

# Riley-Purgatory-Bluff Creek Watershed District

Board of Managers Regular Meeting

Wednesday, December 11, 2019

7:00pm Board Meeting

DISTRICT OFFICE

18681 Lake Drive East

Chanhausen

## Agenda

**Meeting will begin at 7:00pm**

- |  |                    |
|--|--------------------|
| <b>1. Call to Order</b>                      | <b>Action</b>      |
| <b>2. Approval of the Agenda</b>             | <b>Action</b>      |
| <b>3. Budget Informational Meeting</b>       |                    |
| <b>4. Matters of general public interest</b> | <b>Information</b> |

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.

- |   |               |
|---|---------------|
| <b>5. Reading and approval of minutes</b>     | <b>Action</b> |
| a. Board of Manager Meeting, November 6, 2019 |               |
| <b>6. Citizen Advisory Committee</b>          | <b>Action</b> |
| a. Report                                     |               |
| b. Motion                                     |               |
| c. Application updates                        |               |

### **7. 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 November Staff Report
- b. Accept November Engineer's Report (with attached Inspection Report)
- c. Approve land exchange for Carver County Highway 101 right of way
- d. Approve Bluff Creek Tributary Stabilization Project – Pay Application #1
- e. Approve Scenic Heights Elementary School Forest Restoration Project – Pay Application #7

- f. Authorize Administrator Bleser to enter into an agreement with Houston Engineering after legal has drafted an agreement for the Permit and Grant Database System with funds coming from Reserve funds.
- g. Authorize purchase of Trimble R7 Receiver and T7 Tablet Controller survey grade GPS equipment.
- h. Approve Stewardship Grant for \$10,334.00 to Ridgewoods Condominium #1 Association for 21st Century Upgrades
- i. Authorize the Administrator to enter into an agreement with Carver County Soil and Water Conservation District for technical services

**8. Action Items**

**Action**

- a. Pulled consent items
- b. Accept September Treasurer's Report
- c. Approve Paying of the Bills
- d. Permit 2019-042 CSAH 101 Chanhassen – Consider variance requests from Rule B, subsection 3.2 compensatory storage; Rule D, subsection 3.1- average and minimum wetland buffers; and Rule J, subsection 3.1a rate control
- e. Permit 2019-042 CSAH 101 Chanhassen - Approve permit as presented in the proposed board action of the permit review report
- f. Permit 2019-043 Cedarcrest Stables - Consider variance requests from Rule J, subsection 3.1a rate control and 3.1b abstraction
- g. Permit 2019-043 Cedarcrest Stables - Approve permit as presented in the proposed board action of the permit review report
- h. Lower Riley Creek Stabilization Project – Request for additional engineering services budget
- i. Adopt Resolution 2019-021 - Rules
- j. Approve purchase of ipads for Board of Managers with officials District Business

**9. Discussion Items**

**Information**

- a. Manager Report
  - i. MAWD
  - ii. Personnel Committee
  - iii. Other matters
- b. Administrator Report
- c. Governance Manual
- d. Other

**10. Upcoming Board Topics**

- a. Water Quality Report
- b. Approve Task Order Wetland Restoration at Pioneer Trail
- c. Order Silver Lake Water Quality at Pleasant View Drive (On hold)

**11. Upcoming Events**

**Information**

- Citizen Advisory Committee Meeting, December 16, 2019, 6:00pm, 18681 Lake Drive East, Chanhassen

- Board of Managers Meeting, January 8, 2020. 7pm, 18681 Lake Drive E, Chanhassen
- Personnel Committee Meeting, January 17, 2020. 3pm. 18681 Lake Drive East, Chanhassen

Budget Description	2019 LEVY	REVISED 2019 Budget	End of Year 2019 forecast	Carry Over estimates	Plan	2020 Levy	2020 Proposed Budget
<b>LEVY</b>							
<b>REVENUES</b>							
Plan Implementation Levy	\$ 3,602,500.00	\$ 3,602,500.00			\$ 3,704,500.00	\$ 3,703,000.00	\$ 3,703,000.00
Permit	\$ 25,000.00	\$ 50,000.00			\$ 25,000.00	\$ 25,000.00	\$ 25,000.00
Grant Income	\$ 400,000.00	\$ 708,079.00					
Data Collection Income							
Other Income							
Investment Income		\$ 35,000.00				\$ 75,000.00	\$ 75,000.00
Past Levies	\$ 2,889,992.00	\$ 2,511,789.00					\$ 2,873,000.00
2018 Partner Funds		\$ 432,000.00					
<b>TOTAL REVENUE</b>	<b>\$ 6,917,492.00</b>	<b>\$ 7,339,368.00</b>				<b>\$ 3,803,000.00</b>	<b>\$ 6,676,000.00</b>
<b>EXPENDITURES</b>							
<b>Administration</b>							
1 Accounting and Audit	\$ 42,000.00	\$ 42,000.00	\$ -		\$ 44,000.00	\$ 42,000.00	\$ 42,000.00
2 Advisory Committees	\$ 5,000.00	\$ 5,000.00	\$ -		\$ 6,000.00	\$ 5,000.00	\$ 5,000.00
3 Insurance and bonds	\$ 20,000.00	\$ 20,000.00	\$ -		\$ 14,000.00	\$ 20,000.00	\$ 20,000.00
4 Engineering Services	\$ 106,000.00	\$ 106,000.00	\$ -		\$ 109,000.00	\$ 109,000.00	\$ 109,000.00
5 Legal Services	\$ 78,000.00	\$ 78,000.00	\$ -		\$ 81,000.00	\$ 84,000.00	\$ 84,000.00
6 Manager Compensation	\$ 20,000.00	\$ 20,000.00	\$ -		\$ 21,000.00	\$ 20,000.00	\$ 20,000.00
7 Dues and Publications	\$ 12,000.00	\$ 12,000.00	\$ -		\$ 10,000.00	\$ 14,000.00	\$ 14,000.00
8 Office Cost	\$ 144,000.00	\$ 144,000.00	\$ -		\$ 107,000.00	\$ 150,000.00	\$ 150,000.00
9 Permit Review and Inspection	\$ 135,000.00	\$ 110,000.00	\$ -		\$ 96,000.00	\$ 135,000.00	\$ 135,000.00
Permit Review and Inspection Database		\$ 39,900.00					
10 Recording Services	\$ 10,000.00	\$ 10,000.00	\$ -		\$ 17,000.00	\$ 17,000.00	\$ 17,000.00
11 Staff Cost	\$ 550,000.00	\$ 550,000.00	\$ -		\$ 462,000.00	\$ 600,000.00	\$ 600,000.00
<b>Subtotal</b>	<b>\$ 1,122,000.00</b>	<b>\$ 1,136,900.00</b>	<b>\$ -</b>		<b>\$ 967,000.00</b>	<b>\$ 1,196,000.00</b>	<b>\$ 1,196,000.00</b>
<b>Programs and Projects</b>							
<b>District Wide</b>							
12 10-year Management Plan	\$ 5,000.00	\$ 5,000.00	\$ -		\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
13 AIS Inspection and early response	\$ 75,000.00	\$ 75,000.00	\$ -		\$ 75,000.00	\$ 85,000.00	\$ 85,000.00
14 Hennepin County Chloride Initiative*	\$ 10,000.00	\$ 120,800.00	Carry over	\$ 100,000.00			\$ 100,000.00
15 Chloride Lower Minnesota*	\$ 9,000.00	\$ 217,209.00	Carry over	\$ 215,000.00			\$ 215,000.00
16 Cost Share*	\$ 100,000.00	\$ 252,293.00	Carry over	\$ 80,000.00	\$ 200,000.00	\$ 200,000.00	\$ 280,000.00
17 Data Collection and Monitoring	\$ 186,000.00	\$ 186,000.00	\$ -		\$ 192,000.00	\$ 192,000.00	\$ 192,000.00
18 Community Resiliency		\$ 48,000.00	Carry over	\$ -		\$ 50,000.00	\$ 50,000.00
19 Education and Outreach	\$ 119,000.00	\$ 119,000.00			\$ 123,000.00	\$ 123,000.00	\$ 123,000.00
20 Plant Restoration - U of M*	\$ 42,000.00	\$ 42,000.00	Carry over	\$ -	\$ 40,000.00	\$ 42,000.00	\$ 42,000.00
21 Repair and Maintenance Fund *		\$ 177,005.00	Carry Over	\$ 140,000.00	\$ 100,000.00	\$ 100,000.00	\$ 240,000.00
22 Wetland Management*	\$ 25,000.00	\$ 145,272.00	Carry Over	\$ 110,000.00	\$ 100,000.00	\$ 50,000.00	\$ 160,000.00
23 Groundwater Conservation*		\$ 130,000.00	Carry Over	\$ 130,000.00	\$ 100,000.00	\$ 50,000.00	\$ 180,000.00
24 Lake Vegetation Implementation	\$ 75,000.00	\$ 75,000.00			\$ 75,000.00	\$ 75,000.00	\$ 75,000.00
25 Opportunity Project*	\$ 100,000.00	\$ 200,000.00	Carry Over	\$ 180,000.00	\$ 100,000.00	\$ 100,000.00	\$ 280,000.00
26 Stormwater Pond*	\$ 22,000.00	\$ 86,092.00	\$ -		\$ 20,000.00	\$ 20,000.00	\$ 20,000.00
27 TMDL - MPCA		\$ 10,000.00	Carry over	\$ 10,000.00			\$ 10,000.00
<b>Subtotal</b>	<b>\$ 788,000.00</b>	<b>\$ 1,888,671.00</b>		<b>\$ 965,000.00</b>	<b>\$ 1,110,000.00</b>	<b>\$ 1,092,000.00</b>	<b>\$ 2,057,000.00</b>
<b>Bluff Creek</b>							
28 Bluff Creek Tributary*	\$ 50,000.00	\$ 291,091.00	Carry over	\$ 150,000.00			\$ 150,000.00
29 Wetland Restoration and Flood Mitigation*	\$ 450,000.00	\$ 561,870.00	Carry over	\$ 200,000.00			\$ 200,000.00
30 Chanhassen High School *		\$ 41,905.00	\$ -	\$ 20,000.00			\$ 20,000.00
<b>Subtotal</b>	<b>\$ 500,000.00</b>	<b>\$ 894,866.00</b>		<b>\$ 370,000.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 370,000.00</b>
<b>Riley Creek</b>							
31 Lake Riley - Alum Treatment 1st dose *		\$ 5,000.00	Carry over	\$ -	\$ 300,000.00	\$ 300,000.00	\$ 300,000.00
32 Lake Susan Improvement Phase 1 *				\$ -			
33 Lake Susan Water Quality Improvement Phase 2 *		\$ 13,420.00	Carry over	\$ 10,000.00			\$ 10,000.00
34 Rice Marsh Lake in-lake phosphorus load*		\$ 73,983.00	Carry over	\$ 65,000.00	\$ 15,000.00		\$ 65,000.00
35 Rice Marsh Lake Water Quality Improvement Phase 1*	\$ 150,000.00	\$ 150,000.00	Carry over	\$ 125,000.00	\$ 150,000.00	\$ 150,000.00	\$ 275,000.00
36 Riley Creek Restoration (Reach E and D3) *	\$ 250,000.00	\$ 1,680,562.00	Carry over	\$ 500,000.00			\$ 500,000.00
37 Lake Ann - Westland restoration						\$ 150,000.00	\$ 150,000.00
38 Lake Riley & Rice Marsh Lake Subwatershed Assessment		\$ 72,500.00	Carry over	\$ 15,000.00			\$ 15,000.00
39 Upper Riley Creek Stabilization and Restoration*	\$ 425,000.00	\$ 425,000.00	Carry over	\$ 425,000.00	\$ 675,000.00	\$ 675,000.00	\$ 1,100,000.00
<b>Subtotal</b>	<b>\$ 825,000.00</b>	<b>\$ 2,420,465.00</b>		<b>\$ 1,140,000.00</b>	<b>\$ 1,140,000.00</b>	<b>\$ 1,275,000.00</b>	<b>\$ 2,415,000.00</b>
<b>Purgatory Creek</b>							
40 Purgatory Creek Rec Area- Berm/retention area - feasibility/design*		\$ 50,000.00	Carry over	\$ 40,000.00			\$ 40,000.00
41 Lotus Lake in-lake phosphorus load control*		\$ 105,772.00	Carry over	\$ 103,000.00			\$ 103,000.00
42 Silver Lake Restoration - Feasibility Phase 1*	\$ 167,500.00	\$ 168,013.00	Carry over	\$ 140,000.00	\$ 367,500.00	\$ 100,000.00	\$ 240,000.00
43 Scenic Heights*		\$ 111,226.00	Carry over	\$ 70,000.00			\$ 70,000.00
44 Hyland Lake in-lake phosphorus load control*	\$ 100,000.00	\$ 140,000.00	Carry over	\$ 5,000.00		\$ 10,000.00	\$ 15,000.00
45 Mitchell Lake Subwatershed Assessment*		\$ 87,500.00	Carry over	\$ 20,000.00			\$ 20,000.00
46 Lotus Lake Kerber Pond Ravine						\$ 30,000.00	\$ 30,000.00
47 Duck Lake watershed load*		\$ 213,955.00	Carry over	\$ 20,000.00			\$ 20,000.00
<b>Subtotal</b>	<b>\$ 267,500.00</b>	<b>\$ 876,466.00</b>		<b>\$ 398,000.00</b>	<b>\$ 367,500.00</b>	<b>\$ 140,000.00</b>	<b>\$ 538,000.00</b>
48 Reserve	\$ 100,000.00	\$ 99,628.00	\$ -		\$ 100,000.00	\$ 100,000.00	\$ 100,000.00
<b>TOTAL EXPENDITURE</b>	<b>\$ 3,420,000.00</b>	<b>\$ 7,316,996.00</b>		<b>\$ 2,873,000.00</b>	<b>\$ 3,684,500.00</b>	<b>\$ 3,803,000.00</b>	<b>\$ 6,676,000.00</b>
<b>EXCESS REVENUES OVER (UNDER) EXPENDITURES \$ 3,497,492.00 \$ 22,372.00</b>							
<b>ESTIMATED FUND BALANCE BEGINNING</b>							
<b>ESTIMATED FUND BALANCE ENDING</b>							

