that table.

Manager Crafton moved to submit the letter to the City of Chaska. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

f. John Gulliver Research Proposal

Administrator Bleser explained the history behind the proposal and how the multi-year storm water study, which concluded with a 2013 report, caught the attention of John Gulliver at the St. Anthony Falls Research Laboratory. Administrator Bleser explained how the Research Laboratory is interested in furthering the study. She reported that she sent out a communication to the entities who partnered for the original study. Administrator Bleser said that four of those five cities have indicated interest in participating in the additional study. She noted that staff is in conversations about funding and how much each partner could contribute toward the study. There was an extensive discussion about project funding.

Administrator Bleser provided more details about the proposed study, including the fact that five ponds would be included in the study. She pointed out that tonight's discussion is just an update about this potential study and that she hears the Board agreeing that she should continue discussions with the four cities regarding the study and funding. The Board indicated agreement. Administrator Bleser said she will come back in May with more information.

g. City of Bloomington Local Surface Water Management Plan

Administrator Bleser explained that the City of Bloomington's Local Surface Water Management Plan (LCWMP) lacks description about who does what regarding overlapping rules within the city. She pointed out that that plan needs to address the additional control requirements as identified in rule 8410. Administrator Bleser noted that the draft letter in the meeting packet describes what is missing in the LSWMP. She said that staff recommends the Board conditionally approve the City's LSWMP subject to the City's adding to its Plan the information as detailed in the District's letter to the City.

Manager Pedersen moved to conditionally approve the City of Bloomington's LSWMP and send the letter to the City of Bloomington. Manager Ward seconded the motion. Upon a vote, the motion carried 5-0.

h. Authorize Administrator Bleser to Enter into Agreement with Wenck & Associates for the Alum Plans and Specifications for Rice Marsh Lake and Lotus Lake

Manager Ward asked for a clarification of the numbers listed in the Board packet for the project. Administrator Bleser checked the numbers and said that the number should be $69,366.

Manager Ward moved to authorize the Administrator to enter into an Agreement with Wenck & Associates for the alum plans and specifications for Rice Marsh Lake and Lotus Lake. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

11. Discussion Items

a. 50th Anniversary Celebration Update

Administrator Bleser announced that staff explored several venue options including the Riley Jacques Barn near Lake Riley in Eden Prairie. She said that the Barn is open only toward the end of summer, and she asked if the Board would be ok with moving the celebration to the end of the summer. The Board agreed to move the celebration to the end of summer and directed Administrator Bleser to move forward with reserving the Riley Jacques Barn facility.

b. Watershed Boundary Update

Administrator Bleser reported that the Minnesota Board of Water and Soil Resources has approved the Boundary change. She said that staff will make sure the maps on the District website are updated. She noted that the 10-year plan included the updates.

c. Upcoming Events

President Yetka read aloud the upcoming meetings and events. She noted that the April 16th CAC meeting starts at 6 p.m. at the District Office and that the May 2nd monthly Board meeting starts at 7 p.m.

12. Upcoming Events

- Lower Riley Creek Stabilization and Restoration Informational Meeting, Wednesday, April 11, 7:00 p.m., District Office, 18681 Lake Drive East, Chanhassen.
- Citizen Advisory Committee Meeting, Monday, April 16, 6:00 p.m., District Office, 18681 Lake Drive East, Chanhassen.
- RPBCWD Board of Managers and City of Eden Prairie Joint Workshop, Tuesday, April 17, 5:30 p.m.,

Heritage Room, Eden Prairie City Hall, 8080 Mitchell Road, Eden Prairie.

- Regular Monthly Meeting, Wednesday, May 2, 7:00 p.m., District Office, 18681 Lake Drive East, Chanhassen

13. Adjourn

Manager Ward moved to adjourn the meeting. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0. The meeting adjourned at 8:38 p.m.

Respectfully submitted,

Richard Chadwick, Secretary

RPBCWD Staff Report
May 2, 2018

Winter Sampling on Lotus Lake in April.

Administrative

10-Year Plan
Timeline
November 15 – release of the plan out for comments
December 6 – 6:00pm Informational session
January 15 – end of written comment period
February 7 - response to comments to board for approval (we need 10 days in between response to comments and public hearing)
March 15 – Public Hearing
April 4 – release for 90 day

Administrator Bleser presented to the City of Eden Prairie Council and Staff on April 17th. Administrator Bleser will also be presenting to Carver County on May 1st.

50th Anniversary Celebration: Come explore with us!
2019 marks the 50th anniversary of the formation of the Riley Purgatory Bluff Creek Watershed District. District staff continue to formulate plans for the 50th. Staff looked at different alternatives besides Chanhassen Dinner Theater. We will provide an update to the managers at the board meeting.

Administration
Administrator Bleser has been working on our renewals of benefit packages and the potential of enrolling in the League of Minnesota Cities 4M fund.

Aquatic Invasive Species
Administrator Bleser is working with Professor Newman from the University of Minnesota in renewing a grant for better understanding aquatic invasive plant management.

Annual Report
Annual report were distributed to BWSR and DNR. Administrator Bleser also presented at the Timber Lakes Association (Mitchell Lake) and at the Lake Riley Improvement Association Annual Meeting.

Budget
No changes

Data Requests and Research Extensions
A staff member from MPCA contacted the District about future monitoring efforts to address streams and lakes in the Twin Cities metro area that have been listed as impaired or identified as high risk to exceeding chloride standards (Bluff Creek was identified). Staff identified current plans for chloride monitoring on Bluff Creek and plans to assist the MPCA in data collection.

A student from Chaska High School requested and was sent District chloride data for a class project.

An individual submitted 7 data requests in regards to meeting materials and audios for the the past three months.

Grants
The District is still moving forward on the Wetland Restoration and Flood Mitigation Project and Chloride Education and Incentive Program forward for targeted watershed grant funding with BWSR.

MAWD
Planning is still continuing.

Citizens Advisory Committee

April meeting
The Citizens Advisory Committee met Monday, April 16, for their regular monthly meeting. Members reviewed a residential cost-share application and recommended approval pending having two comments addressed. Comments were addressed by the staff/technical review committee satisfactorily. See more detail in the cost-share section. Draft minutes are included in the board packet. These include a summary of the 2018 State of the Waters conference, which

was attended by the CAC Chair, David Ziegler. David reported out on the conference to the entire committee and prompted discussion and questions around the topics.

Technical Advisory Committee

No new updates

Programs and Projects

District-Wide

Cost-share program

First-round applications closed April 11. One application was received for each of the three tiers, Residential, HOA, and City/Business (city/business applications are accepted on a rolling basis throughout the year). The HOA and City applications are both for larger projects, with greater than $10,000 requests and as such will need to go to public hearings. Staff are working with the applicants to refine elements of the proposals.

The city application is from the city of Eden Prairie for rejuvenating the rain garden located at the historic Smith Douglas Moore house (now occupied by Rustica, formerly Dunn Brothers). This was the first raingarden in Eden Prairie, installed 16 years ago in 2002. As such, it is in need of repair, including improvements to the inlet and outlet. It is anticipated that the city application will go to public hearing and to the board the June 6th board meeting. The HOA application is for a set of raingardens and dry creekbeds on a property along Purgatory Creek. The property is located within the 100 year flood plain, and so staff are working with the applicants on the permit submission process. Some additional materials will be needed and it is possible that this project will go to public hearing and the board later in the summer.

The homeowner application is for a shallow boulevard raingarden in Eden Prairie. After review, CAC members requested swapping out one of the plants, and making sure the mulch did not extend above the sidewalk. These modifications were made. Staff and CAC recommend funding. The application and summary are included in the board packet.

MPCA Community Resiliency Grant

Staff has not yet completed reporting but anticipate having it done in April.

Regulatory Program

Permitting

This past month, twenty-four (24) applications were submitted to the District's on-line permitting system. Of these fifteen (15) are currently under various stages of review. The District has only received an on-line application but no supporting documentation (plan sets, etc.) for three (3) additional applications. Another six (6) were reviewed and a a permit was issued administratively. These are included in the following table.

PERMIT #	ADDRESS	PROJECT DESCRIPTION
2018-002	7555 Walnut Curve, Chanhassen	Construction of an in-ground pool, patio area, and a rain garden.
2018-018	UCD Dig Site #7 Eden Prairie	Permit issued to Magellan pipeline to excavate and inspect a portion of their pipeline.
2018-019	UCD Dig Site #9 Eden Prairie	Permit issued to Magellan pipeline to excavate and inspect a portion of their pipeline.
2018-020	9770 Sky Lane, Eden Prairie	Construction of a single family home and an infiltration trench on an existing lot of record.
2018-021	9810 Sky Lane, Eden Prairie	Construction of a single family home and an infiltration trench on an existing lot of record.
2018-024	2165 Wynsong Ln, Chanhassen	Construction of an in-ground pool, patio area, & establishment of a buffer on a downstream wetland..

Two financial assurance bonds are set to expire. The projects are complete, the sites are stabilized but the applicant has not provided as-built surveys and record drawings. Staff has contacted both applicants and both have indicated that they will submit the drawings next week.

Rules Update
As discussed at the April 3, 2018 meeting, the District rule revisions are complete. Item i on the May 2, 2018 consent agenda addresses this. A memorandum has been prepared which summarizes the changes and address the purpose of the changes.

Total Maximum Daily Load
No new updates.

Data Collection (J. Maxwell)

Rice Marsh Aeration
Because a healthy bluegill population within Rice Marsh Lake is an important part of controlling common carp populations in the Riley Chain of Lakes, staff has selected a hatchery for stocking and is working with an aeration provider to discuss surface units. In addition, staff plans to stock bluegills in Staring and the Upper Purgatory Creek Recreational Area to bolster bluegill populations.

Winter Field Season
A final winter sampling event occurred on the Purgatory Chain of Lakes early this month. Staff have sent in both sondes and should receive them back shortly to begin the spring sampling season. At the beginning of the month staff sent in the spent lime signature series sensor to be evaluated.
Staff also purchased components and assembled two additional EnviroDIY units that will be used for lake level sensors, replacing the units that no longer work. Staff will be working with Limnotech to program the units.

Common Carp Management
In preparation for the upcoming field season, staff and service learning students finished mending carp nets to ensure the greatest capture efficiencies. Staff will be taking water temperature readings at the fish barrier to assess when carp movement occurs so the barrier can be closed. Staff have been in contact with the DNR to secure permits in preparation of deploying the trap net and conduct electrofishing removal events.

Creek Restoration Action Strategy

Staff will be replacing "lost" bank pins at our regular stream monitoring sites, as well as at an additional site on the southwest side of Silver Lake, to assess erosion rates in 2018. Barr Engineering and District staff submitted the CRAS to the Center for Watershed Protection for publication and received preliminary review comments back this month. Staff Maxwell has addressed the comments and has submitted the document to undergo a second review. Staff have also been compiling and formatting a final creek walk book.

WOMP Station - Metropolitan Council
Staff visited the WOMP stations twice this month.

Education and Outreach (M. Jordan)

Volunteer program
The first volunteer newsletter was sent out to watershed volunteers, and those who have expressed interest in volunteer opportunities. These will be sent at least every two months. Individuals can sign up to receive it by clicking "volunteer opportunities" when they sign up for the district's regular newsletter.

Service Learners
Service learners are finishing their hours as the school term comes to an end.

Adopt a Dock Program
Volunteers have been contacted and most will be participating again this year. Plates will be going out shortly. Volunteers will also have the opportunity to receive a water thermometer and record lake temperature throughout this season this year.

Master Water Stewards Program
This year's cohort had their last class session on April 17th. This was a joint class with the entire metro-wide cohort, hosted at Mississippi Watershed Management Organization. Stewards are now working toward finishing the plans and preparations for their capstones, submitting for cost-share, and doing their installations.

Citizen Advisory Committee
See CAC section above.

Minnetonka High School Capstone Mentorship
The Minnetonka Student was accepted into the capstone program. Their project will take place the last two weeks of May and will involve learning and applying standard principles of environmental communication and interpretation and using them to design materials that communicate science topics to a general audience.

Communication Program

Eden Prairie City Council - Watershed Board join workshop
On request of the city administrator, a join workshop of the Eden Prairie CIty council and the Watershed District Board of Managers was held. The watershed district administrator presented on the 2017 Annual Report, the draft updated 10-Year Management Plan, and watershed plans for projects and activities in Eden Prairie in 2018.

Lake Riley Improvement association annual meeting
The district administrator attended the annual meeting of the Lake Riley Improvement Association. lose to 50 members of the community attended. Administrator Bleser presented on the 10-year plan, annual report relevant to Lake Riley.

Lake Riley Community Actions for Clean Water Meeting
In partnership with the Lake Riley Improvement Association and the cities of Chanhassen and Eden Prairie, the district is hosting a community meeting for the Lake Riley watershed on May 9.

Lower Riley Creek Restoration
The District hosted a public information session on April 11 at District Office. 22 residents came and the District received positive feedbacks for the project.

Mitchell Lake Association annual meeting
The district administrator attended the annual meeting of the Mitchell Lake Association. 33 members of the community attended. Administrator Bleser presented on the 10-year plan, annual report relevant to Mitchell Lake.

Speakers Bureau
The CAC subcommittee continues to work on the speakers bureau, with support from staff.

Stormwater Practice Maintenance Certification Workshop
Staff Maxwell was again invited and accepted leading an exercise at the annual Stormwater Practice Maintenance workshop held by the University of Minnesota on April 30th and May 1st. A summary description will be included in the June board packet.

Tabling at community events
District staff and a volunteer hosted a table at the Animal Open House on April 7th. Staff and a volunteer also hosted a table at the Eden Prairie Arbor Day Walk and Green Fair on APril 28th.

Water Resources Report
Over 400 lake and creek fact sheets have been distributed to date.
Watershed Sandbox interactive display
The Watershed Sandbox interactive display has been completed and used at two district programs. This augmented reality style display projects topography lines on sand that individuals can sculpt. They can then make it rain and see where the water flows through their created watershed. This is a partnership project of the district, and the Nine Mile Creek Watershed District. Partnering allowed us to share the cost, and to ensure that sandbox is used heavily throughout the year. It will be on display periodically at the office.

Website & Newsletter
The March newsletter has been sent out. Staff continue to work on the website updates.

Youth Outreach
Earth Day Mini-Grants
One grant recipient has already completed their project and submitted for reimbursement.

Clear Springs Elementary Earth Day program
District staff members spent April 26th and 27th at Clear Springs Elementary with all of the 3rd grade classes. With four stations, students learned what a watershed is, where they are in our watershed district, water safety and samples, and how to keep lake and creeks clean. The Watershed Sandbox interactive display made its debut and was well-received. Around 150 students were engaged. A staff member from Nine Mile Creek Watershed District also attended and helped out with the programing. District staff are appreciative of the continued beneficial partnerships between the two districts.

Minnetonka Community Education Center program
District staff members spent the afternoon on April 25th with preschool students at the Minnetonka

Community Education Center. Hosting three stations, they engaged the students in learning about macroinvertebrates, water safety and testing, and how to keep lakes and creeks clean. The Pretend and Play Canoe made its debut at this event and was a hit. Around 100 students were engaged.

Pretend and Learn Canoe
Staff Dickhausen finished construction and finishing of the District's Pretend and Learn Canoe. This eight-foot, mock canoe houses teaching water-sampling and safety equipment. Youth are able to interact with this equipment at outreach events while learning about water sampling and water safety. The canoe folds up into a portable, rolling trunk which can be transported easily in district vehicles.

Staring Outdoor Center partnership
Staff and a volunteer tabled at the Animal Open House is coming up on April 7th. They collected macroinvertebrates and used them to teach about how these insects can be used to understand how healthy a waterbody is. They interacted with over 200 people at the event.

Continuing Education Program
Winter & Turf Maintenance Training
The level II winter maintenance training was cancelled due to low numbers. Staff are looking at potentially rescheduling for June.

Local Leaders Program
Summer Tour
Planning for the MAWD Summer Tour continues. Further details can be found under the MAWD heading at the top.

Businesses and Professionals Program
Professional luncheon series
Our realtor's luncheon had 13 participants. We had great feedbacks and participants were able to gather District resources and bring them back for themselves and clients. Our next business luncheon is our builder's workshop which will be held on May 16th.

Bluff Creek One Water

Chanhassen High School
Chanhassen High School Cooperative Agreement have been finalized by ISD 112 and the City of Chanhassen.

Bluff Creek Tributary Restoration
No updates.

Riley Creek One Water

Lake Susan Park Pond

Staff has worked with the City of Chanhassen to finalize Cooperative Agreement. The City of Chanhassen approved the cooperative agreement at their council meeting on April 23rd.

Riley Creek

Informational meeting was set to April 11th at 7:00pm. Postcards were sent to resident located near the project site. Signs were also posted at trail entrances near the site.

Purgatory Creek One Water

Fire Station 2

No new updates.

Purgatory Creek at 101

No new updates.

Scenic Heights School Forest

When bad weather cancelled a field trip day to the Scenic Heights School forest, Three Rivers Parks District staff reached out to the watershed district to see if they could help. Instead of having two days to do programs with 140 Groveland Elementary School 5th graders, the naturalists needed to fit them all into one day. For once the late spring was a welcomed thing, as district sampling staff were not out in the field yet, and by juggling schedules we were able to join in to support the Three Rivers naturalists. Naturalists and staff talked about why the school forest is being restored, how it connects to water quality, and how each of us can make an impact on clean water. Groups went for hikes through the forest, tracing the route of stormwater as it enters the forest, moves into the pond, through a wetland, and finally out to Purgatory Creek. Staff had a great time, and were impressed not only with the quick-thinking coordination of the exceptional Three Rivers team, Groveland and Scenic Heights, but also the attentiveness and curiosity of the Groveland 5th graders.

Staff have been coordinating with the art teacher at Scenic Heights Elementary about a school-wide art project celebrating the school forest. From May 1-7, staff will be out at the school for all of the art classes. They were do presentations on the school forest project and the different habitats within it that are being restored (pond, riparian, wetland, prairie, wooodland, woodland edge). Each grade level is assigned a habitat, and each class a plant or animal in that habitat. The classes will be making clay tiles showing their plant/animal and then these will be displayed as a school mural, helping to tell the story of the forest and the project.

Professional Workgroups and Continuing Education

Staff Maxwell will be leading creek assessment workshop the day after the MAWD tour. The workshop is held by the RPBCWD not MAWD. Audiences for this professional workshop are water resource managers, data collection staff and individuals who are interested in learning more about techniques to assess creeks, what are on some solutions and how to inspect the creek post-restoration.

resourceful. naturally.
engineering and environmental consultants

BARR

Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report Summarizing April 2018 Activities for May 2, 2018, Board Meeting
Date: April 24, 2018

The purpose of this memorandum is to provide the Riley-Purgatory-Bluff Creek Watershed District (RPBCWD) Board of Managers and the District Administrator with a summary of the activities performed by Barr Engineering Co., serving in the role of District Engineer, during April 2018.

General Services

a. Met with Administrator Bleser, Counsel Smith, and permit Coordinator Jeffery on April 3rd to discuss status of capital project, cooperative agreements, and city surface water management plans.

b. Participated in an April 9th meeting and April 23rd conference call with Permit Coordinator Jeffery and Counsel Smith to finalize rule revisions for Board consideration.

c. Met with Administrator Bleser, city of Eden Prairie, and District Staff to discuss the Lower Riley Creek corridor enhancement plan in connection with the cooperative agreement for the Lower Riley Creek Restoration project.

d. Prepared presentation for April 4th rules workshop.

e. Prepared Engineer's Report for engineering services performed during April 2018.

f. Miscellaneous discussions and coordination with Administrator Bleser about District's 10-year plan, packet materials, bid openings and upcoming Board meeting agenda.

g. Project management and overall coordination of active task orders.

Permitting Program

a. *Permit 2018-012: Children's Learning Adventure:* This project involved construction of a children's learning center in the northwest quadrant of Galpin Blvd. and Highway 5 in Chanhassen. The applicant submitted a new permit to reflect site modification needed to demonstrate compliance with the RPBCWD rules because the infiltration BMPs are not functioning as designed. Responded to applicant's revised submittal on April 6th indicating application is complete. Provided additional review comments and drafted permit modification memo for Board consideration at the May 2nd regular meeting.

b. *Permit 2016-016: Avienda*: This project involves a mixed-use regional development in the southwest quadrant of the intersection of Lyman Boulevard and Powers Boulevard in Chanhassen Minnesota. The project will trigger the RPBCWD Floodplain, Erosion Control, Wetland and Creek Buffer and Stormwater Management Rules. The applicant is proposing

an initial construction phase to include mass grading and construction of all public infrastructure. The applicant will seek future permit approvals, as development occurs to account for site-specific impervious coverage. Review initial submittal and notified applicant on April 2nd that the submittal was incomplete because no wetland information was submitted, the electronic hydrologic and water quality models were not submitted, the submittal lack rate control and water quality information for the initial mass-grading phase, and ultimate build-out conditions was missing BMP information. Had a conference call with the applicant and Permit Coordinator Jeffery on April 13th. Worked with applicant to improve definition of runoff for existing site conditions.

c. Performed erosion control inspections of active sites during the week of April17th (see attached inspection report).

d. Miscellaneous conversations with Permit Coordinator Jeffery about technical questions on permit requirements for potential development and redevelopment projects, including 2018-001 Panera, 2018-017 EP Schools ASC Parking, and others.

Data Management/Sampling/Equipment Assistance

a. Uploaded five RMB lab reports to EQuIS and verified reported results against original lab report pdf.

b. Responded to MPCA questions regarding 2017 Lake and Stream data submittal

c. Updated 2017 field turbidity readings to include greater than qualifiers.

Task Order 6: WOMP Station Monitoring

Purgatory Creek Monitoring Station at Pioneer Trail

a. Site visits to check on stream/ice conditions.

b. Prep/mobilize equipment for 2018 monitoring.

c. Snowmelt event sampling - collect, prep, and deliver samples to lab.

d. Download and review data.

Purgatory Creek Monitoring Station at Valley View Rd

a. Site visits to check on stream/ice conditions.

b. Prep/mobilize equipment for 2018 monitoring.

c. Snowmelt event sampling - set station, collect, prep, and deliver samples to lab.

d. Download and review data.

e. Maintenance - troubleshoot distributor arm errors.

Task Order 7b: Purgatory Creek Stabilization near Hwy 101—Construction

a. Inspections on plant materials are expected in the spring as part of the vegetation maintenance on the project. Additional vegetation may be planted to provide screening and discourage foot traffic on the creek banks.

Task Order 13b: Lake Susan Watershed Treatment and Stormwater Reuse Enhancements Design and Construction Administration

a. Responded to follow-up questions related to project bids from the City of Chanhassen and District staff.

Task Order 14b: Lower Riley Creek Final Design

a. Held public open house for nearby residents to hear about the project, ask questions, and provide input. The meeting was well attended and residents expressed excitement for the project.

b. Discussed comments on the 60% plan with the city of Eden Prairie and began edits to the plan to address the comments.

c. Continued work on permit applications to be submitted to the US Army Corps of Engineers, Mn DNR, and RPBCWD.

d. Completed renderings to help public visualize the project after construction

e. Met with the City of Eden Prairie regarding a draft corridor enhancement and maintenance plan.

f. Continued working on corridor enhancement plan.

Task Order 16: Watershed Management Plan Refresh

a. Worked closely with Administrator Bleser and prepared final review draft for submittal to BWSR for 90-day review.

Task Order 19: Chanhassen High School Stormwater Reuse Design

a. Follow-up with ISD112 staff regarding selection of Bid Alternate C (CMU shelter). ISD112 to pay difference between base bid and selection of Bid Alternate C – school district staff to provide letter to administrator summarizing this agreement/selection.

b. Provide updated drafts of the Notice of Award, Form Agreement, and Bid Form (with edits to reflect selection of Bid Alternate C) to administrator for review and signing, upon full execution of the cooperative agreement and receipt of letter from ISD112 for selection of Bid Alternate C.

c. Update to Peterson Companies regarding the status of the Notice of Award and Form Agreement for the Chanhassen High School project.

Task Order 21B: Bluff Creek Stabilization Project

a. Worked on final additions to the plans, including planting plans and erosion control plans.

b. Completed draft renderings to use at a public meeting.

c. Submitted permit applications to the US Army Corps of Engineers, Mn DNR, and RPBCWD District.

d. Continued worked on a draft corridor enhancement and maintenance plan to discuss with the City of Chanhassen in coordination with Administrator Bleser. This effort was not included in the original task order.

Task Order 23: Scenic Heights School Forest Restoration

a. Clearing of the woody invasive species and selected canopy trees is complete and the change to the school forest is dramatic. Crews from Wetland Habitat Restorations used a two-pronged approach for removal. For areas where desirable plants are to be protected, crew members used a handheld brush saw and followed up with herbicide treatment of the stump. In areas where little or no desirable species have been identified for protection, a skid steer mounted forestry mower was used to obliterate the buckthorn down to the stump, making resprouting less likely.

b. Prior to native seeding, treatment of buckthorn re-sprouts and seedlings will begin. Foliar herbicide applications (targeted spraying of the young green leaves) will be used on larger area of small re-sprouts where no desirable native herbaceous plants such as spring ephemerals have been located.

c. The restoration of the small creek-like channel that feeds water to the pond is expected to take place once road restrictions are removed, likely in Mid-May. The channel will be regraded to soften its banks and three rock riffles will be installed to reduce the erosive energies during storm events. Native seed installation is to begin mid to late May.

Task Order 24: Preliminary Engineering Study for Silver Lake Water Quality Treatment Project

a. We provided the draft Feasibility Report to Administrator Bleser for review on February 28, 2018. We will finalize the Feasibility Report following receipt of Administrator Bleser's comments.

resourceful. naturally.
engineering and environmental consultants

BARR

To: RPBCWD Board of Managers

From: Dave Melmer

Subject: April 17, 2018—Erosion Inspection

Date: April 23, 2018

Project: 23/27-0053.14 PRMT 9016

Barr staff has inspected construction sites in the Riley Purgatory Bluff Creek Watershed District for conformance to erosion and sediment control policies. Listed below are construction projects and the improvement needed for effective erosion control. Site inspections occurred on April 17, 2018.

Site Inspections

2015-008	**3520 Meadow Lane - Existing Single-Family** **3520 Meadow Ln Minnetonka, Minnesota 55345 United States** Site BMP's are adequate. Silt fence is down in some areas on west side--will not affect site runoff. Site cleanup and house painting complete. Some landscaping observed on north side. Deck installation underway. Site activity observed-indoor construction. (April-2018)	**2018-04-17**
2015-010	**Children's Learning Adventure - Private - Commercial/Industrial** **Northwest Corner of Highway 5 and Galpin Avenue Chanhassen, Minnesota 55317 United States** Building construction complete. Inlet protection has been removed. Landscaping is complete. Sod was installed and application of spray tac to exposed soils. Vegetation growing thru mats and in spray-tac'd areas. Pond slope to west has failed-- causing slope erosion to pond downstream. Site representative was notified of Corrective Action--has been repaired. These two areas were recently spray tac'd--sparse vegetation growing to date. Photo taken. All temporary BMP's have been removed. November inspection--inlet protection observed at catch basin on Galpin-- SE corner on site side. (April, 2018)	**2018-04-17**
2015-016	**Blossom Hill - Private - Residential** **10841 Blossom Rd Eden Prairie, Minnesota 55347 United States** Site is snow covered. Visible BMP's look good. Three new home sites under construction on Windsor Terrace need rock entrance installed/ tracking to street. Once snowmelt is complete --catch basin protection needs to be reinstalled. Site representative was notified. February CA has been completed.	**2018-04-17**

2015-035	**LaMettry's Chanhassen - Private - Commercial/Industrial** **Audubon RD and Motorplex CT Chanhassen, Minnesota 55317 United States** Building complete. Parking lot on north lot has been paved. North slope grading and landscaping complete. South area landscaping and sodding complete. Site is stable. Inlet protection still in place. (April-2018) site is snow covered.	**2018-04-17**
2015-036	**Saville West Subdivision - Private - Residential** **5325 County Road 101 Minnetonka, Minnesota 55345 United States** Construction complete at 5320 Spring Ln. House site. Silt fence perimeter control in place. BMP's look good. Landscaping not complete. Site snow covered. Silt fence installed on southwest and west side of development. Lots to south have been brushed/cleared. (April-2018)	**2018-04-17**
2015-050	**Arbor Glen Chanhassen - Private - Residential** **9170 GREAT PLAINS BLVD Chanhassen, Minnesota 55317 United States** Perimeter control (silt fence) installed. Heavy equipment onsite and earthwork/grading complete. Roadway and detention pond installed. All slopes have been stabilized and covered. BMP's look good. No observed activity onsite since last inspection. April-2018	**2018-04-17**
2015-053	**RBSC Chanhassen LLC - Private - Commercial/Industrial** **195 W. 79th Street Chanhassen, Minnesota 55317 United States** No construction has begun. Site was being used as lay down yard for Hwy. 5 construction. Demobilization is complete. Catch basin protection still in place. Exposed soils have been covered and now vegetation is established. April-2018	**2018-04-17**
2015-056	**Oster Property - Private - Residential** **9008 & 9010 Riley Lake Road Eden Prairie, Minnesota 55347 United States** Construction complete. Silt fences /bio-logs have been removed. Vegetation mats and wood chips have been installed on all bare soils. All other BMP's look good. Vegetation (grass) still sparse in areas. (November-2017). Homeowner stated they is getting bids for final landscaping. Site is snow covered-will recheck after spring snowmelt. (April, 2018)	**2018-04-17**
2015-058	**Prairie Center Clinic Addition - Private - Commercial/Industrial** **8455 Flying Cloud Drive Eden Prairie, Minnesota 55344 United States** Construction complete on building. Some BMP's have been removed for landscaping. Vegetation is established. Parking lot top coat complete. Landscaping complete. Site is stable. BMP's are still in place--silt fence. (April/2018) site is snow covered.	**2018-04-17**
2016-004	**Round Lake Park Improvements - Government - Other** **16700 Valley Road Eden Prairie, Minnesota 55344 United States**	**2018-04-17**

	BMP's look good. Site construction complete. Vegetation is growing. All temporary BMP's have been removed with exception of BMP's at infiltration areas and silt fence on east side. Infiltration basins have been graded spray-tac'd--vegetation is growing.April-2018 (site is snow covered)	
2016-015	**18321 Heathcote Lane - Existing Single-Family** **18321 Heathcote LN Deephaven , Minnesota 55391 United States** Silt fences installed/in good condition. Driveway installed. BMP's look good. House construction complete. (April-2018) site is snow covered.	**2018-04-17**
2016-017	**SWLRT - Government - Other** **Varies Eden Prairie, Minnesota 55344 United States** No construction observed to date.	**2018-04-17**
2016-021	**Cedar Hills Park - Government - Other** **9580 Eden Prairie Rd Eden Prairie, Minnesota 55347 United States** Construction complete. BMP's look good. Vegetation has sprouted and is growing. Some regrading and seeding has occurred in some areas. Site snow cover-April, 2018.	**2018-04-17**
2016-026	**Foxwood Development - Private - Residential** **9150 and 9250 Great Plains Blvd Chanhassen, Minnesota 55317 United States** Multiple house construction continues-BMP's look good- silt fences and rock entrances installed/ good perimeter control. Silt fences have been installed on unsold lots. Catch basin protection has been removed in areas. Additional silt fences have been installed across site. Bare soils have been spray-tac'd vegetation sprouting. Some tracking to street/some new house sites need rock entrance. Site representative was notified. CA is closed. Site is snow covered (April-2018)	**2018-04-17**
2016-030	**IDI Distribution Building Expansion - Private - Commercial/Industrial** **8303 Audubon Road Chanhassen, Minnesota 55317 United States** Parking on north side installed/curb and gutter installed. BMP's look good. Building addition complete. All bare soils have been spray-tac'd. Site is snow covered. (April-2018)	**2018-04-17**
2016-032	**CSAH 61 Improvements - Government - Linear** **N/A Eden Prairie, Minnesota 55347 United States** Construction continues. Spoil piles have been spray tac'd and wood chips being used were necessary. Silt fences installed. Brushing and site clearing still underway. Area near creek crossing is under construction and piling are onsite. BMP's to date look good.	**2018-04-17**
2016-037	**Prestige Day Care - Private - Commercial/Industrial** **15219 Pioneer Trail Eden Prairie, Minnesota 55347 United**	**2018-04-17**

	States Construction complete. Sod installed-all landscaping complete. All bare soils have been spray-tac'd. BMP's still in place. Site is snow covered. (April-2018)	
2016-039	**Powers Ridge Senior Apartments - Private - Residential** **1351 Lake Drive West Chanhassen, Minnesota 55317 United States** Construction complete. BMP's are good. Landscaping and sod installation complete. Bare soils covered with matting. Wetland signage installed. Site is snow covered. (April-2018)	**2018-04-17**
2016-040	**18995 Minnetonka Blvd - Existing Single-Family** **18995 Minnetonka Blvd Deephaven, Minnesota 55391 United States** Construction of house continues. Silt fence in place. Slopes with vegetation mats have growth. Southwest corner has more BMP's to control sediment erosion. BMP's installed are adequate. Earthwork near front has been completed--entire site has been covered with straw and snow covered. Driveway installed. April-2018.	**2018-04-17**
2016-041	**Chanhassen West Water Treatment Plant - Government - Other** **2070 Lake Harrison Road Chanhassen, Minnesota 55317 United States** Silt fences installed on site. Construction continues. Rock entrance good. BMP's look good. Street cleanup conducted regularly. March-2018.	**2018-04-17**
2016-042	**18663 St. Mellion Place--Eden Prairie (Bear Path) - Government - Other** **2070 Lake Harrison Road Chanhassen, Minnesota 55317 United States** Construction halted for winter. BMP's are good. Silt fence in one small area is at 40% of height. Site grading and sod installation has occurred on a large portion of site. New silt fence installed where needed. Site is snow covered April 2018.	**2018-04-17**
2016-043	**Bongards Redevelopment - Private - Commercial/Industrial** **8330 Commerce Drive Chanhassen, Minnesota 55317 United States** BMP's are adequate. Parking lot base installed-- catch basins installed and protected--pavement installation still needs to be completed. (April-2018)	**2018-04-17**
2016-044	**Dell Rd & Riley Creek Repair Project - Government - Other** **9980 Dell Road Eden Prairie, Minnesota 55347 United States** Vegetation was growing appears to have died off. Rip-rap was recently installed at dirt road edge to control erosion from road. Additional erosion prevention from road needs to be addressed. More rock installed along flow path and silt deposit at beehive catch basin removed. Representative was contacted in September (2017) and is aware of site condition. Snow covered-April 2018.	**2018-04-17**

2016-045	**MCES Blue Lake Interceptor Rehab - Government - Linear** **See attached multiple , Minnesota 55354 United States** Construction complete. Silt fences installed/bio-logs in place. Bare soils covered with spray-tac. No vegetation growth observed. Site is snow covered. (April-2018)	2018-04-17
2016-047	**9507 Sky Lane Eden Prairie - Existing Single-Family** **9507 Sky Lane Eden Prairie, Minnesota 55347 United States** Vegetation was growing appears to have died off. Riprap was recently installed at dirt road edge to control erosion from road. Additional erosion prevention from road needs to be addressed. More rock installed along flow path and silt deposit at beehive catch basin removed. Representative was contacted in September and is aware of site condition. Snow covered-April, 2018.	2018-04-17
2017-001	**Kopesky 2nd Addition - Private - Residential** **18340 82nd St Eden Prairie, Minnesota 55347 United States** Site has been cleared and perimeter control--silt fence has been installed. No earthwork to date. Rock entrance installed. Heavy equipment onsite. Site is snow covered. April-2018.	2018-04-17
2017-002	**7012 Dakota Ave - Existing Single-Family** **7012 Dakota Ave Chanhassen, Minnesota 55317 United States** Construction complete. Majority of landscaping is complete. Corrective Action has been addressed. Sod has been installed. Area near street and city water shut off that needs bare soils covered. Site representative was notified-November. No activity on this area as of April-2018 inspection. Site is snow covered.	2018-04-17
2017-003	**18761 Heathcote Dr Building Addition - Existing Single-Family** **18761 Heathcote Dr Wayzata, Minnesota 55391 United States** House construction complete. Pool installation complete. Landscaping continues--sod and shrubs installed. Temporary BMP's have not been removed. April-2018. Site snow covered.	2018-04-17
2017-006	**6687 Horseshoe Curve Chanhassen - Existing Single-Family** **18761 Heathcote Dr Wayzata, Minnesota 55391 United States** No activity observed to date.	2018-04-17
2017-009	**Emerson Chanhassen East Renovation - Private - Commercial/Industrial** **8200 Market Boulevard Chanhassen, Minnesota 55317 United States** Construction continues. BMP's installed. Rock entrance in place. Landscaping earthwork underway. West infiltration basin installed and complete-BMP's are good. Bare soils onsite covered with matting and bio-logged. April-2018	2018-04-17

2017-010	**Riley Lake Park Renovations - Government - Other** **9100 Riley Lake Rd Eden Prairie, Minnesota 55347 United States** Construction complete. BMP's installed and look good. Grading and landscaping in is complete. Vegetation growing in some areas. Soils have been spray-tac'd. Vegetation is sparse. Site is snow covered. (April-2018)	2018-04-17
2017-011	**Galpin Blvd Watermain Improvements - Government - Linear** **Galpin Blvd & Lake Harrison Road Chanhassen, Minnesota 55317 United States** Construction complete. Soils covered with erosion control mats-some growth observed to date. Silt fences still installed in some areas. Some areas have had additional matting laid down. Site is snow covered. April-2018.	2018-04-17
2017-023	**Eden Prairie Assembly of God - Private - Commercial/Industrial** **16591 Duck Lake Trail Eden Prairie, Minnesota 55346 United States** Construction has begun. Perimeter control silt fence and rock entrance installed. BMP's look good. Site is snow covered. (April-2018)	2018-04-17
2017-025	**735 Pleasantview Road - Existing Single-Family** **735 Pleasant View Dr Chanhassen, Minnesota 55317 United States** Construction complete. Landscaping complete with exception of small infiltration basin. All temporary BMP's have been removed. Site is snow covered. (April-2018)	2018-04-17
2017-026	**6135 Ridge Road - Existing Single-Family** **735 Pleasant View Dr Chanhassen, Minnesota 55317 United States** Construction continues. Foundation in and rock entrance installed. BMP's look good. Activity has halted since last inspection. (April-2018) site is snow covered.	2018-04-17
2017-027	**7500 Chanhassen Road - Existing Single-Family** **7500 CHANHASSEN RD Chanhassen, Minnesota 55317-8576 United States** Construction continues. Silt fences and bio-logs installed. Erosion on west side went offsite-- cleaned up and more logs installed. Additional silt fence and bio-logs installed -additional BMP's look good. Some site grading conducted in early November. Site is snow covered. (April-2018)	2018-04-17
2017-029	**Tweet Pediatric Dentistry - Private - Commercial/Industrial** **7845 Century Blvd. Chanhassen, Minnesota 55317 United States** Construction complete. BMP's are installed and good. Catch basin protection installed in this area. Infiltration areas installed. Parking lot grading and curb/gutter installation complete. Site	2018-04-17

	grading and landscaping is continues - bare soils have not been covered-snow covered. (April-2018)	
2017-030	**Elevate - Private - Commercial/Industrial** **12900 Technology Drive Eden Prairie, Minnesota 55344 United States** Demolition complete and earthwork underway. Perimeter control installed. Catch basin protection installed. Some catch basins have bladders installed and drainage will be directed to other basins. BMP's look good.	**2018-04-17**
2017-032	**11193 Bluestem Lane - Government - Other** **11193 Bluestem Lane Eden Prairie, Minnesota 55347 United States** Site is snow covered--will inspect after spring snowmelt. Construction complete. All exposed soils on slope were covered and stabilized. Bio-logs installed at toe of slope.	**2018-04-17**
2017-034	**Park Road Overlay Chanhassen - Government - Linear** **Park Road Chanhassen, Minnesota 554317 United States** Work complete at creek crossing and Park Rd. Culvert. BMP's installed are good. -inlet protection installed. Road overlay still needs to be completed. Site is snow covered. (April-2018)	**2018-04-17**
2017-036	**Minnetonka HS Upper Field Access Road - Government - Other** **18301 State Hwy No 7 Minnetonka, Minnesota 55345 United States** Construction complete. Corrective Action items have been addressed. Vegetation has sprouted and is growing--sparse in many areas--will need to be addressed in spring-2018. Snow covered-April, 2018.	**2018-04-17**
2017-038	**West Park - Private - Residential** **760& 781 Lake Susan Drive 8601 Great Plains Blvd Chanhassen, Minnesota 55317 United States** Construction continues. Earthwork/grading underway/street installation complete. Rock entrance installed on south side and to individual house sites. Perimeter control installed. Catch basin protection installed but removed for winter. BMP's look good. Minor tracking observed on --onsite streets. Many areas of exposed soils have been blown with straw. Site is snow covered. April, 2018	**2018-04-17**
2017-044	**17064 Weston Bay Road - Private - Residential** **17064 Weston Bay Road Eden Prairie, Minnesota 55427 United States** Construction complete. Landscaping is complete--majority of areas has been hydro-seeded -no growth observed. BMP's in place. Site is snow covered. (April-2018)	**2018-04-17**
2017-047	**Fawn Hill - Private - Residential** **7240 Galpin Road Chanhassen, Minnesota 55331 United States** Earthwork completed/roadway installed. Perimeter silt fence	**2018-04-17**

	install. Exposed soils blown with straw. Slight tracking to street. BMP's to date look good. Site is snow covered. April-2018	
2017-052	**Old Excelsior Senior Living - Private - Residential** **17705 Hutchins Drive Minnetonka , Minnesota 55345 United States** Earthwork and construction continues. Perimeter control installed. Rock entrance reinstalled. CA's addressed. (April-2018)	**2018-04-17**
2017-053	**Mastercraft - Private - Commercial/Industrial** **17717 State Hwy 7 Minnetonka, Minnesota 55345 United States** Construction continues. Perimeter control installed. Inlet protection installed. Bio-logs in place. BMP's look good. (April-2018)	**2018-04-17**
2017-055	**Scenic Heights Elementary 2018 Addns - Government - Other** **5650 Scenic Heights Drive Minnetonka, Minnesota 55345 United States** No activity observed to date.	**2018-04-17**
2017-056	**Covington Rd Culvert Replacement - Government - Linear** **Covington Road Minnetonka, Minnesota 55345 United States** Construction complete. Vegetation matting installed. Wetland buffer signage installed on downstream side of Covington. Installed BMP's look good. Site is snow covered. (April-2018)	**2018-04-17**
2017-064	**Scenic Heights Elementary School Forest Restoration - Government - Other** **5650 Scenic Heights Drive Minnetonka, Minnesota 55345 United States** Site has been selectively cleared since last month. Site snow covered.	**2018-04-17**
2017-069	**Scheels Redevelopment - Private - Commercial/Industrial** **8301 Flying Cloud Dr. Eden Prairie, Minnesota 55344 United States** Security fence installed. Heavy equipment staged onsite. No activity observed. Site is snow covered.	**2018-04-17**

Please contact me at 952.832-2687 or dmelmer@barr.com if you have questions on the projects listed above or any additional items that need to be addressed for the erosion control inspections.

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

18681 Lake Drive East
Chanhassen, MN 55317
952-607-6512
www.rpbcwd.org

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2018-001

Received complete: 12/28/17

Applicant: Chanhassen Inn

Consultant: CEI Engineering Associates, Inc. ATTN: Alan Catchpool

Project: Chanhassen, MN Panera Store #6038 – Demolition of existing building and parking area to construct one retail/commercial building along with appurtenant site work, utilities, stormwater management, and landscaping. Two bioretention features and a sump manhole with an in-line energy dissipater, to prevent resuspension of sediment, known as the Snout™ are proposed to provide stormwater quantity, quality, and rate control.

Location: 531 West 79th Street, Chanhassen, MN

Reviewer: Terry Jeffery, Permit Coordinator

Rules: Applicable rules checked

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization	X	Rule L: Permit Fees
	Rule G: Waterbody Crossings	X	Rule M: Financial Assurances

Rule Conformance Summary

Rule	Issue		Conforms to RBPCWD Rules?	Comments
C	**Erosion Control Plan**		See comment	See Rule Specific Permit Condition C1.
J	**Stormwater Management**	Rate	Yes	
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J1.
L	**Permit Fee**		Yes	$1,500 was received on Dec. 21, 2017
M	**Financial Assurance**		See Comment	The financial assurance has been calculated at $95,510.

Project Description

The project proposes to demolish one existing building and the associated parking lot to construct one retail/commercial building with a drive thru and parking lot along with appurtenant site work, utilities, stormwater management, and landscaping. Two biofiltration features and a sump manhole with a snout are proposed to provide stormwater quantity, quality, and rate control.

The project site information is summarized below:

1. Total Site Area: 1.45 acres (63,162 square feet)
2. Existing Site Impervious Area: 1.015 acres (44,213 square feet)
3. Post Construction Site Impervious: 1.015 acres (44,225 square feet)
4. New (Increase) in Site Impervious Area: 0.00 acres (12 square feet) (0.002% increase in site impervious area)
5. Disturbed impervious surface: 1.015 acres (100% of existing site impervious area)
6. Total Disturbed Area: 1.45 acres (63,162 square feet)

Exhibits:

1. Permit Application from Chanhassen Inn dated December 21, 2017
2. Review comments to applicant dated December 28, 2017.
3. Email to applicant dated January 28, 2018 stating no materials had been received and the District would exercise its right to extend the review period on February 19, 2018.
4. Response letter to District Comments dated April 16, 2018
5. Civil Design Plan Sheets (14 sheets C0 – C13) dated November 30, 2017 (revised 4/18/18)
6. Drainage Report dated November 30, 2017
7. MIDS Model – Existing Conditions dated November 30, 2017 (revised 2/19/18 & 4/4/18)
8. MIDS Model – Proposed Conditions dated November 30, 2017 (revised 2/19/18 & 4/4/18)
9. Existing and Proposed Conditions HydroCAD Model dated June 26, 2017 (revised 8/17/17)
10. Geotechnical Evaluation Report by Intertek PSI dated April 6, 2017 (additional borings advanced on April 11, 2018)

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter 1.45 acres (63,162 square feet) of land-surface area the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plan prepared by CEI Engineering Associates includes installation of perimeter control where applicable, inlet protection for storm sewer catch basins, rock construction entrances, placement of a minimum of 6 inches of topsoil, decompaction of areas compacted during construction, and retention of native topsoil onsite. The contractor to be responsible for erosion control at the site needs to be determined. To conform to the RPBCWD Rule C requirements the following revisions are needed:

C1. The Applicant must provide the name and contact information of the individual responsible for day to day erosion and sediment control inspection and maintenance at the site. RPBCWD must be notified if the responsible party changes during the permit term.

Rule J: Stormwater Management

Because the project will disturb and remove all the 1.015 acres (44,213 square feet) of existing impervious surface and construct 1.015 acres (44,225 square feet) of new impervious surface on the site, the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.3). As more than 50% of the existing 1.015 acres of impervious surface will be disturbed and additional imperviousness surfaces will be constructed, the criteria in section 3 applies to all disturbed areas and newly constructed impervious surface. The total impervious area to be treated is 1.015 acres.

The developer is proposing a combination of two biofiltration basins and a sump manhole with an in-line energy dissipater, to prevent resuspension of sediment, known as the snout. Three Rain Guardians™, which provide filtration at a curb cut prior to discharge of surface water into a bioretention feature, will also be incorporated for pretreatment before surface water runoff enters the two biofiltration facilities. These practices will be used to provide the required rate control, volume abstraction and water quality management on the site.

Rate Control

To meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site. The Applicant used a HydroCAD hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. Under proposed conditions, the entire site drains from north to southwest and leaves the site via a connection to the existing storm sewer in the southwest corner of the property. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in the following table.

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
SW Corner	4.59	0.16	7.38	0.44	12.49	3.31	0.27	0.22

The proposed project conforms to RPBCWD Rule J, Subsection 3.1.a

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all new and disturbed impervious surface on the parcel. An abstraction volume of 3,713 cubic feet is required from the 1.015 acres (44,225 square feet) of reconstructed and new impervious area on the project for volume retention. The developer is proposing two bioretention basins to provide abstraction volume. The table below summarizes the volume abstraction on the site.

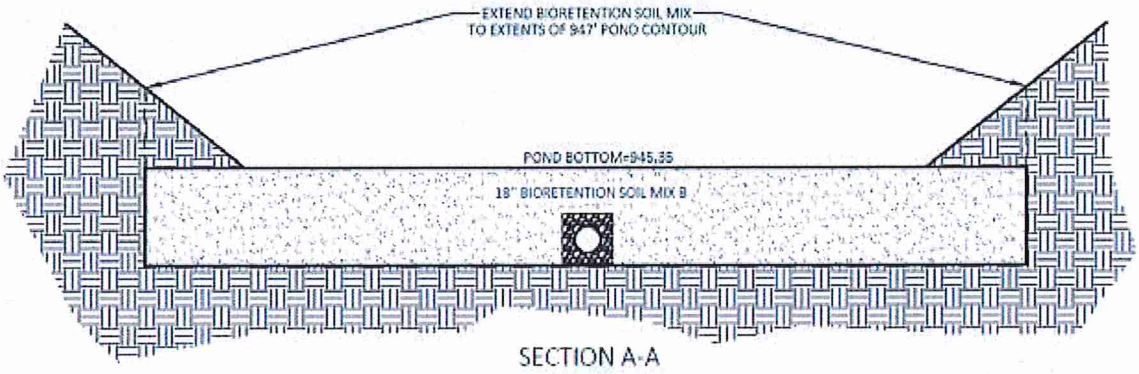
Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)
1.1	3713	2780	0.82

Soil borings performed by Braun Intertec show that soils in the project area below the upper layer of topsoil consist primarily of sandy lean clays to depths as much as 41 feet below existing site grades. These soils are in the hydrologic group "D." The MN Stormwater Manual indicates an infiltration rate for A soils of 0.06 inches per hour. The design was made assuming this infiltration rate. Borings in the proposed bioretention features indicated no groundwater to the final boring depth of 934.9. The bottom of the proposed bioretention basin is at 944.1 so there is at least 9.2 feet of separation to groundwater. (Rule J, Subsection 3.1.b.ii).

The applicant is positing that the site is restricted. The following information was presented to support this assertion.

1. All available green space on the property owned by the applicant, except where utilities conflict, will be utilized as a bioretention feature. See item 3 below.
2. The maximum depth that the bioretention features can provide for infiltration volume and still draw down in 48 hours is 0.24 feet. This means the capacity to provide additional infiltration volume is not available in the basins for meeting the requirement. The proposal does extend

the infiltration surface beyond the toe of slope. See exhibit below.



SECTION A-A

3. Borings advance under the parking lot to the east demonstrated, either because water was directly observed or soils indicators (redoximorphic features) were present that could only develop under saturated conditions. This means that underground practices would not be able to meet the requisite three (3) feet of separation to groundwater. This would also preclude the use of pervious pavers as an underdrain would be needed so no abstraction would occur.
4. The City of Chanhassen requires that they provide more parking stalls than they show. This creates an impediment to reducing the impervious surface on the site.