DRAFT BUDGET WORKSHOP

* Denotes multi-year projects and programs - please see budget description sheet for further details	County	Payable 2019 Net Tax Capacity	Net Tax Capacity Percent Distribution	Apportionable Payable 2020	Apportionable Payable 2019	Tax based in 2019 increased by
	Carver	\$ 35,968,053	23.3379%	\$ 864,203.69	\$ 864,203.69	7.2%
	Hennepin	\$ 118,150,359	76.6621%	\$ 2,838,796.31	\$ 2,838,796.31	Propose Levy increase
	Watershed Total	\$ 154,118,412	100.0%	\$ 3,703,000.00	\$ 3,703,000.00	2.8%

BOARD WORKSHOP: July 10, 2019  
PUBLIC HEARING: September 4, 2019  
DECEMBER BOARD MEETING: December 11, 2019

\*Denotes multi-year project

## MEETING MINUTES

### Riley-Purgatory-Bluff Creek Watershed District

November 6, 2019, RPBCWD Board of Managers Monthly Meeting

#### PRESENT:

Managers: Jill Crafton, Treasurer

Larry Koch

Dorothy Pedersen, Vice President

Dick Ward, President

David Ziegler, Secretary

Staff: Zach Dickhausen, RPBCWD Water Resources Technician

Terry Jeffery, Watershed Planning Manager

Louis Smith, Attorney, Smith Partners

Scott Sobiech, Engineer, Barr Engineering Company

Other attendees: Rod Rue, Eden Prairie City Engineer

Leslie Stovring, Water Resources Coordinator

Patrick Sejkora, Eden Prairie Water Resources Engineer

Laurie Susla, LLCA

Lori Tritz, CAC Chair

#### 1. Call to Order

1 President Ward called to order the Wednesday, November 6, 2019, Board of Managers Monthly Meeting at 7:00  
2 p.m. at the District Office, 18681 Lake Drive East, Chanhassen, MN 55317.

#### 2. Approval of Agenda

3 Manager Koch requested pulling all items off the Consent Agenda except for item 7e – Approve Scenic Heights  
4 Elementary School Forest Restoration Project – Pay Application #6. Manager Ziegler moved to approve the  
5 agenda as amended. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

#### 3. Public Hearing: Rules Amendment

6 Mr. Jeffery reported the District received comments about its proposed rules amendment from five entities and the  
7 purpose of tonight's hearing is to receive comments from the public. He summarized the impetus for the District  
8 moving through this rules amendment process. Mr. Jeffery went through the proposed changes.

9 President Ward opened the floor for public comments. Mr. Sejkora, City of Eden Prairie Water Resources  
10 Engineer, reiterated some of the City's submitted comments. He highlighted items that could represent additional  
11 hurdles or steps the City would need to go through and could increase project cost or difficulty. Mr. Sejkora  
12 commented there had been discussion about incorporating a cost-cap or financial threshold included in the permit  
13 language for which BMPs and other storm water improvements either would have a limit based on the size of the  
14 project or the budget. He said this point did not seem to make it into the draft revised rules provided to the City  
15 for comment. He stated the proposed revised rules still included language about monitoring. Mr. Sejkora said the

16 monitoring can be costly for the City to implement, there isn't a definitive timeframe for when the monitoring is  
17 to occur, and some vendors have become wary of having their products subjected to monitoring. Mr. Sejkora  
18 noted that in Rule J in the required exhibits, language is included about performing some modeling of secondary  
19 overflows for the 100-year critical event. He said the city believes one interpretation is that for municipal projects,  
20 the City would be modeling storm sewer systems, which are large and complex and incorporate offsite areas not  
21 pertinent to the reconstruction improvements. Mr. Sejkora noted that the modeling requirement may bring about  
22 the need for changes in the City's modeling software, which would represent additional costs, training, and  
23 project complexity. He commented the City recognizes modeling as important but modeling on a project-by-  
24 project basis may not be the most efficient method and instead the City supports a partnership effort in modeling  
25 instead of as part of a permit trigger.

26 President Ward requested Mr. Sejkora submit his comments in writing.

27 Mr. Jeffery stated the District has received the City's written comments and staff will be responding to comments  
28 and will bring the responses back to the Board of Managers next month. Manager Koch said he has some  
29 questions and comments and will reach out to Mr. Jeffery directly.

30 Manager Koch moved to adjourn the public hearing. Manager Crafton seconded the motion. Upon a vote, the  
31 motion carried 5-0.

#### 4. Matters of General Public Interest

32 Ms. Laurie Susla of 7008 Dakota Avenue, Chanhassen, and president of the Lotus Lake Conservation Alliance,  
33 reported Lotus Lake has been designated by the DNR as being infested by Zebra Mussels at of October 31, 2019.  
34 She provided background on the designation and reported developments that have occurred since the date of the  
35 designation. Ms. Susla went into detail about the findings that led to the designation, including a water sample  
36 that tested positive for zebra mussel veligers and the finding of five dead zebra mussels on a boat lift that had  
37 been out of the Lake Minnetonka for the winter season, from fall of 2018 to April 2019. She reported that Carver  
38 County has sent water samples from four Lotus Lake locations for eDNA testing, and the test results will be back  
39 next Monday. She said the LLCA is asking for the Board's support to remove Lotus Lake as being designated as  
40 zebra mussel infested if the eDNA tests come back negative.