Staff has reviewed the geotechnical exploration, the provided models, and the other supporting documentation and agrees that this site would be considered restricted and that the provided abstraction volume is more than the minimum 0.55 inches required for restricted sites in the first instance, as provided in 3.3a.

Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.3.

Water Quality Management

Subsection 3.1.c of Rule J requires the Applicant provide for at least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff. The developer is proposing a combination of two bioretention features and an in-line energy dissipater to meet the water quality requirements. The table below summarized the water quality treatment provided for the site. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.c.

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)[1]	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	332.8	299.5 (90%)	324.7 (97.6%)
Total Phosphorus (TP)	1.832	1.099 (60%)	1.327 (72.4%)

[1]Required load reduction is calculated based on the removal criteria in Rule J, Subsection 3.1c and the new and reconstructed impervious area site load.

Low floor Elevation

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation and no stormwater management system may be constructed or reconstructed in a manner that brings the low floor elevation of an adjacent structure into noncompliance according to Rule J, Subsection 3.6.

The low floor elevations of the structure and the adjacent stormwater management feature 100-year event flood elevations are summarized below.

Location Riparian to Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)	Provided Distance Between Building and Adjacent Stormwater Feature (feet)	Required Separation to Ground water based on Appndx J, Plot 1 (feet)	Provided Separation to Ground water based on Appndx J, Plot 1 (feet)
SW of Building (2P)	949.6	947.1	2.5	NA	NA	NA
East of Building (1P)	949.6	947.6	2.0	NA	NA	NA

The proposed freeboard separation is compliant with Rule J, subsection 3.6.

Maintenance

Subsection 3.7 of Rule J requires the submission of maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed.

J1. Permit applicant has provided a draft maintenance and inspection plan. Once approved by RPBCWD, the plan must be recorded on the deed in a form acceptable to the District.

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $1,500

Rule M: Financial Assurance:

Rules C: Silt fence: 920 L.F. x $2.50/L.F. = ... $2,300

Restoration: 2.74 acres x $2,500/acre = ... $6,850

Rules J: SAFL Baffle & Snout = ... $4,750

Rules J: Rain Guardian (x3) = ... $7,500

Rules J: Infiltration Basin 7565 S.F. x $6.00/ S.F.= $45,390

Contingency (10%) $6,680

Administration (30%) $22,040

Total Financial Assurance $95,510

Applicable General Requirements:

1. The RPBCWD Administrator shall be notified at least three days prior to commencement of work.
2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.
3. Return or allowed expiration of any remaining surety and permit close out is dependent on the permit holder providing proof that all required documents have been recorded and providing as-built drawings that show that the project was constructed as approved by the Managers and in conformance with the RPBCWD rules and regulations.

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to Rule C and Rule J if the Rule Specific Permit Conditions listed above are met.

Recommendation:

Approval, contingent upon:

1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $95,510.

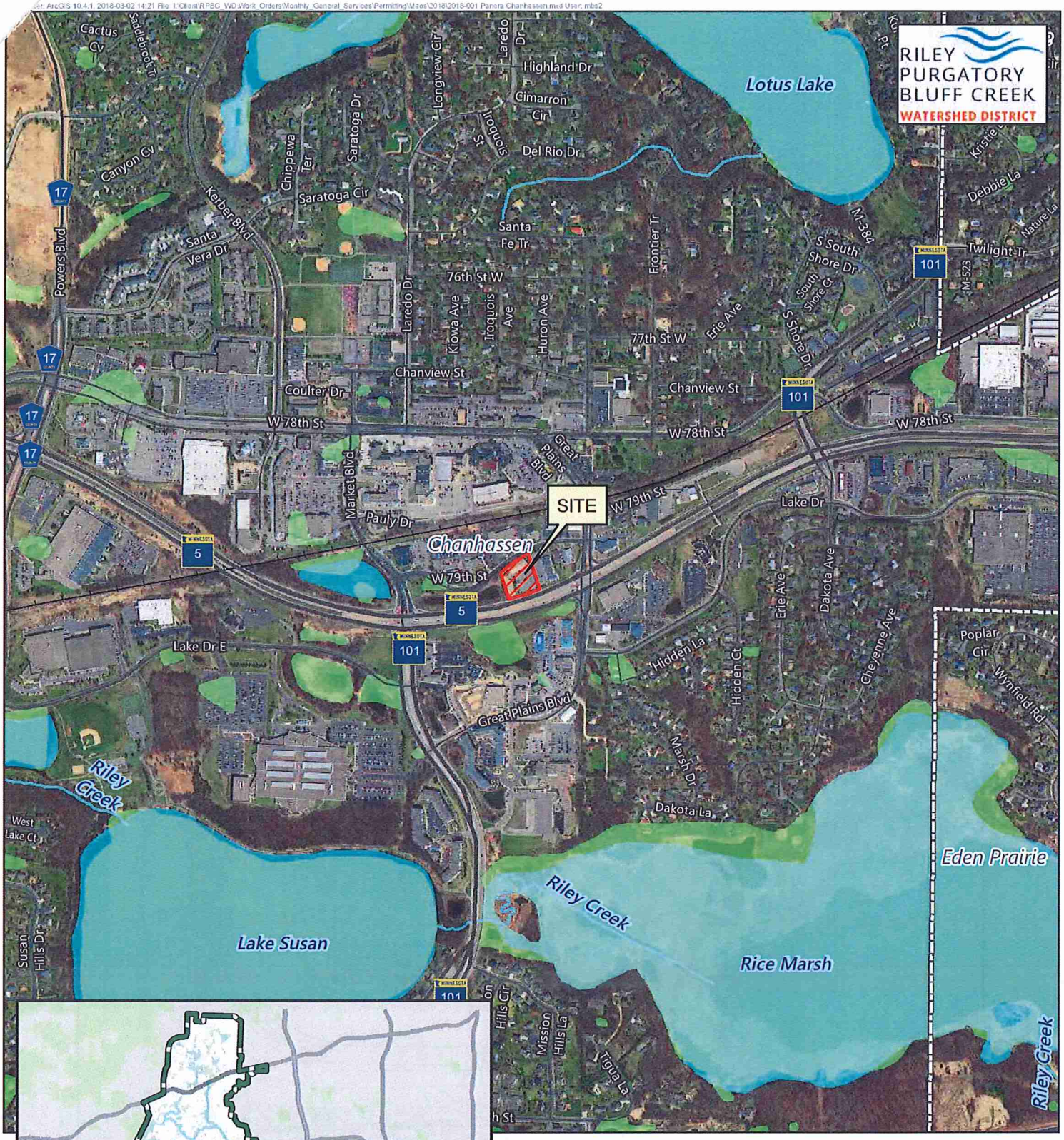
3. The Applicant must provide the name and contact information of the individual responsible for day to day erosion and sediment control inspection and maintenance at the site.
4. Receipt in recordation a maintenance declaration for the stormwater management facilities. A draft must be approved by the District prior to recordation.

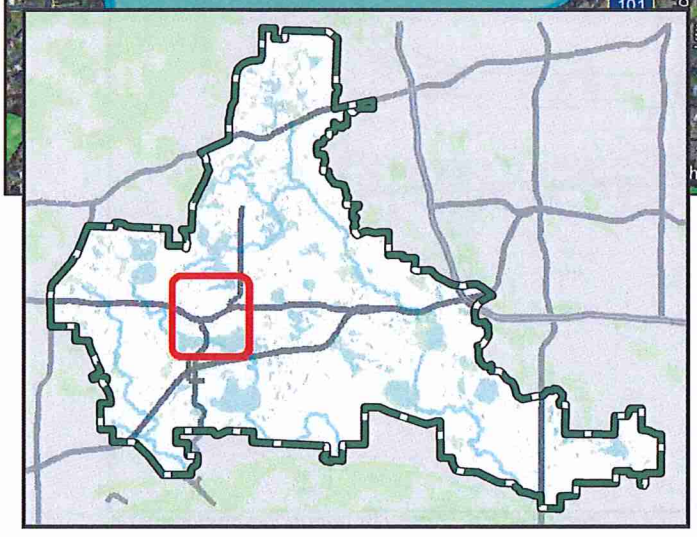
By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization, stormwater facilities conform to design specifications as approved by the District. No financial assurance may be released prior to the provision of as-built drawings.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2018-001 with the conditions recommended by staff.





N

Feet

0 1,000

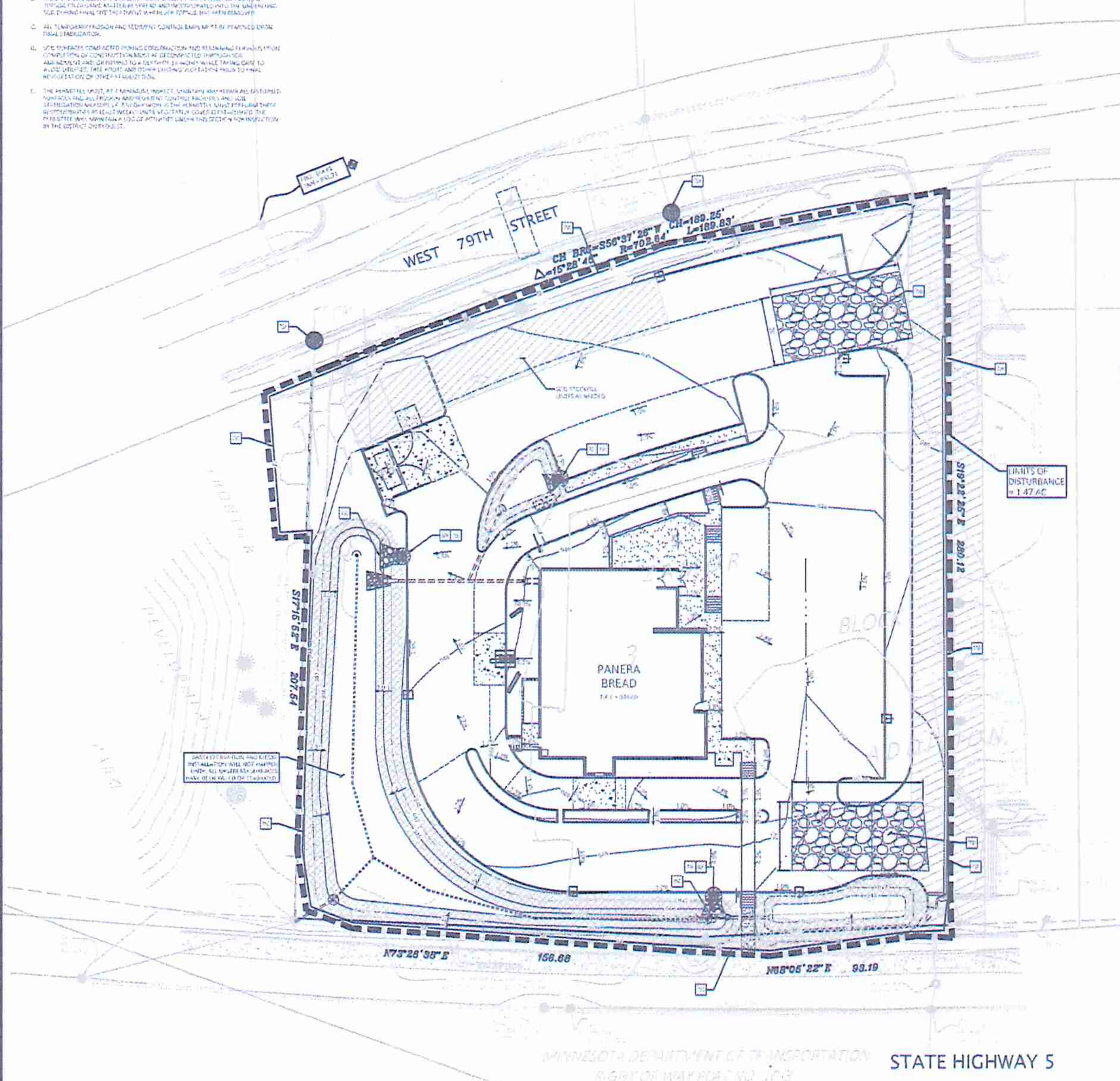
Permit Location Map

PANERA

Permit 2018-001

Riley Purgatory Bluff Creek Watershed District

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT EROSION NOTES



SITE BENCHMARK

811 Know what's below. Call before you dig.

NOTE:

EXISTING LEGEND

SEQUENCE OF CONSTRUCTION

GENERAL EROSION NOTES

PROPOSED

GENERAL EROSION NOTES CONT'D

EROSION DETAILS

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.

Alan J. Catchpool, PE
Professional Engineer
Registration Number: 47969
Date: 4/23/2018

CEI Engineering Associates, Inc.

PANERA BREAD

EROSION CONTROL PLAN-PHASE 2

SHEET NO. C5

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

18681 Lake Drive East
Chanhassen, MN 55317
952-607-6512
www.rpbcwd.org

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2018-017

Received complete: March 23, 2018

Applicant: Eden Prairie Schools

Consultant: Anderson-Johnson Associates, ATTN: Jay Pomeroy

Project: Parking Expansion for Administrative Services Center – The applicant is proposing to add approximately 17,000 square feet of additional parking and a turn lane to the site. Also include within the project scope is the addition of new storm sewer and an underground infiltration system.

Location: 8100 School Road, Eden Prairie, MN

Reviewer: Terry Jeffery, Permit Coordinator

Rules: Applicable rules checked

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
X	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization	X	Rule L: Permit Fees
	Rule G: Waterbody Crossings	X	Rule M: Financial Assurances

Rule Conformance Summary

Rule	Issue		Conforms to RBPCWD Rules?	Comments
C	**Erosion Control Plan**		See comment	See Rule Specific Permit Condition C1.
D	**Wetland and Creek Buffers**		See comment	See Rule Specific Permit Condition D1.
J	**Stormwater Management**	Rate	Yes	
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J1.
L	**Permit Fee**		NA	Government Entity
M	**Financial Assurance**		NA	Government Entity

Project Description

The project proposes to add 48 new parking stalls within 15,709 square feet of new parking area. A turn lane, totaling 1,338 square feet will be added to the entrance to the site. Additionally, 2.51 acres of drive aisles and the bus parking area will be rehabilitated as part of this project. This rehabilitation will not disturb the underlying soils and is exempt from the requirements of Rule J. An underground detention and infiltration feature is proposed to provide stormwater quantity, quality, and rate control. The project will also add buffer to the existing wetland located easterly on the site. No impacts are proposed but the anticipated work will all occur upstream of the wetland.

The project site information is summarized below:

1. Total Site Area: 30.23 acres (The site includes both the Administrative Services Center (ASC) and Central Middle School. Approximately 16.33 acres of the parcel is utilized for the ASC.)
2. Existing Site Impervious Area (ASC only): 4.72 acres (205,603 square feet)
3. Post Construction Site Impervious: 5.08 acres (221,312 square feet)
4. New (Increase) in Site Impervious Area: 0.36 acres (15,709 square feet) (7.6% increase in site impervious area)
5. Disturbed impervious surface: 1,271 square feet (0.6% of existing site impervious area)
6. Total Disturbed Area: 0.812 acre (35,400 square feet)

Exhibits:

1. Permit Application from Eden Prairie Schools dated March 22, 2018
2. Design Plan Sheets (9 Plan Sheets) dated March 9, 2018 (revised April 16, 2018)
3. Stormwater Management Plan dated March 21, 2018 (revised April 16, 2018)
4. P8 Model – First received March 23, 2018 (Revised received April 16, 2018)
5. Existing and Proposed Conditions HydroCAD Model dated June 26, 2017 (revised 8/17/17)
6. Geotechnical Evaluation Report by Braun Intertec Corporation dated March 14, 2016
7. Email responding to District comments dated April 16, 2018

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter 0.812 acre (35,400 square feet) of land-surface area the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plan prepared by Anderson Johnson Associates includes installation of perimeter control where applicable, inlet protection for storm sewer catch basins, a rock construction entrance,

placement of a minimum of 6 inches of topsoil, delineation of areas to be protected from compaction, decompaction of areas compacted during construction, retention of native topsoil onsite, and a plan for final stabilization. The contractor to be responsible for erosion control at the site needs to be determined. To conform to the RPBCWD Rule C requirements the following revisions are needed:

C1. The Applicant must provide the name and contact information of the individual responsible for erosion and sediment control at the site. RPBCWD must be notified if the responsible party changes during the permit term.

Rule D: Wetland and Creek Buffers

Because the proposed work triggers a permit under RPBCWD Rule J and there is a wetland downgradient from the proposed construction activities, Rule D, Subsections 2.1a and 3.1 require buffer on areas adjacent to the wetlands that are downgradient from the land disturbing activities. There is no disturbance of the wetland proposed.

The applicant provided a wetland delineation report, including type and boundary determination, based on a field investigation conducted on May 17, 2016 by Pinnacle Engineering. The City, as the LGU responsible for administration of the MN Wetland Conservation Act, approved the delineation later that same year. The District is copied on all applications and reviews and comments upon submitted materials at that time. A MNRAM for the site has been completed, and the germane criteria for the wetland was determined in accordance with Rule D, Appendix D1 as summarized in the below table.

Wetland ID	RPBCWD Wetland Value	Require Minimum Width[1] (ft)	Require Average Width[1] (ft)	Provided Minimum Width (ft)	Provided Average Width (ft)
Wetland 1	Medium	20	40	80	80

[1] Average and minimum required buffer width based on Rule D, Subsection 3.1.a.

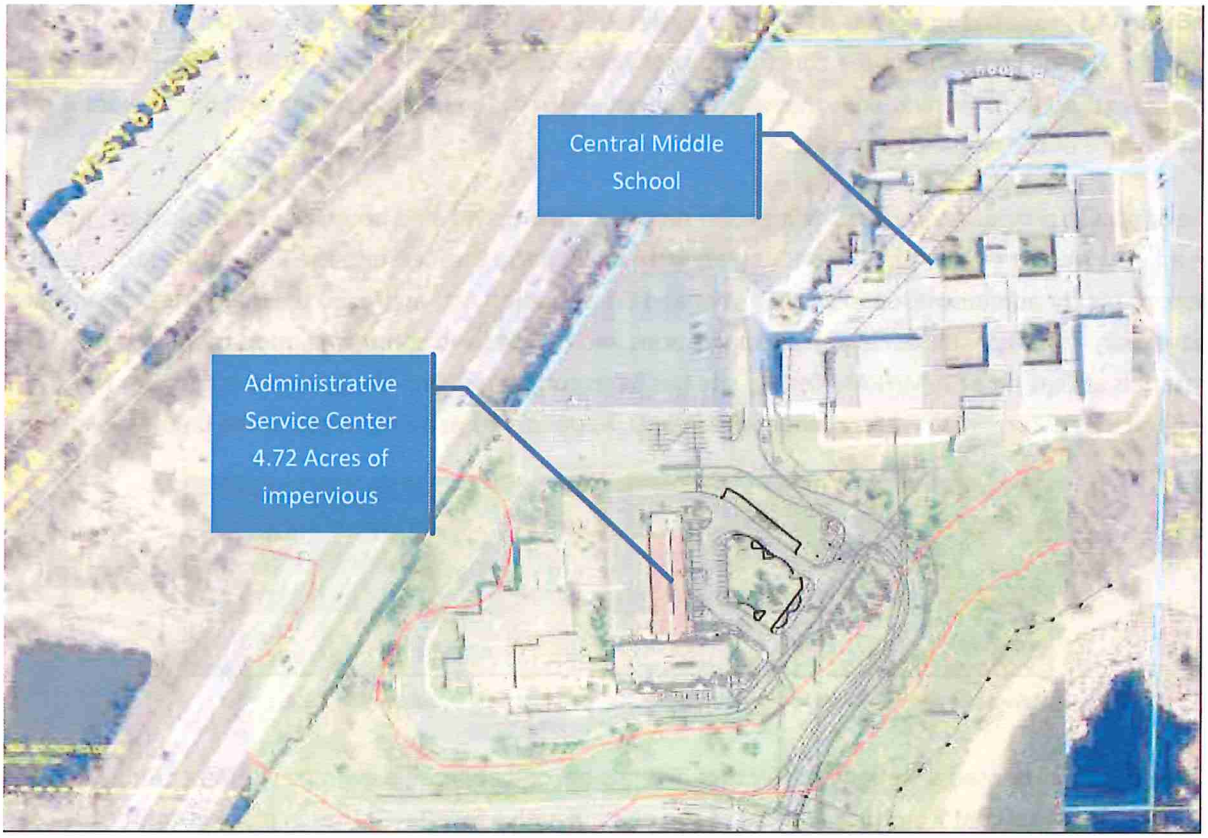
The applicant proposed a wetland buffer that extends beyond applicable average width per Rule D §3.1(a)). The Applicant is proposing to leave the existing native forested buffer in place in conformance with Rule D §3.2. Monumentation is proposed at spacing intervals compliant with Rule D §3.3. A sign detail is included on the detail sheet. The plan will minimize the potential transfer of aquatic invasive species as stipulated in Rule D §3.5.

To conform to the RPBCWD Rule D the following revisions are needed:

D1. Buffer areas and maintenance requirements must be documented in a maintenance agreement approved by RPBCWD. The maintenance agreement must also include an exhibit clearly showing the buffer area and monument locations.

Rule J: Stormwater Management

Because the project will disturb 1,271 square feet of existing impervious surface and construct an additional 0.36 acres (15,709 square feet) on the site, the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.3). As less than 50% of the existing site impervious surface will be disturbed and additional imperviousness surfaces will be constructed, the criteria in section 3 applies only to the disturbed areas and newly constructed impervious surfaces. The total impervious area to be treated is 16,980 square feet.



The developer is proposing an underground retention and infiltration system. Pretreatment will be provided through a cleaning row within the underground system. This practice will be used to provide the required rate control, volume abstraction and water quality management on the site. A sump manhole will also be added to the storm sewer conveyance at a new CB to provide additional sediment removal in an otherwise untreated area on the property.

Rate Control

To meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site. Since the drainage area encompassed by the entire project scope is collected in the storm sewer conveyance and discharges into the wetland in the southeastern portion of the site, there is just a single discharge point to be evaluated.

The Applicant used a HydroCAD hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in the following table.

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
P2	2.81	1.34	7.27	6.06	18.10	17.10	0.71	0.53

The proposed project conforms to RPBCWD Rule J, Subsection 3.1.a

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all new and disturbed impervious surface on the parcel. An abstraction volume of 1,560 cubic feet is required from the 0.39 acre (16,980 square feet) of reconstructed and new impervious area on the project for volume retention. The developer is proposing an underground retention/infiltration basin. The table below summarizes the volume abstraction on the site.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)
1.1	1560	2624

Soil borings performed by Braun Intertec show that soils in the location of the proposed BMP consist primarily of silty sand (SM) over poorly graded sands (SP). The SM soils are in the hydrologic group "B" and have an infiltration rate of 0.45" per hour. The SP soils are in the hydrologic group "A" and have an infiltration rate of 0.8 inches per hour. The design was appropriately made assuming the slower infiltration rate of 0.45 inch/hour. No groundwater was observed to the bottom of the boring at an elevation of 892.2 feet. This 9.6 feet below the bottom of the proposed underground infiltration

system. This exceeds the 3 feet minimum separation required by Rule J, Subsection 3.1.b.ii. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.b.

Water Quality Management

Subsection 3.1.c of Rule J requires the Applicant provide for at least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff. The developer is proposing a combination of two underground stormwater best management practices and a rain water garden. The table below summarized the water quality treatment provided for the site. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.c.

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)[1]	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	415.6	374 (90%)	414.6 (99.7%)
Total Phosphorus (TP)	1.30	0.78 (60%)	1.27 (97.6%)

[1]Required load reduction is calculated based on the removal criteria in Rule J, Subsection 3.1c and the new and reconstructed impervious area site load.

Low floor Elevation

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation and no stormwater management system may be constructed or reconstructed in a manner that brings the low floor elevation of an adjacent structure into noncompliance according to Rule J, Subsection 3.6.

The low floor elevations of the structure and the adjacent stormwater management feature are summarized below.

Location Riparian to Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)	Provided Distance Between Building and Adjacent Stormwater Feature (feet)	Required Separation to Ground water based on Appndx J, Plot 1 (feet)	Provided Separation to Ground water based on Appndx J, Plot 1 (feet)
East of ASC (2P)	915.2	905.1	10.1	NA	NA	NA

The proposed freeboard separation is compliant with Rule J, subsection 3.6.

Maintenance

Subsection 3.7 of Rule J requires the submission of maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed.

J1. Permit applicant has provided a draft maintenance and inspection plan. Once approved by RPBCWD, the Applicant must enter into a written maintenance agreement with the District documenting the maintenance requirements.

Rule L: Permit Fee:

Eden Prairie Public Schools is a governmental unit and per Rule M §2 is not required to supply a permit application fee.

Rule M: Financial Assurance:

Eden Prairie Public Schools is a governmental unit and per Rule L §2 is not required to submit a financial assurance.

Applicable General Requirements:

1. The RPBCWD Administrator shall be notified at least three days prior to commencement of work.
2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to Rule C, Rule D, and Rule J if the rule specific permit conditions listed above are met.

Recommendation:

Approval, contingent upon:

1. Continued compliance with General Requirements.
2. The Applicant must provide the name and contact information of the individual responsible for erosion and sediment control at the site. RPBCWD must be notified if the responsible party changes during the permit term.
3. The Applicant must enter into a written maintenance agreement with the District documenting the buffer areas and maintenance requirements and must also include an exhibit clearly

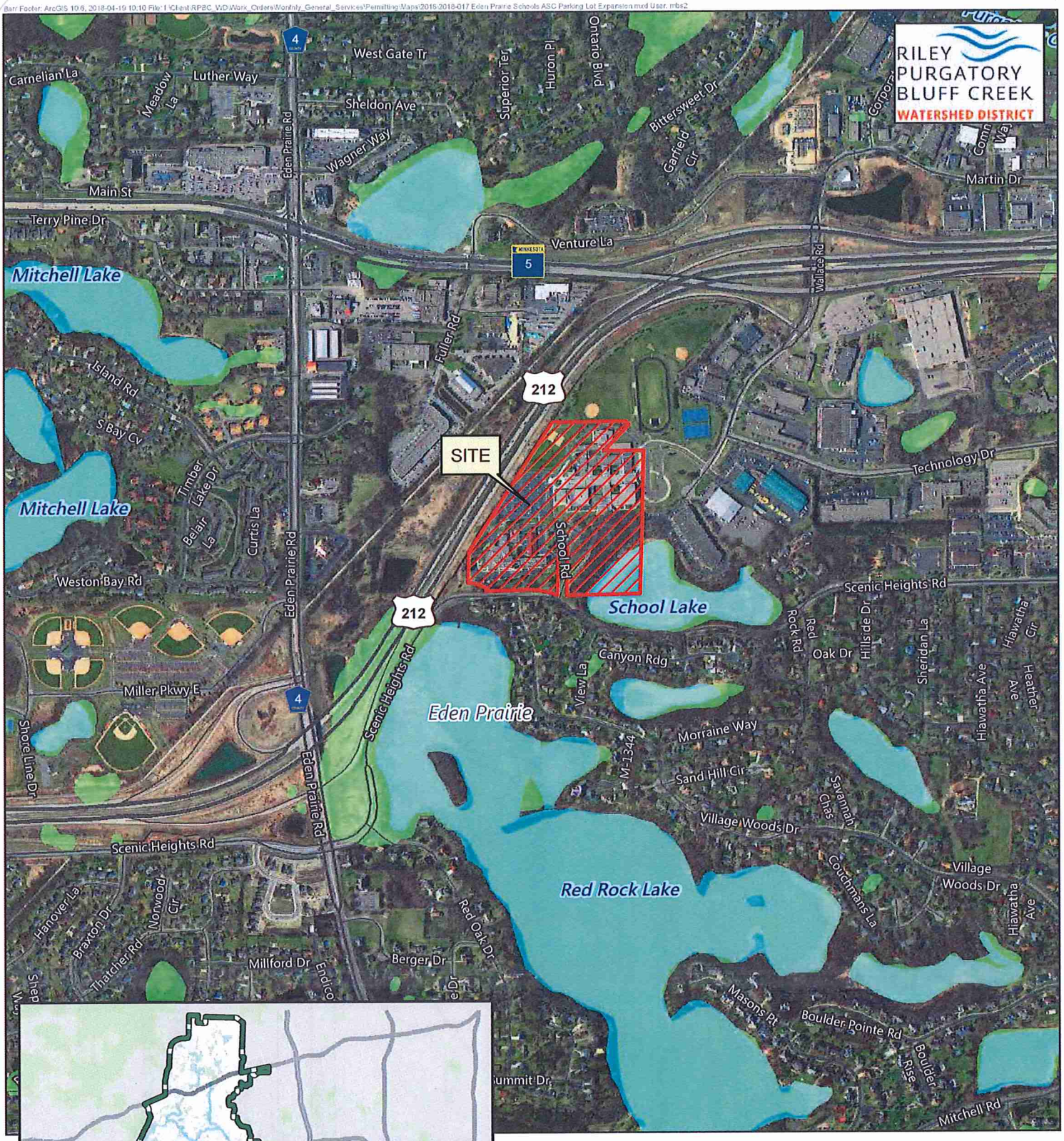
showing the buffer area and monument locations. Stormwater facility maintenance requirements must also be documented in a maintenance agreement approved by RPBCWD prior to execution by both parties.

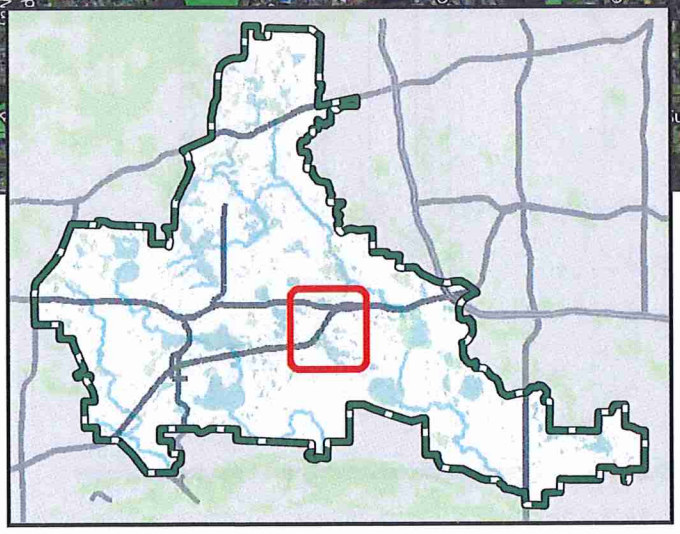
By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization, stormwater facilities conform to design specifications as approved by the District.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2018-017 with the conditions recommended by staff.





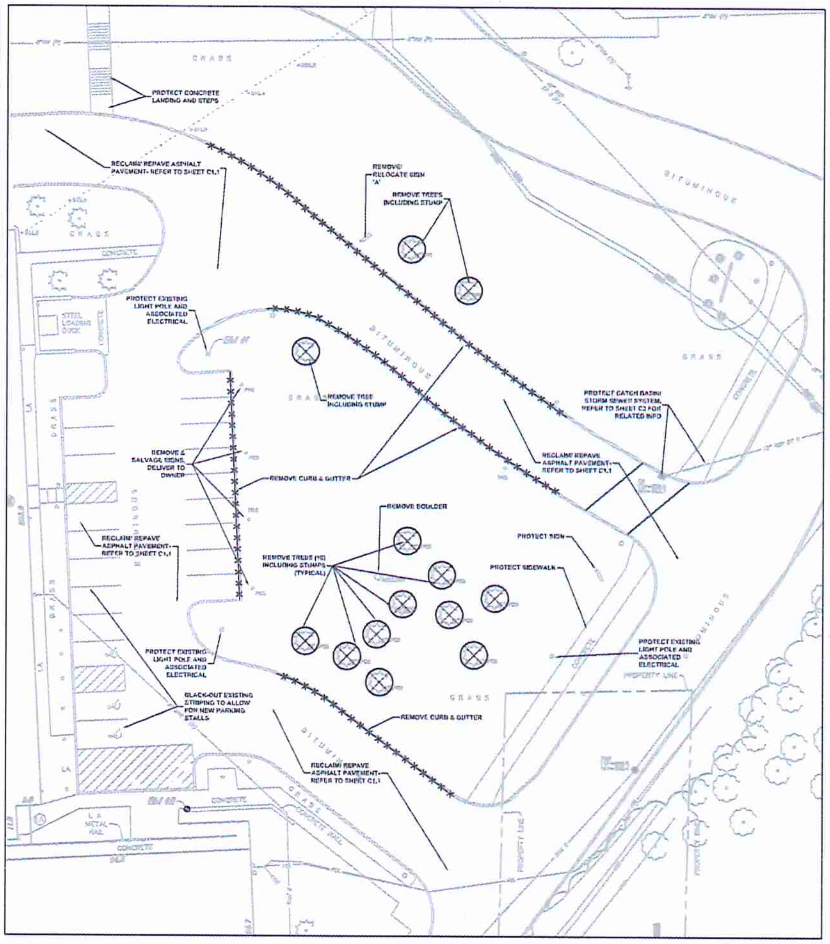
N

Feet

0 1,000

Permit Location Map

EDEN PRAIRIE SCHOOLS ASC
PARKING LOT EXPANSION
Permit 2018-017
Riley Purgatory Bluff Creek
Watershed District



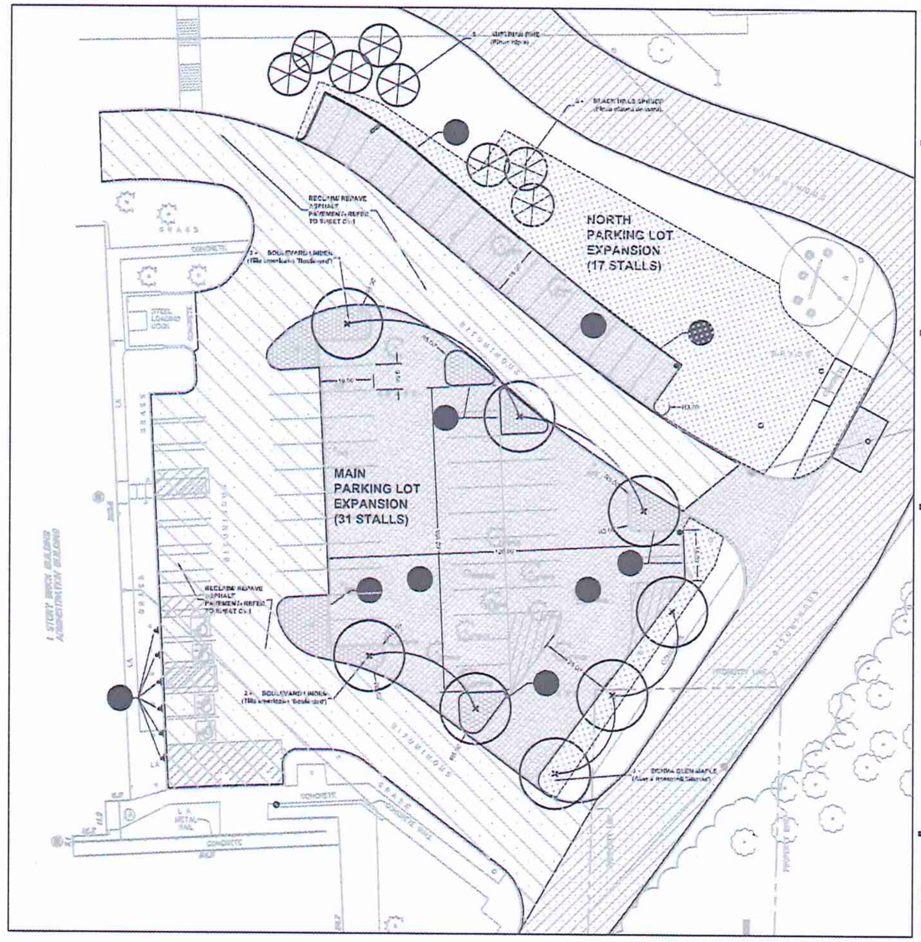
1 C2.1 REMOVALS PLAN

NOTES:

1. REFER TO SHEET C1.0 - TITLE SHEET FOR GENERAL NOTES.
2. REFER TO SHEET C1.1 FOR RELATED INFORMATION.
3. MINIMIZE DISTURBANCE TO SITE AND PROTECT EXISTING VEGETATION AND SITE FEATURES (CURBS, WALKS, PAVEMENTS, OVERHEAD AND UNDERGROUND UTILITIES, SIGNAGE, FENCING, ROADWAYS, ETC.) WHICH ARE TO REMAIN.
4. REPAIR OR REPLACE EXISTING PROPERTY AND SITE FEATURES, INCLUDING GRASS AND VEGETATION, WHICH IS TO REMAIN THAT IS DAMAGED BY THE WORK, TO OWNER'S SATISFACTION AND AT NO ADDITIONAL COST TO THE OWNER.
5. VISIT THE SITE PRIOR TO BIDDING; BE FAMILIAR WITH ACTUAL CONDITIONS IN THE FIELD. EXTRA COMPENSATION WILL NOT BE ALLOWED FOR CONDITIONS WHICH COULD HAVE BEEN DETERMINED OR ANTICIPATED BY EXAMINATION OF THE SITE, THE CONTRACT DRAWINGS AND THE INFORMATION AVAILABLE PERTAINING TO EXISTING SOILS, UTILITIES AND OTHER SITE CHARACTERISTICS.
6. THE CONTRACTOR SHALL HIRE THE SERVICES OF A UTILITY LOCATOR COMPANY TO LOCATE ALL PRIVATELY OWNED UTILITIES THAT MAY BE DISTURBED BY CONSTRUCTION OPERATIONS.

LEGEND

- CONCRETE CURB AND GUTTER REMOVALS
- TREE REMOVALS
- PROPERTY LINE



2 C2.1 LAYOUT PLAN

NOTES:

1. ALL APPLICABLE DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT OR PROPERTY LINE UNLESS OTHERWISE NOTED.
2. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
3. SIGNAGE SHALL BE INSTALLED 18" BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.

LEGEND

- REFERENCE KEY TO SITE DETAILS: DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM)
- PROPOSED MEDIUM DUTY BITUMINOUS PAVEMENT
- PROPOSED TRAFFIC CONTROL SIGN
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPERTY LINE
- PROPOSED MULCHED ISLAND AREA (3" DEPTH DOUBLE SHREDDED HARDWOOD BARRIER)
- PROPOSED DECIDUOUS TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SOD LIMITS

0 10 20

NOT FOR CONSTRUCTION

PARKING LOT CONSTRUCTION
Administrative Services Center
8100 School Road
Eden Prairie, Minnesota 55344

ANDERSON - JOHNSON ASSOCIATES, INC.
AJA
LANDSCAPE ARCHITECTURE • SITE PLANNING • CIVIL ENGINEERING

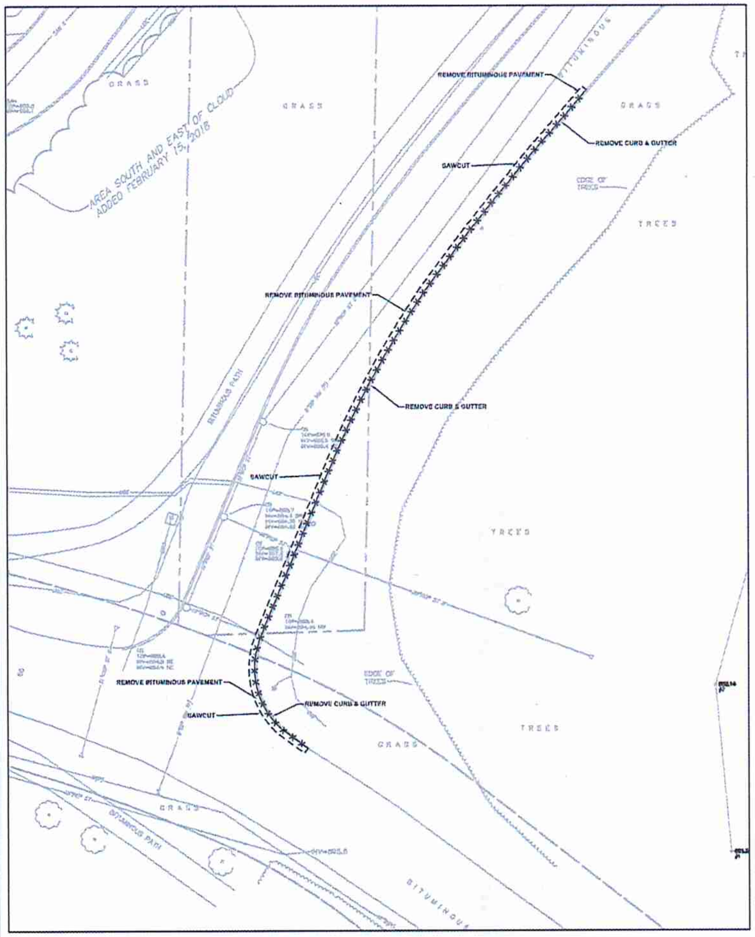
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly licensed Landscape Architect under the laws of the State of Minnesota.

JAY R. POMEROY
Reg. No. 23543 Date 03/09/2018

REMOVALS AND LAYOUT PLANS

Project No. 15135-18005
Date 03/09/2018
Drawn By JRP
Ck. By JRP
Revisions

Sheet C2.1 of 9



REMOVALS PLAN

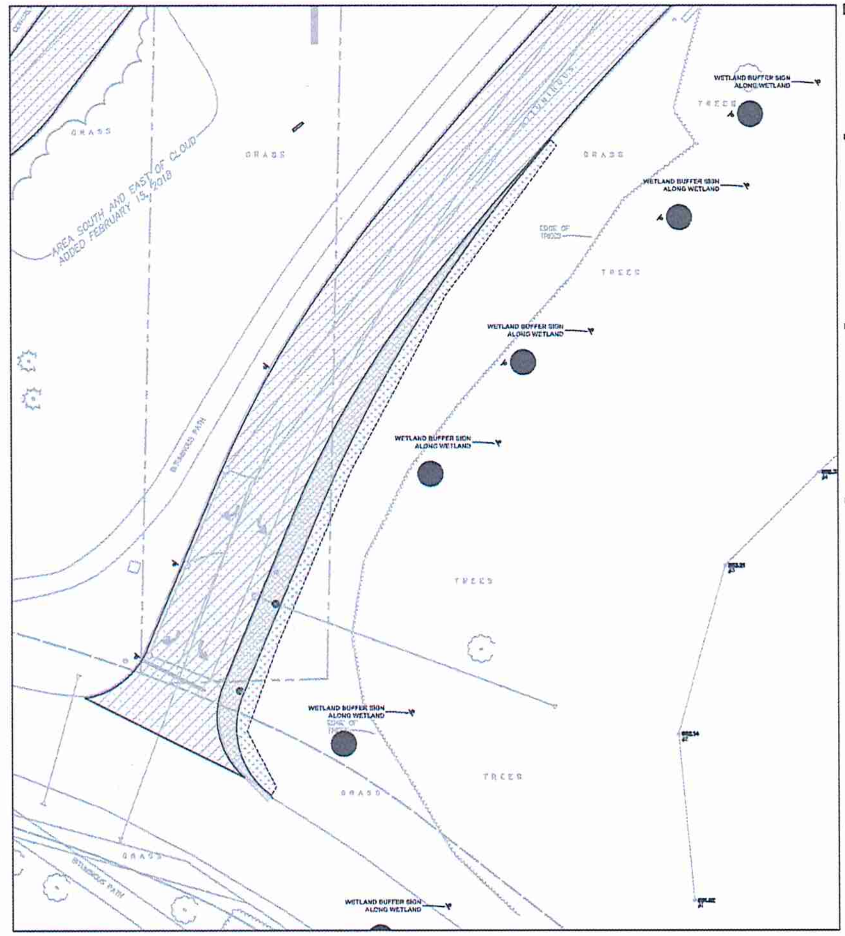
1 / C2.1

NOTES:

1. REFER TO SHEET C1.0 - TITLE SHEET FOR GENERAL NOTES.
2. REFER TO SHEET C1.1 FOR RELATED INFORMATION.
3. MINIMIZE DISTURBANCE TO SITE AND PROTECT EXISTING VEGETATION AND SITE FEATURES (CURBS, WALKS, PAVEMENTS, OVERHEAD AND UNDERGROUND UTILITIES, SIGNAGE, FENCING, ROADWAYS, ETC.) WHICH ARE TO REMAIN.
4. REPAIR OR REPLACE EXISTING PROPERTY AND SITE FEATURES, INCLUDING GRASS AND VEGETATION, WHICH IS TO REMAIN THAT IS DAMAGED BY THE WORK, TO OWNER'S SATISFACTION AND AT NO ADDITIONAL COST TO THE OWNER.
5. VISIT THE SITE PRIOR TO BIDDING; BE FAMILIAR WITH ACTUAL CONDITIONS IN THE FIELD. EXTRA COMPENSATION WILL NOT BE ALLOWED FOR CONDITIONS WHICH COULD HAVE BEEN DETERMINED OR ANTICIPATED BY EXAMINATION OF THE SITE, THE CONTRACT DRAWINGS AND THE INFORMATION AVAILABLE PERTAINING TO EXISTING SOILS, UTILITIES AND OTHER SITE CHARACTERISTICS.
6. THE CONTRACTOR SHALL HIRE THE SERVICES OF A UTILITY LOCATOR COMPANY TO LOCATE ALL PRIVATELY OWNED UTILITIES THAT MAY BE DISTURBED BY CONSTRUCTION OPERATIONS.

LEGEND

- CONCRETE CURB AND GUTTER REMOVALS
- TREE REMOVALS
- PROPERTY LINE



LAYOUT PLAN

2 / C2.1

NOTES:

1. ALL APPLICABLE DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT OR PROPERTY LINE UNLESS OTHERWISE NOTED.
2. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
3. SIGNAGE SHALL BE INSTALLED 18" BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.

LEGEND

- REFERENCE KEY TO SITE DETAILS
  - DETAIL I.D NUMBER (TOP)
  - DETAIL SHEET NUMBER (BOTTOM)
- PROPOSED MEDIUM DUTY BITUMINOUS PAVEMENT
- PROPOSED TRAFFIC CONTROL SIGN
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPERTY LINE
- PROPOSED MULCHED ISLAND AREA (3"DEPTH DOUBLE SHREDDED HARDWOOD BARRIER)
- PROPOSED DECIDUOUS TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SOD LIMITS

NOT FOR CONSTRUCTION

Project No. 15126-18055
Date 03/09/2018
Drawn By JSP
Ck. By JRP
Revisions

TURN LANE REMOVALS AND LAYOUT PLANS

I hereby certify that this plan 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.

JAY R. POMEROY
Reg. No. 23543 Date 03/09/2018

ANDERSON - JOHNSON ASSOCIATES, INC.
AJA
LANDSCAPE ARCHITECTURE • SITE PLANNING • CIVIL ENGINEERING

PARKING LOT CONSTRUCTION

Administrative Services Center

8100 School Road
Eden Prairie, Minnesota 55344

Sheet
C2.11
of 9

OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR PIPING OR SIMILAR).

5. LOCATE ALL EXISTING UTILITIES. VERIFY LOCATION, SIZE AND INVERT ELEVATION OF ALL EXISTING UTILITIES. VERIFY LOCATIONS, SIZES AND ELEVATIONS OF SAME BEFORE BEGINNING CONSTRUCTION.

6. DELINEATE CONSTRUCTION LIMITS WITH FLAGS. NO WORK OR SITE DISTURBANCE SHALL OCCUR BEYOND FLAGS.

7. DISCHARGE POINTS AND GRADING LIMITS WITHIN 200' OF WETLAND, A CREEK, OR WATERCOURSE LIMITS SHALL BE STABILIZED WITHIN 24 HOURS OF CONNECTION TO DISCHARGE POINT.

8. MAINTAIN ADJACENT PROPERTY AND PUBLIC STREETS CLEAN FROM CONSTRUCTION CAUSED DIRT AND DEBRIS ON A DAILY BASIS. PROTECT DRAINAGE SYSTEMS FROM SEDIMENTATION AS A RESULT OF CONSTRUCTION RELATED DIRT AND DEBRIS.

9. MAINTAIN DUST CONTROL DURING GRADING OPERATIONS.

10. ALL EROSION CONTROL METHODS SHALL COMPLY WITH MPCA, RPBCWD AND OTHER LOCAL REGULATIONS.

11. IF EROSION AND SEDIMENT CONTROL MEASURES TAKEN ARE NOT ADEQUATE AND RESULT IN DOWNSTREAM SEDIMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OUT DOWNSTREAM STORM SEWERS AS NECESSARY, INCLUDING ASSOCIATED RESTORATION.

12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.

13. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S MUST BE REMOVED UPON FINAL STABILIZATION.

14. SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED THROUGH SOIL AMENDMENT AND/OR RIPPING TO A DEPTH OF 18 INCHES WHILE TAKING CARE TO AVOID UTILITIES, TREE ROOTS AND OTHER EXISTING VEGETATION PRIOR TO FINAL RE-VEGETATION OR OTHER STABILIZATION.

15. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED.

16. THE CONTRACTOR SHALL INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE CONTRACTOR MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE CONTRACTOR SHALL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.

17. SEDIMENT CONTROL DEVICE AT STORM SEWER INLETS. AT THE INLETS TO ALL STORM SEWER STRUCTURES, PROVIDE A PRODUCT FROM THE FOLLOWING LIST. ACCEPTABLE PRODUCTS:

   A. WIMCO TOP SLAB™ MODEL RD 27.
   B. INFRASAFE® SEDIMENT CONTROL BARRIER, DISTRIBUTED BY ROYAL ENVIRONMENTAL SYSTEMS, INC. SCB'S SHALL BE SIZED SPECIFICALLY FOR THE STRUCTURE AND CASTING SPECIFIED. SCB'S SHALL BE EQUIPPED WITH FRAME AND PERFORATED SHROUD AND SHALL BE WRAPPED ON THE OUTSIDE, COVERING THE PERFORATED WALL ONLY, WITH A GEOTEXTILE SOCK.
   C. DANDY BAG® OR DANDY BAG BI® DISTRIBUTED BY BROCK WHITE COMPANY, ST. PAUL, MN (615) 647-0958. DANDY BAG SHALL BE USED ONLY FOR CURB INLETS AFTER PAVEMENT (BINDER COURSE OR WEAR COURSE) IS INSTALLED OR AT EXISTING PAVED AREAS.
   D. INFRASAFE® DEBRIS COLLECTION DEVICE BY ROYAL ENVIRONMENTAL SYSTEMS, INC., DISTRIBUTED BY ESS BROTHERS, 9360 COUNTY ROAD 10, CORCORAN, MN 55357 DCD'S SHALL BE SIZED SPECIFICALLY FOR THE STRUCTURE AND CASTING SPECIFIED. PROVIDE FILTER BAGS AND TIES FOR COMPLETE INSTALLATION.
   E. PER CITY STANDARD DETAIL.
   F. OR APPROVED EQUAL.

18. THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (E.G., ZEBRA MUSSELS, EURASIAN WATERMILFOIL, ETC.) MUST BE MINIMIZED TO THE MAXIMUM EXTENT POSSIBLE.

19. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.

20. ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT MUST BE USED ON SLOPES OF 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.

21. FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.

22. CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.

23. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.

24. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE REMOVED UPON FINAL STABILIZATION.

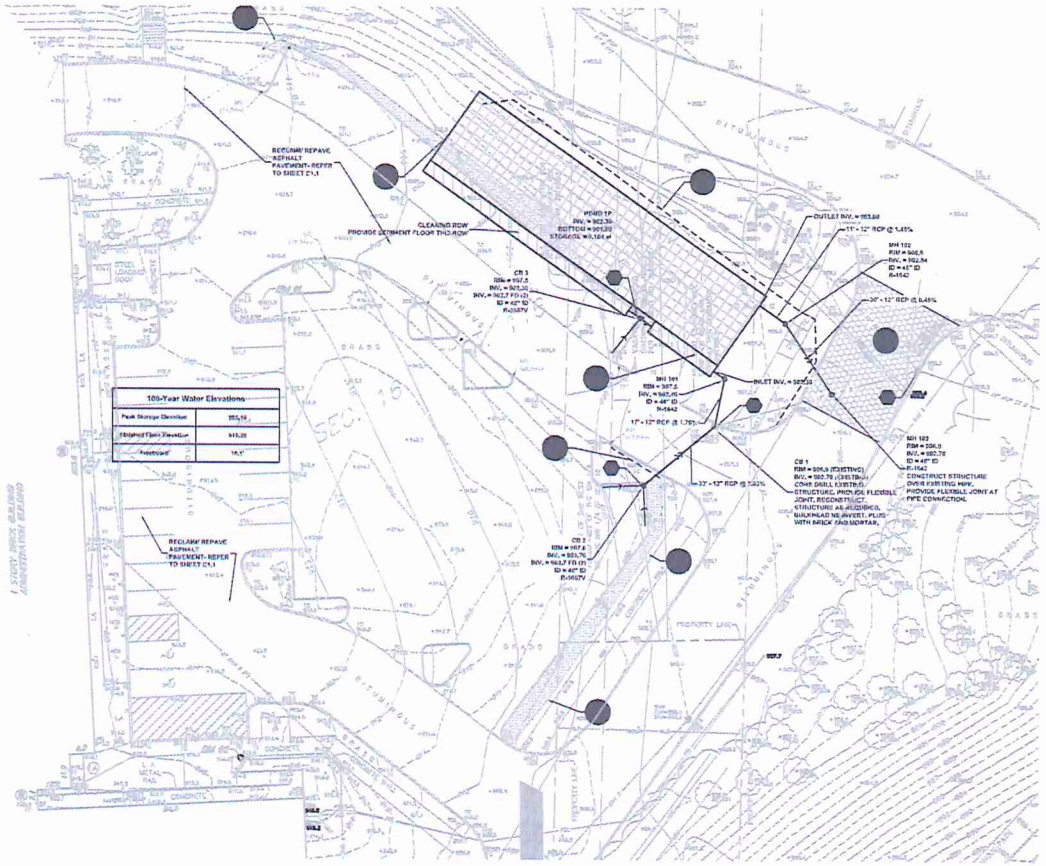
25. SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED THROUGH SOIL AMENDMENT AND/OR R IPPING TO A DEPTH OF 18 INCHES (6 INCHES FOR SINGLE-FAMILY HOME PROPERTIES) WHILE TAKING CARE TO AVOID UTILITIES, TREE ROOTS AND OTHER EXISTING VEGETATION PRIOR TO FINAL REVEGETATION OR OTHER STABILIZATION.

26. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED ON A PROPERTY THAT DRAINS TO AN IMPAIRED WATER, WITHIN 14 DAYS ELSEWHERE.

27. THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.

LEGEND

- REFERENCE KEY TO SITE DETAILS (DETAIL I.D NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM))
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION (ME = MATCH EXISTING, EGF = EMERGENCY OVERFLOW)
- PROPOSED GRADING LIMITS
- APPROXIMATE SOIL BORING LOCATION
- PROPOSED STORM SEWER
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED UNDERGROUND STORAGE UNITS (UGS)
- PROPOSED SILT FENCE
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED EROSION CONTROL BLANKET
- SEDIMENT CONTROL DEVICE AT STORM SEWER INLET
- PROPERTY LINE



APPROXIMATE EROSION CONTROL DEVICE QUANTITIES

SILT FENCE = 610 L.F.

ROCK CONSTRUCTION ENTRANCE = 30 C.Y.

EROSION CONTROL BLANKET = 140 S.Y.

SEDIMENT CONTROL DEVICE AT STORM SEWER INLET = 13

NOT FOR CONSTRUCTIC

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

14500 Martin Drive | Suite 1500
Eden Prairie, MN 55344
952-607-6512
www.rpbcwd.org

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2015-010 (reinstatement)

Received complete: April 6, 2018

Applicant: Morgan G. Earnest II, Vice President

Consultant: Alan Catchpool and David Todd, CEI Engineering Associates

Project: Children's Learning Adventure – Childcare Center – Modification of two bioretention basins that were constructed to provide water quality treatment and stormwater rate control for the original construction (permit 2015-010). The biorentention basins are not infiltrating as expected, so the applicant has proposed modifications to ensure stormwater management and erosion and sediment control features meet requirements.

Location: Northwest corner of Highway 5 and Galpin Avenue, Chanhassen, MN

Reviewer: Scott Sobiech and Katie Turpin-Nagel, Barr Engineering

Rules: Applicable rules checked

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
X	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization	X	Rule L: Permit Fees
	Rule G: Waterbody Crossings	X	Rule M: Financial Assurances

Rule Conformance Summary

Rule	Issue		Conforms to RBPCWD Rules?	Comments
C	**Erosion Control Plan**		Yes	
D	**Wetland and Creek Buffers**		Yes	
J	**Stormwater Management**	Rate	Yes	
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See rule specific condition J1
L	**Permit Fee**			
M	**Financial Assurance**		See Comment	The financial assurance has been calculated at $222,910

Project Description

The existing site development that occurred in 2015, and for which permit 2015-010 was originally issued, consisted of a 33,032 square foot daycare and after school facility, along with associated surface parking lot, concrete curb and gutter, driveways, sanitary sewer lateral, water connection to main, storm sewer, detention basin, gas, electric and telephone utilities. The project included two bio-infiltration basins, a vegetated swale and a detention pond. Stormwater from the detention pond outlets into an existing on-site wetland which discharges through an existing culvert under West 78th street to the north.

The current scope work on the property is proposed to both correct buffer planting and a wetland outlet that were not completed correctly under the term of the original permit (which is now expired) and because the two bio-infiltration basins are not performing as originally designed. It is proposed to convert the bio-infiltration basin at the southern end of the site to a bio-filtration basin with underdrain connecting to the detention pond. The bio-infiltration basin at the northern portion of the site will have approximately one foot of material removed and around one foot of material scarified and loosened to improve the performance. Wetland buffer, originally covered with sod, will be seeded with native vegetation. Because the work is proposed to bring site conditions into compliance with the prior-approved permit (as opposed to RPBCWD initiating an enforcement action) and no new land-disturbing activities for other purposes are proposed, staff recommends reinstatement of permit 2015-010.

The site information for the restoration work is summarized below:

1. Total Site Area: 13.97 acres
2. Existing Site Impervious Area: 3.46 acres
3. New (Increase) in Site Impervious Area: 0.0 acres (0% increase in site impervious area)
4. Total Disturbed Area: 0.39 acres

Exhibits:

1. Permit Application dated March 20, 2018.
2. Site development plans dated March 21, 2018 with revised Buffer and Grading plans dated April 5, 2018 (revised April 19, 2018)
3. Drainage Report dated March 20, 2015 (revised August 26, 2015) (from permit 2015-010).
4. Wetland Delineation Report dated November 19, 2012 (from permit 2015-010).
5. Minnesota Wetland Conservation Act Type and Boundary Notice of Decision dated January 23, 2013 (from permit 2015-010).
6. Response letter dated April 6, 2018.
7. MIDS Calculator file dated February 21, 2018.
8. Proposed Conditions HydroCAD Model received April 6, 2018 (revised April 19, 2018).

9. MnRAM Memo dated May 26, 2015 (from permit 2015-010).
10. Response letter dated April 19, 2018.
11. Existing Conditions HydroCAD model received August 20, 2015 (from permit 2015-010).

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the restoration work will involve the excavation of approximately 1,130 cubic yards of earth the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plan prepared by CEI Engineering Associates, Inc. includes installation of silt fence, inlet protection for storm sewer catch basins, a flared end section sediment trap rock weir and wattle roll, a rock construction entrance, placement of a minimum of 6 inches of topsoil, decompaction of areas compacted during construction, and retention of native topsoil onsite. To conform to the RPBCWD Rule C requirements the following revisions are needed:

C1. The Applicant must provide the name and contact information of the general contractor responsible for the site. RPBCWD must be notified if the responsible party changes during the permit term.

Rule D: Wetland and Creek Buffers:

Because the originally permitted work triggered a permit under RPBCWD Rule J, the onsite wetland is protected by the state Wetland Conservation Act, and the restoration work will also involve disturbance upgradient of the wetland, Rule D, Subsections 2.1a and 3.1 require buffer around this wetland. The wetland was not disturbed during the 2015 work and is not proposed to be disturbed by the restoration work.

A 2012 wetland delineation for the site was included with the original submittal. A MnRAM dated May 26, 2015 was provided. The MnRAM analysis indicated that the wetland onsite is a medium value wetland. The applicant proposed wetland buffers for the wetland, which meet the average (40 feet) and minimum (20 feet) widths identified in Rule D, Subsection 3.1 for medium value wetlands. Buffer monuments were install in 2015 in conformance with Rule D, Subsection 3.3.

The buffer areas and maintenance requirements that were documented in a written agreement with RPBCWD in 2015 were determined to achieve compliance for this project. However, 2015 the wetland buffer was not restored in conformance with Rule D, Subsection 3.2, which states that buffer areas must be planted with native vegetation and maintained to retain natural resources and ecological value. In 2015, the wetland buffer was restored with sod. For this restoration project the sod will be removed and the area will be restored with MnDOT Seed Mix #34-182, which is an approved seeding mix for temporarily flooded areas. Additionally, wetland buff signs not in compliance with Rule D, Subsection

3.3, will be replaced with signs that do comply. A few of the buffer sign locations will change to the inflection points of the wetland buffer.

Rule J: Stormwater Management

Because the project disturbs approximately 1,130 cubic yards of earth the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1). The criteria listed in Subsection 3.1 applied to the entire project parcel at the time of the original project because the project proposed to disturb all of the existing impervious on site and also increased the imperviousness of the entire parcel by more than 600 percent (Rule J, Subsection 2.3). The present scope of restoration work does not alter any impervious surfaces of the parcel, and so no new or additional stormwater management is required. The restoration work also includes installation of an outlet on the wetland that was included in the plans that were the basis for RPBCWD's approval of the original permit, but was not actually constructed.

The property owner and site developer are proposing the modification of the two existing bio-infiltration basins on the site in order to meet the stormwater- management requirements originally imposed. The bio-infiltration basins are not performing as originally designed. It is proposed to convert the bio-infiltration basin at the southern end of the site to a bio-filtration basin with underdrain. The existing basin materials will be excavated and disposed. The basin materials will be replaced with Minnesota Pollution Control Agency's (MPCA's) Soil Mix B (70 – 85% construction sand, 15 – 30% organic matter), including iron filling, sorptive media, and water treatment residual amendments (5% by volume). The underdrain will discharge to the existing stormwater detention pond. The bio-infiltration basin at the northern portion of the site will have approximately one foot of material removed and one foot of underlying material scarified and loosened to improve the infiltration performance. A sump manhole with SAFL baffles will be used for pretreatment for runoff.

Rate Control

In order to meet the rate control criteria listed in subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site. In 2015, the approved design included restricting the 21-inch outlet from the onsite wetland to an 18-inch opening by installing a plate. Because this outlet modification was not completed with the construction of the project, the site conditions do not meet the design approved in 2015. Therefore, the applicant is proposing to retrofit the wetland outlet with an 18-inch outlet as originally approved. This is reflected in the following analysis.

The applicant used a HydroCAD hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The modeling indicates a slight increase in the peak 100-year, 10-day snowmelt runoff rate at the wetland discharge. This slight increase is within the modeling error and generally rates will be decreased for this discharge point. Therefore, the proposed project conforms to the rate control requirements in Rule J, Subsection 3.1a.

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
North	0.4	0	1	0	2.3	0	0.1	0
East	2.1	0.7	4	1.7	8.1	3.8	0.2	0.1
South	0.7	0	1.6	0	3.6	0	0.1	0
Wetland	5.5	2.7	5.6	5.3	12.1	10.9	1.1	1.26

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all impervious surface of the parcel. An abstraction volume of 13,116 cubic feet was required from the 3.46 acres (143,085 square feet) of impervious area on the project for volume retention in the initial construction phase (permit 2015-010).

Soil boring information submitted for the original development of the site indicated that the groundwater table is relatively shallow over a significant portion of the site. In at least one area the soil boring indicated the groundwater table was estimated only two feet below the existing ground level, thus limiting the potential for infiltration. To account for the groundwater level the applicant reconfigured the proposed impervious and stormwater management features to maximize the ability to abstract runoff on the site, including raising the site grades by three feet to increase separation from groundwater in areas suitable for abstraction. Because the engineer concurred that the soil boring information, high groundwater and project reconfiguration submitted showed that the abstraction standard in subsection 3.1 of Rule J could practicably be met, the site was considered a restricted site and stormwater runoff volume was required to be managed in accordance with subsection 3.3 of Rule J. For restricted sites, subsection 3.3 of Rule J requires rate control in accordance with subsection 3.1.a and that abstraction and water-quality protection be provided in accordance with the following sequence: (a) Abstraction of at least 0.55 inches of runoff from site impervious surface determined in accordance with paragraphs 2.3, 3.1 or 3.2, as applicable, and treatment of all runoff to the standard in paragraph 3.1c; or (b) Abstraction of runoff onsite to the maximum extent practicable and treatment of all runoff to the standard in paragraph 3.1c; or (c) Off-site abstraction and treatment in the watershed to the standards in paragraph 3.1b and 3.1c.

As part of the original permit for the project (Permit 2015-010), the Applicant provided volume control calculations supporting that volume abstraction would be provided through the two bio-infiltration basins and a vegetated swale with check dams. It was estimated that approximately 9,173 cubic feet of abstraction was provided by the stormwater features. This was greater than the 6,928 cubic feet of abstraction needed to retain the minimum of 0.55 inches required under 3.3(a). However, the bio-

infiltration basins are not performing as designed due to groundwater and lower than anticipated infiltration capacity of the soils, as determined by observed standing water for longer than 48 hours. Thus, the engineer concurs with the applicant that observed site conditions and performance of the facilities support the conclusion that 0.55 inches of abstraction from the impervious surface is not achievable because of unique site constraints. With the basin modifications, the project will achieve abstraction in the north bio-infiltration basin to the maximum extent practicable (3.3b). It is estimated that 1,794 cubic feet of abstraction can occur in the north bio-infiltration basin, which correlates to an abstraction depth of 0.14 inches, thus providing abstraction to the maximum extent practicable (Rule J, subsection 3.3b).

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)
0.55	6,928	1,794

A sump manhole with a SAFL baffle device will be used for pretreatment of runoff for the northern bio-filtration basin in accordance with 3.1b.i.

Water Quality Management

Application of subsection 3.1.c of Rule J required the Applicant provide for at least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff. The proposed bio-infiltration basin modifications will continue to achieve the required TP and TSS removals. A P8 water quality model was developed to estimate the proposed pollutant removal capacity of the proposed BMPs and is summarized in the below table. The estimated TSS and TP removal conforms to the RPBCWD Rule J, Subsection 3.1.c.

Pollutant of Interest	Required Removal (%)	Estimated Removal (%)
Total Suspended Solids (TSS)	90	90
Total Phosphorus (TP)	60	70

Low floor Elevation

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation according to Rule J, Section 3.6. The proposed structure has a low floor elevation at least 2 feet above the adjacent, applicant computed 100-year flood elevations, thus conforming the Rule J, subsection 3.6.

Basin	Applicant Computed 100-Yr Flood Elevation	Low Floor Elevation	Freeboard (ft)
Pond	958.44	967.8	9.36
Wetland	957.79	967.8	10.01
East Bio-infiltration	963.52	967.8	4.28
West Bio-filtration	963.47	967.8	4.33

Maintenance

Subsection 3.7 of Rule J requires the submission of maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed.

J1. Permit applicant must provide an updated draft maintenance and inspection plan. Once approved by RPBCWD, the maintenance declaration recorded for purposes of compliance with the conditions on the approval of 2015-010 must be amended to comport with the revised stormwater-management design and associated maintenance requirements.

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $1000

Rule M: Financial Assurance:

Rules C: Silt fence & Straw wattle: 1,730 L.F. x $2.50/L.F. =.....$4,325

Restoration: 0.39 acres x $2,500/acre = ...$975

Rules D: Buffer: $5,000

Rules J: Infiltration/filtration: 24,820 sq. ft. x $6/sq. ft. = ...$148,920

Contingency (10%) $15,920

Administration (30%) $47,770

Total Financial Assurance.....$222,910

The applicant provided a $290,000 financial assurance for purposes of the original application for permit 2015-010 that RPBCWD continues to hold. If desired, the applicant can replace the existing financial assurance with an instrument or escrowed funds providing the above-cited financial assurance.

Applicable General Requirements:

1. The RPBCWD Administrator shall be notified at least three days prior to commencement of work.
2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.
3. Return or allowed expiration of any remaining surety and permit close out is dependent on the permit holder providing proof that all required documents have been recorded and providing as-built drawings that show that the project was constructed as approved by the Managers and in conformance with the RPBCWD rules and regulations.

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project conforms to Rule D and will conform to Rules C and J if the Rule Specific Permit Conditions listed above are met.

Recommendation:

Approval of reinstatement of permit 2015-010 for one year, contingent upon:

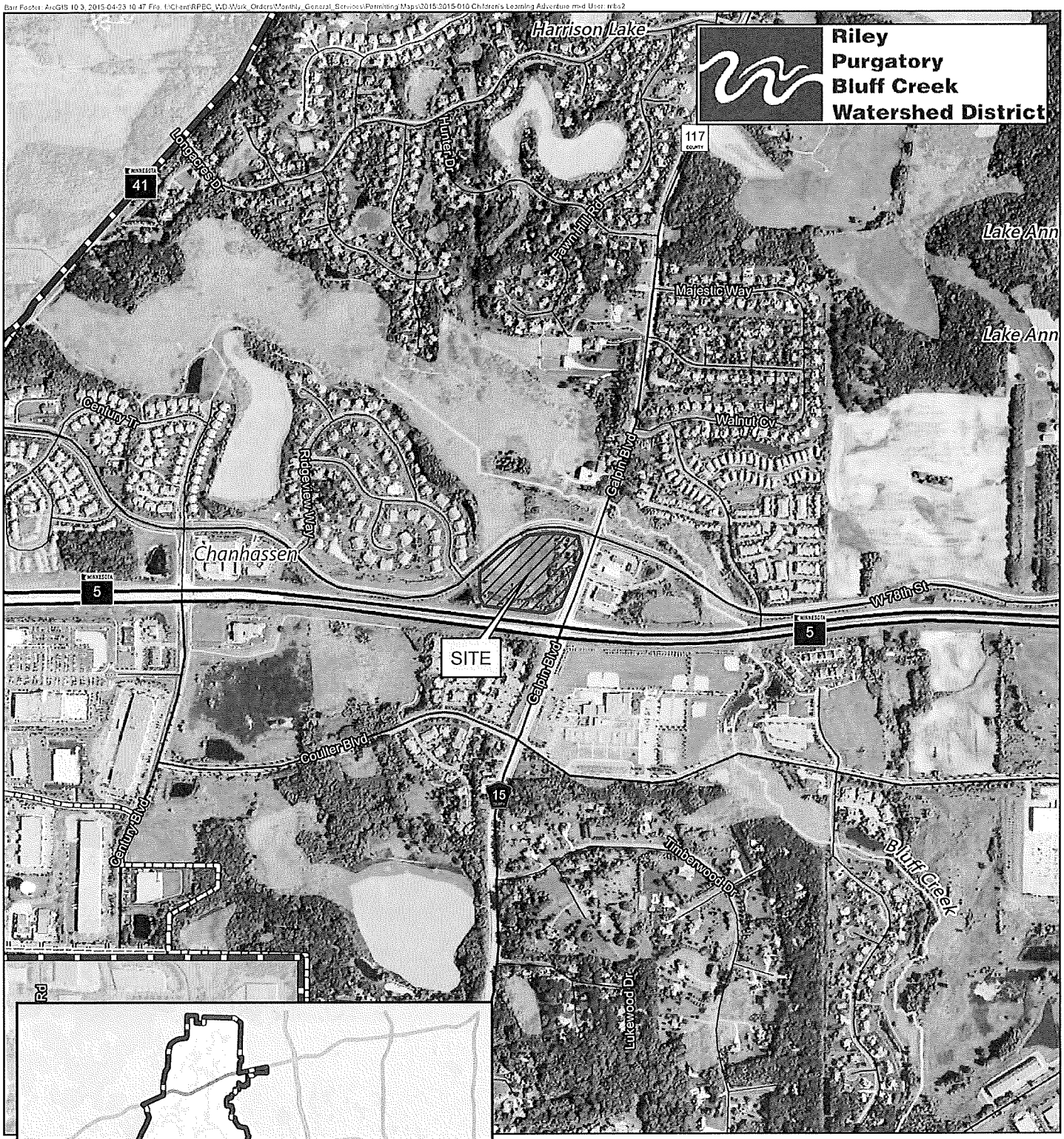
1. Rule-specific permit conditions above.
2. Continued compliance with General Requirements.
3. Receipt of the name and contact information of the general contractor responsible for the site. RPBCWD must be notified if the responsible party changes during the permit term.
4. Receipt in recordation of an updated maintenance declaration for the stormwater management facilities. A draft must be approved by the District prior to recordation.

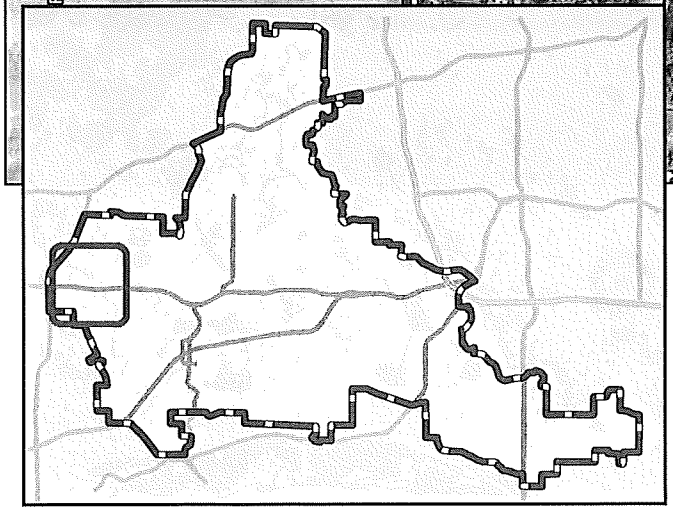
By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization, stormwater facilities conform to design specifications as approved by the District.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve to reinstate permit application No. 2015-010 with the conditions recommended by staff.

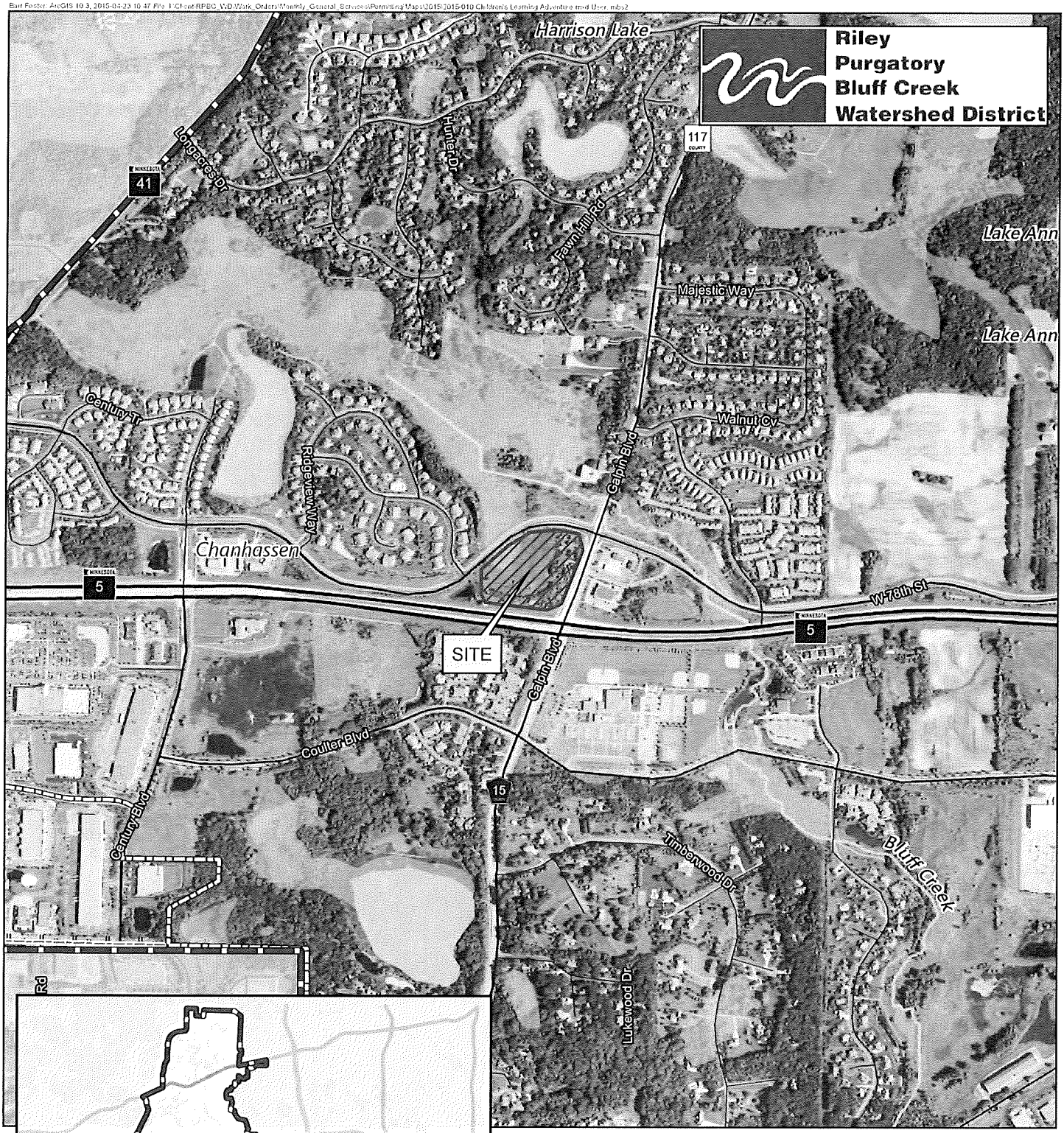


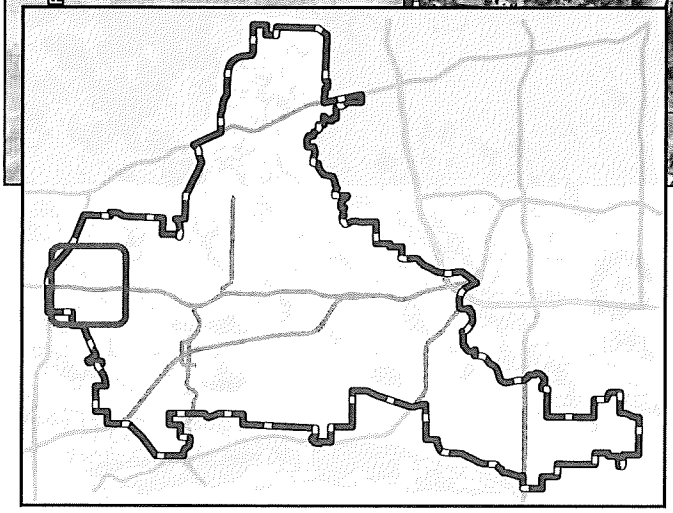


Feet
0 1,000

Permit Location Map

CHILDREN'S LEARNING ADVENTURE
Permit 2015-010
Riley Purgatory Bluff Creek Watershed District





Feet

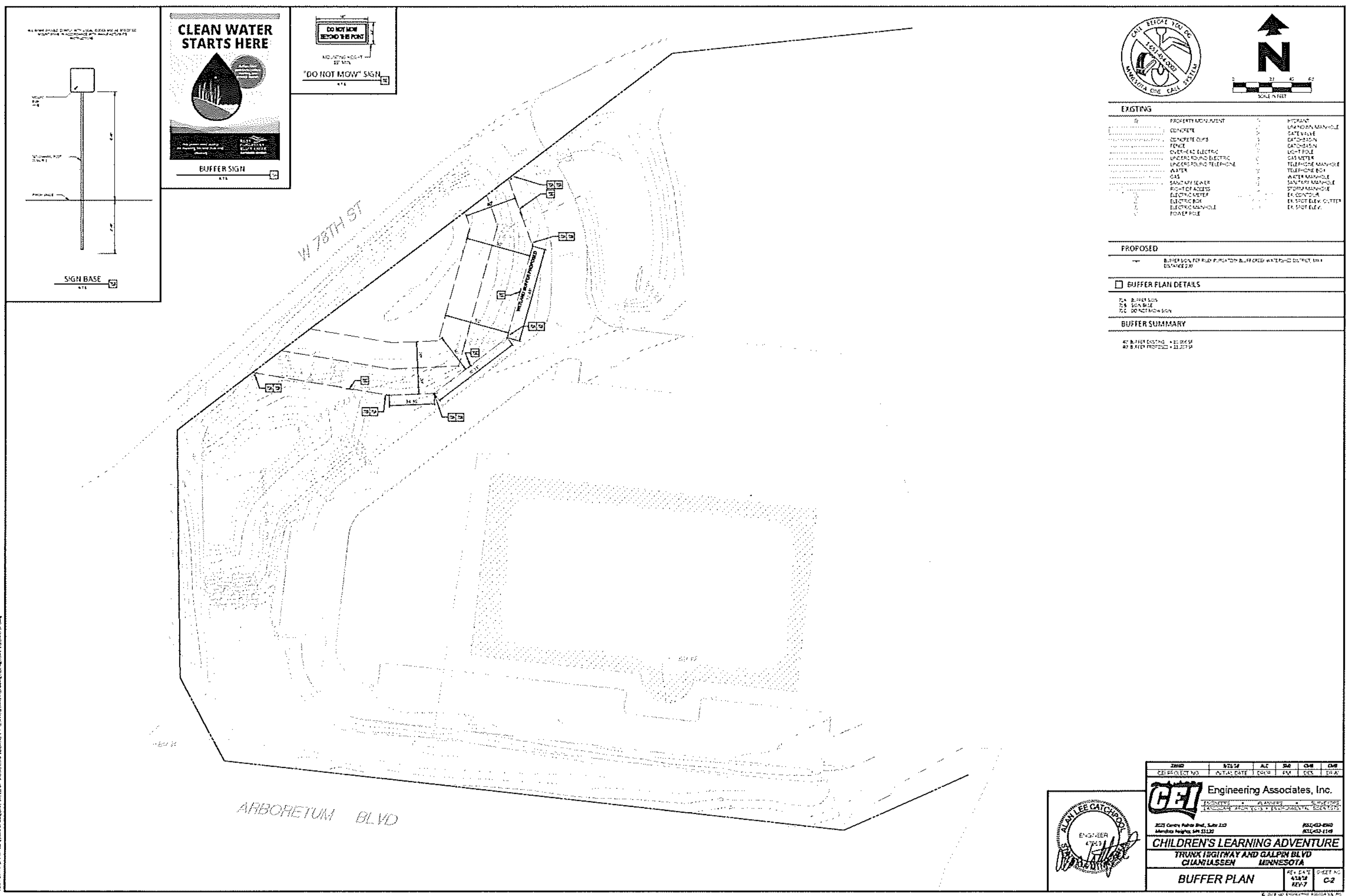
0 1,000

Permit Location Map

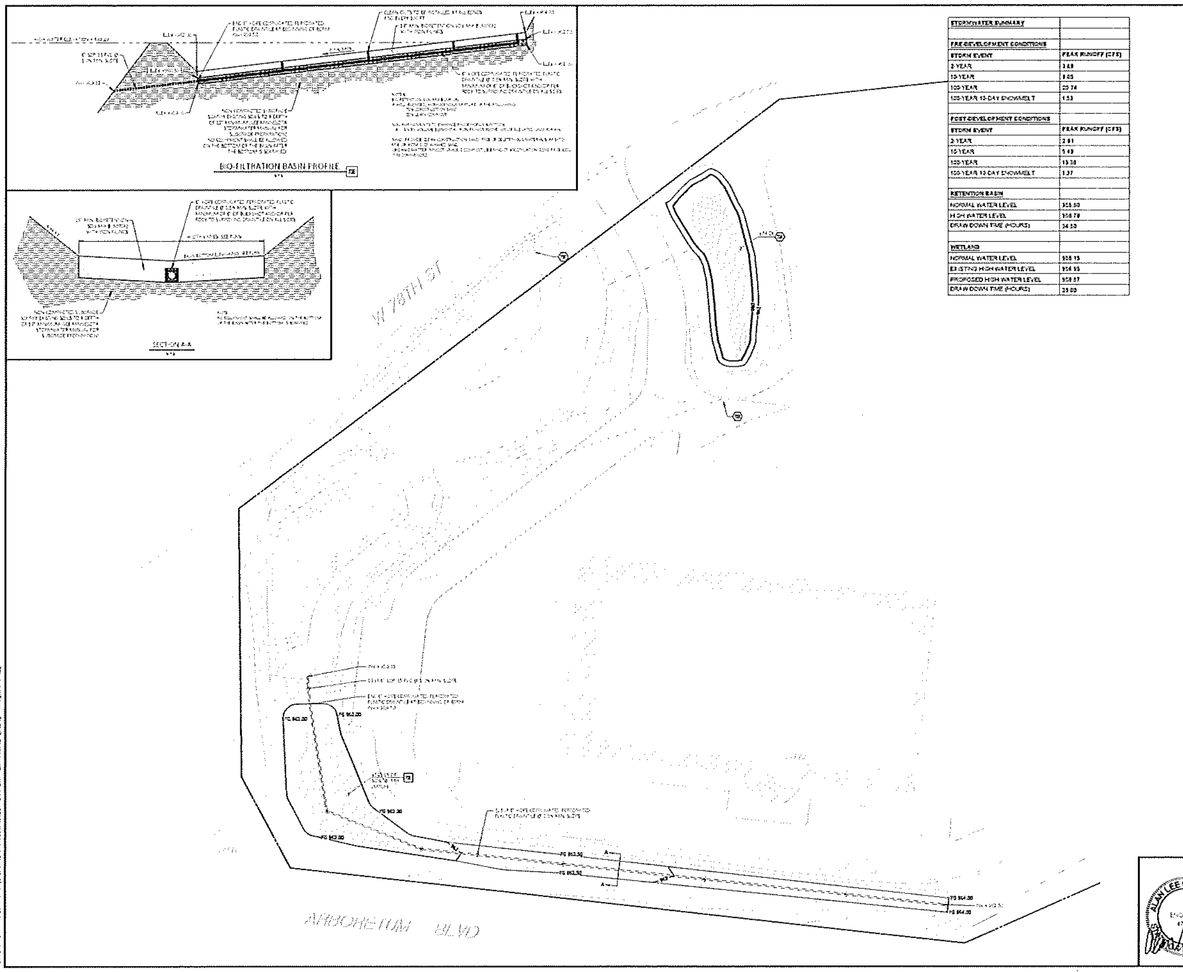
CHILDREN'S LEARNING ADVENTURE

Permit 2015-010

Riley Purgatory Bluff Creek Watershed District



CLEAN WATER STARTS HERE
BUFFER SIGN
"DO NOT MOW" SIGN
SIGN BASE
W 78TH ST
ARBORETUM BLVD
EXISTING
PROPOSED
BUFFER PLAN DETAILS
BUFFER SUMMARY
Engineering Associates, Inc.
CHILDREN'S LEARNING ADVENTURE
TRUNK HIGHWAY AND GALPIN BLVD
CHANHASSEN MINNESOTA
BUFFER PLAN
C-2



STORMWATER SUMMARY	
PRE-DEVELOPMENT CONDITIONS	
STORM EVENT	PEAK RUNOFF (CFS)
2-YEAR	3.49
10-YEAR	9.05
100-YEAR	20.74
100-YEAR 10-DAY SNOWMELT	1.53
POST-DEVELOPMENT CONDITIONS	
STORM EVENT	PEAK RUNOFF (CFS)
2-YEAR	2.81
10-YEAR	5.49
100-YEAR	13.38
100-YEAR 10-DAY SNOWMELT	1.37
RETENTION BASIN	
NORMAL WATER LEVEL	955.50
HIGH WATER LEVEL	958.78
DRAW DOWN TIME (HOURS)	34.50
WETLAND	
NORMAL WATER LEVEL	955.15
EXISTING HIGH WATER LEVEL	954.55
PROPOSED HIGH WATER LEVEL	958.57
DRAW DOWN TIME (HOURS)	29.00

EXISTING

PROPOSED

GENERAL GRADING NOTES

GRADING NOTES

GRADING DETAILS

ALAN LEE CATCHPOOL
ENGINEER

CEI Engineering Associates, Inc.

CHILDREN'S LEARNING ADVENTURE

TRUNK HIGHWAY AND GALPIN BLVD
CHANHASSEN, MINNESOTA

GRADING PLAN

SHEET NO. C-3

REV 7

f. Approve Residential Cost Share Grant for Stoner Raingarden project

APPLICANT	ADDRESS	SUB-WATERSHED	PROJECT TYPE	POLLUTION REMOVAL	AREA RESTORED	PROJECT COST	FUNDING REQUEST	STAFF REC	CAC REC
STONER	15430 Morraine Way Eden Prairie	Red Rock Lake	Boulevard raingarden	TP -0.002 lbs/year TSS – 0.482 lbs/year	2NA	$1508	$1131	Fund at $1131	Fund at $1131

Staff recommend the Stoner Raingarden cost-share project application be approved for funding up to $1131.

Board action

It was moved by Manager_____, seconded by Manager _____ to approve funding the Stoner Raingaerden cost-share project in the amount recommended by staff/ Approve Residential Cost Share Grant for Stoner Raingarden project CAC of up to $1131.

Cost share grant application
2018

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Do not fill in gray boxes. District use only.

Applicant type (check one) ☒ Homeowner ☐ Non-profit - 501(c)(3)
☐ Business or corporation ☐ Public agency or local government unit ☐ School

Project type (check all that apply) ☒ Raingarden ☐ Vegetated swale ☐ Lake/creek/wetland buffer
☐ Shoreline/bank stabilization ☐ Wetland restoration ☐ Pervious hard surface ☐ Infiltration basin
☐ Conservation practice ☐ Other _____

Applicant information

Works or resides in district? Y

Name Mike + Amber Stoner Address 15430 Morraine Way
City/State/Zip Eden Prairie, MN 55347
Phone 952-947-0826 Alt phone 612-423-6267 Email amber.d.stoner@gmail.com
612-423-5701

Primary contact

☒ Same as applicant (leave blank)

Name _____ Address _____
City/State/Zip _____
Phone _____ Alt phone _____ Email _____

Project location

Address 15430 Morraine Way City/State/Zip Eden Prairie, MN 55347
Property Identification Number (PID) 16-116-22 31 0040
Property owner(s) Mike + Amber Stoner

Project located in district? Y

Tributary to a waterbody? No ☐ Yes, indirectly Y ☐ Yes, adjacent

Project summary

Title Boulevard Raingarden
Total project cost ~~$1200~~ $1508 msj Grant amount requested ~~$900~~ $1131 msj
Estimated start date June 1, 2018 Estimated completion date August 1, 2018
Sub-watershed Red Rock Lake

Project located in priority drainage area? N

Is project tributary to a water body? ☒ No, water remains on site ☐ Yes, indirectly ☐ Yes, directly adjacent

2-3 sentence project description

This project will replace the grass boulevard in front of our house with a rain garden consisting of native plants. This beautiful rain garden will increase awareness of ways to reduce run-off + improve water quality.

Is this work required as a part of a permit? ☒ No ☐ Yes

(If yes: describe how the project provides water quality treatment beyond permit requirements on the next page.)

Site visit

One of the requirements for a complete application is a site visit from district staff.

Have you had a site visit? ☐ No ☒ Yes

(If you answered no, please contact staff to schedule one: 952-607-6512)

Y

Project details

Do not fill in gray boxes. District use only.

Checklist To be considered complete the following must be included with the application.

- ☒ location map
- ☒ site plan & design schematics
- ☒ itemized budget or contractor bid
- ☒ project time-line
- ☒ proof of property ownership
- ☒ plant list & planting plan (if project includes plants)

Is time-line reasonable?	Y
Is budget reasonable?	Y
Is plan comprehensive?	Y
Does plant list conform to district's approved plant list?	Y

Description

Describe the current site conditions, as well as site history, and past management.

The boulevard is currently filled with grass and a single stand of switchgrass. It is mowed regularly. We have not used fertilizer or herbicides on that area.

What are the project objectives and expected outcomes? Give any additional project details.

- To create a buffer between the lawn + street drain
- To capture run-off with excess phosphorous and sediment.
- To raise awareness of alternative landscaping for water quality

Are there multiple objectives?	Y
Does the project have well-defined, measurable results?	Y

List other key participants and their roles

→ family project for our neighborhood

Does the project demonstrate strong partnerships & support?	N

Which cost share goals does the project support? (check all that apply)

- ☒ Improve watershed resources
- ☒ Increase awareness of the vulnerability of watershed resources
- ☒ Increase familiarity with and acceptance of solutions to improve waters
- ☐ Foster water resource stewardship

How does the project support the goals you checked?

- highly visible in a neighborhood of manicured lawns - only rain garden on the street
- will provide a small reduction in phosphorus + sediment

Project details (continued)

Do not fill in gray boxes. District use only.

Benefits Estimate the project benefits in terms of restoration and/or **annual** pollution reduction. If you are working with a designer or contractor, they can provide these numbers. If you need help, contact the district cost share program coordinator.

Benefit	Amount	
Water captured		gal / year
Water infiltrated		gal / year
Phosphorus removed	0.002	lbs / year
Sediment removed	0.482	lbs / year
Land restored		ft²

Does the project provide water quality treatment?	Y
Does the project provide restoration?	N

How will you share the project results with your community?

- post a sign with info about the project and a QR code that links to a website with more info and resources
- post labels with plant names
- chat with neighbors about the project
- submit letter to the editor of EP News about project + watershed district

Is there educational value to the project?	Y+
Will the project be visible to the public?	Y+

Are there other projects that could be initiated as a result of this one?

- Neighbors may consider native plants and/or rain gardens for their own properties.

Evaluation

How will the project be monitored and evaluated?

- Take periodic pictures to show growth of the plants
- Place a website counter to track visits to the info page
- submit mandatory reports to watershed district

Maintenance agreement

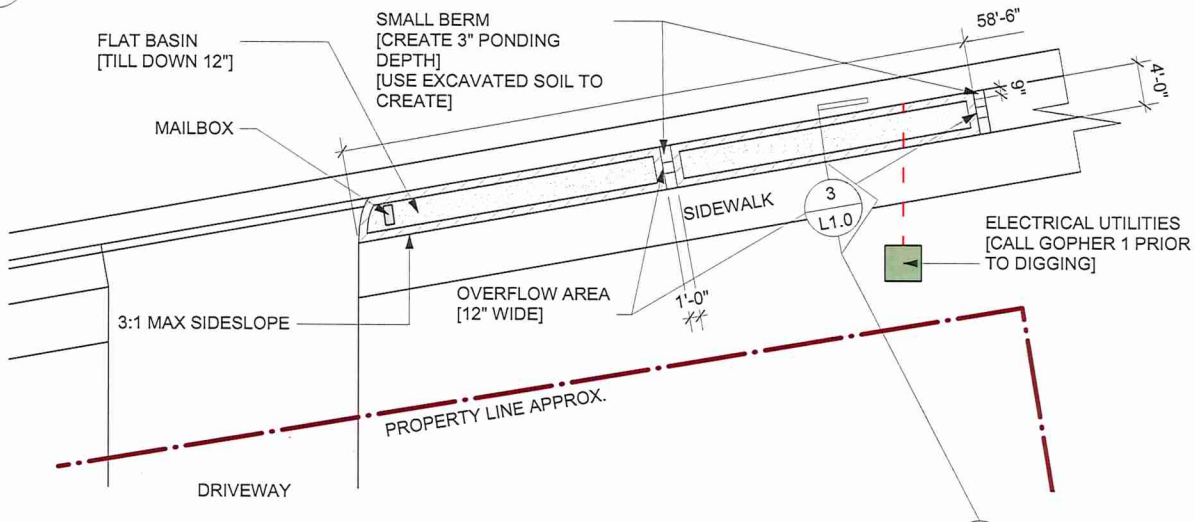
I acknowledge that receipt of a grant is contingent upon agreeing to maintain the project for the number of years outlined in the cost share guidelines document ☒ Yes

Authorization

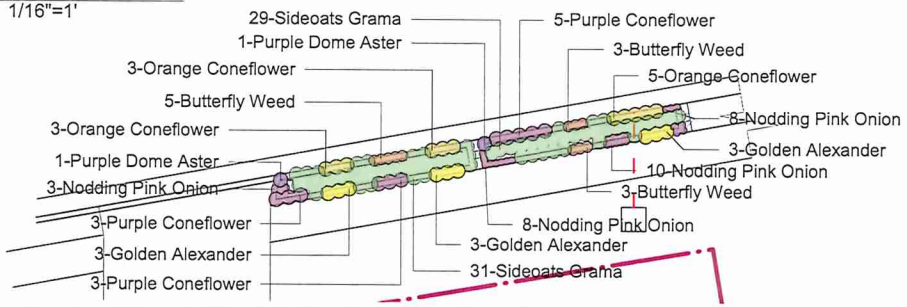
Name of landowner or responsible party Amber Stoner, Michael Stoner

Signature Amber Stoner, Michael Stoner Date April 11, 2018

1 SITE PLAN
3/32"=1'

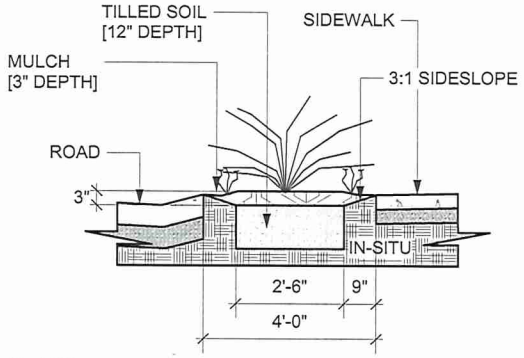


2 PLANTING PLAN
1/16"=1'



Quantity	Latin Name	Common Name
11	Asclepias tuberosa	Butterfly Weed
9	Zizia aurea	Golden Alexander
2	Aster novae-anilae 'Purple Dome'	Purple Dome Aster
11	Echinacea purpurea	Purple Coneflower
11	Rudbeckia fulgida	Orange Coneflower
29	Allium cernuum	Nodding Pink Onion
60	Bouteloua curtipendula	Sideoats Grama

3 SECTION #1
3/8"=1'



STEPS

1. CALL CITY TO GET OK
2. CALL GOPHER 1
3. EXCAVATE SOD AND SOIL TO CREATE 3" PONDING DEPTH
4. TILL SOIL DOWN 12"
5. CREATE 2 (12") BERMS, MAKE 12" OF CENTER LOWEST POINT FOR OVER FLOW
6. PLANT AND MULCH
7. WATER WHEN SOIL IS DRY. UNTIL PLANTS ARE ESTABLISHED

CARVER SWCD
(952)466-5230
CO.CARVER.MN.US/SWCD

Carver Soil & Water Conservation District
11360 HWY. 212, #6
COLOGNE, MN 55322

PROJECT: STONER

LOCATION: 15430 MORRAINE EP

AGENCY: RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

DESIGNER:
DATE: 5/10/17
REVISION: 4/9/18
REVISION:4/19/18
REVISION:
CHECKED BY:

NOTES:

*CALL GOPHER 1 PRIOR TO EXCAVATION
*SITE VERIFY ELEVATIONS
*CALL CARVER SWCD WITH QUESTIONS 952-466-5264
*KEEP MULCH BELOW SIDEWALK

SCALE: NA

BLVD. RAINGARDEN

Cost Estimating Worksheet

Amendments by MSJ

Labor Costs (Contractors, Consultants, In-Kind Labor)

Service Provider	Task	# Hours	Rate/Hour	Requested Funds from RPBCWD	Matching / In-Kind Funds	Total
In-kind,	Cut & relocate Sod & Plants	10	$ 10 /hr	$ 100	$ 0	$ 100
In-kind	Till & Shape Basin & Sideslope	8	$ 10 /hr	$ 80	$ 0	$ 80
In-kind	Plant 89 units	12	$ 10 /hr	$ 120	$ 0	$ 120
In-kind	Mulch around plants	2	$ 10 /hr	$ 20	$ 0	$ 20
			$ /hr	$	$	$
			$ /hr	$	$	$
			$ /hr	$	$	$
			$ /hr	$	$	$
			$ /hr	$	$	$
			Total:	$ 320	$ 0	$ 320

Project Materials

Materials	Unit Costs	Total # of Units	Requested Funds from RPBCWD	Matching / In-Kind Funds	Total
Sod Cutter Rental	$93/day	1	$ 0	$ 93	$ 93
Tiller Rental	$91/day	1	$ 0	$ 91	$ 91
Native Plants, 3" pots (7 varieties, see Planting Plan)	$7	~~$9~~ 133	$ 580	$ 43	$ 623 -------$931
Twice-Shredded Hardwood Mulch	$27	2	$ 0	$ 54	$ 54
3" Planting Auger	$19	1	$ 0	$ 19	$ 19
			$	$	$
			$	$	$
		Total:	$ 580	$ 300	$ ~~880~~ $1188

------$1131

(A) Total Requested Funds from RPBCWD*: $ 900 (Labor + Project Materials)

(B) Total Matching/In-Kind Funds: $ 300 (Labor + Project Materials)

(C) Project Total: $ 1200 (A + B) ------$377

------$1508

***Please note: total requested funds (A) cannot be more than 75% of the Project Total (C).**

If you have questions about the Cost Estimating Worksheet, please contact the Riley-Purgatory-Bluff Creek Watershed District office at 952-294-5976.