41 President Ward noted there may be a need to have an in-depth discussion about this topic, and the Board would  
42 like its Administrator present. He said the Board can discuss this during the AIS agenda item later in this meeting.

#### 5. Approval of Minutes

##### a. October 2, 2019, RPBCWD Board of Managers Regular Monthly Meeting

43 Manager Crafton noted that on page 3, line 70, the minutes should reflect the seminar was jointly hosted  
44 by MAWD and MASWCD. She stated that on page 2, line 19, the word "to" needs to be changed to "so."  
45 Manager Crafton commented that on page 4, line 111, the phrase, "will be distributed" should be replaced  
46 with the word, "sent." Manager Crafton clarified the project name listed on page 5, line 131.

47  
48 Manager Ziegler moved to accept the minutes as amended. Manager Pedersen seconded the motion. Upon  
49 a vote, the motion carried 4-0. [Manager Koch abstained from vote.]

#### 6. CAC

50 Ms. Lori Tritz, CAC Chair, reported that the Committee's main motions included supporting the CAC to have a  
51 role in the Pioneer Trail wetland restoration. She said the CAC is brainstorming about what the Committee would

52 like to see there. Ms. Tritz shared that the CAC did a site visit to the project area. She added that several members  
53 have conducted site visits to restored wetlands as well. She said the CAC feels the stewardship grants committee  
54 should require all native plantings agreed to in the contract to be installed before reimbursement and giving the  
55 applicant a time extension as needed to honor the contract. Ms. Tritz asked that while the Board considers  
56 applications for the CAC to give special consideration to applicants with expertise in governance and fiscal  
57 oversight. She reported on CAC and subcommittee activities, including a community clean-up/leaf raking event,  
58 several buckthorn pulling events, and communication with Flagship regarding the tennis balls collected during the  
59 cleanup and asking Flagship to consider taking action to prevent further pollution. Ms. Tritz reported that the  
60 Speaker's Bureau will give its first presentation on November 19 at Summit Place. She communicated the names  
61 of the CAC members interested in attending MAWD.

62 There was a brief discussion about the timeline for the CAC application process. Mr. Jeffery said staff is targeting  
63 opening the application period in the next week, closing applications in December, and handling appointments in  
64 January 2020.

65 Manager Koch moved to accept the CAC report and refer the motions to staff for comment back to the Board.  
66 Manager Ziegler seconded the motion.

67 Manager Pedersen raised issue with the CAC's motion for stewardship grants requiring 100% of native plantings  
68 included in contract to be installed before processing reimbursement. Manager Pedersen explained her experience  
69 with sourcing native plants and the potential hardship caused by withholding the full reimbursement until 100%  
70 of the native plants are planted. Manager Koch asked Ms. Tritz and the stewardship grants committee to get  
71 further clarification on the status of the plantings and circumstances on why they weren't planted and to bring the  
72 information back to the Board.

73 Upon a vote, the motion carried 5-0.

## 7. Consent Agenda

74 Manager Koch moved to approve the Consent Agenda based on the information in the Board packet. Manager  
75 Ziegler seconded the motion. Upon a vote, the motion carried 5-0. Upon a vote, the motion carried 5-0. The  
76 Consent Agenda included: 7e – Approve Scenic Heights Elementary School Forest Restoration Project – Pay  
77 Application #6.

## 8. Action Items

### a. Pulled Consent Agenda items

#### i. Accept October Staff Report

79 Manager Koch had several questions for staff. Mr. Jeffery and Attorney Smith provided responses.  
80 Manager Koch moved to accept the staff report. Manager Ziegler seconded the motion. Upon a  
81 vote, the motion carried 5-0.

#### ii. Accept October Engineer's Report (with attached Inspection Report)

83 Manager Koch asked Engineer Sobiech several questions and asked for updates regarding staff  
84 activities in October. Engineer Sobiech responded. Manager Koch moved to accept the Engineer's  
85 Report. Manager Ziegler seconded the motion. Upon a vote, the motion carried 5-0.

#### iii. Award Demolition Project for 730 and 750 Pioneer Trail (Wetland Project)

87 Manager Koch asked if the District has adopted a threshold for requiring competitive bids.  
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89 Attorney Smith responded that the District follows statute. Manager Koch asked follow-up  
90 questions and asked Attorney Smith if he would be putting together a contract. Attorney Smith  
91 responded yes.

92 Manager Koch moved to award the Demolition to Olson Construction Company on the condition  
93 that Olson Construction agrees to a contract for such services with the terms and conditions  
94 acceptable to District staff and the District Legal Counsel and to authorize the District  
95 Administrator to execute the contract. Manager Ziegler seconded the motion. Upon a vote, the  
96 motion carried 5-0.

97 iv. **Award Lake Susan Park Pond Repair and Maintenance for Spent Lime**

98 Manager Koch asked staff if there is a high degree of probability that the system will work this  
99 time. Engineer Sobiech provided an update on the level and extent of testing of the system.  
100 Manager Koch said that based on this information, he moves to authorize the District  
101 Administrator to enter into contract with Sunram Construction Inc. for the modification to the  
102 spent lime system at a cost not to exceed \$36,712 contingent on the contractor executing a  
103 contract with such terms and conditions as staff and the District's Legal Counsel deem necessary  
104 to protect the District and to authorize the District Administrator to execute the contract. Manager  
105 Ziegler seconded the motion. Upon a vote, the motion carried 5-0.

106 v. **Enter into Agreement with Fortin Consulting on the Final Development of a**  
107 **Training Manual for Property Managers**

108 Manager Koch moved to enter into contract with Fortin Consulting Inc. for the development of a  
109 guide book contingent upon Fortin Consulting Inc. entering into an agreement with terms and  
110 conditions set by the District's staff, Legal Counsel, and the other participants on this project.  
111 Manager Ziegler seconded the motion. Upon a vote, the motion carried 5-0.

112 vi. **Approve Annual Communication for Release**

113 Mr. Jeffery said staff wants to send the communication piece out for printing by next Tuesday and  
114 asked managers to provide any comments to staff by next Monday. Manager Koch said he will  
115 provide staff with comments and wants to be sure that the communication states the District  
116 calendar is subject to change and to reference the District's website for updates. Manager Koch  
117 moved to have staff solicit comments and produce the final annual communication for release.  
118 Manager Ziegler seconded the motion. President Ward made a friendly amendment for managers  
119 to respond to staff's request for comments. Manager Koch and Manager Ziegler agreed to the  
120 friendly amendment. Upon a vote, the motion carried 5-0.

121 b. **Accept September Treasurer's Report**

122 Manager Crafton moved to accept the Treasurer's Report as submitted. Manager Ziegler seconded the  
123 motion. Manager Koch noted that on page 3, under expenditures for administration, there isn't budget for  
124 the human resources Baker Tilly costs. He moved to transfer \$6,524.80 out of the reserve budget into that  
125 budget line item. The motion died due to lack of a second. Upon a vote, the motion to accept the  
126 September Treasurer's Report carried 4-1 (Manager Koch voted against the motion).

127 c. **Approve Paying of Bills**

128 Manager Crafton moved to pay the bills. Manager Pedersen seconded the motion. Manager Koch stated  
129 that since the District doesn't have a budget item to pay the utilities, he moves to strike payment of that  
130 item. The motion died due to lack of a second. Upon a vote, the motion carried 4-1. [Manager Koch voted  
131 against the motion.]

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**d. Elect MAWD Delegates and Alternate to Represent District at Annual MAWD Meeting**

Manager Pedersen nominated Manager Crafton and President Ward as the delegates and Manager Ziegler as the alternate. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

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**i. Discuss Board Position on MAWD Resolutions**

Manager Pedersen commented she is in favor of letting the delegates consider the information on the resolutions as presented at the meeting and vote at the meeting based on that information.

Manager Koch said he would like to see this Board advocate for the adoption of the two resolutions this Board forwarded. Manager Pedersen moved to accept the packet of resolutions as provided and to authorize the delegates to vote on each resolution based on the information presented at the meeting. Manager Crafton seconded the motion. Upon a vote, the motion carried 4-1. [Manager Koch voted against the motion.]

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**e. 2020 Calendar**

President Ward recommended the January 2020 meeting be moved to January 8. He noted the July 1 and December 2 meetings should be moved as well. The Board moved the July meeting to July 8 and the December meeting to December 9. Manager Koch moved to adopt the 2020 calendar with the updates the Board has discussed. Manager Ziegler seconded the motion. Upon a vote, the motion carried 5-0.

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**f. AIS**

Ms. Susla stated that the LLCA has hired Blue Water Science to dive and walk shallow areas of parts Lotus Lake, and the LLCA will share the results with the District. The Board and staff discussed Lotus Lake and the discovery of the zebra mussel veligers and dead zebra mussels. Manager Koch remarked he would like the Board to support pushing the DNR to rethink its designation of Lotus Lake as infested with zebra mussels. He said he would like the District to come to the December meeting with the possibility of funding some treatment in Lotus Lake in the case data comes back showing that the infestations are localized.

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President Ward asked if the Board should have a special meeting in about two weeks to discuss this issue further. The managers indicated yes. President Ward said he will talk with Administrator Bleser about setting up a special meeting.