Log Homes MN rates A
Cabintek | Log Homes |
Greenhouse Shed Plans
Google Maps
Secure
https://www.google.com/maps/@44.85171112,-93.4731004,38m/data=!3m1!1e3
Search Google Maps
Eden Prairie
Minnesota
Measure distance
Click on the map to add another point
Total distance: 96.97 ft (29.56 m)
Imagery ©2018 Google, Map data ©2018 Google
United States
Terms
Send Feedback
10 ft
3D
Type here to search
7:05 PM
4/5/2018


15430 Morraine Way,
Eden Prairie, MN 55347
Eden Prairie
Valley View Rd
Round Lake Park
Luther Way
Huron Pl
Bittersweet Dr
Mitchell Rd
Willow Park
Zenith Ln
Roberts Dr
Plaza Dr
Martin Dr
W 78th St
Venture Ln
Eden Prairie Rd
Mitchell Lake
Island Rd
Technology Dr
Prairie Center Dr
Eden Rd
Flying Cloud Dr
Scenic Heights Rd
Miller Pkwy W
Miller Park
Chestnut Dr
Carmody Dr
Cumberland Rd
Mitchell Rd
Red Oak Dr
Eden Prairie Rd
Bayloods Ln
Hanover Ln
Braxton Dr
Raleigh Ln
Pioneer Park
McCoy Lake
Bikeway Rd
Skating Lake Pkwy
Anderson Lakes Pkwy
Preserve Blvd
Cardinal Ct
Bing
2000 feet
500 m
© 2018 HERE

Stoner Boulevard Rain garden Project Timeline

June

1 - call Gopher 1, city has already been contacted for approval

9-17 - excavate sod + soil to create 3" ponding depth

18-30 - till soil down 12", create 2 (12") berms

July

1-8 - acquire plants

8 - plant and mulch

9-31 - make + post sign, plant labels, website, take pictures,

resourceful. naturally.
engineering and environmental consultants

BARR

April 16, 2018

President Leslie Yetka and Board of Managers
Riley-Purgatory-Bluff Creek Watershed District
14500 Martin Drive Suite 1500
Eden Prairie, MN 55344

Re: Scenic Heights Elementary School Forest Restoration Project – Pay Application #1
Barr Project # 23/27-0053.14-023

Dear President Yetka and Board of Managers:

Enclosed is the Application for Payment #1 from Wetland Habitats Restorations for work completed through 4/5/18, on the above-referenced project. Upon your review and approval, please sign three copies and return one copy to me, one copy to the contractor and retain the remaining copy for your files.

Major items of work covered by this pay application include mobilization, clearing 6 acres of woody invasive plants under 8" and clearing of 33 trees over 8" in diameter.

Barr Engineering has reviewed the application, and is recommending payment in the amount of **$41,535.00**. Payments shall be made directly to Wetland Habitats Restorations.

Please call me at 952-832-2649 if you have any questions or concerns about the application for payment, or about any other related matters.

Sincerely,

Matthew Kumka, PLA
Barr Engineering Co.

c: Claire Bleser, RPBCWD
Elissa Thompson, Wetland Habitat Restorations

Enclosure #1 – Application for Payment – Progress Payment 1

Scenic Heights School Forest Restoration Project
Progress Payment Number 1

1.0	Total Completed Through This Period	$46,150.00		
2.0	Total Completed Previous Period		$0.00	
3.0	Total Completed This Period			$46,150.00
4.0	Amount Retained, Previous Period		$0.00	
5.0	Amount Retained, This Period (See Note 1)		$4,615.00	
6.0	Total Amount Retained		$4,615.00	
7.0	Retainage Released Through This Period:			$0.00
8.0	Amount Due This Period			$41,535.00

Note 1: At rate of 10% until Completed to Date equals 50% of current Contract Price and a rate of 0% thereafter.
Note 2: Current Contract Price $269,387.50

SUBMITTED BY:
Name: Elissa Thompson Date: 4/15/2018
Title: Project Manager
Contractor: Wetland Habitat Restorations

Signature: Elissa Thompson

RECOMMENDED BY:
Name: Matt Kumka Date: 4/15/2018
Title: Project Manager
Engineer: Barr Engineering Company

Signature:

APPROVED BY:
Name: Leslie Yetka Date:
Title: President
Owner: Riley Purgatory Bluff Creek Watershed District

Signature:

Scenic Heights School Forest Restoration Project
Riley Purgatory Bluff Creek Watershed District
Summary of Work Completed through April 5, 2018 for Progress Payment Number 1

Item	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	BID - WETLAND HABITATS RESTO		(1) Total Completed Through This Period	
				UNIT COST	EXTENSION	Quantity	Amount
1.06.A	Mobilization/Demobilization	L.S.	1	$15,500.00	$15,500.00	0	$0.00
1.06 B	Erosion Control Construction Entrance	Each	1	$2,500.00	$2,500.00	0	$0.00
1.06.C	Desirable Plant Marking for Protection	L.S.	1	$1,750.00	$1,750.00	1	$1,750.00
1.06 D	Clear and Grub Woody Invasive Plant Removal (Trees under 8")	AC	7	$4,500.00	$31,500.00	6	$27,000.00
1.06 F	Clear and Grub Woody Invasive Plant Removal (Trees over 8")	Each	40	$450.00	$18,000.00	33	$14,850.00
1.06 H	Remove and Dispose of Adopt-A-Plots Signs	Each	30	$85.00	$2,550.00	30	$2,550.00
1.06 I	Heavy Duty Silt Fence	L.F.	85	$15.50	$1,317.50	0	$0.00
1.06 J	Erosion Control Blanket	S.Y.	125	$5.50	$687.50	0	$0.00
1.06 K	Remove and Salvage Topsoil (P)	C.Y.	80	$45.00	$3,600.00	0	$0.00
1.06 L	Grading	L.S.	1	$5,900.00	$5,900.00	0	$0.00
1.06 M	Rock Riffle	Each	3	$3,500.00	$10,500.00	0	$0.00
1.06 N	Woodland Seed Mix with Cover Crop (Custom Mix)	AC	4.7	$2,200.00	$10,340.00	0	$0.00
1.06 O	Prairie Seed Mix with Cover Crop (MnDOT 35-221)	AC	1.3	$1,950.00	$2,535.00	0	$0.00
1.06 P	Woodland Edge Seed Mix with Cover Crop (MnDOT 36-711)	AC	1.2	$1,850.00	$2,220.00	0	$0.00
1.06 Q	Wet Meadow Seed Mix with Cover Crop (MnDOT 34-261)	AC	0.5	$3,500.00	$1,750.00	0	$0.00
1.06 R	Live Stake (Furnish and Install)	Each	148	$15.50	$2,294.00	0	$0.00
1.06 S	#10 Cont. Tree (Furnish and Install)	Each	30	$350.00	$10,500.00	0	$0.00
1.06 T	Shrub, Bare Root (Furnish and Install)	Each	182	$25.50	$4,641.00	0	$0.00
1.06 U	Herbaceous Plug (Furnish, Install by others)	Each	2520	$1.50	$3,780.00	0	$0.00
1.06 U	Straw Mulch	AC	7.7	$1,550.00	$11,935.00	0	$0.00
1.06 V	Shredded Hardwood Mulch	C.Y.	45	$65.00	$2,925.00	0	$0.00
1.06 W	Herbaceous Management Site Visit 2018	Each	7	$2,500.00	$17,500.00	0	$0.00
1.06 X	Herbaceous Management Site Visit 2019	Each	7	$2,500.00	$17,500.00	0	$0.00
1.06 Y	Herbaceous Management Site Visit 2020	Each	7	$2,500.00	$17,500.00	0	$0.00
	CONSTRUCTION SUBTOTAL				**$199,225.00**		**$46,150.00**

Contract No: SG-10387

GRANT AGREEMENT
BETWEEN
THE METROPOLITAN COUNCIL
AND
RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
FOR THE METROPOLITAN AREA
WATERSHED OUTLET MONITORING PROGRAM (WOMP2)

THIS AGREEMENT is made and entered into by and between the **METROPOLITAN COUNCIL** (the "Council") and **Riley Purgatory Bluff Creek Watershed District** (the "Grantee"), each acting by and through its duly authorized officers.

WHEREAS:

1. The Metropolitan Council has been charged by the Minnesota Legislature (Minnesota Statutes, section 473.157, Water Resources Plan) with the development of target pollution loads for all Metropolitan Area watersheds.

2. A search of the available data yielded very little data adequate for use in the development of these loads.

3. On January 12, 1995 the Metropolitan Council authorized its staff to enter into grant agreements with various watershed management organizations for the collection of watershed outlet data.

4. The Council has entered into a Joint Power Agreement with the State of Minnesota, acting through its Commissioner of the Minnesota Pollution Control Agency ("State") where the State agrees to provide certain funds for the purposes of the Metropolitan Area Watershed Outlet Monitoring Program.

5. The Grantee has expressed an interest in collecting water quality data at the watershed outlet.

6. The Grantee has exhibited the technical capability to conduct a watershed outlet monitoring program.

7. The Council has reviewed the Grantee's proposal and desires to assist it in the collection of data.

NOW, THEREFORE, the Council and the Grantee agree as follows:

I. GRANTEE PERFORMANCE OF GRANT PROJECT

1.01 Grant Project. The Grantee agrees to perform and complete in a satisfactory and proper manner the grant project as described in the Grantee's application for grant assistance, incorporated in this agreement by reference, and in accordance with the terms and conditions of this agreement. Specifically, the Grantee agrees to perform the specific activities described in Exhibit A ("WOMP Monitoring Work Plan") and to undertake the financial responsibilities described in Exhibit B ("WOMP Monitoring Budget and Financial Responsibilities" document), both of which are attached to and incorporated in this agreement. These activities and financial responsibilities are referred to in this agreement as the "Grant Project".

1.02 Use of Contractors. With the approval of the Council's Grant and Project Managers, the Grantee may engage contractors to perform Grant Project activities. However, the Grantee retains

primary responsibility to the Council for performance of the Grant Project and the use of the contractor does not relieve the Grantee from any of its obligations under this agreement.

1.03 Material Representations. The Grantee agrees that all representations contained in its application for grant assistance are material representations of fact upon which the Council relied in awarding this grant and are incorporated in this agreement by reference.

II. AUTHORIZED USE OF GRANT FUNDS

2.01 Authorized Uses. Grant funds may be used only for costs directly associated with Grant Project activities, as described in paragraph 1.01, and which: i) occur during the Project Activity Period specified in paragraph 6.01, and ii) are eligible expenses as listed in the Grantee Financial Responsibilities portion of the WOMP Monitoring Budget and Financial Responsibilities document (Exhibit B). Grant funds may also be used to prepare the expense report required by paragraph 5.02 of this grant agreement. No other use of grant funds is permitted.

2.02 Unauthorized Uses of Grant Proceeds. Grant funds cannot be used to purchase land, buildings, or other interests in real property, or to pay legal fees, or permit, license, or other authorization fees, unless specifically approved in advance by the Council's Grant Manager.

2.03 Project Equipment and Supplies. With approval of the Council's Project Manager, grant funds may be used to purchase or lease equipment, machinery, supplies, or other personal property directly necessary to conduct the Grant Project. The Grantee will comply with the personal property management requirements described in article VIII of this agreement, with regard to any property purchased pursuant to this paragraph.

III. GRANT AMOUNT AND DISTRIBUTION

3.01 Maximum Grant Amount. The Council shall pay to the Grantee a Maximum Grant Amount of $10,000. Provided, however, that in no event will the Council's obligation under this agreement exceed the lesser of:

a. the Maximum Grant Amount of $10,000; or,
b. the actual amount expended by the grantee on eligible expenses as specified in paragraph 2.01.

The Council shall bear no responsibility for cost overruns which may be incurred by the Grantee in performance of the Grant Project.

3.02 Distribution of Grant Funds. Grant funds will be distributed by the Council according to the following schedule:

a. Within ten working days of Council execution of this agreement, the Council will distribute to the Grantee forty-five (45%) of the Maximum Grant Amount.

b. Upon Council approval of Grantee's January 2019 financial report required by paragraph 5.02, the Council will distribute to the Grantee forty-five (45%) percent of the Maximum Grant Amount.

c. Upon approval of Grantee's January 2020 financial report required by paragraph 5.02, the Council will distribute to Grantee the final payment of the remainder of the Maximum Grant Amount. However, no payment will be made which would cause the distribution of grant

funds to exceed the limits in paragraph 3.01. Further, if the amount already paid to Grantee by the Council pursuant to this paragraph exceeds the cumulative amount actually expended by the Grantee on eligible expenses as specified in paragraph 2.01, the Council shall notify Grantee of the amount of over-payment. Grantee shall repay to the Council the amount of overpayment within 30 calendar days of receipt of notice from the Council.

No payment will be made under this paragraph if the Grantee is not current in its reporting requirements under article V at the time the payment is due. Distribution of any funds or approval of any report is not to be construed as a Council waiver of any Grantee noncompliance with this agreement.

3.03 Repayment of Unauthorized Use of Grant Proceeds. Upon a finding by Council staff that the Grantee has made an unauthorized or undocumented use of grant proceeds, and upon a demand for repayment issued by the Council, the Grantee agrees to promptly repay the amounts to the Council.

3.04 Reversion of Unexpended Funds. All funds granted by the Council under this agreement that have not been expended for authorized Grant Project activities as described in paragraph 2.01 shall revert to the Council.

IV. ACCOUNTING AND RECORDKEEPING REQUIREMENTS

4.01 Documentation of Grant Project Costs. All costs charged to the Grant Project must be supported by proper documentation, including properly executed payroll and time records, invoices, contracts, receipts for expenses, or vouchers, evidencing in detail the nature and propriety of the charges.

4.02 Establishment and Maintenance of Grant Project Information. The Grantee agrees to establish and maintain accurate, detailed, and complete separate accounts, financial records, documentation, and other evidence relating to: i) Grantee's performance under this agreement, and ii) the receipt and expenditure of all grant funds under this agreement. The Grantee shall establish and maintain this information in accordance with generally accepted accounting principles and practices and shall retain intact all Grant Project information until the latest of:

a. complete performance of this agreement; or
b. six (6) years following the term of this agreement; or
c. if any litigation, claim, or audit is commenced during either of these periods, then when all the litigation, claims or audits have been resolved.

If the Grantee engages any contractors to perform any part of the Grant Project activities, the Grantee agrees that the contract for these services shall include provisions requiring the contractor to establish and maintain Grant Project information in accordance with the provisions of this paragraph and to allow audit of this information in accordance with paragraph 4.03.

4.03 Audit. The accounts and records of the Grantee relating to the Grant Project shall be audited in the same manner as all other accounts and records of the Grantee are audited. During the time of maintenance of information under paragraph 4.02, authorized representatives of the Council, and either the legislative auditor or the state auditor in accordance with Minnesota Statutes, section 16C.05, subdivision 5, will have access to all books, records, documents, accounting practices and procedures, and other information for the purpose of inspection, audit, and copying during normal business hours. The Grantee will provide proper facilities for access and inspection.

V. REPORTING AND MONITORING REQUIREMENTS

5.01 Monitoring Work Plan. The WOMP Monitoring Work Plan (Exhibit A) includes the specific geographic area and watershed outlet affected by the Grant Project, the tasks to be undertaken together with schedules and the organization responsible for the tasks' costs. The Grantee Financial Responsibilities portion of the WOMP Monitoring Budget and Financial Responsibilities document (Exhibit B) lists the Grantee expenses eligible for reimbursement by the Council, subject to the limitations of paragraph 2.01. The Grantee agrees to abide by the Monitoring Work Plan, including the Quality Control Provisions listed in the Monitoring Work Plan.

5.02 Grant Project Financial Reports. In January 2019 and January 2020, the Grantee will submit a financial report detailing expenses incurred by Grantee for the Grant Project in the preceding twelve calendar months which are eligible for reimbursement by the Council in accordance with paragraph 2.01.

5.03 Changed Conditions. The Grantee agrees to notify the Council immediately of any change in conditions, local law, or any other event that may affect the Grantee's ability to perform the Grant Project in accordance with the terms of this agreement.

VI. GRANT PROJECT ACTIVITY PERIOD; TERM; TERMINATION

6.01 Project Activity Period. The Grantee agrees to complete the Grant Project activities specified in paragraph 1.01 during the period from January 16, 2018 through December 31, 2019 (the "Project Activity Period").

6.02 Term. The term of this agreement shall extend from the effective date of this agreement to a date sixty (60) calendar days following the end of the Project Activity Period, to permit closeout of this agreement.

6.03 Termination. Either the Council or the Grantee may terminate this grant agreement at any time, with or without cause, by providing the other party written notice of termination at least thirty (30) days prior to the effective date of termination. Upon termination Grantee shall be entitled to compensation for Grant Project activities in accordance with this grant agreement which were satisfactorily performed and incurred prior to the effective date of the termination. Any remaining grant funds which have been distributed to Grantee will be returned to the Council no later than the effective date of termination. Upon the effective date of termination, a) all data collected by Grantee prior to the effective date of termination shall be turned over to the Council by Grantee; and b) all Council personal property in possession of Grantee wherever located and all property acquired with Grant funds shall be turned over to the Council by Grantee.

6.04 Termination by Council for Noncompliance. If the Council finds that there has been a failure to comply with the provisions of this agreement, the Council may terminate the agreement at any time following seven (7) calendar days written notice to the Grantee and upon failure of the Grantee to cure the noncompliance within the seven-day period. Noncompliance includes failure to make reasonable progress toward completion of the Grant Project. If the Council finds that the Grantee's noncompliance is willful and unreasonable, the Council may terminate or rescind this agreement and require the Grantee to repay the grant funds in full or in a portion determined by the Council. Nothing in this agreement shall be construed so as to limit the Council's legal remedies to recover grant funds.

6.05 Effect of Grant Project Closeout or Termination. The Grantee agrees that Grant Project closeout or termination of this agreement does not invalidate continuing obligations imposed on the Grantee by this agreement. Grant Project closeout or termination of this agreement does not alter the Council's authority to disallow costs and recover funds on the basis of a later audit or other review, and does not alter the Grantee's obligation to return any funds due to the Council as a result of later refunds, corrections, or other transactions.

VII. COUNCIL's GRANT MANAGER AND PROJECT MANAGER

Financial aspects of this grant agreement will be handled by the Council's Grant Manager. The Council's Grant Manager for this grant agreement is Joe Mulcahy, or other person as may be designated in writing by the Council.

Technical aspects of the Grant Project, including supervision of the Grantee under the Monitoring Work Plan, will be handled by the Council's Project Manager. The Council's Project Manager for this grant agreement is Casandra Champion, or other person as may be designated in writing by the Council.

However, nothing in this agreement will be deemed to authorize the Grant Manager or Project Manager to execute amendments to this Grant Agreement on behalf of the Council.

VIII. GRANT PROPERTY AND DATA.

8.01 Title. Title to all personal property at the monitoring station site as described in Exhibit A and all property acquired with grant funds will remain with the Council. The Council authorizes the Grantee to utilize the personal property at the site in carrying out the Grant Project activities during the Project Activity Period.

8.02 Maintenance. The Grantee agrees to maintain any personal property at the site in good operating order. If, during the Project Activity Period, any personal property is no longer available for use in performing the Grant Project, whether by planned withdrawal, misuse, or casualty loss, the Grantee shall immediately notify the Council's Project Manager.

8.03 Utility Services. The Council shall make arrangements with local utilities to provide both telephone and electrical hookups as needed at the monitoring station specified in Exhibit A. All utility accounts serving the monitoring station shall be in the name of the Council. All telephone and electric utility costs for the monitoring station shall be paid by the Council.

8.04 Grant Project Closeout or Termination. No later than a) the effective date of termination as provided in Sections 6.03 and 6.04 of this Grant Agreement or b) no later than sixty (60) calendar days following the end of the Project Activity Period ("Project Closeout Date"), whichever is applicable:

i) all data defined in Section 9.04 of this Agreement collected by Grantee prior to the Project Closeout Date or the effective date of termination shall be turned over to the Council by Grantee; and

ii) all Council personal property in possession of Grantee wherever located and all property acquired with Grant funds shall be turned over to the Council by the Grantee.

If the Grant Agreement has not been terminated by either party and Grantee continues to participate in the Watershed Outlet Monitoring Program (WOMP 2) through a subsequent Grant Agreement with the Council, Grantee shall not be required to comply with Section 8.04 subparagraph (ii) until the time as Grantee's participation in the WOMP 2 program ceases.

IX. GENERAL CONDITIONS

9.01 Amendments. The terms of this agreement may be changed only by mutual agreement of the parties. These changes shall be effective only upon the execution of written amendments signed by duly authorized officers of the parties to this agreement.

9.02 Assignment Prohibited. Except as provided in paragraph 1.02, the Grantee shall not assign, contract out, sublet, subgrant, or transfer any Grant Project activities without receiving the express written consent of the Council. The Council may condition this consent on compliance by the Grantee with terms and conditions specified by the Council.

9.03 Indemnification. The Grantee assumes liability for and agrees to defend, indemnify and hold harmless the Council, its members, officers, employees and agents, from and against all losses, damages, expenses, liability, claims, suits, or demands, including without limitation attorney's fees, arising out of, resulting from, or relating to the performance of the Grant Project by Grantee or Grantee's employees, agents, or subcontractors.

9.04 Grant Project Data. The Grantee agrees that the results of the Grant Project, the reports submitted, and any new information or technology that is developed with the assistance of this grant may not be copyrighted or patented by Grantee. The Grantee shall comply with the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13, in administering data under this agreement.

9.05 Nondiscrimination. The Grantee agrees to comply with all applicable laws relating to nondiscrimination and affirmative action. In particular, the Grantee agrees not to discriminate against any employee, applicant for employment, or participant in this Grant Project because of race, color, creed, religion, national origin, sex, marital status, status with regard to public assistance, membership or activity in a local civil rights commission, disability, sexual orientation, or age; and further agrees to take action to ensure that applicants and employees are treated equally with respect to all aspects of employment, including rates of pay, selection for training, and other forms of compensation.

9.06 Promotional Material: Acknowledgment. The Grantee agrees to submit to the Council a copy of any promotional information regarding the Grant Project disseminated by the Grantee. The Grantee shall appropriately acknowledge the grant assistance made by the State and the Council in any promotional materials, reports, and publications relating to the Grant Project.

9.07 Compliance with Law; Obtaining Permits, Licenses and Authorizations. The Grantee agrees to conduct the Grant Project in compliance with all applicable provisions of federal, state, and local laws, ordinances or regulations. The Grantee is responsible for obtaining all federal, state, and local permits, licenses, and authorizations necessary for performing the Grant Project.

9.08 Workers Compensation; Tax Withholding. The Grantee represents that it is compliance with the workers compensation coverage requirements of Minnesota Statutes, section 176.181, subdivision 2, and that it, and any of its contractors or material suppliers, if any, under this contract, are in compliance with the tax withholding on wages requirements of Minnesota Statutes, section 290.92.

9.09 Jurisdiction, Venue, and Applicable Law. Venue for all legal proceedings arising out of this agreement, or breach of this agreement, shall be in the state or federal court with competent jurisdiction in Ramsey County, Minnesota. All matters relating to the performance of this agreement shall be controlled by and determined in accordance with the laws of the State of Minnesota.

9.10 Relation to Joint Power Agreement. The Grantee recognizes that the Council has undertaken certain obligations as part of the Joint Power Agreement. A copy of the Joint Power Agreement is attached to and incorporated in this agreement as Exhibit C. The Grantee agrees that obligations imposed by the Joint Power Agreement on subgrantees or subcontractors are hereby made binding on the Grantee, and the terms of the Joint Power Agreement t are incorporated into this Grant Agreement to the extent necessary for the Council to meet its obligations under the Joint Power Agreement. Terms of the Joint Power Agreement which are hereby specifically incorporated include, without limitation, the following:

Section 5	Clean Water Funding
Section 6	Conditions of Payment
Section 8	Subcontracting
Section 13	Government Data Practices and Intellectual Property
Section 14	Insurance requirements
Section 15	Publicity and Endorsement
Section 16	Governing Law, Jurisdiction and Venue

This paragraph shall not be deemed to create any contractual relationship between the State of Minnesota and the Grantee. The Grantee is not a third-party beneficiary of the Joint Power Agreement.

IN WITNESS WHEREOF, the parties have caused this agreement to be executed by their duly authorized officers on the dates set forth below. This agreement is effective upon final execution by, and delivery to, both parties.

GRANTEE _____

Date _____

By _____

Name _____

Title _____

METROPOLITAN COUNCIL

Date _____

By _____
Sam Paske
Assistant General Manager, Environmental Quality Assurance Department

WOMP2
Revised 3 /18

EXHIBIT A

WOMP MONITORING WORK PLAN

The Grantee, **Riley Purgatory Bluff Creek Watershed District**, will operate and maintain the water quality monitoring site at **Purgatory Creek 11529 Pioneer Trail Eden Prairie, MN**. The Grantee, or designated agent, will conduct monitoring work from January 16, 2018 through December 31, 2019. The Grantor, Metropolitan Council Environmental Services (MCES) will provide training, supplies and technical support to the Grantee and/or its designated agent through the WOMP Coordinator, Casandra Champion.

CONTACT INFORMATION

Casandra Champion, WOMP Coordinator
651-602-8745 (office)
Casandra.champion@metc.state.mn.us

Daniel Henely, Assistant Manager Water Resources
651-602-8085 (office)
Daniel.henely@metc.state.mn.us

MCES Lab Services Logging Bench
651-692-8293

WORKPLAN

Site Visits

At each site visit, the Grantee will record stage, stream control conditions and obtain instantaneous temperature, conductivity, pH, dissolved oxygen, and turbidity measurements. The Grantee will record measurements and observations on an MCES Sample Submission Sheet and Field Notes form and submit the form to the WOMP Coordinator.

Rating Curve Measurements

The WOMP Coordinator will coordinate with the Grantee to ensure that flow measurements are being made approximately every six weeks, with additional targeted high-flow measurements as conditions allow. Flow measurement data collected by the Grantee will be submitted to the WOMP Coordinator. This submission should include the electronic file and a completed MCES Sample Submission Sheet and Field Notes form.

Water Quality Samples

The Grantee will routinely sample stream water quality by submitting bi-weekly grab samples, 26 samples per year. If ice conditions preclude taking a sample, the Grantee will attempt to collect the next sample after four weeks. The Grantee will measure and record temperature, conductivity, pH, dissolved oxygen and turbidity.

The first sample collected in March, June, September and December will include additional quarterly analyses as determined by the WOMP Coordinator.

If the site has an autosampler, the Grantee will collect discrete auto-grabs or flow-weighted composite samples to characterize storm events. If sufficient water volume in available, an aliquot should be poured into a separate container for temperature, conductivity, pH, dissolved oxygen and turbidity measurements.

Datalogger programming and sample collection timing will be coordinated by the WOMP Coordinator.

If the site does not have an autosampler, event grabs will be collected to characterize storm event. Event grab timing will be coordinated by the WOMP Coordinator and MPCA WPLMN staff. The WOMP Cooperator will use a Secchi Tube to measure transparency with every event grab.

E. coli Samples

Minutes: Monday, April 16, 2018

RPBCWD Citizen's Advisory Committee Monthly Meeting
Location: RPBCWD offices: 18681 Lake Street, Chanhassen

CAC Members

Jim Boettcher	P	Curt Kobilarcsik	P	Marilynn Torkelson	P
Paul Bulger	P	Matt Lindon	P	Lori Tritz	P
Anne Deuring	P	Sharon McCotter	P	David Ziegler	P
Peter Iverson	P	Joan Palmquist	P		

Others

Michelle Jordan	District Liaison	P
Richard Chadwick	RPBCWD Board Member	P

Summary of key actions/motions for the Board of Managers:
Motion: Michelle asked for feedback on the one residential cost share application they received by the April deadline. The application is for a rain garden. The application was distributed to the CAC. Marilyn had a concern about the use of Prairie Dropseed. Anne brought up the possibility that since soil has the tendency to fluff up that the rain garden this year may be a berm next year. Lowering the elevation 4" is suggested. Joan moved and Pete seconded the CAC recommend approval of the Stoner Cost Share application pending Michelle bringing our concerns to Seth. Motion carried.

I. **Opening**

A. **Call CAC meeting to Order:** President Ziegler called the meeting to order at 6:01 p.m.

B. **Attendance:** As noted above

C. **Matters of general public interest:** None

D. **Approval of Agenda:** We added the review of one residential cost share to the new business of the agenda. Joan made the motion and Sharon seconded to approve the agenda as amended. Motion carried.

E. **Approval of March 19, 2018 CAC Meeting Minutes**: Pete Iverson moved to approve minutes, seconded by Sharon McCotter. Motion carried.

II. **Old Business**

A. **Update from Board Managers workshop and meeting**: David reported on the workshop on proposed rules changes. Most proposed rule changes were simplified and passed along. The Channel Diversion rule change was held for further study.

The 2017 audit was reviewed and the one discrepancy found was simply a matter of timing of grant funding.

Several people spoke at the time of public interest. Joan asked how the comments had been responded to. Paul stated that the response he got to his comments was that the managers said they are doing the best they can, they are caught between jurisdictions. Sharon is impressed that the managers respond to comments during the open comment period which helps the requestor feel like their points were heard although they can't always do what the requestor wants..

The Board of Managers approved to proceed with Lotus Lake alum treatments. We will treat 30% of Lotus Lake based on where it is most beneficial, 2 doses over 5 years, mostly in deep parts of lake.

There have been a total of 60 permits per year, including new, reviews, modified, and monitored. Each permit has 3-12 BMPs.

The 10 year plan was approved to send to BWSR for final approval. They have a 90 day window to respond.

The Watershed District is partnering with the St. Anthony Falls U of M lab on research to put iron filings in stormwater ponds to capture phosphorus, which may be more economical than iron enhanced sand filters. Matt mentioned issues with iron bacteria potentially changing the ecosystem of pond, especially in color. Curt said there is significant maintenance involved in iron filings treatment, as in adding iron filings.

There was discussion on using leftover cost share money for salt training. Then a discursive ensued on why we have cost share money left over. Some Watershed Districts have a longer history in cost share grants and get more applications. 9 Mile Creek headquarters has good display area. Michelle hopes to relook at how we promote our cost share program. Minnehaha has actually stopped their cost share program.

The 50th anniversary party will likely be in the Riley Jacques Barn toward the end of next summer (2019).

The Watershed boundary changes were approved and maps will be updated. The floor map in the entryway is updated.

The MN Board of Water and Soil Resources (BWSR) One Watershed, One Plan Policy Statements were distributed by email to us.

B. **Interface with other CAC groups**: We have heard from a couple of other CACs of interest in a group interchange for the purpose of sharing information. David sent an email to other CACs and only got a few responses. He thought we should create a list of what we thought we could share with other CACs as well as what we would like to learn from other CACs. David will talk with Claire about who we should be talking to. ACTION ITEM: PLEASE SEND DAVID YOUR THOUGHTS PRIOR TO THE NEXT MEETING ON WHAT YOU WOULD LIKE AN EXCHANGE WITH OTHER CAC'S TO LOOK LIKE.

C. **Landscaping for Water Quality and Wildlife:** Marilynn presented a beautiful presentation on "Landscaping for Water quality and Wildlife" that she prepared for an Eden Prairie Community Adult Ed class. Eleven people attended the class and all seemed on board with the principals. Marilynn also distributed catalogs and fact sheets

D. **Updates from subcommittees**

Speakers Bureau: Joan recorded Michelle's Water 101 presentation for children, transcribed it and it is now available for others to present. She plans to have the adult version ready by May 1.

Storm Drains: Sharon is working with Chanhassen on Oct. 27 storm drain clean up. Dorothy Pederson is working with Shorewood on permission for stenciling. Michelle reported that the Metro Watershed Initiative is doing a roll out of the adopt a drain online metro wide. Go to adoptadrain.org to see how program currently works in St. Paul. Michelle will keep us updated. Cities have GIS mapping of storm drains and specifically which direction water drains, but it is not publicly available. Matt attended a Legislative-Citizen Commission on Minnesota Resources (LCCMR) class targeting storm water, including crowdsourcing, permeable pavers instead of salt, and heated surfaces.

Silt Sock (not) Solution: Anne met with the manufacturer and rep of the EZ-Flo storm drain mats, got a sample of a mat, and is working on a meeting with the water resource manager of Minnetonka to get permission to start a pilot. She has learned that each mat is custom made because of variations in storm drains.

Garlic Mustard: Marilynn reported on a garlic mustard pulling volunteer opportunity near Riley Creek restoration on May 16, from 5:00 – 7:00 pm. Let Marilynn know if you are interested. Use a brush on shoes so no seed spreading.

III. New Business

A. **State of Water Conference:** David attended the conference on April 13 – 14. He took excellent notes and shared them with the CAC. See attached.

B. **Beginners Guide to Sustainability:** Lori is still working on it, adding in comments from members of CAC. Last Saturday's class, the first in the four-class series was during the big snowstorm. Lori learned that she didn't have a good mechanism for communicating with attendees. One person showed up. The class is rescheduled for May 26, 10:00 – 12:00 at the Chanhassen Library. Water class is this Saturday at the library.

D. **Cost Share application:** Michelle asked for feedback on the one residential cost share application they received by the April deadline. The application is for a rain garden. The application was distributed to the CAC. Marilyn had a concern about the use of Prairie Dropseed. Anne brought up the possibility that since soil has the tendency to fluff up that the rain garden this year may be a berm next year. Lowering the elevation 4" is suggested. Joan moved and Pete seconded the recommended approval of the Stoner Cost Share application pending Michelle bringing our concerns to Seth. Motion carried.

Michelle said we also received one Homeowners Association cost share application. The design needs more details, so they are working with them.

The third application is from the Smith Douglas More House and is a renovation of the first rain garden in Eden Prairie. Matt had the brilliant idea of using this first rain garden renovation in our 50th anniversary promotion.

IV. Looking Forward

A. CAC 2018 agenda items for our May meeting

1. Website mockup (Michelle)

B. Upcoming events

1. Arbor Day and Green Fair, April 28, 10:00 am to noon
2. Beginners Guide to Sustainability, April 21, 1:00 PM to 3:00 PM, EP Library 656 Prairie Center Drive
5. RPBCWD Board of Managers meeting, May 2 at 7:00 pm, 18681 Lake Drive East
6. Wetlands Walk – has been postponed to probably June, 10:00 am to 1:00 pm
7. RPBCWD CAC meeting May 21 at 6:00 pm, 18681 Lake Drive East
8. Turf to Fescue Workshop Carver WMO and 9-Mile Creek, June 25, 6:30 to 8:00 pm, Chanhassen Library. (Second session June 27 at Southdale library)
9. MAWD summer tour, We are hosting May 20-22.
10. We are hosting 3 luncheons for realtors (April 18), developers (May 16) and facilities managers (July 18)
11. Wild Ones plant sale, orders due May 26
12. Chanhassen Celebrate Water, July 21, looking for volunteers
13. Pollinator Field Day in Minnetonka – Sometime in July

V. Adjourn CAC meeting

A. Motion and second to adjourn by Sharon/Pete. Motion carried. Meeting adjourned at 8:49 pm.

2018 State Of Water Conference Notes

Thursday

I. The Blue-Green Beast, Managing Algae
Dick Osgood www.lakeadvocates.org

Book Lake Best Management Practices: Managing Algae Problems

Not all algae is a problem, algae is at the base of the food chain in lakes

Many "solutions" being offered are not long term solutions

Phosphorus management = Algae management

Rooted native plants provide good habitat for zooplankton which eat algae and contribute to clear water

Killing curly leaf pond weed and other aquatic plants releases phosphorus into the water

More phosphorus leads to more algae growth

Too much algae can cause, scum, smell, fish kill, toxins, turbid water, altered food web, low oxygen

A good plan should, define the problem, identify the source or cause, define a measurable management objective, evaluate feasibility and alternatives, identify sustainable funding source, identify lead management authority, implement, monitor progress, adapt or adjust as necessary

BMPs buy themselves will only remove about 25% of the amount needed to get the results desired.

End of pipe treatment works

Ongoing phosphorus treatments work

2. What's The Buzz, Insects and Water Quality

Urban Stream Syndrome, salt, oil, sediment, heavy metals, garbage, herbicides, pesticides, fertilizers, flashiness, increased volume, increased velocity

Some macroinvertebrates can only live in "clean" water, mayflies, stone flies, and case-makers

Friday

3. Senator Carrie Ruud,

2004 removed phosphorous from lawn fertilizer

Great Lakes Commission

Currently MN applies 750 million tons of road salt each year

Cost for protection is much lower than the cost for cleaning up salt pollution later

4. MPR, The Water Main, amy@thewatermain.org

Surveys say most Minnesotans don't think cheap, clean water will ever be a problem in MN

Need to improve Water IQ (intelligence quotient) and Water EQ (emotional quotient)

5. Protecting The Sponge, Forest Cover for Lake Water Quality

Minnesota has more surface water than 48 states

Forests are the real headwaters for the Mississippi river, which provides drinking water for St Cloud, Minneapolis, St Paul, and many other cities

Forest = Deep roots = Water infiltration = Clean water in lakes (best BMP = Forest)

If 25% or more of the watershed is developed (farming, housing, factory) there is a substantial reduction in water quality

Goal is to protect forested lands, SFIA (Sustainable Forest Incentive Program), http://www.sfiprogram.org/

Pays private forest landowners to keep forest undeveloped (about $8/acer for 7 year contract)

One Water One Plan, we can protect the water quality in our Mississippi River head water forests for less than it will cost to fix the MN auto registration software

6. Three Perspectives, the Vital Role of Organized Lake Groups

MN COLA http://mncola.angelfire.com/ (Minnesota Coalition of Lake Associations)

MN COLA is a volunteer organization with the mission of preserving, protecting and improving the waters and shore lands of the State of Minnesota through advocacy, education, and sharing of best practices. Priorities are, efficiencies, education, capacity building, information sharing, and political influence

About 78% of the land in Minnesota is privately owned, and there are 11,842 lakes in Minnesota

Together we can be a very powerful lobbying group

7. Managing Runoff, Addressing Erosion, and Growing Shoreline Gardens

Kentucky blue grass has damaged Minnesota lakes more than any other invasive plant!

https://www.dnr.state.mn.us/rys/index.html ***Restore Your Shore*** **is a powerful tool for shoreland owners and professionals to use in implementing shoreland restoration and protection projects**

A shoreline buffer alone is not enough

The Watershed Health Assessment Framework (WHAF) provides an organized approach for exploring the complexity of natural and human communities as they continuously exchange

material, energy, organisms and information. The WHAF can reveal patterns of ecological health from multiple viewpoints, and encourage information sharing and collaboration; fostering innovative ideas that help the health and resilience of our natural and human communities

8. Coldwater Fish Habitat in a Changing Climate, U of MN Extension Shahram Missaghi

Minnesota's lakes have a temperature gradient, colder water stays at the bottom, and this creates a low oxygen zone at the bottom.

Native fish need cold water to live. As the surface temperature increases the zone where native fish can live is squeezed between the warm zone on the top and the low oxygen zone on the bottom. This can result in reduced fish and fish kill.

9. From Policy to On-the-Ground Organizing, Managing Salt Use to Protect Minnesota's Waters

http://stopoversalting.org/ SOS (stop over salting)

1 teaspoon of salt will pollute 5 gallons of water

78% of salt pollution stays in the lakes (salt is heavier than water so dissolved salt concentrates at the bottom of the lakes)

365,000 Tons of salt are applied to the Twin Cities Metro area every year

20 Million tons of salt are applied to US highways every year

50 Water bodies in Minnesota are impaired due to salt pollution

Changing to liquid salt brine has been shown to reduce salt use by 70%

The WMAt is a web-based tool hosted by the Minnesota Pollution Control Agency (MPCA) to assist Minnesota winter maintenance organizations in assessing and reducing salt use. The goal is that the WMAt be used as a resource to help inform the necessary decisions for improving winter maintenance programs for reduced salt use.
http://www.wintermaintenancetool.com/About

10. Capturing Runoff in Climate-Resilient Yards

Minnesota has 90,000 miles of shoreline

40% of our water is impaired

Yards based on fine fescue, white clover, violets, creeping thyme, and other native plants will reduce pollution and improve animal habitat

There were many lake organizations represent at the conference and presentation were focused on home owners and lake organizations.

REDPATH AND COMPANY

April 26, 2018

Claire Bleser
District Administrator
Riley Purgatory Bluff Creek Watershed District
18681 Lake Drive E.
Chanhassen, Minnesota 55317

Dear Claire:

Enclosed please find the checks and Treasurer's Report for Riley Purgatory Bluff Creek Watershed District for the one month and three months ending March 31, 2018.

Please examine these statements and if you have any questions or need additional copies, please call me.

Sincerely,

REDPATH AND COMPANY, LTD.

Mark Gibbs

Mark C. Gibbs, CPA
Enclosure

REDPATH AND COMPANY

To The Board of Managers
Riley Purgatory Bluff Creek Watershed District
18681 Lake Drive E.
Chanhassen, Minnesota 55317

Accountant's Opinion

The Riley Purgatory Bluff Creek Watershed District is responsible for the accompanying March 31, 2018 Treasurer's Report in the prescribed form. We have performed a compilation engagement in accordance with the Statements on Standards for Accounting and Review promulgated by the Accounting and Review Services Committee of AICPA. We did not audit or review the Treasurer's Report nor were we required to perform any procedures to verify the accuracy or completeness of the information provided by the Riley Purgatory Bluff Creek Watershed District. Accordingly, we do not express an opinion, a conclusion, nor provide any form of assurance on the Treasurer's Report.

Reporting Process

The Treasurer's Report is presented in a prescribed form mandated by the Board of Managers and is not intended to be a presentation in accordance with accounting principles generally accepted in the United States of America. The reason the Board of Managers mandates a prescribed form instead of GAAP (Generally Accepted Accounting Principles) is this format gives the Board of Managers the financial information they need to make informed decisions as to the finances of the watershed.

GAAP basis reports would require certain reporting formats, adjustments to accrual basis and supplementary schedules to give the Board of Managers information they need, making GAAP reporting on a monthly basis extremely cost prohibitive. An independent auditing firm is retained each year to perform a full audit and issue an audited GAAP basis report. This annual report is submitted to the Minnesota State Auditor, as required by Statute, and to the Board of Water and Soil Resources.

The Treasurer's Report is presented on a modified accrual basis of accounting. Expenditures are accounted for when incurred. For example, payments listed on the Cash Disbursements report are included as expenses in the Treasurer's Report even though the actual payment is made subsequently. Revenues are accounted for on a cash basis and only reflected in the month received.

Redpath and Company, Ltd.

REDPATH AND COMPANY, LTD.
St. Paul, Minnesota
April 26, 2018

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Treasurers Report

March 31, 2018

REPORT INDEX

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Cash Disbursements
March 31, 2018

Accounts Payable:

Check #	Payee	Amount
4440	Barr Engineering	$50,257.85
4441	CenterPoint Energy	351
4442	CenturyLink	279.53
4443	City of Chanhassen	25,012.41
4444	CSM Financial, LLC	7,187.27
4445	Fe Security, LLC	321.83
4446	HDR Engineering, Inc.	1,987.35
4447	HealthPartners	2,711.78
4448	Amy Herbert, LLC	608.00
4449	Iron Mountain	39.95
4450	Limnotech	7,645.00
4451	Lincoln National Life Insurance	428.10
4452	Metro Sales, Inc.	442.72
4453	Purchase Power	450.72
4454	Redpath & Company	19,718.00
4455	RMB Environmental Laboratories	3,190.00
4456	Smith Partners	12,315.89
4457	Southwest News Media	338
4458	SpeeDee Delivery Service	84
4459	University of Minnesota	40.00
4460	University of Minnesota	630.08
4461	Wenck, Inc.	2,433.04
4462	Wetland Habits Restoration	41,535.00
4463	Xcel Energy	210.09
	Total Accounts Payable:	**$178,218.47**

Payroll Disbursements:

	Payroll Processing Fee	168.72
	Employee Salaries	27,158.88
	Employer Payroll Taxes	1,828.87
	Employer Benefits (H.S.A. Match)	1,575.00
	Employee Benefit Deductions	(396.26)
	Staff Expense Reimbursements	630.02
	PERA Match	1,964.70
	Total Payroll Disbursements:	**$32,929.93**
EFT	Banks Fees - Klein Bank	10.00
EFT	Klien Bank - VISA	3,087.37
TOTAL DISBURSEMENTS:		**$214,245.77**

Memos

The 2018 mileage rate is 54.5 per mile. The 2017 rate was .53.5.
Klein Bank VISA will be paid on-line.

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Fund Performance Analysis - Table 1
March 31, 2018

	2018 Budget	Current Month	Year-to-Date	Year-to Date Percent of Budget
REVENUES				
Plan Implementation Levy	$3,420,000.00	-	-	0.00%
Permit	20,000.00	16,303.00	17,803.00	89.02%
Grant Income	373,175.00	5,988.27	5,988.27	1.60%
Data Collection Income	-	171.78	171.78	---
Other Income	-	3,371.76	15,016.76	---
Investment Income	-	4,898.46	5,594.66	---
Past Levies	1,736,968.00	-	-	0.00%
Partner Funds	445,000.00	-	-	0.00%
TOTAL REVENUE	**$5,995,143.00**	**$30,733.27**	**$44,574.47**	0.74%
EXPENDITURES				
Administration				
Accounting and Audit	40,000.00	19,886.72	21,782.06	54.46%
Advisory Committees	4,000.00	-	286.20	7.16%
Insurance and bonds	12,000.00	-	-	0.00%
Engineering Services	103,000.00	7,991.50	23,327.50	22.65%
Legal Services	75,000.00	2,545.07	8,629.64	11.51%
Manager Per Diem/Expense	19,000.00	94.76	588.63	3.10%
Dues and Publications	8,000.00	1,187.10	8,777.10	109.71%
Office Cost	100,000.00	10,176.51	31,958.95	31.96%
Permit Review and Inspection	90,000.00	13,362.02	45,972.14	51.08%
Recording Services	15,000.00	608.00	2,084.00	13.89%
Staff Cost	434,000.00	35,974.21	103,657.36	23.88%
Subtotal	**$900,000.00**	**$91,825.89**	**$247,063.58**	27.45%
Programs and Projects				
District Wide				
10-year Management Plan	9,662.00	4,178.41	17,292.92	178.98%
AIS Inspection and early response	75,000.00	25,034.77	25,034.77	33.38%
Cost-share	200,000.00	-	238.00	0.12%
Creek Restoration Action Strategies Phase	20,000.00	-	-	0.00%
Data Collection and Monitoring	180,000.00	14,643.98	33,248.50	18.47%
District Wide Floodplain Evaluation - Atlas 14/SMM model	30,000.00	-	-	0.00%
Education and Outreach	115,000.00	2,918.08	20,140.68	17.51%
Plant Restoration - U of M	40,000.00	630.08	10,287.09	25.72%
Repair and Maintenance Fund *	177,005.00	-	-	0.00%
Survey and Analysis Fund *	13,092.00	-	-	0.00%
Wetland Management*	150,000.00	40.00	940.00	0.63%
District Groundwater Assessment	-	-	166.38	---
Groundwater Conservation*	130,000.00	-	-	0.00%
Lake Vegetation Implementation	75,000.00	-	-	0.00%
Opportunity Project*	100,000.00	-	-	0.00%
TMDL - MPCA	10,000.00	-	-	0.00%
Subtotal	**$1,324,759.00**	**$47,445.32**	**$107,348.34**	8.10%
Bluff Creek				
Bluff Creek Tributary*	236,741.00	4,340.00	14,500.00	6.12%
Chanhassen High School *	282,478.00	3,703.34	21,051.83	7.45%
Subtotal	**$519,219.00**	**$8,043.34**	**$35,551.83**	6.85%
Riley Creek				
Lake Riley - Alum Treatment*	22,424.00	-	17,423.96	77.70%
Lake Susan Improvement Phase 1 *	7,106.00	-	-	0.00%
Lake Susan Water Quality Improvement Phase 2 *	353,365.00	3,448.18	47,261.56	13.37%
Rice Marsh Lake in-lake phosphorus load	150,000.00	-	-	0.00%
Riley Creek Restoration (Reach E and D3) *	1,427,987.00	17,006.00	46,453.40	3.25%
Subtotal	**$1,960,882.00**	**$20,454.18**	**$111,138.92**	5.67%
Purgatory Creek				
Fire Station 2 (Eden Prairie)	100,262.00	-	-	0.00%
Purgatory Creek Rec Area- Berm/retention area - feasibility/design	50,000.00	-	-	0.00%
Lotus Lake in-lake phosphorus load control	345,000.00	2,433.04	24,809.30	7.19%
Lotus Lake - Feasability Phase 1	18,802.00	-	-	0.00%
Purgatory Creek at 101*	246,259.00	50.00	50.00	0.02%
Silver Lake Restoration - Feasibility Phase 1	11,003.00	-	7,597.50	69.05%
Scenic Heights	208,957.00	43,994.00	45,004.62	21.54%
Hyland Lake in-lake phosphorus load control	20,000.00	-	-	0.00%
Duck Lake watershed load	220,000.00	-	-	0.00%
Subtotal	**$1,220,283.00**	**$46,477.04**	**$77,461.42**	6.35%
Reserve	**$100,000.00**			0.00%
TOTAL EXPENDITURE	**$6,025,143.00**	**$214,245.77**	**$578,564.09**	9.60%
EXCESS REVENUES OVER (UNDER) EXPENDITURES	**($30,000.00)**	**($183,512.50)**	**($533,989.62)**	

***Denotes Multi-Year Project - See Table 2 for details**

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Muti-Year Project Performance Analysis - Table 2
March 31, 2018

Programs and Projects	Total Project	FUNDING SOURCE District funds	Partner Fund	Grants	Month Ended 03/31/18	Year To-Date	Lifetime Costs	Remaining
District Wide								
10-year Management Plan	**187,000.00**	187,000.00	-	-	4,178.41	17,292.92	194,631.01	(7,631.01)
District Wide Floodplain Evaluation - Atlas 14/SMM model	**30,000.00**	30,000.00	-	-	-	-	-	30,000.00
Repair and Maintenance Fund	**202,005.00**	177,005.00	-	-	-	-	25,000.00	177,005.00
Survey and Analysis Fund	**37,257.00**	37,257.00	-	-	-	-	23,792.63	13,464.37
Wetland Management	**150,000.00**	150,000.00	-	-	40.00	940.00	940.00	149,060.00
Groundwater Conservation	**130,000.00**	130,000.00	-	-	-	-	-	130,000.00
Opportunity Project*	**100,000.00**	100,000.00	-	-	-	-	-	100,000.00
Subtotal	**$836,262.00**	**$811,262.00**	**$0.00**	**$0.00**	**$4,218.41**	**$18,232.92**	**$244,363.64**	591,898.36
Bluff Creek								
Bluff Creek Tributary*	**292,362.00**	242,362.00	50,000.00	-	4,340.00	14,500.00	69,121.46	223,240.54
Chanhassen High School *	**368,000.00**	118,000.00	50,000.00	200,000.00	3,703.34	21,051.83	131,573.70	236,426.30
Subtotal	**$660,362.00**	**$360,362.00**	**$100,000.00**	**$200,000.00**	**$8,043.34**	**$35,551.83**	**$200,695.16**	**$459,666.84**
Riley Creek								
Lake Riley - Alum Treatment 1st dose *	**260,000.00**	260,000.00	-	-	-	17,423.95	254,999.82	5,000.18
Lake Susan Improvement Phase 1 *	**275,000.00**	275,000.00	-	-	-	-	267,894.28	7,105.72
Lake Susan Water Quality Improvement Phase 2 *	**513,400.00**	230,000.00	50,000.00	233,400.00	3,448.18	47,261.56	157,295.98	356,104.02
Rice Marsh Lake in-lake phosphorus load	**150,000.00**	150,000.00	-	-		-	-	150,000.00
Riley Creek Restoration (Reach E and D3) *	**1,565,000.00**	1,265,000.00	300,000.00	-	17,006.00	46,453.40	107,679.00	1,457,321.00
Subtotal	**$2,763,400.00**	**$2,180,000.00**	**$350,000.00**	**$233,400.00**	**$20,454.18**	**$111,138.91**	**$787,869.08**	**$1,975,530.92**
Purgatory Creek								
Fire Station 2 (Eden Prairie)	**139,287.00**	20,000.00	20,000.00	99,287.00	-	-	19,025.36	120,261.64
Purgatory Creek Rec Area- Berm/retention area - feasibility/design	**50,000.00**	50,000.00	-	-	-	-	-	50,000.00
Lotus Lake in-lake phosphorus load control	**345,000.00**	345,000.00	-	-	2,433.04	24,809.30	24,809.30	320,190.70
Purgatory Creek at 101*	**661,094.00**	661,094.00	-	-	50.00	50.00	414,885.60	246,208.40
Scenic Heights	**260,000.00**	165,000.00	45,000.00	50,000.00	43,994.00	45,004.62	96,047.56	163,952.44
Duck Lake watershed load	**220,000.00**	220,000.00			-	-	-	220,000.00
Subtotal	**$1,675,381.00**	**$1,461,094.00**	**$65,000.00**	**$149,287.00**	**$46,477.04**	**$69,863.92**	**$554,767.82**	**$1,120,613.18**
Total Multi-Year Project Costs	**$5,935,405.00**	**$4,812,718.00**	**$515,000.00**	**$582,687.00**	**$79,192.97**	**$234,787.58**	**$1,787,695.70**	**$4,147,709.30**

See Accountants Compilation Report

Riley Purgatory Bluff Creek Watershed District
Balance Sheet
As of March 31, 2018

ASSETS

Current Assets

General Checking-Klein	$603,390.64	
Checking-Klein/BMW	1,388,089.79	
Investments-FMV	559.74	
Investments-Standing Cash	505,017.93	
Investments-Wells Fargo	1,975,569.16	
Accrued Investment Interest	8,670.64	
Due From Other Governments	154,436.00	
Taxes Receivable-Delinquent	20,556.16	
Pre-Paid Expense	17,508.63	
Security Deposits	7,244.00	
Total Current Assets:		**$4,681,042.69**

LIABILITIES AND CAPITAL

Current Liabilities

Accounts Payable	$236,828.56	
Retainage Payable	13,469.38	
Salaries Payable	17,564.00	
FICA/Medicare	(240.89)	
PERA Payable	0.10	
Due to Other Governments	32,650.00	
Permits & Sureties Payable	704,352.00	
Deferred Revenue	20,556.16	
Unavailable Revenue	6,666.00	
Total Current Liabilities:		**$1,031,845.31**

Capital

Fund Balance-General	$4,183,187.00	
Net Income	(533,989.62)	
Total Capital		**$3,649,197.38**
Total Liabilities & Capital		**$4,681,042.69**

RILEY PURGTORY BLUFF CREEK WATERSHED DISTRICT
Klein Bank VISA Activity
March 31, 2018

DATE	PURCHASED FROM	AMOUNT	DESCRIPTION	ACCOUNT #	RECEIPT
02/19/18	Randy's	56.37	Trash Collection	10-00-4215	
03/01/18	Breezy Point Resort	204.02	Hotel Reservation/State of the Water	10-00-4010	Y
03/01/18	Freshwater Society	153.00	Registration-State of the Water	10-00-4010	Y
03/01/18	Breezy Point Resort	204.02	Hotel Reservation/State of the Water	10-00-4800	Y
03/01/18	Freshwater Society	253.00	Registration-State of the Water	10-00-4800	Y
03/06/18	MAWD	125.00	MAWD Legislative Day	10-00-4010	Y
03/09/18	USPS	40.20	Postage	10-00-4280	Y
03/10/18	Microsoft	80.65	Software	10-00-4203	Y
03/13/18	Kowalski's	25.96	Meeting Supplies	10-00-4205	Y
03/15/18	University of Minnesota	8.00	Parking	10-00-4265	Y
03/19/18	Randy's	55.98	Trash Collection	10-00-4215	Y
03/20/18	U of M Extension	80.00	HAB Workshop	10-00-4265	Y
03/20/18	Amazon	62.03	Office Supplies	10-00-4200	Y
03/21/18	Amazon	45.94	Office Supplies	10-00-4200	Y
03/21/18	Verizon	210.09	Phone Service	10-00-4240	Y
		$1,604.26	**General Administration Total**		
03/01/18	Amazon	42.84	Education & Outreach Resources	20-08-4265	Y
03/02/18	Holiday	45.49	Fuel for Truck	20-05-4322	Y
03/02/18	O'Reilly	(19.33)	Return/Unused Parts	20-05-4322	Y
03/02/18	Amazon	53.01	Supplies	20-08-4260	Y
03/07/18	Office Depot	15.29	Office Supplies	20-05-4200	Y
03/07/18	University of Minnesota	100.00	Wetland Certification Training	20-13-4265	Y
03/09/18	Home Depot	72.82	E & O Canoe Display	20-08-4260	Y
03/13/18	Bachman's	15.03	E & O Grass Display	20-08-4275	Y
03/13/18	Amazon	586.88	E & O Lapse Camera	20-08-4635	Y
03/13/18	Office Depot	246.18	Supplies	20-08-4275	Y
03/14/18	Amazon	44.00	E & O Education Supplies	20-08-4275	Y
03/15/18	SuperAmerica	54.45	Fuel for Truck	20-05-4322	Y
03/19/18	Bioquip	113.10	Data Collection Supplies	20-08-4275	Y
03/19/18	Home Depot	24.24	Data Collection Supplies	20-05-4201	Y
03/21/18	Cub Foods	104.57	Turf Training	20-08-4205	Y
03/22/18	Gina Maria's Pizza	180.00	Turf Training Lunch	20-08-4205	Y
03/22/18	Home Depot	7.68	Data Collection Supplies	20-05-4201	Y
03/23/18	Forestry Supplies	90.37	Data Collection Supplies	20-08-4201	Y
03/23/18	Amazon	102.14	Wetland Technology Resource	20-13-4265	Y
03/25/18	Amazon	96.76	Wetland Resources	20-13-4250	Y
03/27/18	University of Minnesota	200.00	Wetland Aerial Photo Review	20-13-4265	Y
03/28/18	Cub Foods	19.51	Turf Training Supplies	20-08-4205	Y
03/28/18	SODAQ	85.66	Monitoring Equipment	20-05-4201	Y
03/28/18	Voltaic	81.95	Monitoring Equipment	20-05-4201	Y
03/28/18	Hologram	20.46	Monitoring Equipment	20-05-4201	Y
03/28/18	Adafruit Industries	36.20	Monitoring Equipment	20-05-4201	Y
03/28/18	Amazon	13.52	Monitoring Equipment	20-05-4201	Y
03/28/18	Amazon	12.87	Monitoring Equipment	20-05-4201	Y
03/28/18	Amazon	3.50	Monitoring Equipment	20-05-4201	Y
03/28/18	Amazon	23.97	Monitoring Equipment	20-05-4201	Y
03/28/18	McMaster-Carr	23.54	Monitoring Equipment	20-05-4201	Y
		$2,496.70	**District-Wide Total**		
		$4,100.96	**GRAND TOTAL**		

RILEY
PURGATORY
BLUFF CREEK
WATERSHED DISTRICT

18681 Lake Drive East
Chanhassen, MN 55317
952-607-6512
www.rpbcwd.org

From: Claire Bleser

To: Board of Managers

Re: Item 8C (Board Packet)

Dear Managers,

At our April 4, 2018 board packet, you received a copy of Dr John Gulliver's proposal titled "Assessment and treatment of internal phosphorus loading in stormwater ponds." Administrator Bleser reached out to the Cities who were part of the original study to see if they were interested in being financial partners for this research. The Cities of Bloomington, Chanhassen, Eden Prairie, Minnetonka and Shorewood have agreed to partner with the District on the Stormwater Study proposed by Dr John Gulliver

Partner	Total Financial Contribution	Additional contribution
Bloomington	$9,000	Cities will also apply and purchase the iron enhance to the selected ponds.
Chanhassen	$6,000	
Eden Prairie	$9,000	
Minnetonka	$9,000	
Shorewood	$9,000	
RPBCWD	$63,580	Staff time as needed (minimal)

The project spends over 3 years and cities would be accordingly each year. The District would manage the grant with the University of Minnesota. The financial contribution from the District is **$21,193.33** each year. This project was not identified why we developed the 2018 budget however, funds can be taken from the Survey and Data Analysis account ($13,092) as well as from Reserve Funds ($9,000).

The project will investigate internal phosphorus in 5 stormwater ponds, implement treatment, and evaluate treatment. The overall goal is to provide a quick assessment tool a identify a possible tool that would mitigate phosphorus pollution from stromwater ponds.

Staff recommendations:

Authorize Administrator Bleser to enter into an agreement with the University of Minnesota and our City partners in regards to Dr John Gulliver's proposal and to allocate funds from Survey and Data Analysis and Reserve Funds budget line item to this research.

COOPERATIVE AGREEMENT
Between the Riley-Purgatory-Bluff Creek Watershed District and the City of Chanhassen

Lake Susan Park Pond Watershed Treatment and Stormwater Reuse Project

This cooperative agreement is made by and between the Riley-Purgatory-Bluff Creek Watershed District, a watershed district created pursuant to Minnesota Statutes chapters 103B and 103D (RPBCWD), and the City of Chanhassen, a governmental subdivision and body corporate and politic of the State of Minnesota (Chanhassen) for the construction, operation and maintenance of the Lake Susan Park Pond water-quality improvement and stormwater-reuse project.

Recitals

WHEREAS RPBCWD's approved watershed management plan (the Plan) identifies excessive nutrient loading as an ongoing harm to water quality in Lake Susan;

WHEREAS in 2010 the Minnesota Pollution Control Agency designated Lake Susan as impaired for aquatic recreation because of excessive nutrients in the lake, and the lake does not meet its designated-use classification;

WHEREAS the capital improvement program in the Plan includes the Lake Susan Water Quality Improvement Project, which includes measures to manage external phosphorus loading to Lake Susan, including increasing storage in basins that discharge to Lake Susan, installing bench or perimeter filters in such basins for soluble phosphorus removal and installing water reuse systems to use basin water for irrigation;

WHEREAS Chanhassen operates its stormwater management system under the state Municipal Separate Storm Sewer System general permit, and construction and maintenance of the Project will accrue to the benefit of Chanhassen's fulfillment of its MS4 permit obligations;

WHEREAS in 2013 RPBCWD and Chanhassen completed an update of the Use Attainability Analysis for Lake Susan that RPBCWD had prepared in 1999 and the update focused on: (1) assessing the water quality in Lake Susan based on updated physical, chemical and biological data; (2) improving understanding of current water quality concerns in the lake; and (3) identifying best management practices to improve and protect the lake's water quality and increase the likelihood of Lake Susan being removed from the state impaired waters list;

WHEREAS in 2016 RPBCWD completed construction of a spent-lime treatment system that is expected to reduce phosphorus levels in runoff to Lake Susan by 45 pounds per year, contributing substantially to achieving RPBCWD's water-quality goals for the lake but not on its own achieving the necessary reductions;

WHEREAS the RPBCWD engineer prepared a feasibility report in March 2017 to assess options to further reduce phosphorus loading to and improve water quality in Lake Susan, and the engineer determined that construction and operation of a pump, iron-enhanced sand filter

and reuse system would reduce loading of total phosphorus to Lake Susan by 32 pounds per year at an estimated annual cost of between $530 and $830 per pound of phosphorus removed and would conserve 1.9 acre-feet of groundwater per year at a total cost of $480,000;

WHEREAS based on these findings and an assessment of potential site impacts, the RPBCWD engineer recommended construction and operation of a pump, filter and reuse system as the most appropriate and cost-effective conceptual design to address RPBCWD's goals for Lake Susan and established interest in reducing use of groundwater for irrigation;

WHEREAS after a duly noticed public hearing on April 5, 2017, the RPBCWD Board of Managers considered the comments received then ordered the Lake Susan Park Pond project on July 12, 2017;

WHEREAS at the direction of the managers, the RPBCWD engineer has completed designs, plans and specifications for construction of an iron-enhanced sand filter adjacent to Lake Susan Park Pond, along with a pump to remove stormwater collected in the pond and route it to the filter for phosphorus removal prior to discharge back to the pond outlet and Lake Susan (the Project). The Project also includes a retrofit of the existing irrigation system at Lake Susan Park to capture, store and use stormwater for irrigation of the park's baseball field;

WHEREAS the Project will be constructed on multiple parcels owned by the City of Chanhassen that altogether constitute Lake Susan Park, which is operated by Chanhassen, in the area depicted and labeled "Project Area" in Exhibit A;

WHEREAS RPBCWD has secured a $233,400 Clean Water, Land and Legacy grant from the State of Minnesota for the Project, which grant carries with it certain obligations and requirements;

WHEREAS the Project will increase public awareness of stormwater reuse and groundwater conservation and will decrease the draw on the underlying aquifer for irrigation;

WHEREAS Chanhassen and RPBCWD acknowledge that their ability to achieve Project objectives depends on each party satisfactorily and promptly performing individual obligations and working cooperatively with the other party; and

WHEREAS Minnesota Statutes section 471.59 authorizes Chanhassen and RPBCWD to enter this cooperative agreement.

AGREEMENT

NOW, THEREFORE Chanhassen and RPBCWD enter into this agreement to document their understanding as to the scope of the Project, affirm their commitments as to the responsibilities of and tasks to be undertaken by each party, establish procedures for performing these tasks and carrying out these responsibilities, and facilitate communication and cooperation to successfully complete and subsequently operate and maintain the Project.

1 Organization and Relationship of the Parties

1.1 The RPBCWD administrator and the Chanhassen water resources coordinator will serve as project leads and principal contacts for their respective organizations for the Project, charged to conduct the day-to-day activities necessary to ensure that the Project is completed in accordance with the terms of this agreement.

1.2 The project leads will coordinate and communicate informally and formally to timely address any issues of concern to ensure the successful completion of the Project.

2 Project Design, Construction and Maintenance

2.1 The Project is further defined for purposes of this cooperative agreement as the work specified in the designs, plans and specifications attached to and incorporated into this agreement as Exhibit B. The Project will also include, after completion of construction, assessment of the effectiveness of the Project by the parties and development by the RPBCWD engineer of specific written schedules, procedures and protocols for routine and major operation and maintenance of the Project. This agreement also provides terms and conditions for post-construction operation and maintenance of the Project.

2.2 For purposes of the Project as specified in paragraph 2.1 and Exhibit B:

i. Chanhassen's execution of this agreement constitutes approval of the designs, plans and specifications in Exhibit B;

ii. By execution of this agreement, Chanhassen grants to RPBCWD, its contractors, agents and assigns a license to access and use the Project Area for purposes of RPBCWD's successful exercise of rights and completion of its obligations under this agreement. Chanhassen's authorization of property-use rights hereunder is nonexclusive, except that RPBCWD, on 24 hours' notice to Chanhassen, may temporarily restrict or preclude public access to the Project Area to ensure safety while construction activities are under way. Access to the Project Area will be restricted as briefly and infrequently as reasonably possible, and will be imposed only as necessary for Project access, construction and safety purposes. RPBCWD will respond within one business day to any communication from Chanhassen regarding closure of the Project Area.

iii. On completion of construction of the Project, Chanhassen will retain ownership of Lake Susan Park and all installed and constructed elements of the Project as described in paragraph 2.1 and otherwise herein.

iv. Chanhassen will forbear from any activity that interferes with the RPBCWD's ability to exercise its rights or meet its obligations under this agreement, including but not limited to transfer of ownership of Lake Susan Park. Chanhassen will facilitate RPBCWD's reasonable exercise of its rights under this agreement with regard to access to and use of the Project Area. Chanhassen will not take any action on, in or adjacent

to the Project Area that could reasonably be expected to diminish the effectiveness or function of the Project for the purposes intended, and after notice of completion of construction of the Project from RPBCWD, Chanhassen will continue to operate and maintenance maintain Lake Susan Park in a manner that avoids inhibiting the operation and effectiveness of the Project.

2.3 As between the parties, RPBCWD will obtain all necessary permits, licenses and approvals for the Project on behalf of itself and Chanhassen, and will ensure that the Project is completed in accordance with applicable law and regulatory requirements. Chanhassen, as owner of Lake Susan Park, will cooperate with RPBCWD's and its contractor's efforts to obtain permits and approvals needed for the Project. Chanhassen, in its regulatory capacity, will facilitate the proper and efficient processing of any permits or approvals needed for the Project.

2.4 RPBCWD will implement the Project as follows:

i. RPBCWD will contract for the construction of the Project as specified in the construction documents in Exhibit B in accordance with state procurement law. RPBCWD will require that the contractor for the Project name Chanhassen as an additional insured with primary and noncontributory coverage for general liability and provide a certificate showing same prior to construction;

ii. RPBCWD or the RPBCWD engineer on RPBCWD's behalf will oversee the construction of the Project. RPBCWD may adjust the designs, plans and specifications for the Project during construction, as long as the revisions do not require RPBCWD to exceed the scope of the rights granted under this agreement;

iii. RPBCWD will submit material changes to Project plans and specifications to Chanhassen for review and approval, such approval not to be unreasonably withheld. Chanhassen's failure to timely act will constitute approval;

iv. On completion of construction of the Project, RPBCWD will restore the Project Area to a safe and functional condition, consistent with its ongoing use for public recreational purposes, except to the extent Lake Susan Park is improved by the Project.

2.5 Until completion of construction of the Project, if RPBCWD, in its judgment, should decide that the Project is infeasible, RPBCWD, at its option, may declare the agreement rescinded and annulled. If RPBCWD so declares, all obligations herein, performed or not, will be voided, except that RPBCWD will return the Project Area materially to its prior condition or to a condition agreed to by Chanhassen and RPBCWD.

2.6 **Maintenance**.

i. RPBCWD will contract with the RPBCWD engineer for and direct the development, in collaboration with Chanhassen, of a draft plan for the post-construction maintenance of the Project (the Maintenance Plan). The Maintenance Plan will delineate and distinguish routine and major maintenance and repair of the Project.

ii. RPBCWD will convey the draft Maintenance Plan to Chanhassen for its approval.. If Chanhassen does not approves the Maintenance Plan, all maintenance necessary to assure that the Project will continue to effectively function as designed will become the sole responsibility of Chanhassen. After approval of the Maintenance Plan, Chanhassen will perform all routine maintenance and monitoring of the Project, along with reporting as may be required by the Maintenance Plan, for 20 years from the date the Project is substantially complete for its intended purposes.

iii. After approval of the Maintenance Plan, Chanhassen will complete or contract for the completion, in its sole discretion, of major maintenance and repairs of the Project, as necessary, for 20 years from the date the Project is substantially complete for the intended purposes. For purposes of this agreement, major maintenance and repair of the Project is defined as work necessary to ensure the continued effective operation of the Project for its intended purposes beyond the routine maintenance and repairs defined and specified in the Maintenance Plan.

iv. RPBCWD may from time to time conduct monitoring of the performance of the Project.

3 Cost- and Credit-Sharing

3.1 **Construction costs.** RPBCWD will be responsible for all costs of design and construction of the Project, except that Chanhassen will reimburse RPBCWD for $100,000 of documented Project costs. RPBCWD will be responsible for the costs and fees associated with complying with regulatory requirements applicable to the Project, except that Chanhassen will assess no fee to RPBCWD for Chanhassen permits required for the Project, if any.

3.2 **Maintenance costs.** Chanhassen will be responsible for costs of operation and routine and major maintenance of the Project in accordance with the Maintenance Plan for a minimum of 20 years from the date of substantial completion, except that RPBCWD will be responsible for the cost of materials and equipment for replacement of the iron-sand filter medium, the necessity for which will be jointly determined by Chanhassen and RPBCWD. Chanhassen will be responsible for cost of labor to replace the iron-sand filter medium. Further, RPBCWD will duly consider levying and dedicating maintenance funds for maintenance of the Project.

3.3 **Administrative costs.** Each party will bear its administrative and incidental costs of fulfilling its responsibilities and obligations under this agreement.

3.4 **Compliance credit.** All stormwater-management or nutrient-reduction capacity created by the Project, if any, may be utilized by Chanhassen in accounting for compliance with its MS4 permit or other regulatory obligations. Chanhassen will determine, at its cost, available credit from the Project. RPBCWD makes no representation or warranty as to credit that will be available from or results that will be achieved by the Project.

4 Specific additional duties – RPBCWD

4.1 RPBCWD will provide as-built construction drawings of the Project to Chanhassen within 90 days of certification of the Project as substantially complete for the intended purposes.

4.2 RPBCWD will contract with the RPBCWD engineer for the development of the Maintenance Plan. The contract for the Maintenance Plan will require the RPBCWD engineer to provide the Maintenance Plan for approval by Chanhassen and RPBCWD within one year of certification by a qualified engineer of the as-built construction drawings of the Project, such approval not to be unreasonably withheld.

4.3 RPBCWD makes no warranty to Chanhassen regarding the RPBCWD engineer's or another third party's performance in design, construction or construction management for the Project or completion of the Maintenance Plan.

5 General Terms

5.1 INDEPENDENT RELATIONSHIP; LIABILITY.

i. This agreement does not create a joint powers board or organization within the meaning of Minnesota Statutes section 471.59, and neither party agrees to be responsible for the acts or omissions of the other pursuant to subdivision 1(a) of the statute. Only contractual remedies are available for the failure of a party to fulfill the terms of this agreement.

ii. Chanhassen and RPBCWD enter this agreement solely for the purposes of improving water quality in Lake Susan. Accordingly, each party is responsible for its own acts, omissions and the results thereof to the extent authorized by law and will not be responsible for the acts and omissions of others or the results thereof. Minn. Stat. chapter 466 and other applicable law govern liability of each of the parties. The limits of liability for the parties may not be added together to determine the maximum amount of liability for either party. Notwithstanding the foregoing or any other provision of this agreement, Chanhassen's and RPBCWD's obligations under this paragraph will survive the termination of the agreement.

iii. This agreement creates no right in and waives no immunity, defense or liability limitation with respect to any third party.

iv. Notwithstanding the foregoing, RPBCWD will not be deemed to have acquired by entry into or performance under this agreement, any form of interest or ownership in the Project Area. RPBCWD will not by entry into or performance under this agreement be deemed to have exercised any form of control over the use, operation or management of any portion of the Project Area or adjacent property so as to render RPBCWD a potentially responsible party for any contamination under state and/or federal law.

5.2 PUBLICITY AND ENDORSEMENT. Any publicity regarding the Project must identify Chanhassen and RPBCWD as the sponsoring entities, and must acknowledge the dedication of Clean Water Land and Legacy funds to the Project. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for Chanhassen or RPBCWD individually or jointly with others, or any subcontractors, with respect to the Project. RPBCWD and Chanhassen will collaborate on the development of educational and informational signage pertinent to the Project, and each party, at its cost, may develop, produce and, after approval of the other party, distribute educational, outreach and publicity materials related to the Project.

5.3 DATA MANAGEMENT. All designs, written materials, technical data, research or any other work-in-progress will be shared between the parties to this agreement on request, except as prohibited by law. As soon as is practicable, the party preparing plans, specifications, contractual documents, materials for public communication or education will provide them to the other party for recordkeeping and other necessary purposes.

5.4 DATA PRACTICES. All data created, collected, received, maintained or disseminated for any purpose in the course of this agreement is governed by the Minnesota Government Data Practices Act, Minnesota Statutes chapter 13, and any state rules adopted to implement the act, as well as federal regulations on data privacy

5.5 ENTIRE AGREEMENT. This agreement, as it may be amended in writing, contains the complete and entire agreement between the parties relating to the subject matter hereof, and supersedes all prior negotiations, agreements, representations and understandings, if any, between the parties respecting such matters. The recitals stated at the outset are incorporated into and made a part of the agreement.

5.6 WAIVERS. The waiver by Chanhassen or RPBCWD of any breach or failure to comply with any provision of this agreement by the other party will not be construed as nor will it constitute a continuing waiver of such provision or a waiver of any other breach of or failure to comply with any other provision of this agreement.

5.7 NOTICES. Any notice, demand or communication under this agreement by either party to the other will be deemed to be sufficiently given or delivered if it is dispatched by registered or certified mail, postage prepaid to:

Chanhassen
Paul Oehme
7700 Market Blvd
Chanhassen, MN 55317
952-227-1168

RPBCWD
Claire Bleser, PhD, administrator
18681 Lake Drive East
Chanhassen MN 55317
952-607-6512

6.8 TERM; TERMINATION. This agreement is effective on execution by both parties and will terminate three years from the date of execution of this agreement or on the written agreement of both parties.

IN WITNESS WHEREOF, the parties have executed this agreement.

RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT
a watershed district and political subdivision of the State of Minnesota

By _____ Date:_____
Leslie Yetka
President

APPROVED AS TO FORM
AND EXECUTION

By _____
RPBCWD counsel

CITY OF CHANHASSEN,
a statutory city and political subdivision of the State of Minnesota

By _____ Date: _____
Denny Laufenburger
Mayor

By _____ Date: _____
Todd Gerhardt
City Manager

Exhibit A
Project Area

Exhibit B
Project Designs, Plans and Specifications

RILEY
PURGATORY
BLUFF CREEK
WATERSHED DISTRICT

18681 Lake Drive East
Chanhassen, MN 55317
952-607-6512
www.rpbcwd.org

From: Claire Bleser

To: Board of Managers

Re: Lake Susan Park Pond Funds

Dear Managers,

Due to higher bids then expected, the District needs additional funds to cover the expense for the construction and management of the project. Staff recommends that $100,000 be transferred from Purgatory Creek at 101 to Lake Susan Park Pond. This project is almost complete and believes that final expenses would not exceed $50,000. There is close to $250,000 left to complete the project.

Staff recommendations:

Authorize Administrator Bleser to transfer $100,000 from Purgatory Creek at 101 to Lake Susan Park Pond project.

RILEY
PURGATORY
BLUFF CREEK
WATERSHED DISTRICT

18681 Lake Drive East
Chanhassen, MN 55317
952-607-6512
www.rpbcwd.org

From: Claire Bleser

To: Board of Managers

Re: Item 8F (Board Packet)

Dear Managers,

The District has developed over the years Education and Outreach materials that are not suitable to transport on the back of the truck bed. In addition, as the District moves to conducting its work through field season, our pick-up trucks will be in high use. In addition, as part of the wetlands program and permitting program, the District needs to have access to a vehicle for field investigations.

Staff is proposing to purchase an SUV through the Cooperative Purchasing Venture with the State of Minnesota. The vehicle would be a mid-size. Specifically, staff identified a Toyota Rav4 as a good option. Administrator Bleser did look at other options but the vehicle turn around (10-12 weeks), cargo space (to small), fuel efficiencies, and price tag (greater than 30K) were not a good alternative. There are three Rav4 alternatives ranging in price from $26,035 to $27,438. Staff anticipates the cost of the vehicle to be in that range but will be dependent on current available inventory.

Staff recommends that the board authorize the Administrator Bleser to purchase a Toyota Rav4 not to exceed $30,000. Funds for the vehicle purchase would come from the Education and outreach, and Wetland budget line item ($15,000 each).

Staff recommendations:

Authorize Administrator Bleser to purchase a Toyota Rav 4 not to exceed $30,000 and that the funds come from the Wetland, and the Education and outreach budget.

resourceful. naturally.
engineering and environmental consultants

BARR

Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers
From: Katie Wolohan and Scott Sobiech, Barr Engineering
Subject: Lake Susan Park Pond Watershed Treatment and Stormwater Reuse Project – Recommendation to Award Project
Project: 23/27-0053.14 013B
c: Claire Bleser – RPBCWD Administrator

In 2017, RPBCWD completed a feasibility study to improve the water quality in Lake Susan in the City of Chanhassen and for the reuse for stormwater from an existing stormwater pond, Lake Susan Park Pond. The project proposes the following:

- Installation of an iron enhanced sand filter (IESF) to reduce phosphorus loading in Lake Susan
- Installation of a pump-and-treat system to draw stormwater from an existing stormwater pond, Lake Susan Park Pond, for irrigation of the site's ballfield, making use of an existing irrigation system and reducing groundwater demand for irrigation
- Lake Susan Park Pond outlet retrofit to address erosion issues immediately downstream of the pond

In 2015, RPBCWD secured a $233,400 Clean Water Fund grant for a watershed treatment and stormwater reuse project at Lake Susan. In July 2017, the RPBCWD Board of Managers approved authorized final design and preparation of construction documents for the watershed treatment and stormwater reuse system recommended in the feasibility study completed in early 2017.

At the February 2018 board meeting, the RPBCWD Board of Managers authorized Barr Engineering to solicit bids. Following the Board's authorization, an advertisement for bid was circulated in local publications and on Quest Construction Data Network (CDN). Barr Engineering facilitated an optional pre-bid meeting on March 9, 2018 which was attended by one contractor (two representatives). Bids were opened on March 20, 2018 at Barr Engineering's office. Three bids were received and are listed below in Table 1.

Table 1. Summary of Bids Received for the Lake Susan Park Pond Watershed Treatment and Stormwater Reuse Project

Bidder	Total Base Bid Entered on the Bid Form[1]
Peterson Companies	$467,490.69
Urban Companies	$579,355.00
G.F. Jedlicki, Inc.	$652,667.00

[1]Engineer's opinion of probable cost was $392,000.00.

Peterson Companies was the low, responsive bidder. **It is recommended that the RPBCWD Board of Managers award the project to Peterson Companies at the bid price of $467,490.69 and authorize the Board President or Administrator to sign the notice of award, form of agreement, and notice to proceed at the appropriate points in the contracting process. We also recommend that the Board authorize the Administrator to execute change orders not to exceed 10% of the original contract amount.**

If the Board of Managers decides to award the project the following would be completed:

- An Authorized Representative signs the Notice of Award to be sent to the successful bidder
- Successful bidder provides the following information:
  - Fully executed Notice of Award
  - Three fully executed counterparts of the Form of Agreement
  - Performance and Payment Bond
  - Certificate of Insurance and all other insurance documentation identified in the Contract Documents
- Barr Engineering will coordinate with the successful bidder regarding the construction schedule
- May 2018 – Issues Notice to Proceed
- Construction Commences – July 9, 2018 after 4th of July activities in the park (or 10 days after the Notice to Proceed, whichever is later)
- Substantial Completion – within 12 weeks after the July 9th or Notice to Proceed, whichever is later
- Construction Complete – September 2018

RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT
Memorandum Supporting and Providing Explanation of Proposed Revisions of the Riley-Purgatory-Bluff Creek Watershed District Rules

May 2, 2018

This memorandum presents background on, technical support for and an explanation of proposed amendments of the Riley-Purgatory-Bluff Creek Watershed District rules. RPBCWD proposes to adopt a new enforcement rule as well. The memo supports RPBCWD's judgment that the proposed changes to the rules will improve the capacity of its regulatory program to protect water resources in the watershed. It describes the basis for RPBCWD's judgment determination that the effectiveness of the rules, as revised, in protecting water resources and minimizing flooding reasonably balances the burden incurred by property owners in complying with the rules. After a period in which RPBCWD did not operate a permitting program, RPBCWD reestablished its regulatory role near the end of 2014, and the ensuing three years' experience implementing the rules led to many of the changes proposed.

RPBCWD proposes to amend the following rules:

- Rule A – Procedural Requirements
- Rule B – Floodplain Management and Drainage Alterations
- Rule C – Erosion and Sediment Control
- Rule D – Wetland and Creek Buffers
- Rule E – Dredging and Sediment Removal
- Rule F – Shoreline and Streambank Improvements
- Rule G – Waterbody Crossings and Structures
- Rule I – Appropriation of Groundwater
- Rule J – Stormwater Management

In addition, NMCWD proposes to adopt accompanying changes to the rules definitions and a new Rule N – Enforcement.

Opportunities to comment

RPBCWD wishes to receive **written comments** on its proposed revisions, and invites interested persons and organizations to submit written comment on revisions on or before the close of business on **Tuesday, June 19, 2018**. RPBCWD prefers submission of comments by email to Terry Jeffery, permit coordinator, at tjeffery[at]rpbcwd.org. But comments also may be sent to Mr. Jeffery at the RPBCWD offices, 18681 Lake Drive East, Chanhassen MN 55317.

State and regional resource protection agencies, local governments and potentially regulated parties are particularly encouraged to review the changes to help RPBCWD ensure that they are fully protective of water resources without creating excessive administrative costs or placing an undue burden on those subject to them. Comments on specific provisions in the proposed rules and how they may apply in practice are very useful. Similarly, critique is most valuable when accompanied by notes on a specific change RPBCWD could make or a suggested alternative approach it could take.

In addition to the written comment period, RPBCWD will hold a **public hearing** on the revisions as part of the regular meeting of the managers, starting at **6 p.m., on June 6, 2018, at the RPBCWD offices at 18681 Lake Drive East, Chanhassen.** At the hearing any interested person will have the opportunity to address the RPBCWD Board of Managers concerning the proposed revisions and the incorporation of the rules into the RPBCWD plan.[1]

The amendments may be revised in response to comments. In addition, this memo will be updated, as needed, to address comments received, and will be reissued in final form to support the managers' adoption of the final revisions to the rules and to provide property owners and project proposers with guidance and background on the rules.

The RPBCWD Board of Managers will consider adopting the revised rules at the regular meeting on July 11, 2018. When adopting the revised rules, the managers will set a date on which the amended rules will be effective throughout the watershed. RPBCWD has tentatively identified **August 1, 2018, as the target effective date**. Permit applications that are not complete as of the effective date will be subject to the amended rules, though an applicant who has submitted a complete application prior to that date may request to have the matter determined in accordance with the revisions.

The RPBCWD rules are incorporated by reference into the district's updated watershed management plan, *Planning for the Next Ten Years 2018-2027*, the final draft of which is at the time of this memo undergoing final review for approval by the state Board of Water and Soil Resources. In conjunction with finalizing and adopting the amendments to the rules, RPBCWD will incorporate the updated rules into the watershed plan.

II. BACKGROUND

Authority

Minnesota Statutes chapters 103B and 103D provide legal authority for RPBCWD's rules. Section 103D.341 requires watershed districts to develop and adopt rules, and section 103D.345 provides authority and basic structure for permitting programs. Watershed districts in the Twin Cities metropolitan area are authorized to regulate the water-resource impacts of land use and development where cities have not adopted district-approved local water management plans or where cities elect to defer exercise of regulatory authority to the watershed district.[2] A

---

[1] RPBCWD is proposing to amend its watershed management plan to include the updated rules at the same time it solicits comment on the rules. Minn. Stat. § 103B.231, subd. 11. The two statutory processes are being pursued in tandem in the interest of efficiency.

[2] Minn. Stat. §§ 103D.335, subd. 23; 103B.211, subd. 1, providing metro watershed organizations with authority to regulate the use and development of land in the watershed when one or more of the following conditions exists:

> (i) the local government unit exercising planning and zoning authority over the land ... does not have a local water management plan approved and adopted in accordance with the requirements of section 103B.235 or has not adopted the implementation program described in the plan;

regulatory program is a critical and necessary component of a metro watershed district's implementation of its watershed management plan.[3]

RPBCWD reestablished its regulatory program in late 2014 after a roughly seven-year period during which implementation of regulatory goals and policies was left to the cities in the watershed. In conjunction with and to support the reinstatement of the program, RPBCWD provided extensive findings and analysis, as well as detail on the legal framework for the regulatory program. (Please see the "Supporting Documents" section of the permitting program web page at http://rpbcwd.org/permits/.)

If it wishes, a city in the watershed may elect to amend its local water management plan and submit implementing ordinances to RPBCWD for review. On RPBCWD's approval of the city's plan[4] and determination that the implementing ordinances will protect water resources as well or better than RPBCWD's rules, the city and watershed organization would agree that the city will exercise sole regulatory authority for the relevant rule areas.[5] Importantly, this does not mean that a watershed city needs to adopt the RPBCWD rules; it means that the RPBCWD board must find, based on analysis of the engineer, counsel and staff, that the city's approach is reasonably likely to produce equivalent protection. (RPBCWD will continue to exercise authority for regulatory responsibilities that are uniquely watershed organizations'.) The delineations of authority would be articulated in a memorandum of understanding submitted for approval of the city council and the NMCWD Board of Managers. The MOU also would provide a framework whereby the two entities will regularly meet and collaborate to ensure that fully protective water-resource standards and criteria are in place, effectively implemented and diligently enforced.

Development of the Proposed Changes

RPBCWD undertook updating of its rules as a so-called housekeeping endeavor. After three years of implementing the rules adopted in late 2014, staff had identified several respects in which the rules could made to function more efficiently. As revisions were being prepared, though, RPBCWD staff and managers elected to explore a couple of key policy-driven revisions as well.

(ii) an application to the local government unit for a permit for the use and development of land requires an amendment to or variance from the adopted local water management plan or implementation program of the local unit; or

(iii) the local government unit has authorized the organization to require permits for the use and development of land.

3 Minn. R. 8410.0105, subp. 6.

4 For RPBCWD to approve a local water management plan wherein the city indicates that it will exercise sole regulatory authority, the city water plan would have to include a commitment to timely update city ordinances in response to any substantial amendment (e.g., adoption of a new standard or requirement) of the RPBCWD rules.

5 *See* Minn. R. 8410.0105, subp. 6 (setting out framework for relationship between watershed district rules and city ordinances).

The limited scope of the rulemaking allowed RPBCWD to conduct an efficient feedback-gathering program with its Technical Advisory Committee. The TAC met in November 2017 and provided feedback on an initial set of changes. The TAC met again in late February 2018 to review amendments that had been revised in response to the initial feedback and discuss the option of requiring development and redevelopment projects to reduce stormwater rate reductions from existing conditions. (The results of this review are discussed below.) In the final draft issued now, the proposed amendments remain largely clarifying and streamlining; the limited policy initiatives proposed are discussed in some detail below.

In keeping with the basic intent of the proposed changes, RPBCWD will continue to seek to make its permitting process more efficient through streamlining of its administration of the program. In conjunction with adoption of the final changes, staff will seek to broaden existing delegation of permitting authority to the administrator to facilitate quicker application turnaround.

III. PROPOSED CHANGES

Highlights – Policy Changes

As noted, most of the proposed amendments were drafted to address questions, issues and interpretive questions that have emerged since RPBCWD reinstated its regulatory program more than three years ago. While there is fair amount of ~~strikeout~~/underline text in the rules, many of the changes are simple clarifications or corrections that do not change the nature or extent of any regulatory requirement. At the same time, RPBCWD is moving forward with a few key policy initiatives that have likewise emerged since the re-initialization of its regulatory program:

- RPBCWD proposes to extend the definition of **"100-year flood elevation"** to constructed stormwater facilities as part of an effort to strengthen the rules' protection of downgradient properties and resources from increased stormwater flows resulting from redevelopment. The change is coupled with the extension of the regulatory scope of Rule B to require replacement of floodplain storage capacity lost when a constructed stormwater-management facility is filled – even if the property in question is not adjacent to a waterbody. This change is made especially critical by RPBCWD's decision – discussed below – not to take a regulatory approach to addressing extant erosion problems in the watershed caused in significant part by stormwater flow rates from impervious surfaces.
- RPBCWD proposes to require projects that trigger its Stormwater Management Rule to prepare and submit a simple plan for effective snow and ice control to avoid **chloride** (salt) contamination of the watershed's waterbodies. New subsection 3.8 of Rule J – Stormwater Management provides two very straightforward requirements: All projects triggering the rule except those on single-family home properties will be required to submit for approval a chloride-management plan that designates for ongoing property-management activities an individual responsible for management of chloride use for ice and snow removal and an individual who has been certified by the Minnesota Pollution Control Agency as having completed its salt-application training. The person

responsible for implementation should have the authority to fulfill this responsibility, but the MPCWD-certified person need not be an employee of the property owner; a contractor could serve. RPBCWD staff and managers realize the chloride plan requirement will be new to many applicants, and even though the requirement has been drafted to require a largely educational effort from applicants, basic forms and guidance materials will be provided to support applicants' compliance.

In addition, RPBCWD will not require the completed chloride management plan to be submitted before issuing a permit (i.e., the chloride-management plan need not be submitted before RPBCWD will issue a permit for the proposed work). But RPBCWD will not conduct the final inspection needed to release an applicant's financial assurance until the plan is provided. (*See* amendment to section 4 of Rule M – Financial Assurances.)

RPBCWD supports legislation providing a liability exemption for property owners who manage chloride use in accordance with MPCA protocols.[6] But even in the absence of such a reasonable legal innovation, public and private property owners both will be required to comply with the provision. Though no waterbody in the watershed has been declared impaired for chlorides yet, RPBCWD has determined that a local regulatory requirement is a critical complement to implementation of the Twin Cities Metro Chloride Management Plan.[7]

- RPBCWD has added an option in new section 4 of Rule J for compliance on a **regional** scale with the stormwater-management standards in subsection 3.1. RPBCWD is particularly keen to receive comments on this alternative approach to onsite, site-by-site stormwater management.
- Correcting an oversight from the 2014 rulemaking, RPBCWD proposes to adopt new regulatory **enforcement** provisions as Rule N. The rule provides the regulated community with fair, complete, straightforward information on the process and procedures RPBCWD will use to enforce its rule requirements and ensure compliance with permits. The rule makes clear (in section 4) that RPBCWD may recover costs of enforcement actions from private property owners.
- RPBCWD also has carefully reassessed the need for technical expertise in two different related arenas: Submissions from applicants, and review and recommendations to the board of managers. In each case, engineer or other technical review and approval is specified only where necessary (e.g., stormwater-management plans must be signed by an engineer, Rule J, subsection 5.4).
- Also important in this rulemaking is a substantial change RPBCWD decided not to make – yet. In late February staff met with the Technical Advisory Committee to present and discuss a proposed amendment to the rate-control requirement in section 3.2a of Rule J –

---

6 Information on the agency's program generally and salt-application training specifically is available at: https://www.pca.state.mn.us/water/salt-and-water-quality (last visited January 7, 2018).

7 *Id.*

Stormwater Management. The RPBCWD engineer presented the results of a significant research effort prompted by the long-observed dramatic erosion of inherently unstable creek banks and gullies in the watershed – especially in lower valleys running down to where the watershed's namesake creeks run toward and contribute sediment to the Minnesota River. The engineer's research showed that the problem could be addressed, in part, by restricting the rate of offsite flows from development and redevelopment projects to rates close to natural conditions. Further, the research showed that even on properties with poorly infiltrating soils, such reduced rates could be achieved through outlet restrictions and similar design modifications. Several TAC members, however, pointed to the difficulty of reducing rates on projects such as road reconstructions that take place on narrow, restricted property, and the maintenance challenges of small orifices on stormwater facilities. On a more positive note, TAC members suggested undertaking collaborative projects retrofitting stormwater facilities into key areas where regional benefits could mitigate runoff rates. The RPBCWD managers found the engineer's research compellingly supported the feasibility of a below-existing rate control criterion and are deeply concerned about the ongoing erosion in the watershed. But the managers determined that additional stakeholder engagement on the potential impact of such a provision is required before adoption is considered. RPBCWD will pursue collaborative retrofit projects as feasible while continuing to assess options for taking a regulatory approach.

DEFINITIONS

Most of the amendments proposed to several definitions are offered for purposes of straightforward clarification. Background and explanation are provided here only where some substantive change is meant to be affected by the proposed amendment.

The importance and operation of the addition of "constructed stormwater facility" to the definition of **"100-year flood elevation"** is discussed above. "100-year Flood Elevation" also is revised to reference not only the current best-available precipitation data from the National Weather Service (presently the 2013 Atlas 14 Volume 8 release), but also Natural Resources Conservation Service Technical Release 60 (a.k.a. TR-60) – whichever is higher.

The map of **"High-Risk Erosion Areas"** will be adopted by the RPBCWD Board of Managers at the public meeting at which the rules are adopted to ensure that the regulated community and other have an opportunity to be heard on the proposed map and science underlying it, and to ensure that the map will not be changed without appropriate public process and opportunity to be heard.

The definition of "**linear project**" is intended to clarify that the important element in determining which projects are subject to the specific provisions in the rules (especially the stormwater rule) for linear work is that the land-disturbing activities take place on a property that is 1. public; 2. narrow and largely occupied by existing infrastructure – transportation and otherwise. The fundamental premise behind the specific requirements in the Stormwater Management Rule for linear projects is that they take place on existing, difficult-to-change and narrow parcels. The changes to the definition are intended to underscore and ensure that those

qualities are determinative. A road or other physically linear project that takes place as part of a larger development or redevelopment project on the same or adjacent parcels will not be subject to the provisions of the RPBCWD rules for linear projects.

"**Remodeling**" replaces "reconstruction" in the definitions to better distinguish work on single-family home properties with existing constructed features from the more generic term for tearing up and replacing impervious surfaces. The purpose is to make clear when the specific elements of the RPBCWD Stormwater Management rule apply for single-family home projects – and when they don't (e.g., when changes are made only within the existing envelope of the house, and no new or fully reconstructed impervious surface results). (See subsections 2.2 of Rule J.)

Definitions of "**redoximorphic**" and "**topsoil**" added to the rules are addressed in the sections below addressing the rules, the operation of which is affected by the definitional change.

Other definitional changes are nonsubstantive clarifications.

RULE A – PROCEDURAL REQUIREMENTS

The addition of subsection 2.5 to Rule A for **emergency work** responds to comments made by TAC members about cities' occasional (but important) need to respond quickly to certain hazardous or threatening land conditions. Rather than trying to create specific exceptions for specific types of work under individual rules to facilitate cities' quick responses, RPBCWD is proposing a general description of the circumstances in which such work can proceed immediately, with compliance to be determined later. The provision does not constitute or provide a variance from compliance with RPBCWD rule requirements. This necessarily means cities will have to go back to conduct further work in some cases, but RPBCWD figures that where conditions described in the rule exist, re-deployment of recourses is a better downside than delay in undertaking work that protects persons and property. The exception is available only to public entities.

The change to section 5 of the rule underscores that RPBCWD may approve a permit for **a term longer** than the default one year.

RULE B – FLOODPLAIN MANAGEMENT AND DRAINAGE ALTERATIONS

Regulation

The changes to the regulation section here are tied to expansion of the definition of "100-year flood elevation." The change here recognizes that while RPBCWD wishes to ensure the flood storage lost when a constructed facility (including and underground feature) is filled, there is regulation under this rule of mere alteration of or sediment removal from stormwater management features. The policy driver for requiring compensation for filling constructed facilities is described in the Highlights section above. Alteration of natural waterbodies continues to regulated to ensure continued management of flood flows and maintenance of flood storage capacities; removal of accumulated sediment (only) from natural water bodies is regulated under Rule E.

Criteria

The articulation of the low-floor (freeboard) requirement is greatly simplified in subsection 3.1 of this rule in favor of a single comprehensive statement in subsection 3.6 of the Stormwater Management Rule.

The requirement for siting replacement storage in subsection 3.2 is revised to provide appropriate flexibility a water basin or constructed stormwater facility is filled in whole or part. The drainage and utility easement exhibit requirement in 2.4.8 is expanded to ensure coverage of facilities, as well as floodplains associated with water bodies to round out measures installed for the protection of flood storage. Compensatory storage must be created below an outlet and above groundwater, otherwise it is not providing "fully compensatory storage."

The **creekside impervious restrictions** in section 3.4 have been revised to allow property owners to place or replace impervious surfaces between 50 and 100 feet from the centerline of an adjacent creek, while the prohibition on structures to 100 feet is retained. While RPBCWD has a long history of prohibiting such encroachments because of the vulnerability of banks through the three-creek watershed, property owners and TAC members have requested some flexibility and harmonization with similar restrictions in other watersheds. The RPBCWD engineer determined that allowing impervious surfaces a reasonable distance from banks would not significantly accelerate flood flows or put bank stability at risk, providing the basis for the flexibility introduced here.

RULE C – EROSION PREVENTION AND SEDIMENT CONTROL

The addition of "prevention" to the title of Rule C (and general usage of the term "erosion prevention and sediment control" throughout the rules) underscores that the purpose is to prevent – not just control – erosion in the watershed. Otherwise, changes here are very limited: The addition in subsection 3.1b of a specific reference to supplemental practices for areas upstream of waterbodies is consistent with the current construction stormwater general permit issued by the Minnesota Pollution Control Agency as part of its National Pollutant Discharge Elimination System program and alerts applicants to the need for additional protection (e.g., double silt fence, 50 feet of vegetated buffer) when work is to occur upgradient from a water resource. The small change from "and" to "or" in this subsection signals that while RPBCWD will allow applicants to use newer, more effective BMPs provided in MPCA guidance materials, RPBCWD will not require applicants to use new techniques in state guidance without first incorporating specifics into the rule.

For the decompaction testing required after a project is completed (subsection 3.2c), RPBCWD owns the analytical equipment needed to produce the required information and will allow applicants to use it. RPBCWD has seen a number of supposedly stabilized sites where decompaction efforts have not been adequate to allow successful establishment of stabilizing vegetation, prompting the addition of specifications to the provision.

Rule D – Wetland and Creek Buffers

Changes are proposed to Rule D to clarify applicability of the buffer provisions generally and to clarify the scope of the exemption in paragraph 2.2.

With regard to the latter, members of the TAC asked that in-kind replacement of utilities such as stormwater outfalls and culverts be excused from having to provide buffer. Often such projects take place in wetlands, and the municipal entities undertaking them do not have the necessary property rights (ownership) to plant and maintain buffer vegetation anyway. Further, the properties are often physically constrained. Recognizing these realities, RPBCWD proposes to expand the exemption from the rule in a very limited and specific way. RPBCWD will require that a party obtain an incidental-wetland or no-loss determination to eliminate any possible uncertainty over whether the exemption applies or not. (The exemption is available to any property owner – not just cities or other public entities.)

Members of the TAC argued that the exemption from buffer provision should be further expanded to other types of maintenance projects. But a broad and vaguely stated exemption prompts all manner of interpretive uncertainties that consume staff time. And as a base proposition the RPBCWD managers still would like wetlands and creeks protected by buffers whenever and wherever possible. Further, the argument that public entities sometimes need to undertake work to protect against or mitigate immediate threats to public property and welfare is addressed by the new and broadly applicable emergency work provision in subsection 2.5 of Rule A, which serves cities' needs for urgent repairs without sacrificing opportunities to implement RPBCWD's buffer policy.

New subsection 3.1 clarifies the scope and extent of the applied buffer requirement – where on an applicant's property must buffer be established – in response to difficulties of application of the rule to date – especially where a property borders or includes a section of creek.

The admittedly limited buffer-reduction provisions in subsection 3.1b have not proven worth the additional analytical work needed to qualify, and so are proposed to be eliminated.

The 'designated contact' information required to be included in the recorded buffer-maintenance declaration under existing paragraph 3.4 is removed, given that the declaration is recorded and provides for a perpetual maintenance requirement, the chances of the proper contact person changing are good.

All other changes to the buffer rule are clarifications.

Rule E – Dredging and Sediment Removal

The few changes in Rule E are typographical corrections and clarifications.

Rule F – Shoreline and Streambank Stabilization

While the proposed changes to Rule F are visually extensive, they achieve just two significant goals: better striking the balance between facilitating maintenance and ensuring unnecessary hard-armoring does not take place, and providing more detail for categorization of shorelines and streambanks to ensure that the appropriate stabilization measures are implemented.