**9. Discussion Items**

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**a. Manager Report**

President Ward reported the Governance Committee met two weeks ago and has given Smith Partners the necessary information to update the District's Governance Manual. Attorney Smith noted Smith Partners should be able to update the manual by the Board's December meeting. Manager Pedersen moved to approve legal expenses up to \$3,000 for Smith Partners to update the District's Governance Manual. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

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**b. Personnel Committee**

Manager Pedersen stated the Committee met in October and discussed potential education opportunities for Administrator Bleser. She said the discussion will continue at the Committee's next meeting on November 14. Manager Pedersen reported the Committee reviewed the changes that will be happening in terms of cost for the District's current benefits program. She said the Committee is gathering information regarding paternity leave and will bring updates on these Committee discussions to the Board at the

December monthly meeting.

**c. BWSR Board**

Manager Crafton updated the managers about her discussions with Dan Shaw.

**d. Administrator Report**

Mr. Jeffery updated the Board on an opportunity with a homeowner association. He said this opportunity originated with a member of the CAC reaching out about a possible rain garden project with the HOA. Mr. Jeffery said the HOA is putting together a list of ideas and HOA property that could offer an opportunity for a project.

**e. Land Exchange for County Road 101 to Maintain Access to Bluff Creek from RPBCWD Land**

Mr. Jeffery reviewed maps included in the meeting packet, including a map showing a property purchased by the District in the early 1990s and a map showing the area of Highway 101 that will be part of a realignment project. Mr. Jeffery pointed out the approximately 10,000-square-foot area that will be the TH101 realignment project’s permanent taking and the area that will be temporary construction easement. He explained the District’s property is parcel 2 and the District was offered parcel 4b, but staff recommends asking for parcel 4b and parcel 37, the cul-de-sac. Mr. Jeffery went into detail about the reasons, which include that those parcels provide valley access and project staging area.

**10. Upcoming Board Topics**

President Ward noted that upcoming Board topics are listed on the agenda and include Approving Task Order for Wetland Restoration at Pioneer Trail and Ordering Silver Lake Water Quality at Pleasant View Drive (January). He announced upcoming events, including the Evening with the Watershed on December 3.

**11. Upcoming Events**

- Personnel Committee, November 14, 3:00 p.m., 18681 Lake Drive East, Chanhassen
- Citizen Advisory Committee Meeting, November 18, 6:00 p.m., District Office, 18681 Lake Drive East, Chanhassen
- Evening with the Watershed, December 3, 2019, 6:30 p.m., Chanhassen American Legion
- MAWD Conference, December 5-7, Annual Conference of the Minnesota Association of Watershed Districts in Alexandria, MN.

**12. Adjournment**

Manager Ziegler moved to adjourn the meeting. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0. The meeting adjourned at 8:47 p.m.

Respectfully submitted,

\_\_\_\_\_  
David Ziegler, Secretary

**Minutes: Monday, November 18, 2019**  
**RPBCWD Citizen's Advisory Committee Monthly Meeting**  
**Location: RPBCWD offices: 18681 Lake Street, Chanhassen**

**CAC Members**

Jim Boettcher	P	Peter Iverson	P	Sharon McCotter	P	Marilynn Torkelson	P
Scott Bryan	A	Daryl Kirt	A	Jan Neville	P	Lori Tritz	P
Anne Deuring	P	Denny Kopfmann	R	Joan Palmquist	P		
Barry Hofer	P	Matt Lindon	P	Samir Penkar	P		

**Others**

Terry Jeffery	RPBCWD staff
B Lauer	RPBCWD staff
Claire Bleser	RPBCWD staff
Dorothy Pederson	RPBCWD Manager

**Summary of key actions/motions for the Board of Managers:**

1. **Motion:** The CAC will be voting on a slate of officers at our December meeting to take effect in January.

**I. Opening**

- A. Call CAC meeting to Order: Chair Lori Tritz called the meeting to order at 6:02 pm.
- B. Attendance: As noted above.
- C. Matters of general public interest: None
- D. Approval of Agenda: We would like to move the Pioneer Trail wetland restoration to first item and save the groundwater conservation topic for another meeting. Matt moved and Joan seconded to approve the agenda as amended. Motion carried.
- E. Approval of October 21, 2019 CAC Meeting Minutes: Jim Boettcher was excused, not absent. Joan asked for a clarification of the motion regarding the unfinished stewardship grant. Rather than sounding like it was focused on native plants, it should have simply been incomplete and therefore not reimbursable. Jim moved and Jan seconded to approve the minutes as amended. Motion carried.

**II. New Staff**

- A. We were introduced to B Lauer, new Education and Outreach assistant. B is developing a groundwater conservation program.

**III. Pioneer Trail Wetland Restoration Charette**

- A. In small groups led by Claire and Terry we answered:
  1. What about wetlands are you curious? We shared with our group and then shared with the room.
  2. Terry provided an overview of wetlands with a handout. This is the first wetland restoration/enhancement (non-regulatory) project for the District. Terry reminded us that wetlands were a resource of concern for residents in the 10-year plan. The previously 10-year plan was more lake-focused. Additional interesting stuff not included in handout: Hydrophytic vegetation grows in saturated or inundated soils. Soil that develops under saturated or inundated conditions is characterized by oxidized metals (reddish color) or stripped of metals (grey color). Hydrology is the hardest of the wetland indicators. We look for matted leaves, stains on trees, topographic depression, and vegetation. To qualify hydrologically as a wetland, the soil at 21" depth is at a biological 0 degrees (when microbial activity slows down) for a consecutive 10% of growing season.

There are currently 12 million acres of wetlands in MN. We've lost 12 million acres since presettlement. Over half of all bird species rely on wetlands for nesting or feeding.

Flood attenuation: 15% additional wetland volume reduces flood strength by 60%.

3. The primary purpose for the restoring the Pioneer Trail wetland property is to restore function (increased storage, habitat), decrease discharge (flooding), and wetland education.
  4. Carver Co. would like to obtain right of way to build a trail along north side of Pioneer Trail.
  5. Restoration techniques: Vegetation restoration, regrading ditches, and removing tiles to restore hydrology
  6. Next we categorized all the questions and answered, "How do you want to receive information about this?"
    - a. Better understanding wetlands: Speakers bureau, story map, learning presentation, printed, website, video
    - b. Engagement: students, outdoor classroom, restrooms, interactive place for conversation, signage, viewing areas, boardwalks, outdoor wetland library, accessibility, viewing wildlife, sit and enjoy, live web cam, geo cache, labeled vegetation, seasonality, birders, researchers
    - c. Rules and regulations: What are the rules governing wetlands that must be complied with? How does the purchase of wetland credits for new developments work? What funding sources are available to restore and maintain wetlands?
  7. Claire and B will transcribe and synthesize all info and bring it back to us. Send other questions you have to Terry.
- B. Name of project: This has been discussed but not finalized. Typically, the name of this type of project honors the people who dwelled on the land and the history of the land.
- C. Timeline: First we need to do a feasibility and hold public hearing, then board can act on ordering project. We cannot start design without ordering the project. We plan to break ground in the fall of 2020. We have until 2021 to complete project. If the project costs above \$175,000 we have to go to bid, which is slower. If the cost is below \$175,000, we can solicit quotes which allows us to tailor to contractors that specialize in this kind of work. April -June public hearing and ordering. Design in the summer.
- D. The District is interested in other potential wetland restoration sites. We should let them know if we hear of other troubled sites that could become wetland restorations.

### III. Staff Report

- A. There are 5 open spots on the CAC for 2020. If you know anyone encourage them to apply by the end of the year. There is no need to fill out application for current members.
- B. Clarification of staff roles: With Michelle's departure we are not just filling holes, but rather discerning what we need. We are still in limbo but call either Claire or Terry and they will guide you to the correct staff. Regular staff meetings have been established to alleviate cracks.
- C. Preserve HOA project: Jan's neighborhood approached the District about a green roof and that has led to several other ideas culminating in a full-fledged opportunity project. The site provides good exposure, a good template, and good water work.
- D. Update on Duck Lake project: All trees have been planted; homeowner's guide notes have been found. The CAC has talents to lend to this project.

### IV. Commission Discussion

- A. Board Meeting of November 6, 2019: We recognize it is complicated, but please ask note taker to be more specific as to the nature of questions, i.e., "questions about process." Audio recordings of the Board meetings are available. Could we receive the minutes any sooner? Terry will check.

Lotus Lake is infested with zebra mussels. The additional testing concluded that "it is unlikely that there is not a reproducing population." This doesn't mean we don't still need inspections. There are other AISs.

- B. CAC Calendar: Lori passed around a 2020 calendar. Please sign up to take notes and present to board. If unable to fulfill your month, trade with someone who hasn't done it.
- C. Potential learning presentations
  1. Jan's restoration to Neill Lake.

2. Jim has Carver County ideas.
3. RPBCWD project visit.
4. Tree trenches installation
5. A day in the life of an AIS inspector
6. Layers of bureaucracy to navigate for District projects

Any other new ideas for presentations, send them to Lori. Terry will set up google docs.