The regulatory scope of the rule in section 2 is adjusted to better provide flexibility for property owners maintaining existing stabilization practices. The changes move away from exempting **maintenance** project to making it reasonable quick for property owner to obtain a permit. The exemption language in subsection 2.2 is removed in favor of a fast-track maintenance permitting process – detailed in new subsection 3.4 – that allows property owners to readily obtain a permit for an existing stabilization as long as any of the length, width or depth of the practice is not expanded and underlying soils are not disturbed. The erosion intensity or sheer stress calculations required for new, reconstructed or expanded practices need not be submitted, through plans do need to be signed by a certified engineer or landscape architect. The revised maintenance approach eliminates the recursive loop in the present exemption, which applies only if the work complies with the rule requirements. (I.e., you don't need a permit as long as you comply with all of the permit requirements – an uncertain prospect for property owners and an unworkable shift of emphasis onto RPBCWD staff to 'catch' property owners whose maintenance projects in fact involve new or fully reconstructed stabilization.) Practices that were installed without a permit after the effective date of the restored RPBCWD rules (February 1, 2015) do not qualify for fast-track permitting.

Subsection 3.4 was the subject of some discussion with the Technical Advisory Committee, which supported its inclusion and helped refine the terms. The availability of a fast-track permit reflects RPBCWD's interest in supporting property owners' efforts to ensure their shorelines do not erode; RPBCWD does not want property owners to be discouraged from repairing or maintaining shorelines that need such work because they did not want to spend the time or expense of demonstrating compliance with the rule's framework for ensuring that shorelines and streambanks are armored (i.e. riprapped) only to the extent that they need to be to prevent erosion. To have done otherwise would have been counterproductive. Put simply, section 3.4 means that only when new or materially expanded shoreline or streambank stabilization improvements are proposed will property owners have to demonstrate that the design of their work is consistent with the erosive forces at work.

The changes to the **sequencing** terms in 3.2 provide a clearer and more precise framework for determining whether hard-armoring, a mix of hard-armoring and vegetation or vegetated stabilization practices will be permitting in the watershed. The scoring and calculation required to determine which stabilization practices may be used are technical, but RPBCWD has endeavored to make the process one involving completing forms and performing some mathematical calculations. While an engineer's assistance can be employed to document existing conditions and design practices appropriate to erosive-force intensity calculated, RPBCWD provides flexibility for a landscape architect to sign off on plans, too, in subsections 4.2 and 4.3. The forms and guidance needed to calculate erosion intensity or streambank sheer stress will be readily available through the RPBCWD website. From there, the criteria a stabilization design must comport with are better organized in subsection 3.3: All practices must meet the criteria in 3.3a and the invasive-species prevention requirements in e; riprap must meet subsection b; retaining walls c; and sand blankets d.

The shoreline and streambank stabilization rule is unique in that it pertains to and regulates work, the undertaking of which aligns with and helps accomplish RPBCWD's watershed-management goals. That is, RPBCWD wants shorelines and streambanks to be stabilized –

hence the interest in ensuring property owners don't defer maintenance. This raises the conundrum of RPBCWD providing **cost-share support** for work that is actually subject to its regulatory requirements, when cost-share support is reserved otherwise for work that provides protection beyond compliance with RPBCWD rule requirements – e.g., construction of rain gardens that provide treatment that is not required to offset impacts of proposed land-disturbing work and associated redevelopment. Given this, in conjunction with the finalization of the proposed amendments to the RPBCWD rules, the managers will consider a policy to allow for RPBCWD cost-share support for bioengineered and vegetative shoreline and streambank stabilizations. Beyond comments on the scope and operation of the rules, observers' and interested parties' thoughts and comments on factors to consider in drafting and adopting such policy are welcome.

Rule G – Waterbody Crossings and Structures

Only very limited changes are proposed for Rule G.

The regulatory scope of the rule is revised to remove the incongruity of RPBCWD regulating placement of structures in small waterbodies but not in public waters (i.e., those within the Department of Natural Resources' work in waters jurisdiction). The scope was crafted for adoption in 2014 to keep RPBCWD out of the business of regulating placement of docks in public waters – leaving such approvals to DNR's well-established framework. But this meant RPBCWD did not regulate placement of other structures as well. The revision makes the necessary changes to bring structures in public waters other than docks (which are explicitly excluded) into RPBCWD's scope, making the general permit for most work in public waters that DNR has issued more effective.[8]

The wildlife-passage provisions in 3.2d have proven to be in applicable in most circumstances in the watershed, many parts of which are fully developed. The revisions proposed remove the requirement that a qualified wildlife biologist approve project plans for providing wildlife passage along a waterbody crossing. Rather, staff and the RPBCWD engineer will exercise discretion to require an applicant to provide passage – not only for land animals but, newly with the amendments, for fish, too – that provides for the creatures present or potentially present in a particular location.

Other changes to the Rule G are clarifications.

Rule J – Stormwater Management

RPBCWD proposes the addition of a new chloride policy (paragraph 1.10) supporting the new substantive requirement in subsection 3.8 that an applicant submit a **chloride-management plan**.

As the present amendments were being developed, RPBCWD was completing Planning for the Next Ten Years, an update of RPBCWD's comprehensive watershed management plan.

---

[8] Public Waters Work General Permit 2015-1192, issued 9/22/2015, allowing property owners obtaining a permit from RPBCWD to thereby receive DNR approval for the same work.

Expected to be approved by the Board of Water and Soil Resources by the time the proposed rule amendments are adopted, the updated plan notes that Bluff Creek has been identified by the MPCA as a "high-risk stream" for chloride impairment,[9] and includes a specific commitment to assist with the implementation of projects or other management actions to address chloride pollution.[10]

The proposed approach is simple, and meant to complement other efforts RPBCWD will undertake to draw private property owners into the mix of parties contributing to reducing salt contributions to the creek. (Though the requirement also applies to governmental entities in the watershed, RPBCWD's experience is that virtually all of these are already implementing salt-reduction strategies and conducting their operations in compliance with the MPCA salt-management program.) RPBCWD elected to exclude single-family home properties in the proposed scope of the chloride requirement since such properties generally are not professionally maintained and usually feature significantly smaller pavement areas.

Mindful that the requirement is innovative and will be unfamiliar to many applicants, RPBCWD will implement the requirement in a manner that facilitates compliance:

- Property owners and permit applicants may have difficulty completing the required training and certification before scheduled groundbreaking on a project, so rather than requiring the chloride-management plan prior to issuance of a permit, RPBCWD withhold a portion of the permittee's financial assurance until the management plan is submitted and approved.
- RPBCWD will provide guidance on chloride management, continue to work with MPCA to hold trainings in and nearby the watershed, and will develop and make readily available (e.g., on the RPBCWD website) a basic management-plan template.

RPBCWD staff floated the chloride-management plan requirement past the TAC, but is eager to hear from potentially regulated private property owners on the proposed requirement during the comment period.

Changes to the regulatory scope of the rule are minor: The revision from "reconstruction" to "remodeling" in 2.2a is discussed under Definitions above. Retaining walls are added to the trails exception in 2.2d. And new paragraph 2.2e reflects RPBCWD practice to date; note, though, that while disturbance on a property without construction or reconstruction of impervious surface may not result in stormwater-management requirements, but the extent of disturbance will 'count' in aggregating disturbance and imperviousness creation/reconstruction for purposes of a later application that trigger the common scheme of development provision in subsection 2.5.

Changes proposed to section 3.1 better organize and provide needed addition detail in the **baseline stormwater-management criteria**. The additional detail has proven necessary after RPBCWD review of more than 100 stormwater-management plans since the regulatory

---

9 Footnote 1, Table 5-5, *Planning for the Next Ten Years* (draft on file with RPBCWD).

10 *Id.*, sec. 3.2.6.2.

program was reinstated in late 2014. RPBCWD also has added a requirement that infiltration practices and facilities draw down to 'dry' (i.e., no standing water in the practice) within 48 hours (paragraph 3.1b.iii) and added a cap in 3.1b.iv on the infiltration rate that can be used to comply with the rules at 8.3 inches an hour – made with support and at suggestion of TAC and consistent with the MPCA's current NPDES-program Construction Stormwater Permit.

To fulfill specific direction from the managers to further address indirect impact of development and redevelopment on wetlands, **bounce and inundation and stormwater-treatment requirements** applicable to stormwater flow to wetlands are added in subsection 3.2 and accompanying tables. The provisions mirror those in neighboring watershed organizations.

The **low-floor provisions** in subsection 3.6 are revised and reorganized for clarity, and RPBCWD proposes to clarify that siting in accordance with the framework provided in Appendix J1 an alternative to showing compliance with the 2-foot freeboard standard. (The revisions also clarify that J1 is incorporated into the rules as a term thereof and is not guidance.) NMCWD has processed numerous applications that have demonstrated compliance through the 4a siting framework, which has proven cost-effective and protective.

The new **regional stormwater management** framework discussed above in the "Highlights" section is added as section 4.

RPBCWD also has added specific exhibit requirements applicable to use of **stormwater harvest and reuse** to provide stormwater management (subsections 3.7 and 5.4k), based on experience and the increasing frequency with which such solutions are now being proposed. Other changes to the exhibits section are designed to ensure that plans and designs are approved based on accurate and verified site-specific infiltration-rate data and analysis (see, please, paragraphs 3.1b.ii.C and 5.4c.).

Rule M – Financial Assurances

(The only change to Rule M is discussed above, with regard to the incorporation of the chloride-management plan requirement into the rule.)

Rule N – Enforcement

Correcting an oversight from the 2014 rulemaking, RPBCWD proposes to adopt a new **enforcement rule**. The rule provides the regulated community with fair, complete, straightforward notice of the process and procedures RPBCWD will use to enforce its rule requirements and ensure compliance with permits while respecting property rights. The addition reflects the independence of the RPBCWD regulatory program, though RPBCWD will continue to rely on close working relationships with the regulatory and public works departments at each of the cities in the watershed. The rule makes clear (in section 4) that RPBCWD may recover costs of enforcement actions from private property owners.

Table 1 – Technical Advisory Committee participants

Name	Affiliation
Tom Dietrich	City of Minnetonka
Will Manchester	City of Minnetonka
Vanesa Strong	City of Chanhassen
Jennie Skancke	Department of Natural Resources
Matt Lindon	RPBCWD Citizens Advisory Committee
Mike Wanous	Carver County Soil & Water Conservation District
Masha Guzner	Carver County Planning & Water Management
Bob Bean	City of Deephaven
Joe Mulcahy	Metropolitan Council
Alyson Fauske	City of Shorewood
Bill Alms	City of Shorewood
Rod Rue	City of Eden Prairie
Dave Modrow	City of Eden Prairie
Leslie Stovring	City of Eden Prairie
Robert Ellis	City of Eden Prairie
Dan Edgerton, Matt Clark	City of Chaska
Steve Christopher	Board of Water and Soil Resources
Steve Segar	City of Bloomington
Linda Loomis	Lower Minnesota River Watershed District

RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT

RULES

~~*November 5, 2014*~~

Proposed amendments

Adopted as revised XXXX, 2018

RILEY--PURGATORY--BLUFF CREEK WATERSHED DISTRICT
BOARD OF MANAGERS

I, ~~Ken Wenel,~~_____, secretary of the Riley--Purgatory--Bluff Creek Watershed District Board of Managers, certify that the attached are true and correct copies of the rules of the Riley--Purgatory--Bluff Creek Watershed District, which were properly adopted by the Board of Managers ~~November 5, 2014~~.

_____ Date: _____

~~Ken Wenel,~~_____, Secretary

[Notary block]

TABLE OF CONTENTS

Definitions

The following definitions and acronyms apply to the District rules and accompanying guidance materials.

100-year flood elevation: The surface elevation of a waterbody or constructed stormwater facility that has a 1-percent chance of being equaled or exceeded in any given year, as shown on District floodplain maps, where available, or as calculated using a model utilizing the most recent applicable precipitation reference data as published by the National Weather Service ~~reference data~~ (e.g., Atlas 14~~).~~) or Natural Resource Conservation Service Technical Release 60 (TR-60), whichever is higher

Abstraction: Permanent retention of runoff on a site by structures and practices such as infiltration basins, evapotranspiration and capture and reuse.

Back-to-back storm events: Distinct rainfall events occurring within 24 hours of each other.

Best management practices (BMPs): Various structural and nonstructural measures taken to minimize negative effects on water resources and systems, such as ponding, street sweeping, filtration through a rain garden and infiltration, as documented in the Minnesota Pollution Control Agency's Protecting Water Quality in Urban Areas and the Minnesota Stormwater Manual.

Bioengineering: Various shoreline and streambank stabilization techniques using aquatic vegetation and native upland plants, along with techniques such as willow wattling, brush layering and willow-posts.

District: Riley-Purgatory-Bluff Creek Watershed District.

Existing conditions: Site conditions at the time of consideration of a permit application by the District, before any of the work for which a permit is sought has commenced, except that when impervious surfaces have been fully or partially removed from a previously developed parcel but no intervening use has been legally or practically established, "existing conditions" denotes the previously established developed use and condition of the parcel.

Fill: Any rock, soil, gravel, sand, debris, plant cuttings or other material placed onto land or into water.

Groundwater: Water in the interstices of rock and soil that is present at pressures greater than one atmosphere.

High-Risk Erosion Areas are specific locations in the watershed that, because of topography and soil conditions, are particularly susceptible to erosion. High-Risk Erosion Areas are specified in a map adopted by the Board of Managers and published and maintained by the District on its website at www.rpbcwd.org.

Impervious surface: Any ~~exposed~~ground surface that is or has ~~been~~become compacted or covered with a layer of material, or is likely to become compacted from expected use, such that it is or will be highly resistant to infiltration. (A boardwalk is not an impervious surface.)

Landlocked basin: A localized depression that does not have a natural outlet at or below ~~the~~its 100-year flood elevation.

Land-disturbing activity: Any alteration of the ground surface that could result, through the action of wind and/or water, in soil erosion, substantial compaction, or the movement of sediment into waters, wetlands, storm sewers, or adjacent property. Land-disturbing activity

includes but is not limited to soil stripping, clearing, grubbing, grading, excavating, filling and the storage of soil or earth materials. –Typical, routine farming operations (e.g., plowing, harvesting) are not land-disturbing activities for purposes of the rules.

Linear project: Construction or reconstruction of a public ~~road or other~~ transportation ~~route, sidewalk or trail~~improvements, or construction, repair or reconstruction of a utility or utilities ~~right of way~~in a linear corridor that is not a component of a larger development or redevelopment project.

Low floor: The lowest elevation of ~~any floor of any~~a structure~~, habitable or not~~.

Nested: A hypothetical precipitation distribution where the precipitation depths for various durations within a storm have the same exceedance probabilities. -This distribution maximizes the rainfall intensities by incorporating selected short-duration intensities within those needed for longer durations at the same probability level. As a result, the various storm durations are "nested" within a single hypothetical distribution. Nested-storm distribution (or frequency-based hyetograph) development must be completed utilizing the most recent applicable National Weather Service reference data (e.g., Atlas 14), in accordance with:

1. the alternating block methodology as outlined in Chapter 4 of the HEC-HMS Technical Reference Manual, (USACE, 2000);
2. methods in HydroCAD;
3. methods established by the Natural Resources Conservation Service; or
4. otherwise as approved by the District engineer.

(Reference: U.S. Army Corps of Engineers. 2000. Hydrologic Modeling System HEC-HMS Technical Reference Manual.)

Outfall: A constructed point source where a storm sewer system discharges to a receiving water. An outfall does not include diffuse runoff or conveyances that connect segments of the same stream or water systems (e.g., when a conveyance temporarily leaves a storm sewer system at a road crossing).

Parcel: A contiguous area of land under common ownership, designated and described in official public records and separated from other lands by its designation.

Protected wetland: A wetland, the draining, filling or excavation of which is regulated.

~~Reconstruction~~Remodeling: For non-linear projects, ~~changes~~land-disturbing modifications, including addition, expansion or other improvement to a building or buildings on a property, that ~~involves~~involve a change to the footprint of the impervious surface on the parcel.

Redevelopment: Any land-disturbing activity on an already-developed parcel or any substantial change to existing structures on a parcel.

Redoximorphic: Soil features characterized by evidence of the reduction and oxidation of iron and manganese compounds in the soil after saturation with water and desaturation.

Regulated feature: A public watercourse, public waters wetland or other protected wetland in the watershed, or any watercourse within a High-Risk Erosion Area. "Regulated feature" is a collective term, used to describe all water resources regulated under Rule D.

Rehabilitation: A maintenance project that disturbs or replaces only the existing impervious surface, does not disturb underlying soils or result in a change in the direction, peak rate, volume or water quality of runoff flows from the parcel, and does not include the addition of new impervious surface. -Full-depth reconstruction that does not disturb underlying soils and

mill and overlay of paved surfaces are rehabilitation.

Retaining wall: Vertical or nearly vertical structures constructed of mortar-rubble masonry, hand-laid rock or stone, vertical timber pilings, horizontal timber planks with piling supports, sheet pilings, poured concrete, concrete blocks, or other durable materials and constructed approximately parallel to the streambank or shoreline.

Right-of-way: Parcels of land on which a linear project is located, including adjacent area necessary for safe operation of the road, sidewalk or trail and dedicated to such use by fee ownership or other recorded or registered title interest.

Shoreline: The lateral measurement along the contour of the ordinary high water mark of waterbodies other than watercourses, and the top of the bank of the channel of watercourses, and the area waterward thereof.

Site: The location of activities that are the subject of a District permit and are under the control of the applicant.

Stream Power Index: As defined by the Minnesota Department of Agriculture, Stream Power Index is calculated: LN ((Drainage Area + 0.001) * ((Slope/100) + 0.0001)). SPI is a function of slope and tributary flow accumulation values, which can be thought of as the volume of water flowing to a particular point on the landscape. SPI represent the ability of intermittent overland flow to create erosion, but the SPI values are not differentiated based on soils type or land cover effects on runoff volume or erosion.

Structure: Any impervious building or other object that is constructed or placed on the ground and that is, or is intended, to remain in place for longer than a temporary period.

Thalweg: The line connecting the points of lowest elevation in a watercourse, channel, valley, ravine or gully.

Topsoil: The top most soil horizon which is most favorable for plant growth. It is ordinarily rich in organic matter. Topsoil shall meet the following standard.

Requirement	Range	Test Method
Material Passing ¾ sieve (19mm)	100%	ASTM D 422
Material passing No. 4 sieve	≥85%	
Clay	5% - 35%	ASTM D 422
Silt	5% - 40%	ASTM D 422
Sand	30% - 70%	ASTM D 422
Organic Matter	3% - 15%	ASTM D 2974
pH	6.1 – 7.5	ASTM G 51
Compaction	1,400 kilopascals or 200 pounds/square inch in the upper 12 inches of soil	Field test

Waterbody: A watercourse or water basin.

Water basin: An enclosed natural depression with definable banks, capable of retaining water.

Watercourse: A natural channel with definable beds and banks capable of conducting confined runoff from adjacent land.

Beyond the definitions above, words in the Riley--Purgatory--Bluff Creek Watershed District rules will be interpreted consistently with definitions in Minnesota water law (Minnesota Statutes chapters 103A,

103B, 103C, 103D, 103E, 103F and 103G). The specific definitions above will prevail in the event of a contradiction or deviation.

Acronyms

BMP – best management practice
MnRAM – Minnesota Routine Assessment Methodology for Evaluating Wetland Functions (*see* http://www.bwsr.state.mn.us/wetlands/mnram/index.html)
NGVD - national geodetic vertical datum
OHW – ordinary high water level (*see* Minn. Stat. § 103G.005, subd. 14)

Rule A – Procedural Requirements

1 Policy

1.1 Any person undertaking an activity for which a permit is required by these rules must obtain the required permit prior to commencing the activity that is regulated by the District.

1.2 The District rules will be interpreted and permit decisions will be made consistently with watershed district purposes articulated in the Minnesota Statutes section 103B.201 and 103D.201.

2 Application

2.1 An application bearing the original signature of the property owner(s) must be submitted to the District to obtain a permit under these rules. Applicants are encouraged to contact the District and/or submit preliminary plans early in the project development process for nonbinding informal review for conformity with District policies and rules.

2.2 Each substantive District rule includes application and exhibit specifications that, along with this rule, apply to the submission of applications to the District and will be utilized to make determinations of completeness under this rule.

2.3 The District will not act on an incomplete permit application. A complete permit application includes all required information, exhibits and fees and must be signed by all property owners. The District will notify an applicant if his or her application is incomplete within fifteen (15) business days of receipt of the application. Required information includes, but is not limited to:

a the name, address, and telephone number(s) of all property owners;

b the name, address and telephone number(s) for all contractors, if known, undertaking land-disturbing activities as part of the proposed project; and

c a statement granting the District and its authorized representatives access to the site for inspection purposes.

2.4 Application forms and guidance materials may be obtained from the District office or downloaded from the District web site at www.rpbcwd.org.

2.5 Emergency activity undertaken by a public entity immediately necessary to protect life or prevent substantial physical harm to persons or property may be the subject of an application submitted within 30 days of commencement of such work. Emergency activity must be timely brought into conformance with all applicable District standards and criteria.

3 Conditional approval

The District may conditionally approve an application, but the permit will not be issued until all conditions to the approval are satisfied. All conditions must be satisfied within 12 months of the date of conditional approval, and approval will expire if conditions are not timely satisfied.

4 Reconsideration

An applicant aggrieved by a condition or conditions on approval of an application or the specific grounds for denial of an application may suspend the District's decision on the application by filing a notice of reconsideration with the District.

4.1 Notice of reconsideration must be filed with the District within 10 business days of the decision and at least one day before the date by which a decision on the application must be issued to comply with Minnesota Statutes section 15.99. The notice must be submitted on a form provided by the District that includes the applicant's concurrence in an extension of the time for District permit action under section 15.99 and must include a statement of the specific conditions and findings to be reconsidered.

4.2 The District will schedule reconsideration of the matter by the Board of Managers and provide notice of the date of reconsideration to the applicant at least 30 days in advance.

4.3 No later than 15 days prior to the date of reconsideration, the applicant may supplement the established permit-review record with any additional exhibits, documentation or legal arguments the applicant wishes to submit.

4.4 In accordance with Minnesota Statutes section 103D.345, subdivision 2, an applicant will be responsible for the analytical costs incurred by the District for purposes of the reconsideration, except no costs will be recovered for reconsideration of a decision made on an application made by a local, state or federal governmental body.

4.5 Upon the applicant's filing of a notice of reconsideration, the underlying permit decision will be suspended until the District renders a determination on the reconsideration and the activities that are the subject of the application may not be undertaken before the District renders a final decision on reconsideration.

4.6 Absent the timely filing of a notice of reconsideration of a condition or the grounds for denial, the District's decision on the application is final at issuance. A decision on reconsideration will constitute the District's final decision on the application.

5 Permit assignment and renewal

A permit is valid for one year from the date the permit is approved, with or without conditions, unless specified otherwise by the District on approval or the permit is suspended or revoked. To renew or transfer a permit or conditional approval of a permit, the permittee must notify the District in writing prior to the permit expiration date and provide an explanation for the renewal or transfer request. The District may impose different or additional conditions on a renewal or deny the renewal in the event of a material change in circumstances, except that on the first renewal, a permit will not be subject to additional or different requirements solely because of a change in District rules. New or revised rule requirements will not be imposed on renewal of a permit where the permittee has made substantial progress toward completion of the permitted

work. If the activities subject to the permit have not substantially commenced, no more than one renewal may be granted. An applicant wishing to continue to pursue a project for which permit approval has expired must reapply for a permit from the District and pay applicable fees.

A permittee may assign a permit to another party only upon approval of the District, which will be granted if:

5.1 the proposed assignee agrees in writing to assume responsibility for compliance with all terms, conditions and obligations of the permit as issued;

5.2 there are no pending violations of the permit or conditions of approval; and

5.3 the proposed assignee has provided any required financial assurance necessary to secure performance of the permit.

The District may impose different or additional conditions on the transfer of a permit or deny the transfer if it finds that the proposed transferee has not demonstrated the ability to perform the work under the terms of the permit as issued. Permit transfer does not extend the permit term.

6 Suspension or revocation

The District may suspend or revoke a permit issued under these rules wherever the permit is issued on the basis of incorrect or erroneous information supplied to the District by the applicant, or if the preliminary and final subdivision approval received from a municipality or county is not consistent with the conditions of the permit.

Rule B – Floodplain Management and Drainage Alterations

1 Policy

It is the policy of the Riley–-Purgatory–-Bluff Creek Watershed District Board of Managers to regulate to control floodwaters, ensure the preservation of the natural function of floodplains as floodwater storage areas, maintain no net loss of floodplain storage to accommodate 100-year flood storage volumes and maximize upstream storage and infiltration of floodwaters.

2 Regulation

A permit is required for:

2.1 Any land-disturbing activities or filling of land below the 100-year flood elevation of a waterbody or any filling of land below the 100-year flood elevation of a constructed stormwater facility in the watershed.

2.2 Any alteration of surface water flows below the 100-year flood elevation of a waterbody by changing land contours, diverting or obstructing surface or channel flow, or creating a basin outlet.

3 Criteria for floodplain and drainage alterations

3.1 The low floor elevation of all new and reconstructed structures ~~will be constructed at a minimum of two feet above any applicable 100-year flood elevation. Within landlocked basins, the low floor elevation of all new and reconstructed structures will be constructed at an elevation one foot above the surface overflow elevation or the calculated high water level from back to back 100 year, 24 hour storm events or the 100 year, 10 day snowmelt, whichever is higher.~~must be constructed in accordance with Rule J, subsection 3.6. .

3.2 Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory storage is provided within the same floodplain and:

a at the same elevation ~~(+/-~~+/- 1 foot~~) and within~~ for fill in the floodplain of ~~the same waterbody is provided.~~ a watercourse;

b at or below the same elevation for fill in the floodplain of a constructed stormwater facility or water basin.

Creation of floodplain storage capacity to offset fill must occur within the original permit term. If offsetting storage capacity will be provided off site, it ~~will~~must be created before any floodplain filling for the project will be allowed.

3.3 The District will issue a permit to alter surface flows only if it finds that the alteration will not have an adverse offsite impact and will not adversely affect flood risk, basin or channel stability, groundwater hydrology, stream base flow, water quality or aquatic or riparian habitat.

3.4 Creekside restrictions.

a No enclosed structure may be placed, constructed or reconstructed ~~and no surface may be paved~~ within 100 feet of the centerline of ~~any~~a watercourse~~,~~

~~except that this provision does; and~~

b No impervious surface may be created or re-created within 50 feet of the centerline of water watercourse.

These restrictions do not apply to:

a Bridges, culverts and other structures and associated impervious surface regulated under Rule G – Waterbody Crossings and Structures;

b Trails 10 feet wide or less, designed primarily for nonmotorized use.

~~3.5~~3.5 Permit approval requires submission of an erosion prevention and sediment control plan that meets the applicable standards of Rule C, section 3.

3.6 Activities subject to this rule must be conducted so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible.

4 Required information and exhibits

The following exhibits must accompany the permit application~~, including but not limited to one full size plan set (22 inches by 34 inches), one plan set reduced to a maximum size of 11 inches by 17 inches, and electronic files in a format aceeptable to the District~~:

~~4.1~~4.1 One 11 inch-by-17 inch plan set , and electronic files in a format acceptable to the District, as well as a plan set 22 inches by 34 inches if requested by the District.

4.2 Site plan showing property lines, delineation of the work area, existing elevation contours of the work area, ordinary high water level or normal water elevation and 100-year flood elevation. All elevations must be reduced to national geodetic vertical datum (NGVD; 1929 datum).

4.~~2~~3 Grading plan showing any proposed elevation changes.

4.~~3~~4 Preliminary plat of any proposed land development.

~~4.4~~.5 Determination by a licensed civil engineer or registered qualified hydrologist of the 100-year flood elevation for the parcel before and after the project.

4.~~5~~6 Computation by a professional engineer of cut, fill and change in water storage capacity resulting from proposed grading.

4.~~6~~7 Erosion-control plan.

4.~~7~~8 Soil boring results, if requested by the District ~~engineer~~.

4.~~8~~9 Documentation that drainage and flowage easements over all land below the 100-year flood elevation have been conveyed to the municipality with jurisdiction~~.~~.

5 Exceptions

No floodplain and drainage permit from the District is required:

5.1 If all of the following conditions exist:

a The 100-year flood elevation of a water basin is entirely within a municipality;

b the water basin is landlocked;

c the municipality has adopted an ordinance regulating floodplain

encroachment; and

d the proposed project is entirely within the drainage area of the water basin.

Rule C – Erosion Prevention and Sediment Control

1 Policy

It is the policy of the District to ensure management of land disturbances to:

1.1 Improve water quality to fully support swimming in designated lakes and to fully support designated uses for waterbodies.

1.2 Preserve vegetation and habitat important to fish, waterfowl and other wildlife while also minimizing negative impacts of erosion.

1.3 Alleviate identified erosion problems.

1.4 Minimize the duration and intensity of soil and cover disturbances.

1.5 Require local governments and developers to manage runoff effectively to minimize water quality impacts from new development, redevelopment and other land-disturbing activities.

1.6 Encourage low-impact development techniques and approaches.

1.7 Minimize compaction of soil from land-disturbing activities and encourage decompaction of soil compacted by land-disturbing activities.

2 Regulation

2.1 An erosion prevention and sediment control permit must be obtained for any land-disturbing activity that will involve:

a Placement, alteration or removal of 50 cubic yards or more of earth; or

b Alteration or removal of 5,000 square feet or more of land-surface area or vegetation.

2.2 A permit from the District is not required to create, restore or improve a wetland and/or buffer pursuant to a District-approved natural resources creation, restoration or management plan.

3 Criteria

3.1 Permit approval requires preparation of an erosion prevention and sediment control plan that provides:

a protection of natural topography and soil conditions, including retention onsite of native topsoil to the greatest extent possible;

b temporary erosion prevention and sediment control practices such as silt fencing, fiber logs, inlet protection, rock construction entrances, temporary seeding, vegetative buffer strips, erosion control blanketing, mulching, floatation silt curtains, supplemental erosion prevention sediment control upgradient of waterbodies ~~and~~or other practices as specified by the District and consistent with the Minnesota Pollution Control Agency's "Protecting Water Quality in Urban Areas," as amended or updated, and the "Minnesota Stormwater Manual," as amended or updated;

c minimization of the disturbance intensity and duration, including phasing of disturbance to minimize quantity of disturbed area at any one time:

d additional measures, such as hydraulic mulching and other practices as specified by the District, on slopes of 3:1 (H:V) or steeper to provide adequate stabilization;

e protection of stormwater facilities during construction;

f final site stabilization measures, including permanent stabilization of all areas subject to disturbance, specifying that at least six inches of topsoil or organic matter be spread and incorporated into the underlying soil during final site treatment wherever topsoil has been removed;

g proper management of all construction site waste, such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site.

3.2 Site stabilization

a All temporary erosion prevention and sediment control BMPs must be maintained until completion of construction and vegetation is established sufficiently to ensure stability of the site, as determined by the District.

b All temporary erosion prevention and sediment control BMPs must be removed upon final stabilization.

c Soil surfaces compacted during construction and remaining pervious upon completion of construction must be ~~decompacted through~~to achieve a soil ~~amendment and/or ripping to a depth~~compaction testing pressure of ~~18~~less than 1,400 kilopascals or 200 pounds per square inch in the upper 12 inches ~~(8 inches for single-family home properties) while taking care to avoid~~of soil. In addition, utilities, tree roots and other existing vegetation ~~prior to~~must be protected until final revegetation or other stabilization of the site.

d All disturbed areas must be stabilized within ~~7~~seven calendar days after land-disturbing work has temporarily or permanently ceased on a property that drains to an impaired water, within 14 days elsewhere.

3.3 **Inspection and maintenance.** The permit holder will be responsible for the inspection, maintenance and effectiveness of all erosion prevention and sediment control facilities, features and techniques until final site stabilization. The permittee must, at a minimum, inspect, maintain and repair all disturbed surfaces and all erosion prevention and sediment control facilities and soil stabilization measures every day work is performed on the site and at least weekly until land-disturbing activity has ceased. Thereafter, the permittee must perform these responsibilities at least weekly until vegetative cover is established. The permittee will maintain a log of activities under this section for inspection by the District on request. Between November 15 and snowmelt, and if site work ceases before completion for more than 14 consecutive days, the weekly inspection requirement may be reduced to monthly if the site is managed such that:

a Exposed soils are stabilized with established vegetation, straw or mulch, matting, rock, rolled erosion control product or other approved material. Seeding is encouraged, but is not alone sufficient.

b Temporary and permanent ponds and sediment traps are graded to capacity before spring snowmelt. This does not include infiltration/filtration facilities, which must be kept free of sediment until final site stabilization.

c Sediment barriers are properly installed at necessary perimeter and sensitive locations.

d Slopes and grades are properly stabilized with approved methods. Rolled erosion control products must be used on slopes of 3:1 (H:V) or greater and where erosion conditions dictate.

e Stockpiled soils and other materials subject to erosion are protected by established vegetation, anchored straw or mulch, rolled erosion control materials or other durable covering preventing movement of eroded materials.

f All construction entrances are properly stabilized.

g Snow management protects erosion prevention and sediment control measures.

4 Required information and exhibits

The following exhibits must accompany the permit application~~, including but not limited to one full-size plan set (22 inches by 34 inches), one plan set reduced to a maximum size of 11 inches by 17 inches) and electronic files in a format acceptable to the District~~:

~~4.1~~4.1 One 11 inch-by-17 inch plan set , and electronic files in a format acceptable to the District, as well as a plan set 22 inches by 34 inches if requested by the District.

4.2 A narrative statement describing the proposed site work.

4.23 An erosion and sediment-control plan including:

a name, address and phone number of the individual who will remain liable to the District for performance under this rule and maintenance of erosion and sediment-control measures from the time the permitted activities commence until vegetative cover is established

b topographic maps of existing and proposed conditions that clearly indicate all hydrologic features and areas where grading will expose soils to erosive conditions, site property boundaries, as well as the flow direction of all runoff and run-on;

i single-family home construction or reconstruction projects may comply with this provision by providing aerial imagery or an oblique map acceptable to the District;

c for all projects except construction or reconstruction of a single-family home, tabulation of the construction implementation schedule;

d clear identification of all temporary erosion prevention and sediment control measures that will remain in place until vegetation is established;

e clear identification of all permanent erosion control and soil stabilization measures, including their locations;

f clear identification of staging areas, as applicable;

g delineation of proposed changes to any floodplain, wetland or wetland buffer;

h documentation as to the status of the project's National Pollutant Discharge Elimination System construction stormwater permit and a copy of the project's Stormwater Pollution Prevention Plan, if applicable.

i clear identification of locations where compaction is to be prevented and/or mitigated.

Rule D – Wetland and Creek Buffers

1 Policy

It is the policy of the Board of Managers to ensure the preservation of the natural resources, recreational, habitat, water treatment and water storage functions of water resources. This rule is intended to:

1.1 Support municipal enforcement of the Wetland Conservation Act and the policy of no net loss in the extent, quality and ecological diversity of existing wetlands in the watershed.

1.2 Preserve vegetation and habitat important to fish, waterfowl and other wildlife while also minimizing negative impacts of erosion.

1.3 Require buffers around wetlands, water basins and watercourses affected by land-disturbing activities.

1.4 Ensure the preservation of the natural resources, habitat, water treatment and water storage functions of wetlands, water basins and watercourses.

1.5 Maintain wetland integrity and prevent fragmentation of wetlands.

1.6 Prevent erosion of shorelines and streambanks, and foster the use of natural materials for the protection, maintenance and restoration of shorelines and streambanks.

2 Regulation

2.1 Compliance with the criteria in section 3 of this rule is required for any activity that requires a permit under ~~the~~ Rule B – Floodplain Management and Drainage Alterations, Rule E – Dredging and Sediment Removal, Rule F – Shoreline and Streambank Stabilization, except sand blanketing, Rule G – Waterbody Crossings and Structures or Rule J – Stormwater Management ~~rules~~. The requirements of the rule apply to property:

a encompassing or adjacent to a public watercourse, public waters wetland or other protected wetland in the watershed; or

b encompassing or adjacent to any other watercourse within a High-Risk Erosion Area, unless the applicant submits data demonstrating a Stream Power Index rating of 3 or less and an absence of any significant existing erosion.

2.2 The requirements of this rule do not apply to incidental wetlands or to wetlands that are disturbed solely by utility improvements or repairs that are the subject of a no-loss determination from the relevant Wetland Conservation Act Local Government Unit.

3 Criteria

3.1 **Buffer** ~~width. area.~~ Buffer must be created or maintained ~~on any regulated feature:~~

a Around a wetland disturbed by land-disturbing activity regulated by the

District;

b on the edge of a wetland that is downgradient from land-disturbing activity regulated by the District;

c On streambank downgradient from the land-disturbing activity regulated by the District and ~~on any regulated feature downgradient from the activity,~~50 feet from each of the upstream and downstream extent of the disturbance.

3.2 **Buffer width.** Buffer must be created or maintained upgradient of regulated features in accordance with the following criteria:

a Subject to paragraphs 3.~~1b~~2b through ~~e~~f, buffers must extend:

i An average of 80 feet from the delineated edge of an exceptional value wetland,[1] minimum 40 feet;

ii An average of 60 feet from the delineated edge of a high value wetland, minimum 30 feet;

iii an average 40 feet from the delineated edge of a medium value wetland,[1] minimum 20 feet;

iv an average 20 feet from the delineated edge of a low value wetland,[1] minimum 10 feet;

v an average of 50 feet from the centerline of a public waters watercourse, minimum 30 feet;

vi an average of 50 feet from the thalweg of any watercourse within a High-Risk Erosion Area, minimum 30 feet.

~~b The actual width of buffer required for a particular project may be reduced from the applicable width in paragraph a as follows:~~

~~i For every 3 percent decrease in average buffer slope from 18 percent, the average buffer width may be reduced 1 foot.~~

~~ii For every grade of Hydrologic Soil Group above Type D for the predominant buffer soil condition, the average buffer width may be reduced 1 foot.~~

~~c Steep slopes. Paragraph b notwithstanding, where~~b Steep slopes. Where a buffer encompasses all or part of a slope averaging 18 percent or greater over a distance of 50 feet or more upgradient of the regulated feature, calculated using a reasonably precise topographic surface model, the buffer will extend to the width specified under section 3.~~1a~~2a or to the top of the slope, whichever is greater. An existing contour alteration or artificial structure on a slope constitutes a break in slope only if it will indefinitely dissipate upgradient runoff velocity and trap upgradient pollutant loadings.

~~d~~c **Existing single-family residential properties:** Paragraphs a ~~through e~~and b do not apply. When required on an existing single-family home property, buffer must extend an average of 20 feet from the delineated edge of a wetland or OHW of a watercourse, minimum 10 feet.

---

1 Wetland values will be determined in accordance with Appendix D1.

~~e~~d Buffer averaging. Buffer width may vary, provided that the minimum buffer width is maintained at all points, there is no reduction in total buffer area, and the buffer provides wetland and habitat protection at least equivalent to a buffer of uniform width. Buffer wider than 200 percent of the applicable width calculated in accordance with above provisions will be excluded from the buffer-averaging calculation. Buffer width may not be averaged on a steep slope.

~~f~~e Buffer is only required on the property owned by the applicant that is the subject of the District permit, and is required where the regulated feature is either on or within the applicable buffer width of the subject property.

~~g~~f Buffer required for linear projects will be limited in width to the extent of available right-of-way.

3.23 Buffer areas must be planted with native vegetation and maintained to retain natural resources and ecological value. Existing buffer areas preserved in compliance with this rule must be managed in a naturalized condition to encourage growth of native vegetation and eliminate invasive species. Buffer vegetation must not be cultivated, cropped, pastured, mowed, fertilized, subject to the placement of mulch or yard waste, or otherwise disturbed, except for periodic cutting or burning that promotes the health of the buffer, actions to address disease or invasive species, mowing for purposes of public safety, temporary disturbance for placement or repair of buried utilities, or other actions to maintain or improve buffer quality and performance, each as approved by the District in advance in writing or when implemented pursuant to a written maintenance plan approved by the District.

a Diseased, noxious, invasive or otherwise hazardous trees or vegetation may be selectively removed from buffer areas and trees may be selectively pruned to maintain health.

b Pesticides and herbicides may be used in accordance with Minnesota Department of Agriculture rules and guidelines.

c No fill, debris or other material will be placed within a buffer.

d No structure or impervious cover (hard surface) may be created within a buffer area, except that boardwalks, sidewalks and trails designed for nonmotorized use, and stormwater management facilities may be located within a buffer area as long as the minimum buffer width is maintained from the regulated feature and average buffer width is maintained, except as allowed under paragraph 3.~~1~~e3e of this rule. Plans and specifications must be approved by the District prior to construction.

i Hydrants, utility manholes, piers, docks, canoe racks, information kiosks, signage, retaining walls and benches may be located within a buffer in a public park.

e A pervious path or boardwalk, not more than 12 feet wide, may be maintained to provide access to a regulated feature. Access paths or boardwalks will not be located where or constructed such that concentrated

runoff will flow to the regulated feature.

3.~~3~~4 Buffer will be indicated by permanent, free-standing markers at the buffer's upland edge~~,~~ installed in accordance with a plan and specifications providing:

a Installation date, which must be set to ensure protection of buffer area during and after land-disturbing activities;

b text in material conformity with a design and text provided by the District. ~~A marker will be placed~~;

c location(s) for markers, at a minimum along each lot line, with additional markers at an interval of no more than 200 feet. ~~If a District permit is sought for a subdivision, the monumentation requirement will apply to~~ and, for subdivisions, on each lot of record to be created.

On public land or right-of-way, the monumentation requirement may be satisfied by the use of a marker flush to the ground or breakaway markers of durable material.

3.~~4~~5 Before any work subject to District permit requirements commences, buffer areas and maintenance requirements must be documented in a declaration or other document approved by the District and recorded in the office of the county recorder or registrar. On public land or right-of-way, buffer areas and maintenance requirements may be documented in a written agreement with the District in lieu of a recorded document.

3.~~5~~6 In establishing buffer pursuant to this rule, the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) must be minimized to the maximum extent possible.

~~4~~5 Temporary ~~Alterations~~alterations

Temporary alteration of buffer areas permitted under this rule or in writing by the District must comport with the requirements of this section.

~~4~~5.1 Compliance with District Rule C – Erosion Prevention and Sediment Control is required, irrespective of the area or volume of earth to be disturbed.

~~4~~5.2 Buffer zones and the location and extent of vegetation disturbance will be delineated on the erosion control plan.

~~4~~5.3 Alterations must be designed and conducted to ensure only the smallest amount of disturbed ground is exposed for the shortest time possible. Mulches or similar materials must be used for temporary soil coverage and permanent native vegetation established as soon as possible.

~~4~~5.4 Fill or excavated material may not be placed to create an unstable slope.

~~5~~6 Roads and ~~Utilities~~utilities

A structure, impervious cover or right-of-way maintained permanently in conjunction with a crossing of a waterbody or wetland may be constructed and maintained in buffer area that would otherwise be required under this rule. The structure, impervious cover or right-of-way must be designed to minimize the area of permanent vegetative disturbance. Minimization includes, but is not limited to, approach roads and rights-of-

way that are perpendicular to the crossing and of a minimum width consistent with use and maintenance access needs.

~~5~~6.1 All work will be conducted in accordance with section 4 of this rule.

~~6~~7 **Shoreline or ~~Streambank Improvements~~**streambank improvements

A shoreline or streambank improvement subject to District Rule F, including a sand blanket, is excepted from the prohibitions of subsection 3.2, provided the improvement complies with District Rule F – Shoreline and Streambank Stabilization. The applicable buffer width may overlap shoreline or streambank improvements other than a sand blanket.

~~7~~8 **Required information and exhibits**

The following exhibits ~~will~~must accompany the permit application~~, including but not limited to one full size~~:

8.1 One 11 inch-by-17 inch plan set ~~(22 inches by 34 inches), one plan set reduced to a maximum size of 11 inches by 17 inches),~~ and electronic files in a format acceptable to the District~~:~~, as well as a plan set 22 inches by 34 inches if requested by the District.

~~7.1~~8.2 For work on any property subject to this rule:

a A scaled site plan showing existing conditions, including the following elements:
   i Topographic contours at two-foot intervals;
   ii Existing streets, roads and trails;
   iii Existing structures and facilities;
   iv Extent of regulated feature as delineated in the field;
   v Location of existing trees and tree masses;
   vi Soil types and locations.

b A scaled proposed site plan showing proposed development that include the following elements:
   i Topographic contours showing finished grade at two-foot intervals;
   ii Proposed streets, parking, trails and sidewalks;
   iii Location of proposed structures and facilities;
   iv Extent of regulated feature and associated buffers as delineated in the field;
   v Location of major landscaping including those existing trees and tree masses to be retained.
   vi Property lines and corners and delineation of lands under ownership of the applicant
   vii Street rights-of-way;
   viii Utility easements;

~~7~~8.2 For projects on properties on which wetlands are located, exhibits must be submitted as follows:

a For existing single-family home properties encompassing all or part of a wetland: A wetland delineation.

b For all other properties encompassing all or part of a wetland: A wetland delineation, type determination, and function and values assessment of any regulated wetland using the Minnesota Routine Assessment Method (MnRAM) or another wetlands-assessment method approved by the District. The delineation and function and values assessment must be conducted by a certified wetland delineator and supported by the following documentation:

i Identification of the methods used;

ii Identification of presence or absence of normal circumstances or problem conditions;

iii Wetland data sheets, or a report, for each sample site, referenced to the location shown on the delineation map. In each data sheet/report applicant must provide the reasoning for satisfying, or not satisfying each of the technical criteria and why the area is or is not a wetland;

iv A delineation map showing the size, locations, configuration and boundaries of wetlands in relation to identifiable physical characteristics, such as roads, fence lines, waterways or other identifiable features;

v The location of all sample sites and stakes/flags must be accurately shown on the delineation map.

~~7~~8.3 For properties adjacent to but not encompassing any portion of a wetland, the District will determine the need for wetland buffer and applicable buffer width using best available data, including any wetland functions and values data submitted by the applicant.

Appendix D1 – Wetlands Definitions

"Exceptional value wetlands" are those meeting one or more of the following rating levels, as determined by application of the current edition of the Minnesota Routine Assessment Method (MnRAM) or another wetlands-assessment method approved by the District.

Function or Value	Rating
Vegetative Diversity	Exceptional
Wildlife Habitat	Exceptional
Amphibian Habitat AND Vegetative Diversity	High High
Fish Habitat	Exceptional
Shoreline Habitat	High
Aesthetics/education/recreation/cultural AND Wildlife Habitat	Exceptional High
Stormwater Sensitivity AND Vegetative Diversity	Exceptional Medium or greater
Vegetative Diversity AND Maintenance of Hydrologic Regime	High High

"High value wetlands" are those meeting one or more of the following rating levels, as determined by application of the current edition of MnRAM or another wetlands-assessment method approved by the District.

Function or Value	Rating
Vegetative Diversity	High
Wildlife Habitat	High
Amphibian Habitat	High
Fish Habitat	High
Shoreline Protection	Medium
Aesthetics/education/recreation/cultural AND Wildlife Habitat	High Medium
Stormwater Sensitivity AND Vegetative Diversity	High Medium or greater
Vegetative Diversity AND Maintenance of Hydrologic Regime	Medium High or greater

"Medium value wetlands" are those that do not qualify as high value wetlands but that meet one or more of the following rating levels, as determined by application of the current edition of MnRAM or another wetlands-assessment method approved by the District.

Function or Value	Rating
Vegetative Diversity	Medium
Wildlife Habitat	Medium
Amphibian Habitat AND Vegetative Diversity	Medium Medium
Fish Habitat	Medium
Shoreline Habitat	Low
Aesthetics/education/recreation/cultural AND Wildlife Habitat	Medium Low
Stormwater Sensitivity	Medium

"Low value wetlands" are those that do not qualify as "exceptional," "high," or "medium" wetlands.

Rule E – Dredging and Sediment Removal

1 Policy

It is the policy of the Board of Managers to regulate the removal of sediment from public waters to mitigate the impacts of stormwater sediment transport and deposition.

2 Regulation

No person will dredge or otherwise remove 1 cubic yard or more of sediment from the beds, banks or shores of any public water by any means without first securing a permit from the District.

2.1 Dredging or sediment removal will be permitted only:

- a To maintain, or remove sediment from, an existing channel, subject to such further limitations on method or extent of dredging as this rule may provide;
- b To implement or maintain an existing legal right of navigational access;
- c To remove sediment to eliminate a source of nutrients, pollutants or contaminants;
- d To improve the public recreational, wildlife or fisheries resources of surface waters; or
- e For other actions by public entities for public purposes.

2.2 No District permit under this rule is required for activities conducted pursuant to a project-specific permit from the state Department of Natural Resources, but the District buffer requirements apply to activity that would otherwise require a District permit.

3 Criteria

3.1 Dredging or sediment removal will be permitted upon submission of exhibits demonstrating that the dredging or sediment removal:

- a Is the minimal-impact solution to achieve reasonable navigational access, when proposed for navigation purposes;
- b Will not alter the original alignment, slope or cross-section of the beds, banks or shores of any public water;
- c Will not occur above the ordinary high water level or into the upland adjacent to the lake or watercourse;
- d Will not enlarge a natural watercourse or basin landward or create a channel to connect adjacent backwater areas for navigational purposes;
- e Will not cause increased seepage or result in subsurface drainage;
- f Is not proposed for a location where any portion of the area to be dredged contains any slope steeper than 3:1 (H:V) in a marina or channel, or steeper than 10:1 (H:V) for an area adjoining residential lakeshore; and
- g Is not proposed for a location where adverse ecological impact to a high-quality wetland or other ecologically sensitive area cannot be minimized or mitigated.

3.2 Dredged or excavated sediment must be placed at a location:

a above the ordinary high water level of a public water, public water wetland or wetland subject to the Wetland Conservation Act;
b Not in a floodplain; or
c Not subject to erosion or likely to cause ~~redeposition~~re-deposition of the sediment to an adjacent waterbody, stormwater facility or storm sewer.

3.3 Degradation or erosion of the banks or bed of the subject waterbody by entry of equipment must be avoided, and the banks or bed of the subject waterbody must be restored and stabilized at the conclusion of the permitted work and prior to the removal of floatation silt curtain, if required.

3.4 Where determined necessary by the District to protect water quality, a floatation silt curtain will be placed around the sediment-removal site and maintained for the duration of the project.

3.5 No activity affecting the bed of a public water may be conducted between March 15 and June 15 on watercourses, or between April 1 and June 30 on all other public water waterbodies, to minimize impacts on fish spawning and migration.

3.6 Dredging must be conducted so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible.

4 Required information and exhibits

The following exhibits will accompany the permit application~~, including but not limited to one full-size plan set (22 inches by 34 inches), one plan set reduced to a maximum size of 11 inches by 17 inches, and electronic files in a format acceptable to the District~~:

~~4.1~~4.1 One 11 inch-by-17 inch plan set, and electronic files in a format acceptable to the District, as well as a plan set 22 inches by 34 inches if requested by the District.

4.2 A site plan, showing:
a Delineation of the work area;
b Property lines;
c Ordinary high water elevation; and
d 100-year flood elevation.

4.3 Profile, cross sections and/or topographic contours (at intervals of no more than 1 foot) showing existing and proposed elevations and proposed side slopes in the work area.

4.4 In the case of projects using hydraulic means of sediment removal and onsite spoil containment, the applicant will provide:
a Cross-section of the proposed dike;
b Stage/storage volume relationship for the proposed spoil containment area;
c Detail of any proposed outlet structure, showing size, description and invert elevation;
d Stage/discharge relationship for any proposed outlet structure from the spoil containment area; and
e Site plan showing the locations of any proposed outlet structure and emergency overflow from the spoil containment area.

4.~~4~~5 A site plan showing the proposed location of floating silt curtain(s).

4.~~5~~6 Supporting data:

a Description and volume computation of material to be removed;

b Description of equipment to be used;

c Construction schedule;

d Location map of spoil containment area;

e Erosion control plan for containment area;

f Restoration plan for any proposed permanent on-site spoil containment site showing final grades, removal of control structure, and a description of how and when the site will be restored, covered or revegetated after construction.

g Detail of any proposed floating silt curtain including specifications.

5 Fast-~~Track Public Project Permit~~track public project permit

A public entity may obtain a permit for removal of between 1 and 20 cubic yards of sediment from a public waterbody at a stormwater system outlet or similar structure on notice to the District at least 48 hours in advance, including location of the removal. The removal must comply with all criteria in section 3 of this rule.

Rule F – Shoreline and Streambank Stabilization

1 Policy

It is the policy of the Board of Managers to prevent erosion of shorelines and streambanks, and to foster the use of natural materials and bioengineering for the maintenance and restoration of shorelines.

2 Regulation

A permit from the District is required to install or maintain an improvement to stabilize a shoreline or streambank, including but not limited to riprap, a bioengineered installation, a sand blanket or a retaining wall, on any watercourse or a public water. Maintenance of an existing stabilization improvement may be approved under the fast-track application provisions in subsection 3.7 below.

2.1 No District permit under this rule is required for activities conducted pursuant to a project-specific permit from the state Department of Natural Resources, but the District buffer requirements apply to activity that would otherwise require a District permit.

~~2.2 No permit under this rule is required for maintenance of an existing shoreline or streambank improvement that involves in-kind replacement or restoration of the improvement in compliance with the criteria in this rule without addition of new material or structural change to the improvement.~~

3 Criteria

3.1 An applicant for a permit under this rule must demonstrate a need to prevent erosion or restore an eroded shoreline,[2] unless the proposed improvement is ~~part of a public project~~ designed to restore natural shoreline.

3.2 **Sequencing.** ~~-~~Stabilization practices must be consistent with the erosion intensity ~~and~~/or ~~sheer~~shear stress rating calculated for the property proposed to be stabilized. ~~—~~The District will approve proposed stabilization practices in accordance with the ~~following~~applicable sequencing priority:

a ~~An applicant must first assess whether maintenance or restoration of shoreline can be accomplished using bioengineering.~~

b ~~If the~~Shoreline **erosion intensity** ~~or shear stress~~ **calculation** ~~demonstrates that bioengineering cannot provide~~. Applications for shoreline stabilization must include a ~~stable~~completed RPBCWD Erosion Intensity Scoresheet[3] to

---

[2] All references to "shoreline" in these rules should be read to refer to both shoreline and streambank, except where context clearly requires distinction between the two.

[3] The Erosion Intensity Scoresheet is incorporated into and a part of these rules. It may be obtained from the District office or the permitting section of the District website: www.RPBCWD.org. The website

determine the erosive energy ranking for the site (low, medium, high). The proposed **shoreline**~~, a combination of riprap and bioengineering may be used to restore or maintain~~ stabilization practice must be consistent with the **shoreline** erosion energy rating calculated.

i ~~c~~ ~~If~~Low-energy site means a site where **the erosion intensity** ~~or~~score is 47 or less. Low energy shorelines may be stabilized using bioengineering stabilization practices.

ii Medium-energy site means a site where the erosion intensity score is 48 to 67. Medium energy shorelines may be stabilized using a combination bioengineering and vegetated riprap stabilization practices.

iii High-energy site means a site where the erosion intensity score is greater than 67. High energy sites may be stabilized with riprap and vegetated riprap practices.

b **Streambank shear stress calculation.** Applications for streambank stabilization must include a **shear stress calculation** ~~demonstrates that~~for the site.[4] The proposed streambank stabilization practice must be consistent with the shear stress calculated.

i Low energy streambanks are those where the shear stress calculated is less than or equal to 2.5 pounds per square foot and may be stabilized using bioengineering practices.

~~ii~~ Medium energy streambanks are those where the shear stress calculated is between 2.5 and 5 pounds per square foot and may be stabilized using **a combination of riprap and bioengineering** ~~cannot provide a stable shoreline, riprap may be used to restore or maintain shoreline~~.

iii High energy streambanks are those where the shear stress calculated is greater than 5 pounds per square foot and may be stabilized using riprap and vegetated riprap.

c **Design flexibility.** The District may approve alternative stabilization techniques if the applicant provides sufficient evidence from an engineer registered in Minnesota to demonstrate that the proposed stabilization practice represents the minimal-impact solution with respect to all other reasonable alternatives. A detailed alternatives analysis must be provided .

---

also provides guidance on how to complete the scoresheet. The scoresheet may be periodically updated, on approval of the RPBCWD Board of Managers, to account for improved understanding of shoreline-erosion factors . ()

[4] Shear stress must be calculated in a manner consistent with the Natural Resources Conservation Service's National Engineering Handbook (including Technical Supplement 14I: Streambank Soil Bioengineering); Stability Thresholds for Stream Restoration Materials published by the U.S. Army Corps of Engineers; NRCS Engineering Field Handbook Streambank and Shoreline Protection (Chapter 16); or Wisconsin Supplement Engineering Field Handbook Chapter 16 Streambank and Shoreline Protection. The RPBCWD website – www.rpbcwd.org – provides guidance on how to calculate shear stress.

3.3 **Design** criteria.

~~a~~a Vegetative, bioengineered and hard-armored stabilization.

i Live plantings ~~incorporated in shoreline bioengineering~~ must be native aquatic vegetation and/or native upland plants.

ii The finished, stabilized slope of any shoreline will not be steeper than 3:1 (horizontal to vertical) waterward of the OHW except where necessary:

(a). to match existing slopes and certified by registered professional engineer for continued slope stability, or;

(b) for bridges, culverts and other structures regulated under Rule G – Waterbody Crossings and Structures.

iii Horizontal encroachment from a shoreline will be the minimal amount necessary to permanently stabilize the shoreline and will not unduly interfere with water flow or navigation. No riprap or filter material may be placed more than 6 feet waterward of the OHW. Streambank riprap may not reduce the cross-sectional area of the channel or result in a stage increase at or upstream of the installation.

iv The design of any shoreline erosion protection will reflect the engineering properties of the underlying soils and any soil corrections or reinforcements necessary. The design will conform to engineering principles for dispersion of wave energy and resistance to deformation from ice pressures and movement, considering prevailing winds, fetch and other factors that induce wave energy.

b Riprap.

i Riprap to be used in shoreline erosion protection must be sized appropriately in relation to the erosion potential of the wave or current action of the particular waterbody, but in no case will the riprap rock average less than six inches in diameter or more than 30 inches in diameter. Riprap will be durable, natural stone and of a gradation that will result in a stable shoreline embankment. Stone, granular filter and geotextile material will conform to standard Minnesota Department of Transportation specifications, except that neither limestone nor dolomite will be used for shoreline riprap, but may be used at stormwater outfalls. All materials used must be free from organic material, soil, clay, debris, trash or any other material that may cause siltation or pollution.

~~e~~ii Riprap will be placed to conform to the natural alignment of the shoreline.

~~d~~iii A transitional layer consisting of graded gravel, at least six inches deep, and an appropriate geotextile filter fabric will be placed between the existing shoreline and any riprap. The thickness of riprap layers should be at least 1.25 times the maximum stone diameter. Toe boulders, if used, must be at least 50 percent buried.

~~e~~iv Riprap must not cover emergent vegetation, unless authorized by a

Department of Natural Resources permit.

~~f~~v Riprap will extend no higher than the top of bank or two feet above the 100-year high water elevation, whichever is lower.

vi Placement of riprap for cosmetic purposes alone is prohibited.

~~g The finished, stabilized slope of any shoreline will not be steeper than 3:1 (horizontal to vertical).~~

~~h Horizontal encroachment from a shoreline will be the minimal amount necessary to permanently stabilize the shoreline and will not unduly interfere with water flow or navigation. No riprap or filter material will be placed more than 6 feet waterward of the OHW. Streambank riprap will not reduce the cross sectional area of the channel or result in a stage increase at or upstream of the installation.~~

~~i The design of any shoreline erosion protection will reflect the engineering properties of the underlying soils and any soil corrections or reinforcements necessary. The design will conform to engineering principles for dispersion of wave energy and resistance to deformation from ice pressures and movement, considering prevailing winds, fetch and other factors that induce wave energy.~~

~~j Placement of riprap for cosmetic purposes alone is prohibited.~~

~~3.4~~c **Retaining** ~~Walls~~walls. Retaining walls extending below the OHW of a waterbody are prohibited, except where:

i ~~a~~ there is a demonstrable need for a retaining wall in a public improvement project, and

ii ~~b~~ the design of the retaining wall has been certified by a registered engineer.

~~3.5 Criteria~~ d **Sand** ~~Blankets.~~ blankets. The following standards apply to sand blanketing:

i ~~a~~ The sand or gravel used must be clean prior to being spread. The sand must contain no toxins or heavy metals and must contain no weed infestations such as, but not limited to, water hyacinth, alligator weed, and Eurasian watermilfoil, or animal infestations such as, but not limited to, zebra mussels or their larva.

ii ~~b~~ The sand layer must not exceed six inches in thickness, 50 feet in width along the shoreline, or one-half the width of the lot, whichever is less, and may not extend more than 10 feet waterward of the ordinary high water level.

iii ~~c~~ Only one installation of sand or gravel to the same location may be made during a four-year period. After the four years have passed since the last blanketing, the location may receive another sand blanket. No more than two applications may be made at an individual project site.

1) ~~i~~ Exception. Beaches operated by public entities and available to the public ~~shall~~must be maintained in a manner that represents the minimal impact to the environment, relative to other reasonable

alternatives, but otherwise are exempt from the criteria in paragraphs (b) and (c) of this section.

~~3.6~~e In ~~constructing~~installing or maintaining ~~a~~any shoreline stabilization, the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) must be minimized to the maximum extent possible.

3.4 **Fast-track maintenance.** Notwithstanding the requirements and criteria in subsections 3.1 to 3.6, where an applicant can establish that a shoreline stabilization practice was constructed before February 1, 2015, or after that date in compliance with a duly issued District permit, the District will issue a permit for maintenance of the practice as long as the applicant submits plans documenting that maintenance work will not increase the length, width or depth of the practice, and will not disturb underlying soils.

4 Required information and exhibits.

The following exhibits will accompany the permit application~~, including but not limited to one full size~~:

4.1 One 11 inch-by-17 inch plan set ~~(22 inches by 34 inches), one plan set reduced to a maximum size of 11 inches by 17 inches~~, and electronic files in a format acceptable to the District~~:~~, as well as a plan set 22 inches by 34 inches if requested by the District.

4.~~1~~2 A site plan, including:

a Documentation, including at a minimum photographs, of existing erosion or the potential for erosion;

b a survey locating the existing OHW contour, existing shoreline, floodplain elevation and location of property lines;

c elevation contours of the upland within 15 feet of the OHW and referenced to accepted datum; and

d plan view of locations and lineal footage of the proposed riprap.

The plan must show the location of an upland baseline parallel to the shoreline with stationing. -The baseline will be staked in the field by the applicant and maintained in place until project completion. -Baseline origin and terminus each must be referenced to three fixed features, with measurements shown and described on the plan. -Perpendicular offsets from the baseline to the OHW must be measured and distances shown on the plan at 20-foot stations. -The plan will be certified by a registered engineer or ~~surveyor~~landscape architect.

4.~~2~~3 A construction plan and specifications certified by a registered engineer or landscape architect, showing:

a A sequencing analysis in compliance with section 3.2;

b materials to be used, including the size(s) of any riprap to be used;

c cross section detailing the proposed riprap, if any, drawn to scale, with the horizontal and vertical scales noted on the drawing. The detail should show the finished riprap slope, transitional layer design and placement, distance waterward of the riprap placement and OWH.

d Description of the underlying soil materials.

e Material specifications for stone, filter material and geotextile fabric.

4.~~3~~4 For sites involving aquatic plantings, a separate Aquatic Plant Management permit will be obtained from the Department of Natural Resources.

a This provision does not apply to slope protection projects using woody species such as willow and dogwood.

4.~~4~~ ~~An~~5An erosion control and site restoration plan.

4.6 For an application for a sand blanket, the following exhibits are required:

a Site plan showing property lines, delineation of the work area, existing elevation contours of the adjacent upland area, ordinary high water elevation, and 100-year high water elevation (if available). All elevations must be reduced to NGVD (1929 datum).

b Profile, cross sections and/or topographic contours showing existing and proposed elevations in the work area. (Topographic contours should be at intervals not greater than 1.0 foot).

c A completed Sand Blanket Permit Application form.

Rule G – Waterbody Crossings and Structures

1 Policy

It is the policy of the Board of Managers to discourage the use of beds and banks of waterbodies for the placement of bridges, utilities or other structures, and to protect the hydraulic capacity and floodplain of streams and drainage systems.

2 Regulation

No person ~~will~~may construct, improve, replace or remove a crossing in contact with or under the bed or bank of any waterbody within the District, place or replace a structure other than a dock in the bed or banks of waters of the state ~~that are not public waters~~, remove a structure from the bed or bank of any waterbody, or conduct horizontal drilling under a waterbody that is not a public water without first securing a permit from the District.

2.1 No District permit under this rule is required for activities conducted pursuant to a project-specific permit from the state Department of Natural Resources, but the District buffer requirements apply to activity that would otherwise require a District permit.

3 Criteria

3.1 Use of the bed or banks of a waterbody must meet:

a a demonstrated public benefit for projects affecting public waters or

b a demonstrated specific need for all other waterbodies.

3.2 Construction, replacement or improvement of a waterbody crossing in contact with the bed or bank of a waterbody:

a Will retain adequate hydraulic capacity and assure no net increase in the flood stage of the pertinent waterbody;

b Will retain adequate navigational capacity pursuant to the waterbody's recreational classification;

c Will not adversely affect water quality, change the existing flowline/gradient, or cause increased scour, erosion or sedimentation;

d Will ~~preserve existing~~provide wildlife passage along each bank and riparian area and fish passage in the waterbody by means that:

~~1~~ account for wildlife that are native to the area or may be present~~; and~~

~~2 are approved by a qualified wildlife biologist.~~.

e Will represent the 'minimal impact' solution to a specific need with respect to ~~all~~ other reasonable alternatives~~.~~, based on analysis of at least two reasonable alternatives, one of which may be not undertaking the proposed work..

3.3 Construction or improvement of an outfall structure in contact with the bed or bank of a waterbody must:

a incorporate a stilling-basin, surge-basin, energy dissipator, or other device or devices when necessary to minimize disturbance and erosion of natural shoreline and bed resulting from peak flows;

b when feasible, utilize discharge to stormwater treatment ponds, artificial stilling or sedimentation basins, or other devices for entrapment of floating trash and litter, sand, silt, debris, and organic matter prior to discharge to public waters; and

c use natural or artificial ponding areas to provide water retention and storage for the reduction of peak flows into waterbodies to the greatest extent possible.

3.4 Projects involving directional boring or horizontal drilling will provide for minimum clearance of 3 feet below the bed of a waterbody and a minimum setback of 50 feet from any stream bank for pilot, entrance and exit holes.

3.5 Placement or replacement of a structure must:

a Represent the minimal impact solution to a specific need with respect to all other reasonable alternatives;

b Represent the minimum encroachment, change or damage to the environment, particularly the ecology of the waters, necessary to achieve the intended purpose;

c Comply with the District floodplain rule; and

d Not cause adverse effects to water quality and the physical or biological character of the waterbody.

3.6 Removal of structures or other waterway obstructions:

a Will maintain or restore the original cross-section and bed conditions to the greatest extent practicable;

b Will achieve complete removal of the structure, including any footings or pilings that impede navigation; and

c Will not involve the removal of a water-level control device.

3.7 For all projects:

a No activity affecting the bed or banks of a protected water may be conducted between March 15 and June 15 on watercourses, or between April 1 and June 30 on all other public water waterbodies, to minimize impacts on fish spawning and migration.

b Banks must be stabilized immediately after completion of permitted work and revegetated as soon as growing conditions allow.

c The potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) must be minimized to the maximum extent possible.

d Compliance with applicable criteria in ~~subsections~~subsection 3.~~2 to 3.~~4 of Rule F – Shoreline and Streambank Stabilization is required.

4 Required information and exhibits.

The following exhibits will accompany the permit application~~, including but not limited~~

~~to one full-size plan set (22 inches by 34 inches), one plan set reduced to a maximum size of 11 inches by 17 inches, and electronic files in a format acceptable to the District~~:

~~4.1~~4.1 One 11 inch-by-17 inch plan set , and electronic files in a format acceptable to the District.

4.2 Construction plans and specifications, certified by registered professional engineer.

4.~~2~~3 An analysis prepared by a professional engineer ~~or qualified hydrologist~~ showing the effect of the project on hydraulic capacity and water quality.

4.~~3~~4 An erosion control and site restoration plan.

5 Maintenance

Crossings and structures in contact with the bed or bank of a waterbody will be repaired and maintained to ensure continuing compliance with applicable criteria in section 3 or this rule, including but not limited to ensuring adequate hydraulic and navigational capacity; assuring no net increase in the flood stage; preventing adverse effects to water quality, changes to the existing flowline/gradient and increased scour, erosion or sedimentation; and minimizing the potential for obstruction of the waterbody. A declaration or other recordable document stating terms for maintenance and approved by the District will be recorded before activity under a permit issued under this rule commences. In lieu of recordation, a public permittee or a permittee without a property interest sufficient for recordation may assume the maintenance obligation by means of a written agreement with the District. The agreement will state that if the ownership of the structure is transferred, the public body will require the transferee to comply with this subsection.

Rule H – Appropriation of Public Surface Waters

1 Policy

It is the policy of the Board of Managers to regulate the appropriation of public surface waters pursuant to the mandate in Minnesota Statutes section 103B.211, subdivision 4.

2 Regulation

A permit from the District is required to appropriate less than 10,000 gallons per day and up to 1,000,000 gallons per year of water for a nonessential use from:

2.1 A public water basin or wetland within the ~~District~~District's jurisdiction; or

2.2 A public watercourse within the ~~District.~~District's jurisdiction.

3 Criteria

An appropriation of public water permitted under this rule must not materially alter the hydrologic regime in a basin or watercourse.

3.1 In addition, the appropriation must:

- a Be reasonable and practical with regard to alternative sources of water or methods available, including use of water appropriated during high flows and levels and stored for later use, to attain the stated objective;
- b Include the utilization of water storage and reuse and conservation practices to the greatest extent feasible;
- c Be subject to restriction, at any time, to meet in-stream flow needs or protect basin water levels.

3.2 A permittee must provide by March 1 each year a report including:

- a A written summary of how appropriated water was used and conservation utilized; and
- b the method of appropriation, if changed from original application.

3.3 Permits issued under this rule will continue until revoked or relinquished. Failure to comply with the criteria and requirements of this rule will be grounds for revocation.

4 Exhibits

An applicant for a permit under this rule must provide:

4.1 Written evidence of ownership, control of or a license to use the land abutting the surface water source from which water will be appropriated.

4.2 A completed application showing:

- a Applicant address;
- b Applicant email address;
- c Purpose of the requested appropriation;
- d Source of water;
- e Amount of water to be appropriated on a maximum daily, monthly and annual basis, if known;

f Means, methods and techniques of appropriation;
g Alternative sources of water considered and reasons why the particular alternative proposed was selected;
h Information on any water storage facilities and capabilities and any proposed reuse and conservation practices; and
j A contingency plan or agreement with the District to discontinue the permitted appropriation in the event of restrictions.

An appropriation application form may be obtained from the District offices or website.

Rule I – Appropriation of Groundwater

1 Policy

It is the policy of the Board of Managers to regulate appropriations to ensure the health and availability of groundwater in the watershed.

2 Regulation

A permit from the District, incorporating an approved groundwater-appropriation plan, is required for an appropriation of groundwater of less than 10,000 gallons per day and up to 1,000,000 gallons per year or of any amount for domestic use by less than 25 persons, except that no District permit is required for temporary construction dewatering.

3 Criteria

3.1 An applicant for a permit under this rule must demonstrate that the implementation of its groundwater appropriation plan will:

- a Be reasonable and practical with regard to alternative sources of water or methods available;
- b Include the utilization of water storage and reuse and conservation practices to the greatest extent feasible;
- c Be subject to restriction to meet in-stream flow needs or protect basin water levels.

3.2 A permittee must provide by March 1 each year a report including:

- a A written summary of how appropriated water was used and conservation utilized; and
- b the method of appropriation, if changed from original application.

3.3 Permits issued under this rule will continue until revoked or relinquished. Failure to comply with the criteria and requirements of this rule will be grounds for revocation.

4 Exhibits

An applicant for a permit under this rule must provide a completed application and groundwater appropriation plan including:

4.1 Applicant address;

4.2 Applicant email address;

4.3 Purpose of the requested appropriation;

4.4 Alternative sources of water considered and reasons why the groundwater appropriation proposed was selected;

4.5 Depth of well, and number and capacity in gallons per minute of pump(s) to be installed;

4.6 Information on any water storage facilities and capabilities and any proposed reuse and conservation practices; and

4.~~87~~7 A contingency plan or draft agreement with the District to discontinue the appropriation in the event of restriction.

An appropriation application form may be obtained from the District offices or website.

Rule J – Stormwater Management

1 Policy

It is the policy of the District to regulate the management of stormwater runoff to:

1.1 Limit the impact of runoff quality and rate on receiving waterbodies.

1.2 Improve water quality to fully support swimming in designated lakes.

1.3 Improve water quality to fully support designated uses for waterbodies, and remove waterbodies from the Minnesota Pollution Control Agency list of impaired waters.

1.4 Alter stormwater hydrographs (stream flow) through infiltrative strategies that reduce peak discharge rates and overall flow volume.

1.5 Require that onsite retention and regional water quality treatment systems operate together to provide complete and effective runoff management.

1.6 Provide for nondegradation of surface waterbodies in the watershed.

1.7 Encourage the use of Better Site Design, Low Impact Development and other techniques that minimize impervious surfaces or incorporate volume-control practices, such as infiltration, to limit runoff volumes.

1.8 Maximize opportunities to improve stormwater and snowmelt management presented by redevelopment of land.

1.9 Require governmental entities and developers to manage runoff effectively to minimize water quality impacts from new development, redevelopment and other land-disturbing activities.

1.10 Minimize the movement of chloride compounds into water resources.

2 Regulation

A permit from the District, incorporating an approved stormwater management plan, is required under this rule prior to the commencement of any activities to which this rule applies. The District may review a stormwater management plan at any point in the development of a regulated project and encourages project proposers to seek early review of plans by the District.

2.1 The requirements of this rule apply to any land-disturbing activity that will involve:

:

a Placement, alteration or removal of 50 cubic yards or more of earth;

b Alteration or removal of 5,000 square feet or more of land-surface area or vegetation; or

c Subdivision of a ~~parcel~~property or properties into three or more residential lots.

2.2 **Exemptions.** The requirements of this rule do not apply to:

a Construction or ~~reconstruction~~remodeling on an existing single-family home site, unless any portion of the parcel is:

1 Within 300 feet of the centerline of and draining to Riley Creek, Purgatory

Creek or Bluff Creek,

2 Within 500 feet of the ordinary high water level of and draining to any other public water or protected wetland, or

3 Below athe 100-year flood elevation ~~adopted by the District.~~of a water body.

b Construction or ~~reconstruction~~remodeling on a single-family home site consistent with a subdivision, development or redevelopment plan ~~that is subject to an unexpired~~implemented in accordance with a District permit issued after February 1, 2015, and an approved erosion prevention and sediment control plan.

c Rehabilitation of paved surfaces.

d Trails ~~and~~, sidewalks and retaining walls that do not exceed 10 feet in width and are bordered downgradient by a pervious ~~buffer of~~ area extending at least half the trail width.

e Land-disturbing activities that do not involve creation of new impervious surface, reconstruction of existing impervious surface or grading that materially alters stormwater flow at a site boundary.

2.3 **Redevelopment.** If a proposed activity will disturb more than 50 percent of the existing impervious surface on the parcel or will increase the imperviousness of the entire parcel by more than 50 percent, the criteria of section 3 will apply to the entire project parcel. Otherwise, the criteria of section 3 will apply only to the disturbed areas and additional impervious surface on the project parcel. For purposes of this paragraph, disturbed areas are those where underlying soils are exposed in the course of redevelopment.

2.4 **Linear projects.** Notwithstanding subsection 2.3, a permit under this rule is not required for a linear project if the project entails construction or reconstruction creating less than 5,000 square feet of new and/or fully reconstructed impervious surface. For linear projects creating 5,000 square feet or more of new and/or fully reconstructed impervious surface, stormwater management in accordance with the criteria of subsection 3.2 must be provided.

2.5 **Common scheme of development.** Activity subject to this rule on a parcel or adjacent parcels under common or related ownership will be considered in the aggregate, and the requirements applicable to the activity under this rule will be determined with respect to all development and redevelopment that has occurred on the site or on adjacent sites under common or related ownership since the date this rule took effect (January 1, 2015).

a For development or redevelopment under common or related ownership, compliance with the criteria of section 3 may be achieved through a shared stormwater management facility or facilities as long as the criteria in subsection 3.1 are met for each contributing drainage area within the common or related ownership.

2.6 **Performance monitoring.** A permit granted by the District on a finding that stormwater management facilities, as they are to be constructed and maintained

under the permit, will meet applicable performance standards under this rule, does not require additional steps if the permit is complied with but standards are not met. Notwithstanding, as a specific condition to a permit, the District may impose monitoring, performance evaluation, additional compliance measures or other requirements for the purposes of demonstrating that performance standards are being met.

3 Criteria

3.1 An applicant for a permit under this rule must demonstrate, using a model utilizing the most recent applicable National Weather Service reference data (e.g., Atlas 14), that the implementation of its stormwater management plan will:

a Rate.

i Limit peak runoff flow rates to that from existing conditions for the two-, 10- and 100-year frequency storm events using a nested 24-hour rainfall distribution, and a 100-year frequency, 10-day snowmelt event, for all points where stormwater discharge leaves the site;

b Volume. Provide for the abstraction onsite of 1.1 inches of runoff from impervious surface of the parcel;

i Where infiltration or filtration facilities, practices or systems are proposed, pretreatment of runoff must be provided.

ii ~~The bottom of~~ Where infiltration facilities, practices or systems are proposed, data must be ~~at least three~~submitted showing:

A. no evidence of groundwater or redoximorphic soil conditions within 3 feet ~~above~~of the ~~seasonal high~~bottom of the facility, practice or system;

B. soil conditions within 5 feet of the bottom of any stormwater treatment facility, practice or system;

C. site-specific infiltration capacity of soils at the bottom of the facility, practice or system.

iii Drawdown of water ~~table~~levels in infiltration facilities must be within 48 hours.

iv Infiltration rates utilized to meet the 3.1b criterion may not exceed 8.3 inches per hour.

c Quality. Provide for at least ~~sixty percent~~ (60 percent) annual removal efficiency for total phosphorus, (TP) and at least ~~ninety percent~~ (90%) percent annual removal efficiency for total suspended solids (TSS) from site runoff~~.~~, and no net increase in TSS or TP loading leaving the site from existing conditions.

i The onsite abstraction of runoff may be included in demonstrating compliance with the total suspended solids and total phosphorus removal requirements.

3.2 **Criteria for Linear Projects.** An applicant for a permit for a linear project under this rule must demonstrate, using a model utilizing the most recent applicable

National Weather Service reference data (e.g., Atlas 14), that the implementation of its stormwater management plan will:

a Achieve the rate control standard in paragraph 3.1a and the water quality standard in paragraph 3.1c; and

b For projects creating between 5,000 square feet and 1 acre of new and/or fully reconstructed impervious surface, provide for the abstraction onsite of 1.1 inches of runoff from the net increase in impervious surface area; or

c For projects creating more than 1 acre of new and/or fully reconstructed impervious surface, provide for the abstraction onsite of the larger of the following:

i 0.55 inches of runoff from the new and fully reconstructed impervious surfaces; or

ii 1.1 inches of runoff from the net increase in impervious area.

3.3 **Criteria for restricted sites.** Where the District ~~engineer~~ concurs that an applicant has demonstrated that the abstraction standard in subsection 3.1 or 3.2, as applicable, cannot practicably be met through a combination of onsite best management practices and relocation of project elements to address varying soil conditions and other site constraints or infiltration will cause or exacerbate migration of underground contaminants, the applicant must provide rate control in accordance with the standard in paragraph 3.1a, and abstraction and water-quality protection in accordance with the following priority sequence:

a Abstraction of at least 0.55 inches of runoff from site impervious surface determined in accordance with paragraphs 2.3, 3.1 or 3.2, as applicable, and treatment of all runoff to the standard in paragraph 3.1c; or

b Abstraction of runoff onsite to the maximum extent practicable and treatment of all runoff to the standard in paragraph 3.1c; or

c Off-site abstraction and treatment in the watershed to the standards in paragraph 3.1b and 3.1c.

3.4 **Criteria for projects on existing single-family home property.** The criteria in sections 3.1 to 3.3 and exhibit requirements in section 4 do not apply. An applicant for a permit for construction or reconstruction on an existing single-family home property must submit site plans and designs providing for construction, installation or implementation of a stormwater-management BMP consistent with guidance promulgated by the State of Minnesota, including but not limited to the Minnesota Stormwater Manual, Protecting Water Quality in Urban Areas Manual and Minimal Impact Design standards.

3.5 **Buffer credit.** Stormwater management capacity of buffer area created in compliance with Rule D or otherwise will be credited toward compliance with the criteria in this rule.

3.6 **Low-floor elevation.** All new and reconstructed buildings must be constructed such that the lowest floor is:

~~No structure may be constructed or reconstructed such that its lowest floor~~

~~elevation is less than 2~~a At least two feet above the 100-year ~~event flood~~high water elevation or one foot above the natural overflow of a waterbody;

b At least two feet above the 100-year high water elevation ~~and roof~~ of any open stormwater conveyance; and

c At least two feet above the 100-year high water elevation or one foot above the emergency overflow of a constructed facility.

In addition, a stormwater management ~~system may~~facility must be constructed ~~or reconstructed in a manner~~at an elevation that ensures that ~~brings the low floor elevation of an~~ no adjacent ~~structure~~habitable building will be brought into noncompliance with ~~this standard~~a standard in this subsection 3.6. Alternatively, a stormwater management facility may be constructed at a location and elevation set according to Appendix J1 – "Low Floor Elevation Assessment," which is incorporated into and made a part of these rules.

~~a All structures riparian to inundation areas or constructed or natural stormwater management facilities must be located and elevations must be set according to Appendix J1 "Low Floor Elevation Guidance."~~

b **Landlocked basins.** Any new or reconstructed structure wholly or partially within a landlocked basin must be constructed such that its lowest floor elevation is:

i 1 foot above the surface overflow of the basin, or

ii 2 feet above the elevation resulting from two concurrent 100-year single rainfall events in a 24-hour period or a 100-year, 10-day snowmelt, whichever is higher.

iii The starting elevation of the basin prior to the runoff event will be established by the highest of one of the following:

A Existing ordinary high water elevation established by the Minnesota Department of Natural Resources;

B Mottled soil.

c Landlocked water basins may be provided with outlets if an outcome-based analysis and resource oriented management review regarding downstream impacts is completed and demonstrates that:

i A hydrologic regime is maintained that complies with all other rules;

ii Dead storage is provided to retain the fully developed future conditions back to back 100-year critical event water volume, above the highest anticipated groundwater elevation to the extent possible while preventing damage to property adjacent to the basin;

iii The outlet does not create adverse downstream flooding or water quality conditions, or materially affect stability of downstream watercourses

iv Proposed development draining to the landlocked basin has incorporated runoff volume and rate control practices to the extent practical

v There is a demonstrated need for an outlet to protect existing structures and infrastructure; and

vi The outlet design is part of an approved comprehensive local water management plan.

3.7 Maintenance

All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. Permit applicants must provide a maintenance, inspection and, if required, monitoring plan that identifies and protects the design, capacity and functionality of onsite and offsite stormwater management facilities; specifies the methods, schedule and responsible parties for inspection, maintenance and monitoring; provides for the inspection and maintenance in perpetuity of the facility, with documentation retained onsite and available to the District upon reasonable notice; and contains at a minimum the requirements in the District's standard maintenance declaration. For applications managing runoff through stormwater reuse, the maintenance plan must provide for the protection of greenspace to be irrigated or other land-use restrictions, as necessary, and metering of the volume of water reused to ensure continuing treatment capacity. The plan will be recorded on the deed in a form acceptable to the District.- A public entity assuming the maintenance obligation may do so by entering an agreement with the District in lieu of a recorded document.

~~4 Required exhibits~~

3.8 Chloride management.

An applicant for a permit under this rule for land-disturbing activity on property other than a single-family home site must provide a plan for post-project management of chloride use on the site that includes, at a minimum:

a Designation of an individual authorized to implement the chloride plan; and

b Designation of a Minnesota Pollution Control Agency-certified salt applicator engaged in the implementation of the chloride plan for the site.

3.9 Rights to Utilize Offsite Facility. An applicant relying on regional stormwater management treatment for compliance with the standard in paragraph 3.1c or under an approved regional plan under section 4 must demonstrate that it holds the legal rights necessary to discharge to the relevant offsite stormwater facility or facilities, and that the facility or facilities are subject to a maintenance document satisfying the requirements of paragraph 3.7.

3.10 Wetland protection.

a Bounce and inundation. No activity subject to this rule may alter a site in a manner that increases the bounce in water level, duration of inundation, or change the runout elevation in the subwatershed in which the site is located, for any wetland receiving discharge directly from the site beyond the limits specified Table J.1.

b Treatment of runoff to wetlands. Use of an existing or created wetland for stormwater treatment as part of a proposed development, redevelopment or

other land-disturbing project regulated under District rules must comply with the following criteria:

i Stormwater must be treated to meet the 3.1b criterion by before discharge to a wetland.

ii Exceptional and high value wetlands may not be used for stormwater management unless no other alternative is feasible. When permitted, any discharge to a high-value wetland must be treated to at least 75 percent annual removal efficiency for phosphorus and at least 90 percent annual removal efficiency for total suspended solids prior to discharge to the wetland.

4 **Regional Stormwater Management.** An applicant may comply with the criteria in subsection 3.1 for all parcels within a catchment area or areas through a regional or subwatershed plan approved by the District. A regional plan must provide stormwater management that meets or exceeds the criteria in subsection 3.1. The regional plan must provide for an annual accounting to the District of treatment capacity created and utilized by projects or land-disturbing activities within the drainage and treatment area to which the plan pertains.

4.1 District approval of a regional plan will be based on a determination that:

a The use of a regional facility in place of onsite stormwater management is not likely to result in adverse impacts to local groundwater or natural resources located upstream of the regional facility or facilities, including, for example, reduced water quality, altered wetland hydrology, changes to stream velocities or base flow, erosion or reduced groundwater recharge; and

b The plan incorporates onsite BMPs where necessary to mitigate impacts and provide local benefits not provided by the regional facility.

5 **Required exhibits**

The following exhibits must accompany the permit application~~, including but not limited to one full size~~:

5.1 One 11 inch-by-17 inch plan set ~~(22 inches by 34 inches); one plan set reduced to maximum size of 11 inches by 17 inches~~, and electronic files in a format acceptable to the District~~:~~, as well as a plan set 22 inches by 34 inches if requested by the District.

~~4.1~~5.2 Stormwater management system modeling in a form acceptable to the District engineer. For example, HydroCAD, SWMM, MIDS calculator, P8 or alternative method as approved by the District engineer in advance of submission.

~~4.2~~5.3 A site plan showing:

a Property lines and delineation of lands under ownership of the applicant.

b Existing and proposed elevation contours.

c Identification of existing and proposed normal, and ordinary high and 100-year water elevations onsite.

5.~~4.3~~ A stormwater management plan certified by a registered engineer including, at a

minimum:

a Proposed and existing stormwater facilities' location, alignment and elevation.

b Delineation of existing wetlands, marshes, shoreland and/or floodplain areas onsite or to which any portion of the project parcel drains, except that where a project will not change the hydrology of a wetland, the wetland need only be identified on the plan.

c Geotechnical analysis including soil borings and, where applicable, data developed in accordance with the Minnesota Stormwater Manual supporting existing and designed infiltration rates, at all proposed stormwater management facility locations.

d Construction plans and specifications for all proposed stormwater management facilities, including design details for outlet control structures.

e Stormwater runoff volume and rate analyses for the 24-hour, 2-, 10- and 100-year critical events, existing and proposed conditions.

f All hydrologic, water quality, and hydraulic computations completed to design the proposed stormwater management facilities, including calculation of stormwater-management capacity of buffer, as applicable.

g Narrative addressing incorporation of retention BMPs.

h Platting or easement documents showing sufficient drainage and ponding/flowage easements over hydrologic features such as floodplains, storm sewers, ponds, ditches, swales, wetlands and waterways.

i Documentation as to the status of the project's National Pollutant Discharge Elimination System stormwater permit, if applicable.

j If infiltration of runoff is proposed, the District may require submission of a phase I environmental site assessment and/or other documentation to facilitate analysis by the District of the suitability of soils for infiltration.

~~4.4~~k If a stormwater harvest and reuse practice is proposed to meet applicable requirements, submission of:

i An analysis using a stormwater reuse calculator or equivalent methodology approved by the District engineer documenting how the annual volume of reuse water translates to the abstraction criterion in subsection 3.1b;

ii documentation of the adequacy of soils, storage capacity and delivery systems;

iii delineation of greenspace area to be irrigated, if applicable; and

iv an irrigation or usage plan.

5.5 An erosion control plan complying with District Rule C.

~~4.~~5.6 Upon completion of site work, a permittee must submit as-built drawings demonstrating that at the time of final stabilization, stormwater facilities conform to design specifications as approved by the District.

Table J.1: Impacts on onsite wetland[5]

Wetland Value/ Waterbody	Permitted Bounce for, 10-Year Event	Inundation Period for 1- and 2-Year Event	Inundation Period for 10-Year Event	Runout Control Elevation
Exceptional	Existing	Existing	Existing	No change
High	Existing plus 0.5 feet	Existing plus 1 day	Existing plus 7 days	No change
Medium	Existing plus 1.0 feet	Existing plus 2 days	Existing plus 14 days	0 to 1.0 ft above existing runout
Low	No limit	Existing plus 7 days	Existing plus 21 days	0 to 4.0 ft above existing runout

[5] Adopted from *Wetland Management Classification System* http://bwsr.state.mn.us/wetlands/mnram/MnRAM_Wetland_Mgmt_Classification_Guidance.pdf

Appendix J1 – Low-Floor Elevation ~~Guidance~~Assessment

Overview of Lowest Floor Issue

There seems to be two reasons for establishing a minimum lowest floor elevation in the vicinity of a pond – to prevent flooding of the structure by surface water and to prevent seepage or damage from uplift pressures that could result from a rise in the water table elevation. The first reason (direct flooding) can easily be established with knowledge of the maximum flood elevation of a pond (or the 100-year elevation, if this is used) and ground surface topography. The second reason (a rise in the water table due to increased pond elevations) is not so straight forward. This second area is the subject of this memo.

When a formerly dry pond becomes wet (or when a wet pond's water elevation increases) due to a storm event, downward seepage of the ponded water begins. The rate of seepage through the bottom of the pond is dependent upon:

1) The elevation of the water surface above the pond bottom

2) The soil type at the bottom of the pond (i.e. the pond bottom's thickness and permeability)

3) The type of soil underneath the pond (e.g., clay, silt, sand, gravel)

4) The degree of saturation of the soils beneath the pond

5) The depth to the water table

In general, higher seepage through the bottom of the pond will occur when the water surface elevation is high, the pond's bottom sediments are thin and/or sandy, the soils underneath the pond are permeable (such as sand or gravel), the soils underneath the pond have a high moisture content (i.e., they are at field capacity or higher), and the water table is well below the bottom of the pond (i.e. the soils are freely draining).

Higher seepage rates through the bottom of the pond will cause the water table elevation to rise by creating a "mounding condition" below the pond. How high and how widespread the water table mound becomes are contributing factors to whether or not basements will be affected. *However, the single most important factor that will determine if seepage from a pond will cause wet basement problems is the depth to the water table, below the basement.*

The magnitude and extent of the groundwater mounding conditions is also contingent upon the aquifer's transmissivity (aquifer permeability multiplied by aquifer thickness), the specific yield of the aquifer materials, and the duration of the high water levels in the pond. In general, thicker aquifers with higher permeability will experience less mounding than thinner aquifers of lower permeability. Perched aquifers (i.e. groundwater zones less than about 10 feet that overlie extensive clay layers) typically experience the greatest amount of mounding.

Overview of ~~Variance~~ Evaluation Method

All of the combinations of settings, pond configurations, aquifer parameters, and distances from ponds cannot be anticipated beforehand in coming up with a method to quickly evaluate whether or not a variance to the minimum floor elevation ordinance should be considered. However, by making some generalities, the most commonly encountered situations can be evaluated. This is the approach taken here.

A groundwater flow model of a "typical" pond and aquifer setting was developed. Aquifer parameters and pond elevations were varied and the resulting water table mounding conditions were simulated. The following conditions were evaluated:

1. Pond elevation increases of 2 feet, 4 feet, and 6 feet above normal or dry conditions

2. Depth to the water table (before flooding) of 3 feet (to represent conditions of 3 feet or less) and 10 feet (to represent conditions where the depth to the water table is greater than 3 feet). The purpose of simulating these two conditions is that with shallow water tables, the rate of infiltration is substantially reduced as the groundwater mound rises into the pond. For deeper aquifer conditions, the pond bottom is always above the water table and the depth to the water table has no bearing on the seepage rate.

3. Three aquifer conditions: clay or perched aquifers (transmissivities of 7 ft^2/day and specific yield values of 0.1); silt aquifers (transmissivity of 70 ft^2/day and specific yield values of 0.2) and sand and gravel aquifers (transmissivities of 2000 ft^2/day and specific yield values of 0.2).

4. Pond bottom sediment thickness of 1 feet and bottom sediment hydraulic conductivity of 1 ft/day.

5. Instantaneous occurrence of a flood condition in the pond, which lasts for 25 days, followed by instantaneous reduction to normal conditions. The purpose of using this condition is that the effects of aquifer storage (specific yield) are taken into account. A duration of 25 days was selected as being a reasonable time period of flood conditions.
6. Increases in the water table elevation were recorded at several distances between 5 feet and 200 feet from the pond. The maximum rise during the modeled period was selected for plotting.

The U.S. Geological Survey's groundwater modeling code, MODFLOW, was used for this analysis.

How to Determine if a Variance is Warranted

In order to determine if a proposed lowest floor elevation is acceptable, the following need to be known:

1. Depth to the water table and an estimation of the water table's seasonally high elevation.

2. Type of aquifer materials – e.g., clay, silt, sand, gravel

3. Information as to whether or not the water table is perched or is part of a deeper, thicker aquifer system.

4. An estimate of the flood elevation of the pond.

5. The distance of the proposed floor to the pond.

Depth to the water table and the type of aquifer material needs to be determined through the installation of soil borings. The other information should be estimated from other sources.

Once this information is obtained, the minimum depth to the water table from the bottom of the proposed floor slab can be determined from one of six plots, attached to this memorandum. Which of the six plots to use depends on the depth of the water table with respect to the pond's bottom and the type of aquifer material (e.g., clay, silt, sand, gravel). The following steps should be used:

1. Determine the closest distance of the proposed floor to the pond (if the pond size increases during flooding, the distance should be from the flooded perimeter of the pond to the proposed floor).

2. Using Plot 1, determine the minimum permissible depth to the water table for the specified distance from the pond. If the actual depth to the water table (see discussion below for determining this) is greater than the value on Plot 1, no further evaluation is necessary – the floor is sufficiently high with respect to the water table that the water table will not reach the bottom of the slab, regardless of the soil type or transmissivity. If the depth to the water table is less than the value from Plot 1, further evaluation is necessary.

3. If the soil type of the aquifer, below the water table, is mostly clay OR if the aquifer is perched (a continuous clay layer is less than 5 feet below the water table), Plot 2 must be used. The appropriate pond level increase (2, 4, or 6 feet) for flood conditions must be used in Plot 2 to find the minimum permissible depth to the water table. If the depth to the water table from Plot 2 is less than the actual depth to the water table, the proposed floor elevation is too low and must be raised to equal the value from Plot 2.

4. If the soil type of the aquifer is mostly silt AND the pond bottom is 3 feet or less above the water table, Plot 3 should be used.

5. If the soil type of the aquifer is mostly sand or gravel AND the pond bottom is 3 feet or less above the water table, Plot 4 should be used.

6. If the soil type of the aquifer is mostly silt AND the pond bottom is 3 feet or more above the water table, Plot 5 should be used.

7. If the soil type of the aquifer is mostly sand or gravel AND the pond bottom is 3 feet or more above the water table, Plot 5 should be used.

The values from the plots are guidelines, based on typical conditions. If the plots indicate the proposed floor elevation is too low, additional analyses and data collection could be pursued by the applicant. These additional analyses could include additional soil borings, long-term monitoring of piezometers, or more sophisticated modeling.

Determining Depth to the Water Table

If a variance to a lowest floor elevation ordinance is to be considered, the depth to the water table at the location in question must be known. Without this knowledge, there cannot be a technical basis for approving a variance. Furthermore, the applicant should demonstrate that the measured water-table elevation is both representative of conditions over the entire floor area and is representative of values typical for seasonally high conditions (e.g. spring conditions). A suggested requirement for collecting this information is the following:

1. A minimum of two soil borings ~~shall~~must be installed at or near the perimeter of the lowest floor. At least one of these borings ~~shall~~must be where the floor is closest to the nearest pond.

2. Soil borings ~~shall~~must extend to a depth of at least 7 feet below the water table. The borings ~~shall~~must be left open for a time sufficient to determine the stabilized water level in the borehole. The water level ~~shall~~must be measured with reference to a known bench mark that can relate the water table elevation to the proposed floor elevation. Soils at or immediately below the water table ~~shall~~must be sampled and texturally classified using an approved classification method.

Water levels measured during dry summer months or during the winter may be lower than water levels during the spring. The applicant should be required to make an effort to determine the likely amount of seasonal fluctuation in the water table in the area. Water level records from wells completed in the area could be used. If information is unavailable, the applicant should be required to add a value to the measured water table elevation. One suggestion would be to assume 25% of the total annual precipitation (29 inches), divided by the average effective porosity for non-cohesive soils (0.3), which is:

$$(29 \text{ inches}/4) \times (1 \text{ foot}/12 \text{ inches})/0.3 = 2 \text{ feet}$$

If the seasonally adjusted maximum water-table elevation is eight (8) feet or below the bottom of the slab of the lowest floor, it is unlikely that temporary flood conditions in the pond will cause the water table to rise to the level of the floor.[6]

6- This assumes that the pond level begins to return to normal within about 30 days and the pond level's increase is not greater than 6 feet.