- D. Election of officers: Joan moved, and Sharon seconded that we vote on a slate of CAC officers in December to take effect in January. Motion carried. Lori is willing to stay on as chair. Sharon is willing to stay on as vice chair. If anyone wants to put their name forward, send to Lori. Claire and Terry will work on a new member orientation for the January meeting. We would like Lewis to present as District council. We should be prepared to speak on subcommittees, however new members will not be asked to join yet.
- E. Jim asked if we have ever considered a youth commissioner? We like the idea, but it has to be done right. Probably start in fall. Would need to consider appointment by Board if given full voting rights. Jim B will work with Lori to figure out how it might work.
- F. CAC meeting code of conduct: Jan and Sharon developed a code of conduct to proactively guide our meetings – basically be on time, be prepared, be respectful, don't be a jerk. Matt suggested the addition of deferring to the chair. Marilynn suggested letting the chair know if you cannot attend meeting. The final code of conduct reads:
1. Show up on time and come prepared and notify the chair prior to the meeting if you will be absent
  2. Contribute to meeting goals
  3. Strive to meet the stated purpose and expected outcomes of the meeting
  4. Encourage participation and opinion sharing from everyone
  5. Listen actively with an open mind
  6. Stay on point and on time
  7. Communicate openly, critiquing ideas rather than individuals
  8. Treat all participants with kindness, respect and consideration, valuing a diversity of views and opinions
  9. Defer to the Chair and her/his role in guiding the meeting

**V. Subcommittee Reports:**

- A. Education and Outreach: Speakers Bureau has first presentation tomorrow at Summit Place.
- B. Lakes and Streams: need to redo charter, Denny resigned
- C. Stormwater: did Chanhassen clean up, 26 people 122 bags, 2 sites, different groups, talked about ways to expand program
- D. Landscaping for Water: would like to support ongoing projects
- E. Start a wetland subcommittee? The CAC is currently acting as a defacto "committee of the whole" in regards to wetlands. A wetlands committee charter is already created. At this time a separate subcommittee apart from the "committee of the whole" is not required.

**VI. Next meeting:**

- A. Water conservation
- B. Election of officers

**VII. Upcoming Events.**

- A. MAWD December 5-7
- B. Board of Managers meeting December 10, 7:00 pm, 18681 Lake Drive East
- C. RPBCWD CAC meeting December 16 at 6:00 pm, 18681 Lake Drive East
- D. An Evening with the Watershed, Tuesday, December 3, 6:30 – 8:00 pm.

**VIII. Adjourn CAC meeting:** Pete moved and Sharon seconded to adjourn. Motion carried. Meeting adjourned at 9:02.

## RPBCWD September Staff Report

Administration		Staff update	Partners
<b>Accounting and Audit</b>	Coordinate with Accountant for the development of financial reports. Coordinate with the Auditor. Continue to work with the Treasurer to maximize on fund investments.	Financials were submitted to Treasurer and Accountant, and has been processed for this month.	
<b>Annual Report</b>	Compile, finalize and submit an annual report to agencies	Staff have begun discussing annual report timelines.	
<b>Internal Policies</b>	Work with Governance Manual and Personnel Committees to review bylaws and manuals as necessary	Governance manual is included in your packet	
<b>Advisory Committees</b>	Engage with the Technical Advisory Committee on water conservation, chloride management and emerging topics Engage with the Citizen Advisory Committee on water conservation, annual budget and emerging topics. Facilitate recruitment of CAC members for 2019.	The CAC met for their regular monthly meeting November 18. Draft CAC minutes are included in the packet. Administrator Bleser, Staff Lauer, and Staff Jeffery led CAC members on an exercise to develop ideas for what education at the Pioneer Trail Wetland Restoration Project site might entail. Response to TAC comments are included in the packet. A meeting will be held with the TAC in January or early February to review rules guidance document.	
<b>MAWD</b>		Save the Data: Legislative Days are March 18-19, 2020 Annual Meeting is December 4-6.	
<b>Membership</b>		No new updates.	
<b>District-Wide</b>			
<b>Regulatory Program</b>	Review regulatory program to maximize efficiency.	Two permit applications have been received since the November meeting.	

	<p>Engage Technical Advisory Committee and Citizen Advisory Committee on possible rule changes. Implement regulatory program.</p>	<p>Three permits were administratively approved since the November meeting. These were a repair of erosion issues off Magnolia Trail issued to the City of Eden Prairie, the demolition of the homes on Vogelsburg Trail issued to the City of Chanhassen, and the construction of a duplex on an existing lot of record in Minnetonka issued to Dingman Custom Homes.</p> <p>In addition to the two new applications, four (4) other permits are currently under review; two of which are before the board tonight.</p> <p>Staff Jeffery and Engineer Sobiech met with three other potential applicants to review their proposed projects.</p>	
<b>Aquatic Invasive Species</b>	<p>Review AIS monitoring program Develop and implement Rapid Response Plan as appropriate Coordinate with LGUs and keep stakeholders aware of AIS management activities. Manage and maintain the aeration system on Rice Marsh Lake as per the Riley Chain of Lakes Carp Management Plan. Review AIS inspection program. Keep abreast in technology and research in AIS. 2019 zebra mussel veliger testing.</p>	<p>eDNA was confirmed on Lotus Lake. The MN DNR has listed Lotus Lake. Informational meeting is December 9, 2019.</p>	<p>City of Chanhassen City of Eden Prairie University of Minnesota MN DNR Carver County</p>
<b>Cost-Share</b>	<p>Review program to determine efficiencies and needs. Recommend modification as necessary. Review applications and recommend implementation.</p>	<p>The Stewardship Grant Review committee met November 18th to review an application from Ridgewoods Condominiums. The committee made a funding recommendation. In accordance with the new program structure</p>	<p>Carver County Soil and Water Conservation District</p>

		<p>the application will be referred to the Board of Managers for a final funding decision, as the funding request is greater than \$10,000.</p> <p>Although the grant season has ended, Staff Jeffery has asked the Stewardship Grant Review Committee to meet for an undetermined, but expectedly few additional times to discuss the first year of the scoring system and if modifications are warranted. The first meeting will occur in January. Denny Kopfman has elected not to continue on the CAC and is no longer on the committee. A replacement will be needed.</p> <p>Staff Lauer has begun summarizing the performance of the program in 2019.</p> <p>Staff Lauer will work to make appropriate revisions and updates to program and materials during the off season.</p>	
<b>Data Collection</b>	<p>Continue Data Collection at permanent sites. Identify monitoring sites to assess future project sites.</p>	<p>Creek walks occurred on Purgatory Creek this month. Staff walked subsections within sections P7, P6, P5, P4, and P3. The early snowfall did not allow staff to complete P1 and P2. These two subsections will be finished in the spring of 2020.</p> <p>WOMP stations: Continued bi-weekly sampling of the station.</p> <p>Phytoplankton results were received by Barr Engineering.</p>	<p>Metropolitan Council</p> <p>City of Eden Prairie</p> <p>University of MN</p> <p>City of Chanhassen</p>

		<p>Aeration notice for Rice Marsh Lake was published in the Eden Prairie and Chanhassen newspapers twice this month. The unit will be started when ice thickness increases to a safe thickness, allowing staff to deploy thin ice signs. Staff began to QC and compile data. Work on the Water Resources Report began this month. Service Learning students from the U of M are continuing to volunteer with data collection staff this month and will continue through the fall semester.</p>	
<p><b>District Hydrology and Hydraulics Model</b></p>	<p>Coordinate maintenance of Hydrology and Hydraulics Model.          Coordinate model update with LGUs if additional information is collected.          Partner and implement with the City of Bloomington on Flood Evaluation and Water Quality Feasibility.</p>	<p>The City of Eden Prairie is interested in adding details to the H and H model. Staff and Engineering are discussing details.</p>	<p>City of Bloomington</p>
<p><b>Education and Outreach</b></p>	<p>Implement Education &amp; Outreach Plan, review at year end.          Manage partnership activities with other organizations.          Coordinate Public Engagement with District projects.</p>	<p>Staff Lauer and GreenCorps member Bakkum visited 2 Kindergarten classes at Cedar Ridge Elementary School on November 6th. They led scavenger hunt activities in the school forest and taught the students about trees.          Master Water Stewards: This year's cohort of Stewards attended their second class in November, and are continuing to learn about the district and local water issues.          A volunteer with the District CAC gave the first presentation for the new Speaker's Bureau program. The presentation focused on how water moves through the environment and what we can do to keep it clean, and was</p>	<p>Master Water Stewards:          Freshwater Society</p> <p>Adopt a drain: City of Eden Prairie, City of Minnetonka, City of Bloomington, Hamline University, Nine Mile Creek Watershed District</p>

		<p>presented to residents at Summit Place senior homes in Eden Prairie.</p> <p>Applications for Educator and Action grants continue to be received, reviewed, recommended, and processed.</p> <p>Community members continue to sign up to adopt storm drains and keep them clear of leaves, dirt, and other debris through the Adopt-a-drain.org partnership.</p>	
<b>MN GreenCorps Update</b>		<p>GreenCorps Member Bakkum has been utilizing recently gained knowledge to determine next steps of projects, focusing on chloride reduction in the private sector.</p> <p>She has secured booth at upcoming MNLA Northern Green conference to promote educational materials and has developed a follow-up survey to further pinpoint future education for this audience.</p>	MPCA
<b>Groundwater Conservation</b>	<p>Work with other LGUs to monitor assess and identify gaps.</p> <p>Engage with the Technical Advisory Committee to identify potential projects.</p> <p>Develop a water conservation program (look at Woodbury model)</p>	<p>Six out of the seven cities within the District applied for and were granted Water Efficiency Grants from the Metropolitan Council amounting to \$107,600 worth of funding. The grant will enable cities to administer rebate programs for smart irrigation controllers, water efficient toilets and washing machines, and irrigation system audits.</p> <p>Staff Lauer has begun identifying the groundwater conservation needs of cities through conversations with city staff responsible for administering Metropolitan Council Water Water Efficiency Grant funds to residents.</p>	TBD

		Staff Lauer will conduct a facilitated conversation with the CAC in December to help identify perceptions of groundwater conservation and the water conservation needs of residents that a district program could serve.	
<b>Lake Vegetation Management</b>	<p>Work with the University of Minnesota or Aquatic Plant Biologist, Cities of Chanhassen and Eden Prairie, lake association, and residents as well as the Minnesota Department of Natural Resources on potential treatment. Implement herbicide treatment as needed.</p> <p>Secure DNR permits and contract with herbicide applicator.</p> <p>Lakes the District is monitoring for treatment include: Lake Susan, Lake Riley, Lotus Lake, Mitchell Lake, Red Rock Lake and Staring Lake.</p> <p>Work with Three Rivers Park District for Hyland Lake</p>	No new updates.	<p>City of Eden Prairie</p> <p>City of Chanhassen</p> <p>University of Minnesota</p> <p>MNDNR</p>
<b>Opportunity Projects</b>	Assess potential projects as they are presented to the District	The Preserve HOA submitted ideas for a site retrofit. Staff is reviewing and will be meeting with the HOA to continue the conversation.	<p>St Hubert Catholic Community</p> <p>Carver County Soil and Water Conservation District</p>
<b>Total Maximum Daily Load</b>	<p>Continue working with Minnesota Pollution Control Agency on the Watershed Restoration And Protection Strategies (WRAPS).</p> <p>Engage the Technical Advisory Committee.</p>	No new updates	MPCA

<b>Repair and Maintenance Grant</b>	Develop and formalize grant program.	No new update.	
<b>University of Minnesota</b>	<p>Review and monitor progress on University of Minnesota grant.</p> <p>Support Dr John Gulliver and Dr Ray Newman research and coordinate with local partners.</p> <p>Keep the manager abreast to progress in the research.</p> <p>Identify next management steps.</p>	<p>On November 15th John Gulliver and Poornima Natarajan presented pond findings to RPBCWD and City staff and recommended moving forward with the treatment of 3 ponds with iron enhanced sand. Staff has been working with the cities involved in the studies to volunteer their ponds and cover costs.</p> <p>On January 18th, the District will be hosting a stormwater pond meeting. The various groups at the UofMN, all participating cities, and Limnotech will be invited. All ongoing research and preliminary results of some of the studies will be shared.</p> <p>Limnotech is working on a grant proposal to the Minnesota Stormwater Research Council. The District would be partners. Their idea is to develop a multi-process numerical model of pond phosphorus dynamics, that they would calibrate with continuous field data collected from the instrumented ponds from this past summer. Limnotech would eventually leverage this data and create a simple-to-use tool to help practitioners to design, manage and simulate ponds to maximize P retention while minimizing effort/costs.</p>	<p>Stormwater ponds partners: Bloomington, Chanhassen, Eden Prairie, Minnetonka, Shorewood, and Limnotech.</p> <p>Plant Management: Chanhassen Eden Prairie</p>
<b>Watershed 50 year Anniversary</b>	<p>Come explore with us!</p> <p>Finalize anniversary program for 2019.</p> <p>Implement anniversary events.</p>	The District hosted a final event to close out this anniversary year: Evening with the Watershed on December 3rd.	

		All community art project panels have been completed, and will be framed this winter and displayed at the District offices.	
<b>Watershed Plan</b>	Review and identify needs for amendments.	Please review your board packet for rules component.	
<b>Wetland Conservation Act (WCA)</b>	Administer WCA within the Cities of Shorewood and Deephaven. Represent the District on Technical Evaluation Panel throughout the District	No WCA application were received for Deephaven. No WCA applications have been received in Shorewood. Staff Jeffery has been providing technical advice to Staff from Chanhassen in the interim until a new WRC is found. Staff Jeffery has been providing technical advice to Eden Prairie on six (6) wetland delineations and/or determinations.	City of Shorewood City of Deephaven City of Chanhassen City of Eden Prairie MCWD BWSR DNR ACOE
<b>Wetland Management</b>	Identify potential restoration/rehabilitate wetlands and wetland requiring protection.	Field work has finished for the year and Chanhassen has been completed. Staff Jeffery, after discussions with the MN Board of Soil and Water Resources confirmed that they have no intent to revisit and support the MNRAM application in the future. Instead the district will rely on the Excel version of the MNRAM until the BWSR provides new guidance on wetland assessment. Staff have begun work on the annual Wetland Report and writing a formal document for wetland assessment SOP's based upon lessons learned in 2019 and the above information pertaining to the MNRAM.	City of Chanhassen MNDNR

<b>Hennepin County Chloride Initiative</b>	Phase 1: Develop a plan to target commercial and association-based sources or chloride pollution - businesses, malls, HOAs, property management companies and the private applicators that they hire. We will hire a consultant to facilitate focus groups with private applicators, as well as those that execute contracts with private applicators. These focus groups will help identify needs and barriers for our target audience. The consultant will compile information into a plan for implementation.	The partnership will be meeting on December 17th to go over the results of the qualitative research and survey that the District has performed. Administrator Bleser and Research Kreiter will be presenting preliminary findings at MAWD. White paper will be formalized early spring 2020.	
<b>Lower Minnesota Chloride Cost-Share Program</b>	The Lower Minnesota River Watersheds are coming together to offer cost-share grants.	The program is anticipated to restart after the december initiative meeting.	
<b>Bluff Creek One Water</b>			
<b>Chanhassen High School Re-use</b>	Continue to work with all partners. Complete site restoration and start system. Finalize and implement E and O for project. Monitor Project.	Staff met on-site to troubleshoot the frequent alarming that was occurring at the reuse facility. The problem was identified (a check valve that was not opening so the UV treatment could be cooled) and repaired. We anticipate closing the project at the October board meeting.	ISD 212 City of Chanhassen Metropolitan Council
<b>Bluff Creek Tributary Restoration</b>	Implement and finalize restoration. Monitor Project.	Due to the rainy weather some of the work for the restoration is taking longer than anticipated but work is moving forward.	City of Chanhassen
<b>Wetland Restoration at 101</b>	Remove 3 properties from flood zone, restore a minimum 7 acres and as many as 16 acres of wetlands,	Grant reimbursement has been submitted for the home purchase. Quotes have been solicited from three contractors and received	City of Chanhassen MN DNR

	connect public with resource, reduction of volume, rate, pollution loads to Bluff Creek	from two for the demolition of the homes at 730 and 750 Pioneer Trail, the abandonment of wells and septic, the removal of driveways and foundations, and grading and stabilization of the site. This work is eligible for reimbursement under the Flood Hazard Mitigation Grant.	
<b>Riley Creek One Water</b>			
<b>Lake Riley Alum</b>	Continuing to monitor the Lake.	No updates	
<b>Lake Susan Improvement Phase 2</b>	Complete final site stabilization and spring start up. Finalize and implement E and O for project. Monitor Project.	System is winterized.	City of Chanhassen Clean Water Legacy Amendment
<b>Lake Susan Spent Lime</b>	Replace media to improve functionality	Staff Jeffery has worked with Chanhassen Parks and Recreation Director to secure right of entry to replace media in the spent lime facility this winter.	City of Chanhassen
<b>Lower Riley Creek Stabilization</b>	Coordinate agreement and acquire easements if needed for the restoration of Lower Riley Creek reach D3 and E. Implement Project. Continue Public Engagement for project and develop signage of restoration.	Updated postcard to residents was sent to remind them that the project is about to start.	City of Eden Prairie Lower MN River Watershed District
<b>Rice Marsh Lake Alum Treatment</b>	Continuing to monitor the Lake.	No updates.	City of Eden Prairie City of Chanhassen
<b>Rice Marsh Lake Watershed Load Project 1</b>	Conduct feasibility. Develop cooperative agreement with City of Chanhassen	Staff Jeffery and District Engineer Sobiech met with City of Chanhassen staff to discuss limitations and potential BMP locations. Staff Jeffery, District Engineer Sobiech, and project engineer Hlavaty met on site	City of Chanhassen

		November 22 to review the area and discuss potential practices.	
<b>Upper Riley Creek</b>	<p>Work with City to develop scope of work (in addition to stabilizing the creek can we mitigate for climate change)</p> <p>Conduct feasibility</p> <p>Develop cooperative agreement with the City of Chanhassen</p> <p>Order Project</p> <p>Start design</p>	Discussion of this project will be on hold till the new water resources coordinator is hired. No changes.	City of Chanhassen
<b>Purgatory Creek One Water</b>			
<b>PCRA Berm</b>		The District and the City met to discuss the berm with USACOE and DNR to identify limitations and options as scope of project might differ from the original permit. The productive meeting has lead to Wenck Engineering vetting out options that would allow the berm to be restored and utilize the overflow location to manage common carp.	City of Eden Prairie
<b>Duck Lake Water Quality Project</b>	<p>Work with the City to implement neighborhood BMP.</p> <p>Identify neighborhood BMP to help improve water resources to Duck Lake.</p> <p>Implement neighborhood BMPs.</p>	Raingarden agreements were sent to homeowners. Final rain barrels were distributed.	City of Eden Prairie
<b>Hyland Lake Internal Load control</b>	Implement Hyland Lake Alum application.	Project is complete.	Three Rivers Park District City of Bloomington
<b>Lotus Lake – Internal Load Control</b>	Monitor treatment and plant populations.	No updates.	