Determining Soil Type at the Water Table

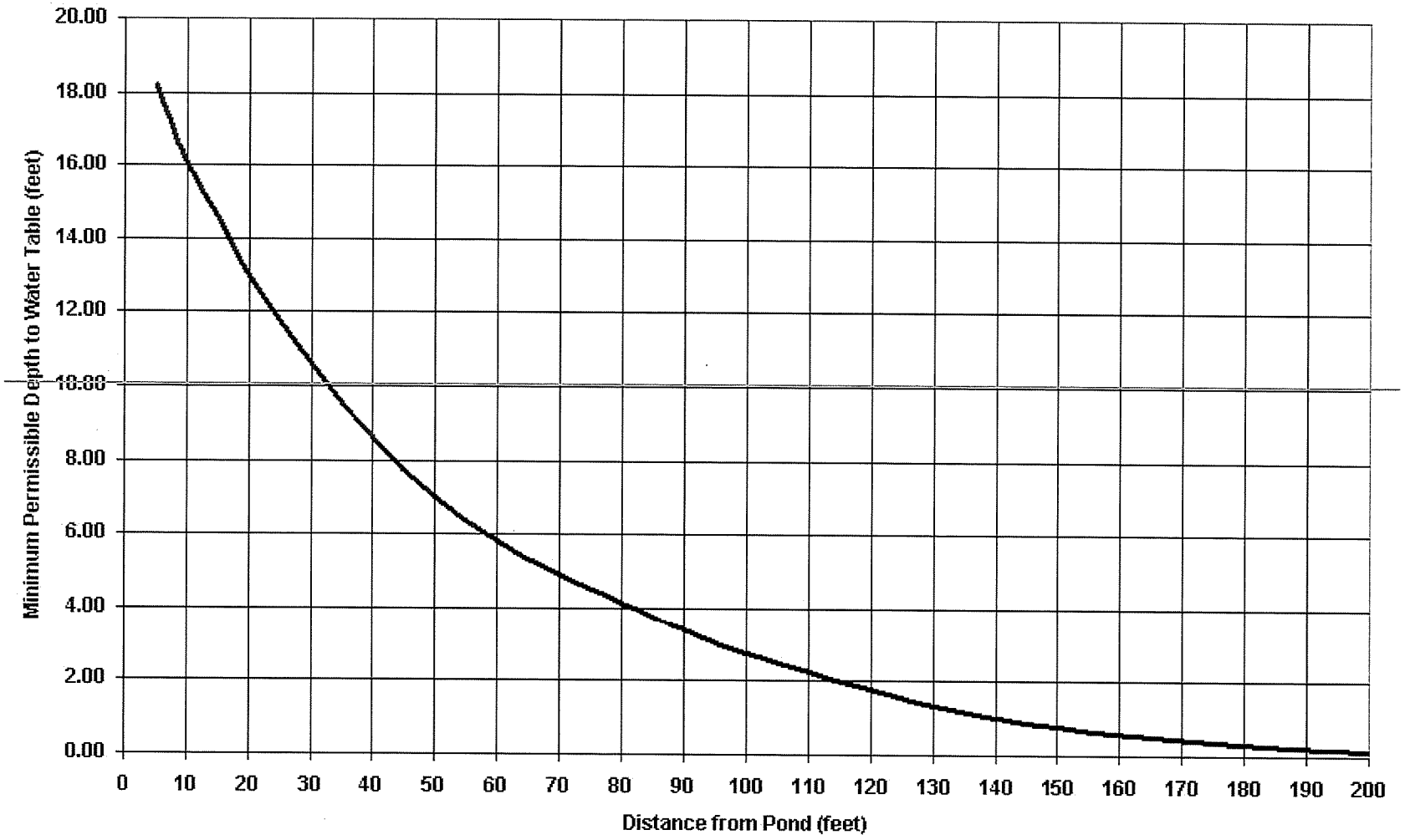
The textural classification from the soil borings will be necessary for determining the expected rise in the water table caused by an increase in pond elevation. At a minimum, the soil should be classified as one of the following:

1. Sandy or gravely soils – consisting of predominantly sand or gravel, with minor amounts of silt and clay

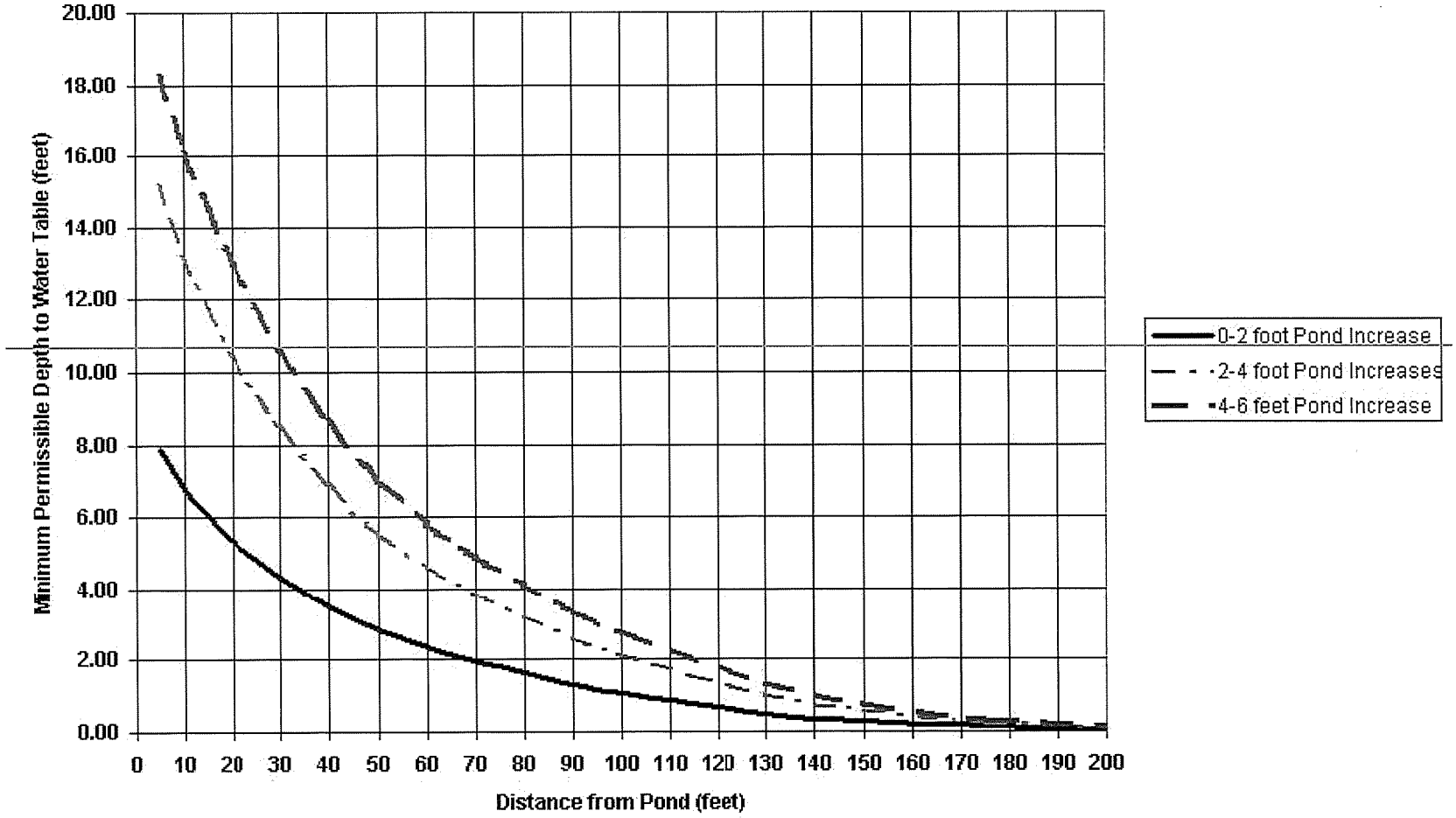
2. Silty soils – consisting predominantly of silt

3. Clayey soils – consisting predominantly of clay.

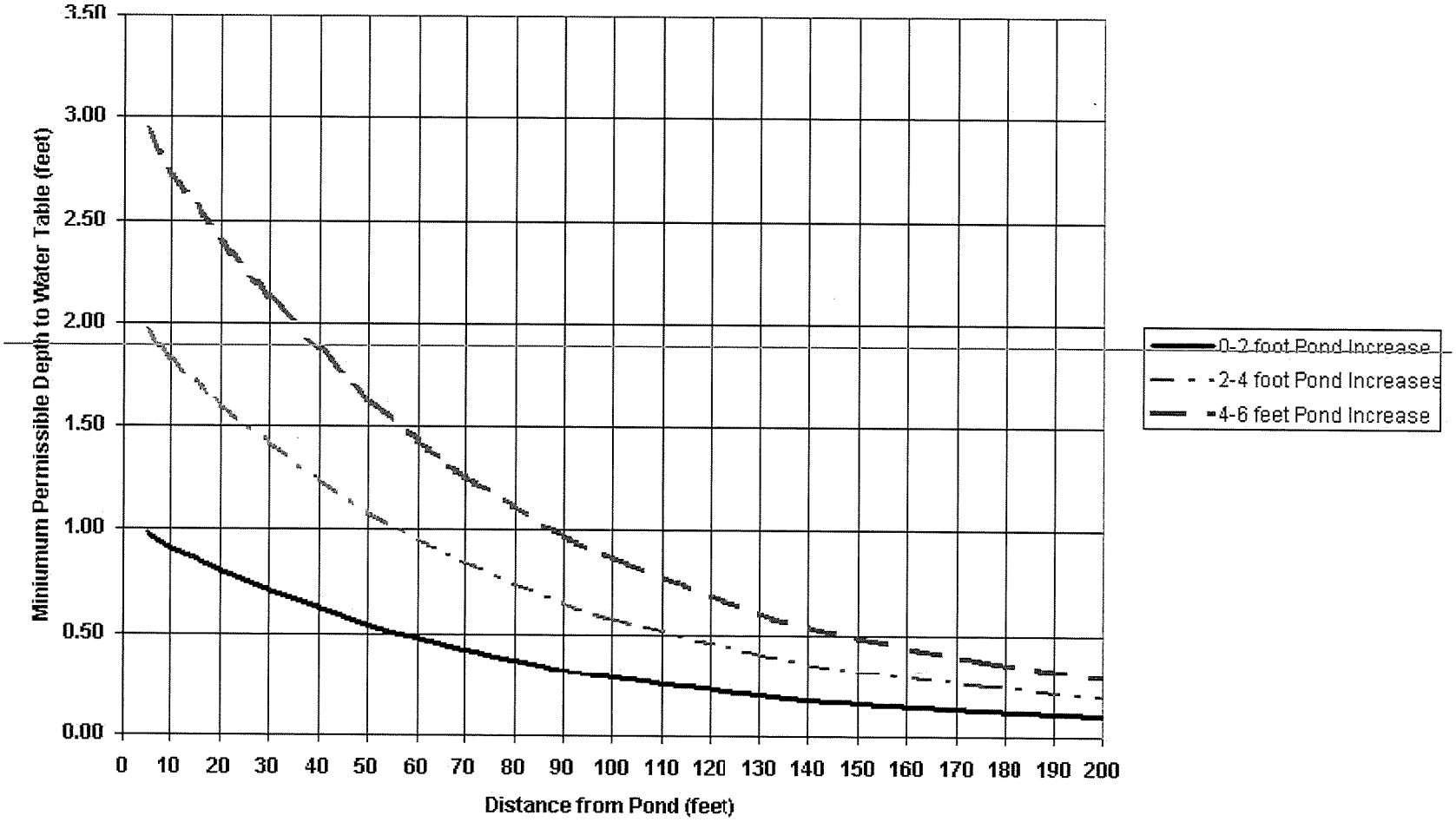
PLOT 1: Minimum Depth to Water Table for No Further Evaluation



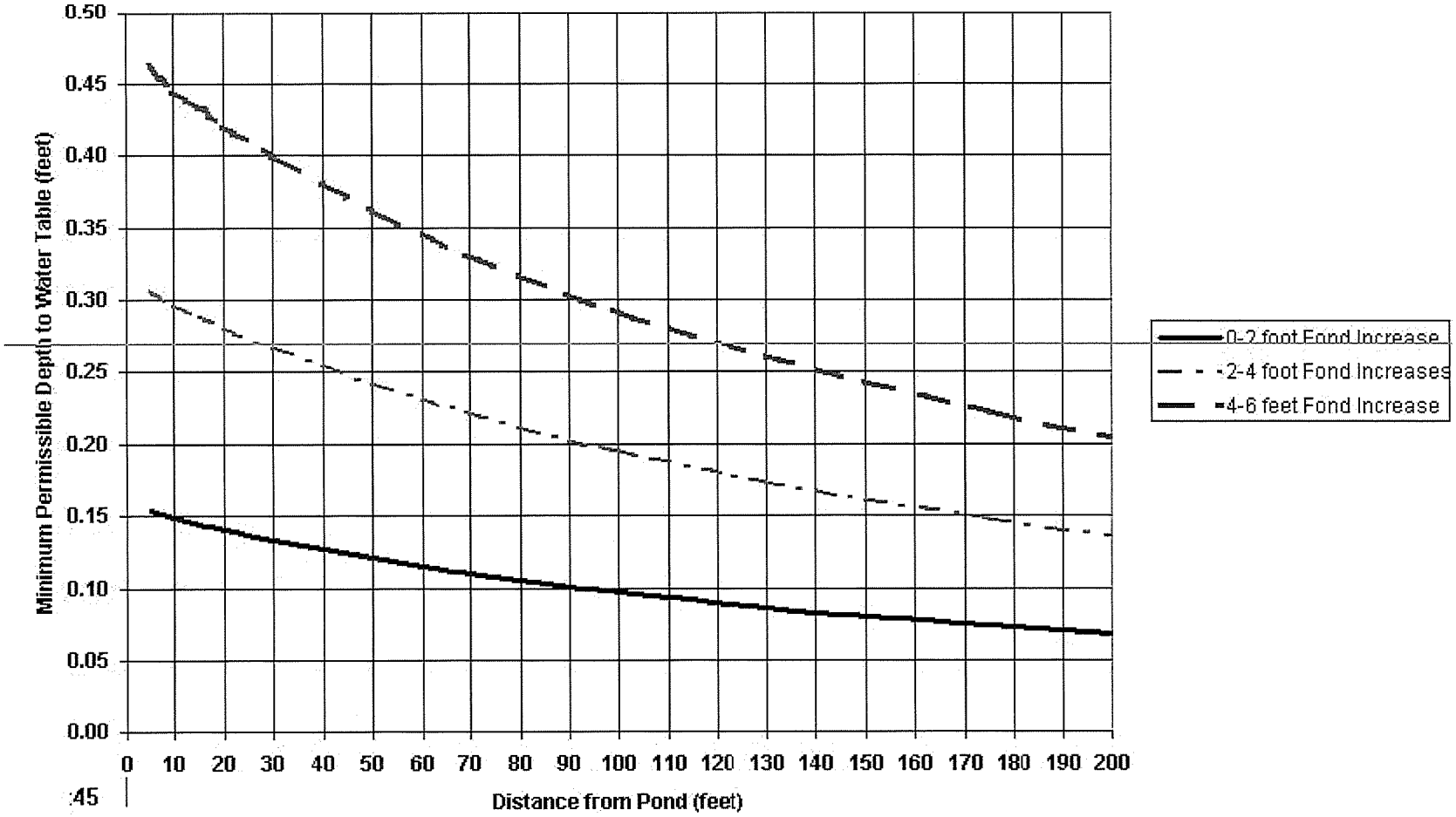
PLOT 2: Minimum Permissible Depth to Water Table - Clay or Perched Conditons
(Perched Conditions = Water Table <5 feet above a continuous clay layer)



PLOT 3: Minimum Permissible Depth to Water Table - Silt - Pond Bottom <3 feet above Ambient Water Table

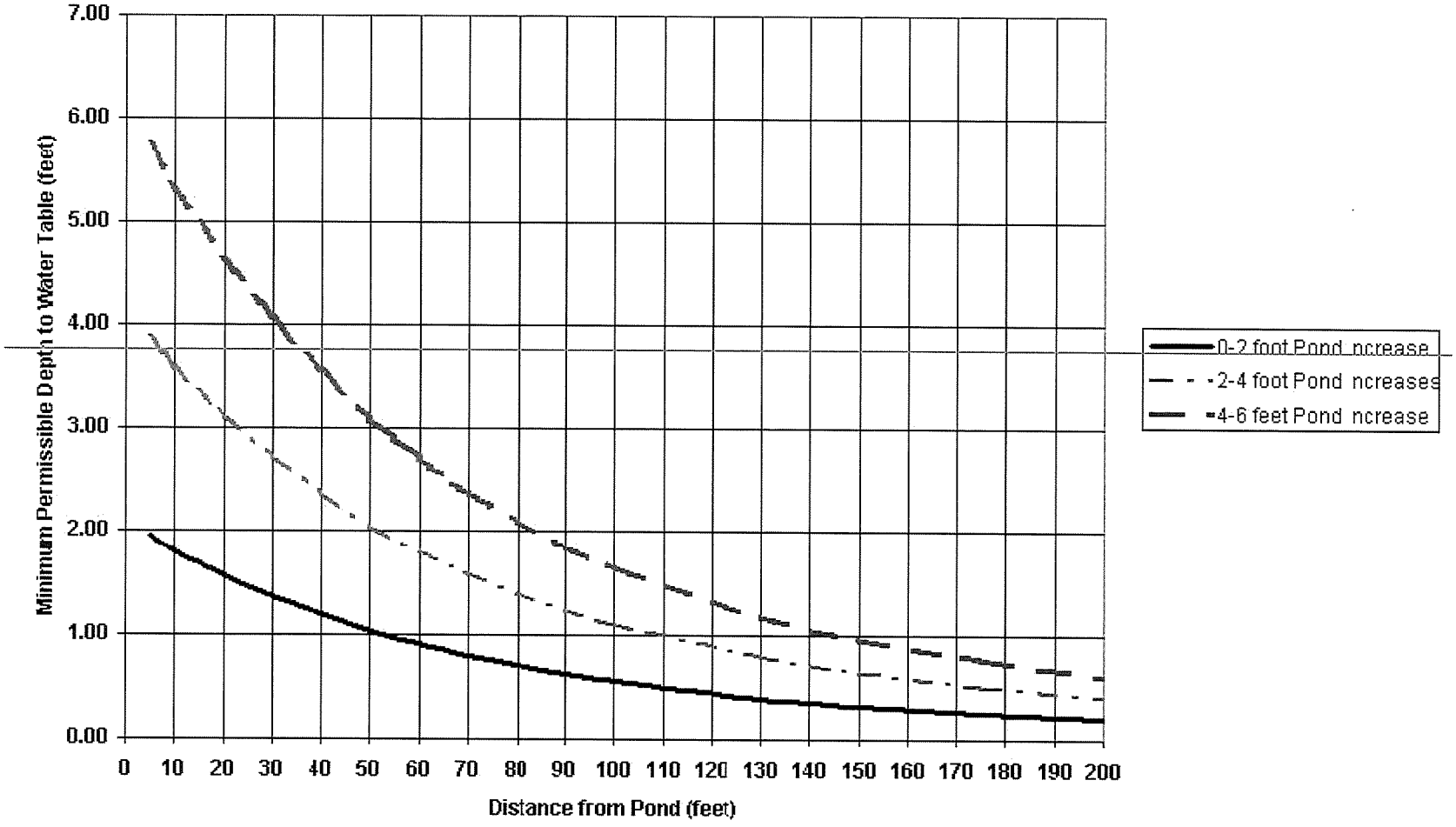


PLOT 4: Minimum Permissible Depth to Water Table - Sand & Gravel - Pond Bottom <3 feet above Ambient Water Table

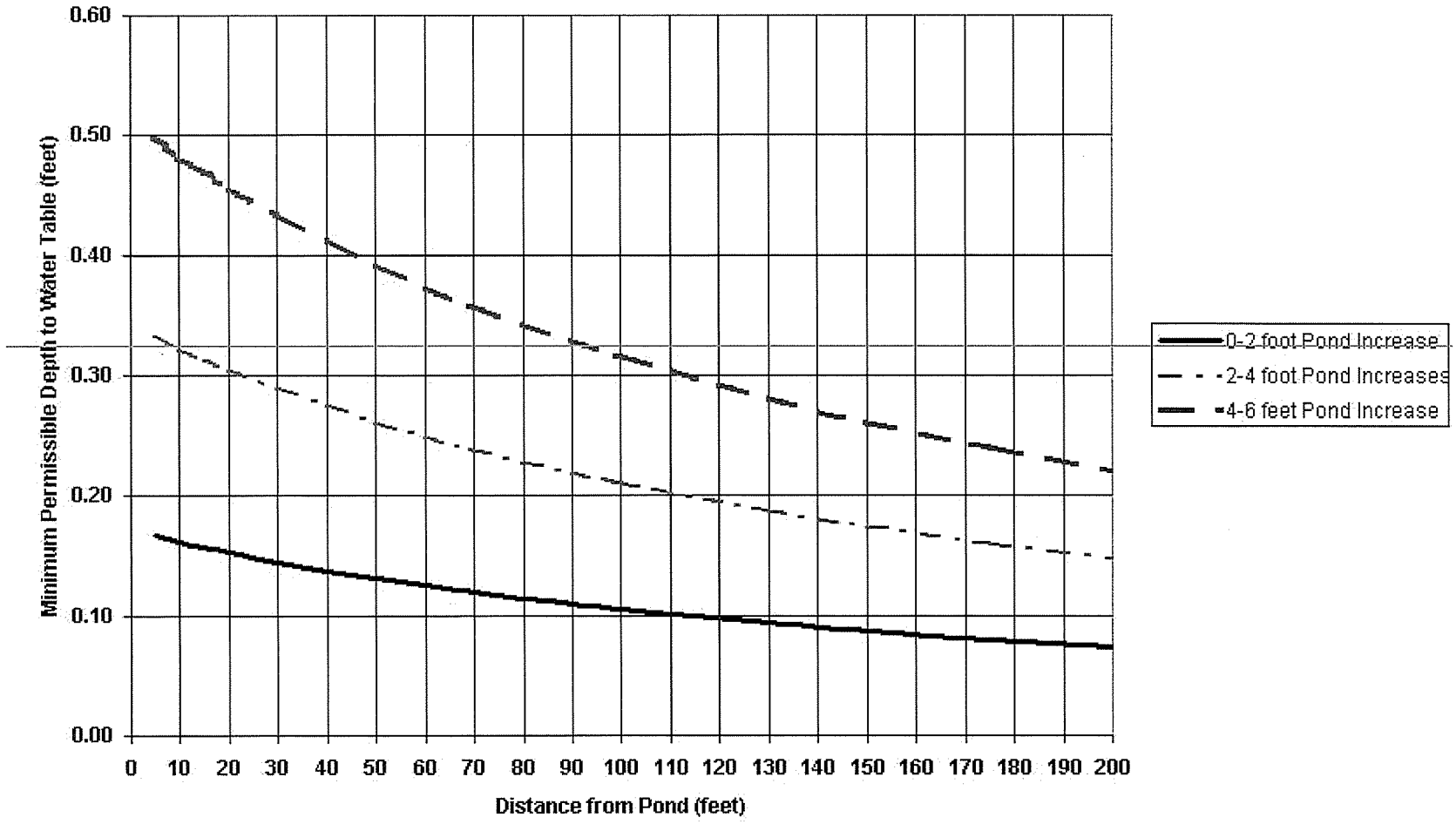


:45

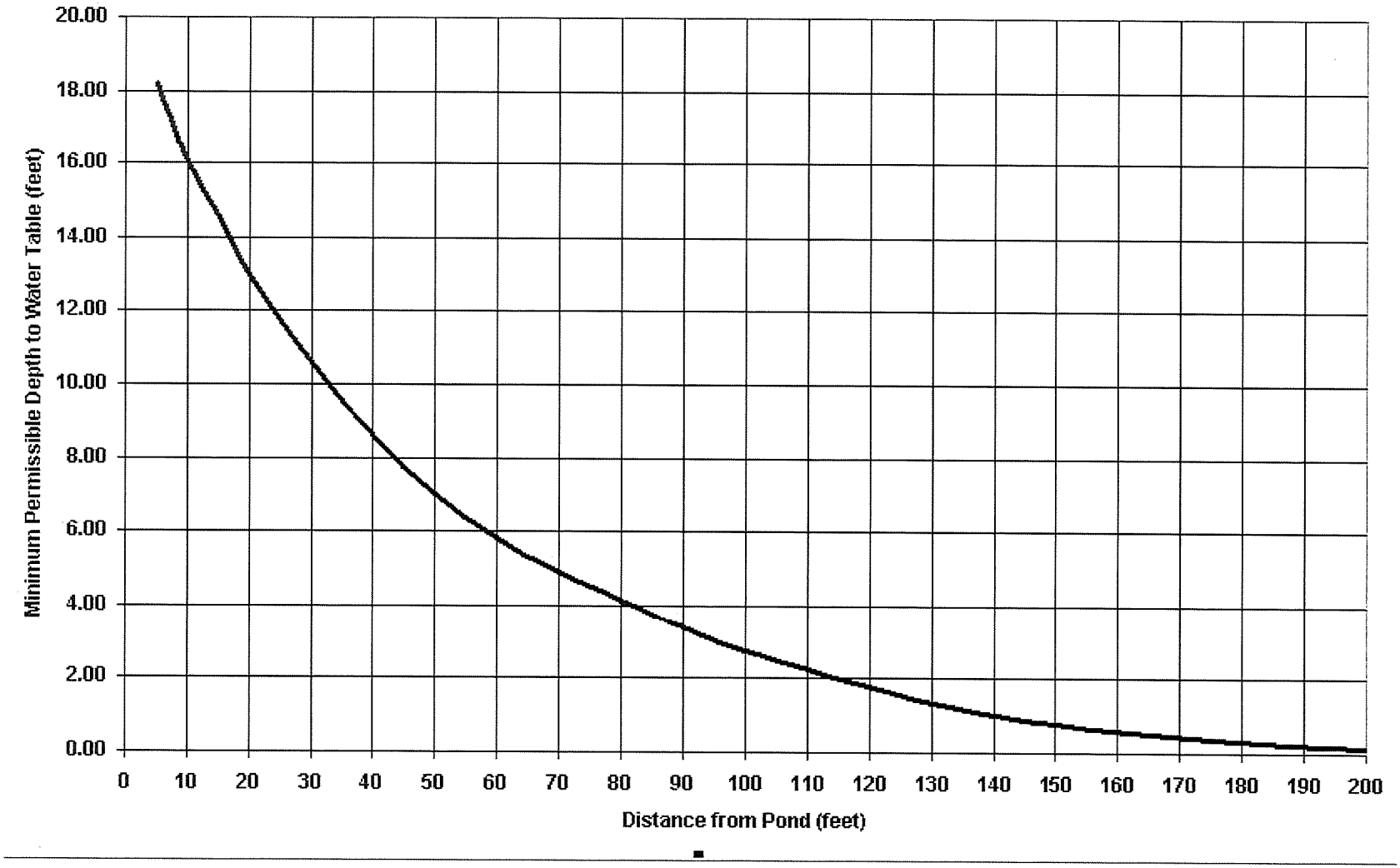
PLOT 5: Minimum Permissible Depth to Water Table - Silt - Pond Bottom >3 feet above Ambient Water Table



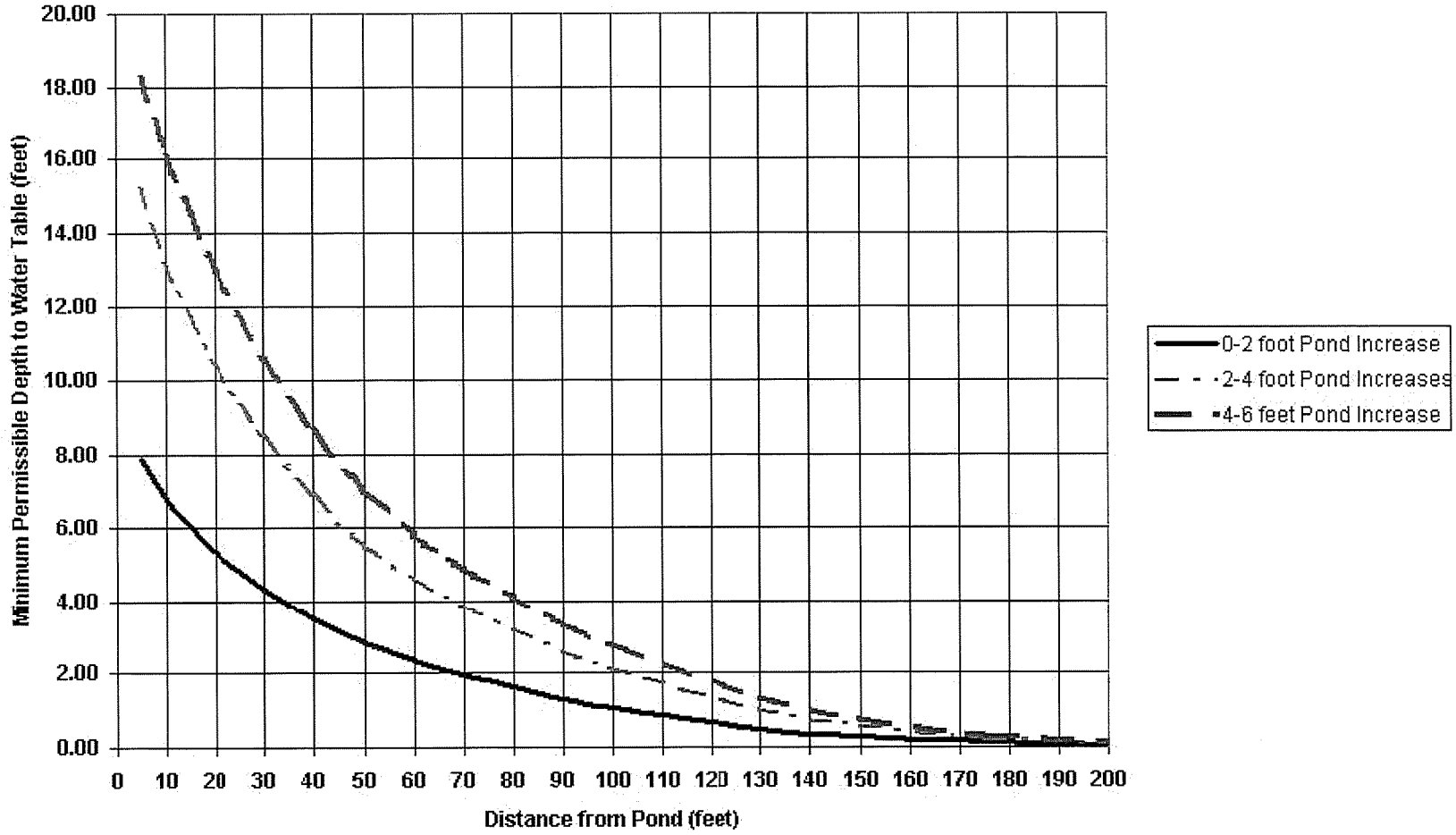
PLOT 6: Minimum Permissible Depth to Water Table - Sand & Gravel - Pond Bottom >3 feet above Ambient Water Table



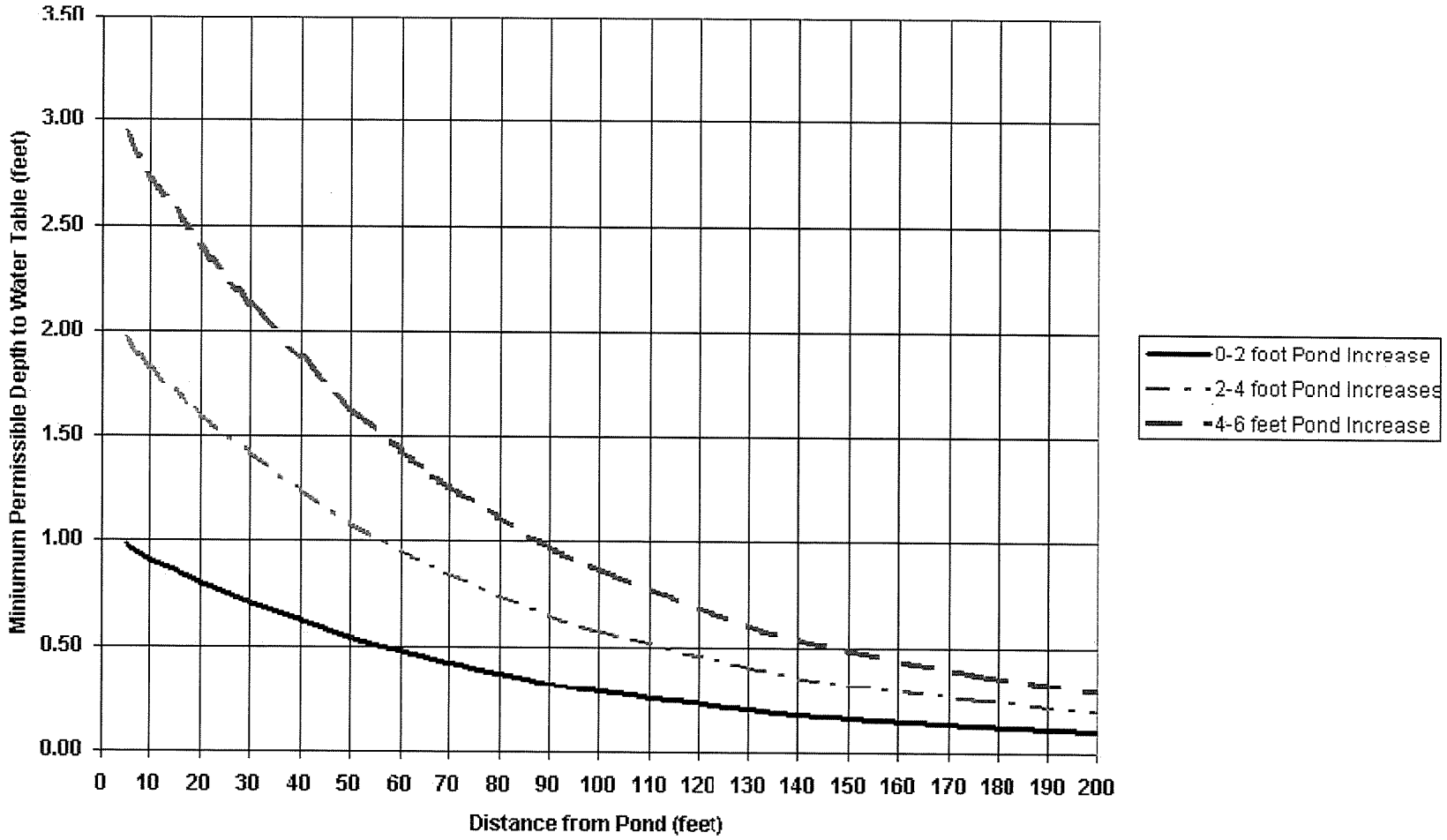
PLOT 1: Minimum Depth to Water Table for No Further Evaluation



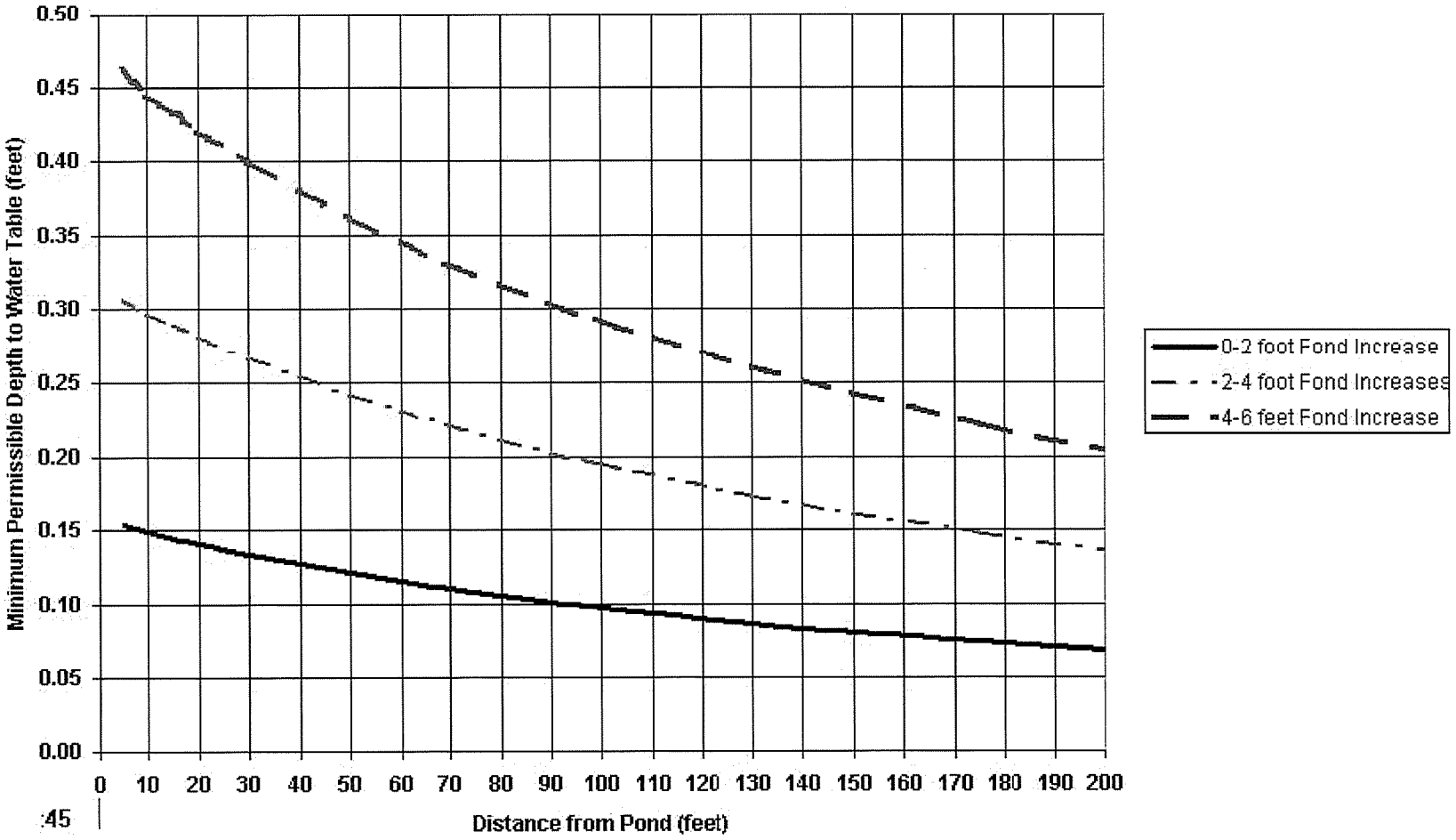
PLOT 2: Minimum Permissible Depth to Water Table - Clay or Perched Conditons
(Perched Conditions = Water Table <5 feet above a continuous clay layer)



PLOT 3: Minimum Permissible Depth to Water Table - Silt - Pond Bottom <3 feet above Ambient Water Table

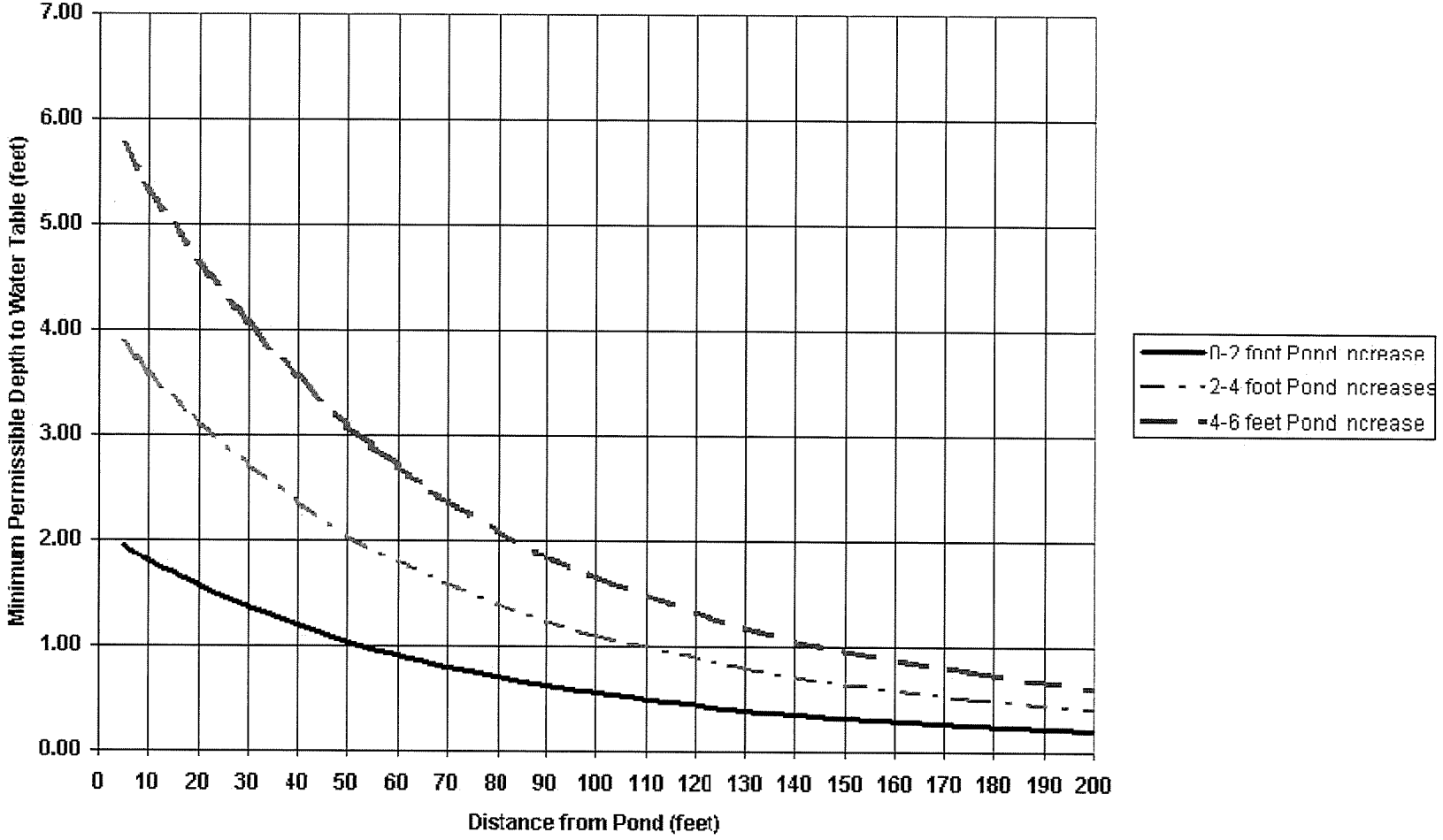


PLOT 4: Minimum Permissible Depth to Water Table - Sand & Gravel - Pond Bottom <3 feet above Ambient Water Table

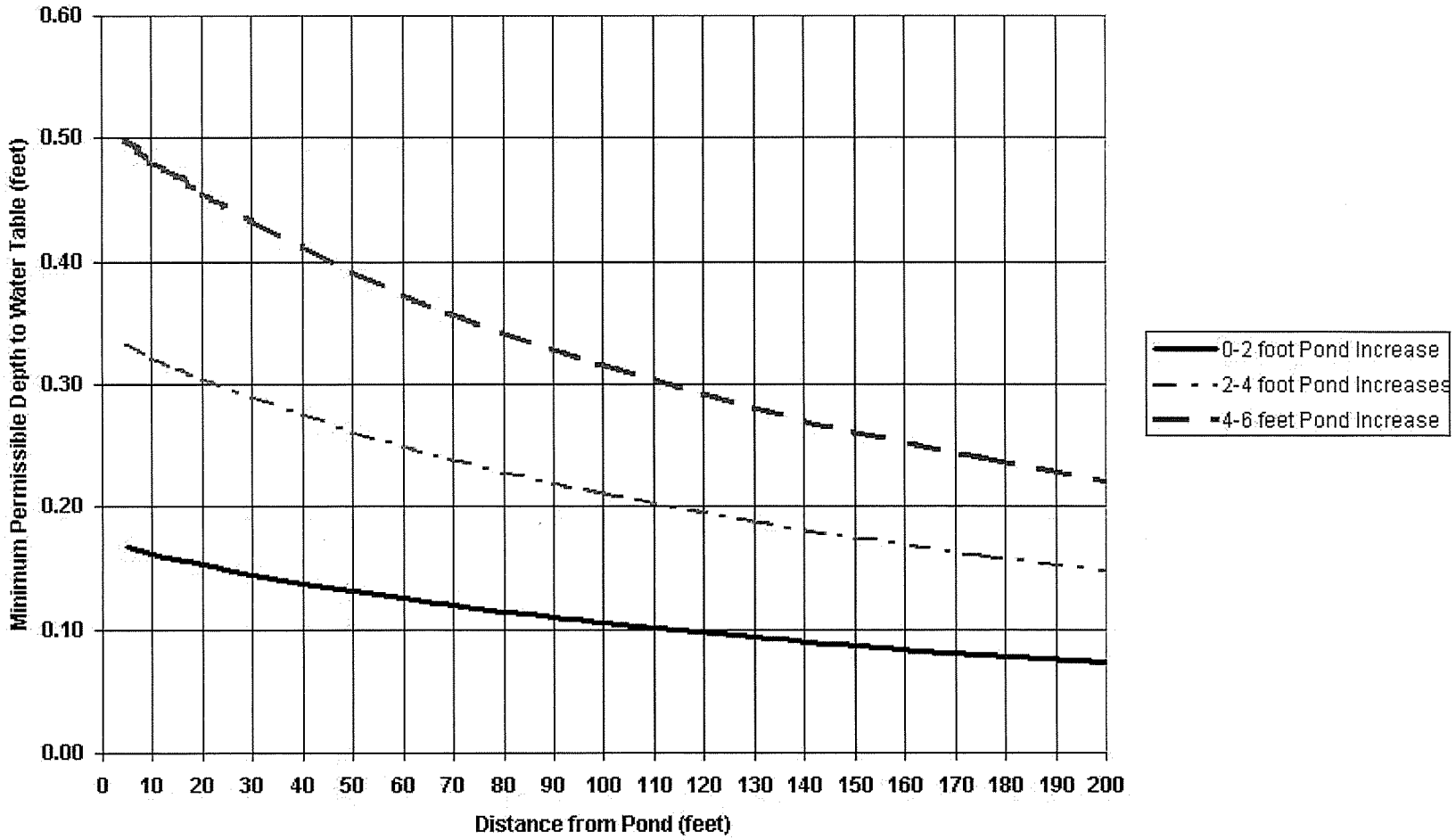


:45

PLOT 5: Minimum Permissible Depth to Water Table - Silt - Pond Bottom >3 feet above Ambient Water Table



PLOT 6: Minimum Permissible Depth to Water Table - Sand & Gravel - Pond Bottom >3 feet above Ambient Water Table



Rule K – Variances and Exceptions

1 Variances

The Board of Managers will consider a request for a variance from strict compliance with the requirements of a District rule on submission of a request by a permit applicant. To grant a variance, the Board of Managers must find, based on demonstration by the applicant, that because of unique conditions inherent to the subject property, which do not apply generally to other land or structures in the Riley--Purgatory--Bluff Creek watershed, strict application of a rule provision will impose a practical difficulty on the applicant, not a mere inconvenience.

For purposes of the Board of Managers' determination of whether a practical difficulty exists, the following factors will be considered:

1.1 how substantial the variation is from the rule provision;

1.2 the effect of the variance on government services;

1.3 whether the variance will substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties;

1.4 whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules;

1.5 how the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance; and

1.6 in light of all of the above factors, whether allowing the variance will serve the interests of justice.

2 Exceptions

The Board of Managers may approve an exception from a provision of the rules requiring a particular treatment or management strategy, or setting forth a design specification, if an applicant demonstrates that better natural resource protection or enhancement can be achieved by the project as proposed, with such further conditions as the Board of Managers may impose, than would strict compliance with the provision.

3 Term

A variance or exception granted by the District is valid only as long as the underlying permit remains valid.

4 Violation

A violation of any condition of a permit approved with a variance constitutes grounds for termination of the variance.

Rule L – Permit Fees

1 Policy

It is the determination of the Board of Managers that:

1.1 Charging a minimal permit application fee will increase public awareness of and compliance with District permitting requirements, and will reduce enforcement and inspection costs;

1.2 The public interest will benefit from inspection by District staff of certain large-scale projects in locations presenting particular risk to water resources to provide the Board of Managers with sufficient information to evaluate compliance with District rules and applicable law, and the District's annual tax levy should not be used to pay such costs; and

1.3 From time to time persons perform work requiring a permit from the District without a permit, and persons perform work in violation of an issued District permit. The Board of Managers determines that its costs of inspection and analysis in such cases will exceed the costs incurred where an applicant has complied with District requirements. The Board of Managers further concludes that its annual tax levy should not be used to pay costs incurred because of a failure to meet District requirements but rather such costs should be recovered from the responsible parties.

2 Requirement

The District will charge applicants permit fees in accordance with a schedule that will be maintained and revised from time to time by resolution of the Board of Managers to ensure that permit fees cover the District's actual costs of administrating and enforcing permits and the actual costs related to field inspections of permitted projects, such as investigation of the area affected by the proposed activity, analysis of the proposed activity, services of a consultant and any required subsequent monitoring of the proposed activity. Costs of monitoring an activity authorized by permit may be charged and collected as necessary after issuance of the permit. The fee schedule may be obtained from the District office or the District's web site at http://www.rpbcwd.org. A permit applicant must submit the required permit fee to the District at the time it submits the relevant permit application. The fee provided for in this rule will not be charged to any agency of the United States or of any governmental unit or political subdivision of the State of Minnesota.

Rule M – Financial Assurances

1 Policy

It is the policy of the District to protect and conserve the water resources of the District by requiring a bond or other financial performance assurance with a permit application to ensure adequate performance of the authorized activities and compliance with the District rules.

2 Requirement

The District may require a permit bond, letter of credit or other financial assurance in a form approved by the District for an activity regulated under these rules. A financial assurance will not be required of any agency of the United States or of any governmental unit or political subdivision of the State of Minnesota.

3 Criteria

Financial assurances required pursuant to this rule must be issued in compliance with the following criteria:

3.1 The financial assurance will be a permit bond, letter of credit, cash deposit or other form acceptable to the District, and a commercial financial assurance will be from an issuer licensed and doing business in Minnesota. Financial assurance templates may be obtained from the District web site (http://www.rpbcwd.org) and also are available from the District office.

3.2 The financial assurance will be issued in favor of the District and conditioned upon the applicant's performance of the activities authorized in the permit in compliance with the terms and conditions of the permit and all applicable laws, including the District's rules, and payment when due of any fees or other charges authorized by law, including the District's rules. The financial assurance will state that in the event the conditions of the financial assurance are not met, the District may make a claim against it. In the event that the District makes a claim against a financial assurance, the full amount of the financial assurance required must be restored within 45 days.

3.3 The financial assurance must be effective for one year from the date of issuance unless a longer period is specified by the District and will contain a provision that it may not be canceled without at least thirty (30) days prior written notice to the District.

3.4 The financial assurance will be submitted by the permit applicant, but the financial assurance principal may be either the landowner or the individual or entity undertaking the proposed activity.

3.5 No financial assurance will be released except pursuant to the terms of section 4.

3.6 No interest will be paid on financial assurances held by the District.

3.7 The amounts of financial assurances required by the District will be set by the

Board of Managers by resolution. The schedule of financial assurance amounts will be maintained on the District website (http://www.rpbcwd.org) and also will be available from the District office. Financial assurance amounts will be set as necessary to cover the following potential liabilities to the District:

a field inspection, monitoring and related fees authorized under Minnesota Statutes section 103D.345;

b the cost of maintaining and implementing erosion prevention and sediment control and other protective measures required by the permit;

c the cost of remedying damage resulting from noncompliance with the permit or for which the permittee is otherwise responsible.

3.8 When a cash escrow is to be provided to fulfill a District financial assurance requirement, the permittee/escrow provider will be required as a condition of permit issuance, transfer or renewal to enter into a cash escrow agreement with the District. Permit approval may be revoked for failure to comply with this requirement. A cash escrow agreement template will be maintained on the District website (http://www.rpbcwd.org) and also will be available from the District office.

4 Financial Assurance Release

On written notification of completion of a project and submission of the chloride-management plan pursuant to section 3.8 of Rule J, if applicable, the District will inspect the project to determine if the project has been constructed in accordance with the terms of the permit and District rules. If the project is completed in accordance with the terms of the permit and District rules, any documentation or other records necessary to demonstrate and confirm that required facilities, features or systems have been constructed or installed and are functioning as designed and permitted, and there is no outstanding balance for unpaid permit fees, the District will release the financial assurance.

4.1 Final inspection compliance constituting grounds for financial assurance release includes, but is not limited to:

a demonstration by the permittee and confirmation by the District that the site has been vegetated and stabilized to prevent erosion and sedimentation per Rule C, subsection 3.4, and that erosion and sedimentation controls have been removed;

b demonstration and confirmation that stormwater management features have been constructed or installed and are functioning as designed and permitted;

c payment of all outstanding fees to the District.

The District may return a portion of the financial assurance if it finds that the entire amount is no longer required to ensure compliance with the permit conditions and District rules. If the District has not inspected the project and made a determination about the project's compliance with the above criteria within 45 days of District receipt

of written notification of project completion, the financial assurance is deemed released unless the District notifies the permittee that final inspection compliance matters remain outstanding. In the event that a financial assurance is released through expiration of the time for confirmation of final inspection compliance, the District will provide a writing releasing the financial assurance if needed to meet the issuer's requirements.

Rule N – Enforcement

1 **Investigation of noncompliance.** District staff and agents may enter and inspect a property in the watershed to determine whether a violation of one or more District rules, a permit or an order exists or whether land-disturbing activities have been undertaken in violation of District regulatory requirements.

2 **Board hearing; administrative compliance order.** A property owner or permittee will be provided with reasonable notice of a compliance hearing and an opportunity to be heard by the Board of Managers on a finding of probable violation and failure of the property owner to apply for a permit or a permittee to take necessary corrective steps. At the conclusion of a hearing, the District may issue a compliance order. A District compliance order may require a property owner to apply for an after-the-fact permit and/or effect corrective or restorative actions. A District compliance order may require that land-disturbing activities on the property cease until corrective or restorative actions take place.

3 **District court enforcement.** The Board of Managers may seek judicial enforcement of an order and recovery of associated legal costs and fees, as provided by Minnesota Statutes chapter 103D, through a civil or criminal action pursuant to Minnesota Statutes section 103D.545 and 103D.551.

4 **Liability for enforcement costs.** The permittee or owner of a property that is the subject of District enforcement action will be liable for associated costs incurred by the District, including but not limited to the costs of inspection and monitoring of compliance, engineering and other technical analysis, legal fees and costs, and administrative expenses.