<b>Scenic Heights</b>	Continue implementing restoration effort. Work with the City of Minnetonka and Minnetonka School District on Public Engagement for project as well as signage.	Staff will be evaluating site this fall and continues to coordinate with school. In October, all surviving trees from the gravel bed nursery were planted in the School Forest.	Minnetonka Public School District City of Minnetonka Hennepin County
<b>Silver Lake Restoration</b>	Order project Design Project Work with the City of Chanhassen for Design, cooperative agreement and implementation	Delayed until new city staff are on board.	City of Chanhassen
<b>Professional Development</b>			
<b>American Water Resources Conference, Salt Lake City</b>	Administrator Bleser and Staff Swope attended the annual AWRA Conference in Salt Lake City, Utah, November 3rd-6th. Administrator Bleser presented on integrated lake management and a separate presentation on HAB (harmful algal blooms). Staff Swope presented on the District's Duck Lake Partnership Project. BLM commissioner presented on the state of BLM. Staff Swope and Administrator Bleser also learned about the capture of water near Snowbird Resort through old mine tunnels. Administrator Bleser discussed HAB with EPA on how to utilize remote sensing to predict cyanobacteria blooms.		
<b>North American Lake Management Society</b>	Administrator Bleser attended an internal load and cyanobacteria 1 day workshop. Administrator Bleser also presented on the Lake Management Decision Tree. Administrator Bleser is part of the Conference Committee for NALMS Minneapolis 2020. Some of the sessions that I attended were salt related and brought quite a bit of food for thought and are shaping next steps in the Chloride initiative and chloride grant program.		
<b>Climate Adaptation Conference</b>	Administrator Bleser's abstract was accepted. EQB has invited Administrator Bleser to be on a pannel as part of one of the sessions.		
<b>American Water Resources Association</b>	Administrator Bleser was asked to be the Treasurer for AWRA and has accepted. Her term in this position will run til 2021. The AWRA board will be meeting in January in Washington DC. Administrator Bleser will be gone January 9th in the afternoon and returning on the 11th.		

## Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing November 2019 Activities for December 11, 2019, Board Meeting  
**Date:** December 1, 2019

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 November 2019.

### General Services

- a. Met with Administrator Bleser, Watershed Planning Manager Jeffery, and Counsel Smith on November 26<sup>th</sup> about the capital improvement program and status of ongoing task orders. Discussion included the status of Bluff Creek Tributary restoration project, spent lime repair access agreement (existing agreement appears to provide access rights), telemetry system request for Chanhassen High School reuse project, potential meeting with Bearpath Golf Course about potential creek restoration, 101 Wetland restoration property purchase and demolition, Silver Lake subwatershed project, Scenic Heights Forest Restoration, and the Duck Lake subwatershed project basin designs and homeowner coordination.
- b. Met with city of Eden Prairie, MNDNR, USACE, Wenck, Administrator Bleser and Watershed Planning Coordinator Jeffery about the repairing the eroded emergency overflow berm separating the water quality basin from the restored wetland in the Purgatory Creek Park area on November 21<sup>st</sup>. Several repair options were discussed. The city expressed a desire for RPBCWD to lead the repair and reinstall the boardwalk, raised concerns about future settlement of the embankment and sheetpile, and wants the district to stay involved with the project should additional repair be needed in the future. USACE indicated the control elevation and emergency overflow elevation are specified in permit issued to RPBCWD for original construction. RPBCWD can restore to original design without a USACE permit but if repair deviates from original design a permit modification would be needed. Wenck will develop a scope to develop two concept repair alternatives with cost estimates.
- c. Participated in a November 19<sup>th</sup> meeting with Administrator Bleser and RPBCWD staff to discussion status projects and programs.
- d. Met with Watershed Planning Coordinator Jeffery on November 6<sup>th</sup> to begin brainstorming a scope of work for technical assistance with wetland restoration project at Highway 101 and Pioneer Trail in Chanhassen.
- e. Participated in the November 6<sup>th</sup> regular Board of Managers meeting.
- f. Prepared Engineer's Report for engineering services performed during November 2019.

- g. Miscellaneous discussions and coordination with Administrator Bleser about spent lime system modifications, wetland restoration at 101, additional assistance with the Duck Lake subwatershed project tasks, Bluff Creek restoration, project staffing as well as upcoming Board meeting agenda.

### **Permitting Program**

- a. *Permit 2019-042: County State Aid Highway 101 - Chanhassen* – The project proposes to reconstruct County State Aid Highway 101 (CSAH 101) from Pioneer Trail to Flying Cloud Drive (CSAH 61), and filling a portion of the Nieman wetland floodplain. The applicant proposes stormwater management facilities including two pretreatment ponds, two filtration basins, and existing wet pond and vegetated swales to provide water quality treatment, volume abstraction and rate control for runoff prior to discharging offsite. This permit triggers RPBCWD's floodplain management, erosion control, wetland and creek buffer, and stormwater management rules. The applicant is requesting variances from the floodplain compensatory storage requirement, minimum and average wetland buffer criteria, and rate control criteria for the snowmelt event. Reviewed October 30<sup>th</sup> submittal and provided comments. The applicant is requesting variances from RPBCWD stormwater requirements for rate control from all discharge points and volume abstraction criteria. Reviewed November 19<sup>th</sup> revised submittal, worked with applicant's engineer to minimize variance requests, and drafted permit review report for Board consideration at the December 11<sup>th</sup> meeting.
- b. *Permit 2019-043: Cedarcrest Stables*: This project involves construction of a 17-lot single family home subdivision in Eden Prairie. The proposed project triggers RPBCWD's erosion control and stormwater management rules. Reviewed October 24<sup>th</sup> submittal and provided comments. The applicant is requesting variances from RPBCWD stormwater requirements for rate control from all discharge points and volume abstraction criteria. Reviewed November 14<sup>th</sup> revised submittal and drafted permit review report for Board consideration at the December 11<sup>th</sup> meeting.
- c. Met with Watershed Planning Coordinator Jeffery and Alliant Inc on November 19<sup>th</sup> for preapplication discussions about RPBCWD's permit review process for the Overlook development in Eden Prairie. This project would be located to the southwest of Flying Cloud Airport. This permit triggers RPBCWD's erosion control, wetland and creek buffer, and stormwater management rules.
- d. Worked with Watershed Planning Coordinator Jeffery and Counsel Welch on rule revisions including responses to comments and changes to rules in response to comments received.
- e. Met with Eden Prairie Central Middle School representative and city of Eden Prairie to discuss stormwater management criteria, soil borings, and application timeline.
- f. Miscellaneous conversations with Watershed Planning Coordinator Jeffery about technical questions on permit requirements for potential development and redevelopment projects as well as permit transfers.

### **Data Management/Sampling/Equipment Assistance**

- a. Prepared, uploaded, and verified 8 RMB laboratory (RMB) reports.

- b. Communicated with RMB about a test that was reported incorrectly. Worked with RMB to receive a revised report.
- c. Worked with the Client to correct composite sample start and end times in the database.

### **Education and Outreach**

- a. Printed and mounted educational posters for Evening with the watershed event.

### **Repair and Maintenance**

#### Lake Susan spent lime filter modification

- a. Reviewed the agreement and insurance information submitted by Sunram (contractor).
- b. Reviewed the submitted product information from Sunram on the HDPE pipe, PVC pipe, butterfly valve, and gate valves, and provided comments to the Contractor. Barr staff also provided a submittal log listing all the information that the Contractor is responsible for providing prior to and during construction of the modifications.
- c. The Contractor is requesting to mobilize as soon as possible. Watershed Planning Manager Jeffery continued coordination with the City of Chanhassen to finalize the access agreement for the project. The contract documents indicate that construction will not begin before January.

### **Task Order 6: WOMP Station Monitoring**

#### ***Purgatory Creek Monitoring Station at Pioneer Trail***

- a. Download and review data.
- b. Removed FTS DTS-12 turbidity sensor for winter season calibration and tune-up.

#### ***Purgatory Creek Monitoring Station at Valley View Rd***

- a. Download and review data.

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

- a. Worked with Peterson Companies on excavation quantities and high performance turf reinforcement mat quantities associated with final payment items and project close-out materials.

### **Task Order 14b: Lower Riley Creek Final Design**

- a. Met with Matt Bourne (City staff) on site to discuss bridge placement.
- b. Completed survey to stake construction limits.
- c. Reviewed submittals provided by Rachel Contracting
- d. Subcontractor has been working on clearing marked trees and salvaging for use as root wads/toe wood, etc. They have had some equipment issues so they have been moving

slower than expected. They are bringing in swamp mats to help them with mobility issues  
Grading work is anticipated to begin in early December.

- e. Continued coordinating with contractor and City

#### **Task Order 21B: Bluff Creek Stabilization Project**

- a. Grading work began again during the week of November 4.
- b. Sunram Construction completed grading and stabilization work on a side ravine at the downstream end of the project.
- c. Sunram completed grading, constructed riffles, and permanent erosion control measures on approximately 300 feet of the main channel at the downstream end of the project.
- d. Wet weather in the week before Thanksgiving caused an additional delay in construction work. The site was too muddy to complete work. Sunram will begin work again in the first week of December.



**Flow through a newly constructed rock riffle at the downstream end of the project**



**Grading and installing another rock riffle. Note the pipe being used to pump water around the active work area.**

### **Task Order 25: Duck Lake Water Quality Improvement Project**

- a. Contacted five landscape contractors to identify suitable candidates to construct downspout planter box prototypes during early 2020. Two of the five have expressed an interest once their current projects lighten up. The selected design(s) would be mass-produced and installed at homes of interested Duck Lake watershed residents during spring 2020.
- b. Continued drafting request for quote (RFQ) documents, including quote forms, design plans, and specifications for construction of four rainwater gardens during spring 2020.
- c. Communicated with future rainwater garden owners to facilitate obtaining signed homeowner agreements to construct rainwater gardens during spring 2020.

### **Task Order 26: Stormwater Model Update and Flood-Risk Area Prioritization Identification for the Bloomington Portion of Purgatory Creek**

- a. Barr staff revised the prioritization framework based on feedback provided by City of Bloomington staff and Administrator Bleser. The initial framework includes six criteria for prioritizing flood-prone areas.
  - (1) Number of impacted structures – This criterion considers the number of habitable structures that are within the 100-year floodplain within a given area. Consideration will be given to whether the structure is residential or commercial. Auxiliary structures such as sheds, park pavilions, or garages are not considered for this criterion.
  - (2) Frequency of flooding – This criterion considers how frequently structures maybe inundated. Structures that are inundated during more frequent events (i.e., 2-year) will be given a higher score than structures that are inundated during less frequent events (i.e., 100-year event).
  - (3) Social Vulnerability Index – This criterion considers census data to provide consideration for if a flood-prone area is located within a designated vulnerable area.
  - (4) Project Efficiency – This criterion considers project partners and if the project could meet goals published in the District or project partner's management plan.
  - (5) Multiple benefits – This criterion considers within a flood-risk mitigation project might provide multiple benefits for an area such as recreational benefits or ecosystem services.
  - (6) Critical Infrastructure – This criterion considers whether a project would reduce flood-risk for infrastructure classified by the District or City as critical such as emergency evacuation routes, emergency service locations such as hospital, police, fire, or city government buildings, emergency support services such as schools, grocery stores, or churches, and critical city services such as sanitary lift stations.
- b. Barr staff started processing GIS files for each of the six criteria. Data will be processed in GIS, and then brought into Excel. In Excel point values will be assigned to each flood-prone area to calculate a composite score. Flood-prone areas will then be ranked, such that the higher scores represent the higher priority areas. The draft Excel file will then be shared with city and District staff to review the scoring.

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- c. The prioritized list of flood-prone areas is intended to provide guidance on locations to complete further study and evaluation of flood-risk mitigation options. The order of the list may change over time as project are implemented or different partners are identified.

**Task Order 28a: Rice Marsh Lake Subwatershed 12a Water Quality Project**

- a. Investigated monitoring data sample timing with respect to flow data to better understand which data are suitable for model calibration.
- b. Continued P8 calibration to monitoring data within the RM\_12a watershed.
- c. Performed site survey on November 12<sup>th</sup>
- d. Conducted site visit with Watershed Planning Coordinator Jeffery on November 22<sup>th</sup> to investigate areas for potential BMPs and review stability of upstream ravine.

**To:** RPBCWD Board of Managers  
**From:** Dave Melmer  
**Subject:** November 18-19, 2019—Erosion Inspection  
**Date:** December 1, 2019  
**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. The sites were inspected from November 18-19, 2019.

## Site Inspections

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<b>2015-010</b>	<b>Children's Learning Adventure - Private - Commercial/Industrial Northwest Corner of Highway 5 and Galpin Avenue Chanhassen, MN 55317</b> No change since last monthly inspection.	<b>2019-11-19</b>
<b>2015-036</b>	<b>Saville West Subdivision - Private - Residential 5325 County Road 101 Minnetonka, MN 55345</b> Construction complete at 5320 Spring Lane house site. Landscaping complete/ sod installed. Silt fence installed on southwest and west side of development. Additional lot has silt fence perimeter control installed- no activity at this lot. Lots to south have been brushed/cleared. One site has been surveyed for construction.	<b>2019-11-19</b>
<b>2015-050</b>	<b>Arbor Glen Chanhassen - Private - Residential 9170 GREAT PLAINS BLVD Chanhassen, MN 55317</b> No change since last month inspection. Perimeter control (silt fence) installed. Roadway and detention ponds installed. Rock entrances refreshed-installed regularly. Catch basin protection installed. Bio-rolls installed where needed. Landscaping at some sites underway. CA opened for silt fence overtopping and silt into detention pond south of 715 Crossroads Court. Site representative was notified. CA remains open--no change-site representative is aware.	<b>2019-11-18</b>
<b>2015-055</b>	<b>Hampton Inn Eden Prairie - Private - Commercial/Industrial 11825 Technology Drive Eden Prairie, MN 55344</b> No change since last monthly inspection. Site construction continues. BMP's in place.	<b>2019-11-18</b>
<b>2016-017</b>	<b>SWLRT - Government - Other Varies Eden Prairie, MN 55344</b> No change since last monthly inspection. Construction has begun along entire route. BMP's look good thru out entire site/route to date.	<b>2019-11-18</b>

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<b>2016-019</b>	<b>Powers Ridge Lot 2 - Private - Commercial/Industrial 1361 Lake Dr. West Chanhassen, MN 55317</b> No site activity observed to date.	<b>2019-11-19</b>
<b>2016-020</b>	<b>Prairie View Enclave - Private - Commercial/Industrial 12701 Pioneer Trail Eden Prairie, MN 55347</b> No activity observed to date.	<b>2019-11-18</b>
<b>2016-026</b>	<b>Foxwood Development - Private - Residential 9150 and 9250 Great Plains Blvd Chanhassen, MN 55317</b> Multiple new home sites starting--rock entrances installed. Minor tracking to street observed-- site is swept regularly. Multiple house construction continues-BMP's look good- silt fences and rock entrances installed/ good perimeter control. Catch basin protection installed. Silt fences have been installed on unsold lots. Bare soils have recently been sprayed.	<b>2019-11-18</b>
<b>2016-032</b>	<b>CSAH 61 Improvements - Government - Linear N/A Eden Prairie, MN 55347</b> Construction continues. Slopes are covered with matting or have been spray tac'd. Area near creek crossing is completed.-- BMP's look good.	<b>2019-11-18</b>
<b>2016-033</b>	<b>Anderson Lakes-Purgatory Trail - Government - Other Anderson Lakes PKWY and Purgatory Creek Eden Prairie, MN 55344</b> No activity observed to date.	<b>2019-11-18</b>
<b>2016-041</b>	<b>Chanhassen West Water Treatment Plant - Government - Other 2070 Lake Harrison Road Chanhassen, MN 55317</b> Silt fences installed on site. Construction complete. Landscaping and seeding complete--vegetation established. Entrance installed and paved--roadway complete. Playground installation on north side complete. South slope vegetation is established. Site representative was notified about silt fence and bio-roll removal.	<b>2019-11-19</b>
<b>2017-001</b>	<b>Kopesky 2nd Addition - Private - Residential 18340 82nd St Eden Prairie, MN 55347</b> Site grading complete-house construction completed at three sites. Fourth house site construction is underway. Perimeter control installed/bio rolls along infiltration basin. Infiltration basins completed. Basin protection removed for winter.	<b>2019-11-18</b>
<b>2017-023</b>	<b>Eden Prairie Assembly of God - Private - Commercial/Industrial 16591 Duck Lake Trail Eden Prairie, MN 55346</b> Construction complete. Site vegetation is established. Site is stable. All temporary BMP's have been removed from original construction. Additional construction observed and bio-logs installed and still onsite.	<b>2019-11-19</b>

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<b>2017-024</b>	<b>Prairie Bluffs Senior Living - Private - Residential 10280 Hennepin Town Rd Eden Prairie, MN 55347</b>	<b>2019-11-18</b>
	<b>Open CA(s): Silt/ sediment in wetland. Tracking/ debris at curbside on main road. See photos. Deadline: 12/11/2019</b>	
	Construction complete. CA remains open for street tracking -- sediment build up at curb--less than last month--still needs attention. Site representative was notified in May /July and again in September and is aware. Landscaping complete. Sand delta at wetland needs to be removed. Slope to wetland covered and stabilized. No change in status of wetland work-silt delta removal from previous runoff. Terry Jeffery was notified/photo taken.	
<b>2017-026</b>	<b>6135 Ridge Road</b>	<b>2019-11-19</b>
	No change since last monthly inspection. Rock driveway good. Silt fence installed. Bare soils on upper half of slope have been covered with straw matting-vegetation is growing. Southwest corner has rock retaining landscaping completed.	
<b>2017-029</b>	<b>Tweet Pediatric Dentistry - Private - Commercial/Industrial 7845 Century Blvd. Chanhassen, MN 55317</b>	<b>2019-11-19</b>
	No change since last month's inspection. Construction complete . Temporary BMP's are installed. Catch basin protection installed in this area. Infiltration areas installed. Parking lot grading and curb/gutter installation complete. Infiltration pond has bio-logs staked in to control silt. Vegetation is established and site is stable. Site representative was notified (July,September and again in November) about catch basin protection and bio-roll removal.	
<b>2017-030</b>	<b>Elevate - Private - Commercial/Industrial 12900 Technology Drive Eden Prairie, MN 55344</b>	<b>2019-11-18</b>
	Construction completed. Perimeter control removed.. Some catch basins have bladders installed---can be removed. Site is stable. Site representative was contacted about removing catch basin protection.	
<b>2017-031</b>	<b>Lion's Tap - Private - Commercial/Industrial 16180 Flying Cloud Drive Eden Prairie, MN 55347</b>	<b>2019-11-18</b>
	Construction continues. BMP's installed. Soils on slopes are covered.	
<b>2017-038</b>	<b>West Park - Private - Residential 760&amp; 781 Lake Susan Drive 8601 Great Plains Blvd Chanhassen, MN 55317</b>	<b>2019-11-18</b>
	No change since last month. Construction continues. Street installation on north and south side completed. Rock entrance installed on south side and to individual house sites continues. Perimeter control installed. Catch basin protection installed. BMP's look good. Additional silt fences have been installed. Bare soils that are not being worked have been stabilized. Landscaping at some	

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sites underway or completed. Street sweeping was underway during inspection. BMP's look good. Final grading and landscaping underway.

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**2017-039**                      **Mission Hill Senior Living - Private - Residential**                      **2019-11-18**  
**8600 Grate Plains Boulevard Chanhassen, MN 55317**

No change since last month. Construction continues. BMP's installed look good. Site perimeter control installed. Catch basin protection installed. South swale has been stabilized. Areas of final grading still underway bare soils due to be sprayed Wednesday-11/20. Minor tracking to observed.

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**2017-047**                      **Fawn Hill - Private - Residential**                      **2019-11-19**  
**7240 Galpin Road Chanhassen, MN 55331**

Construction continues at additional house sites. Perimeter silt fences installed and additional silt fences installed where needed. BMP's to date look good. CA closed.

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**2017-069**                      **Scheels Redevelopment - Private - Commercial/Industrial**                      **2019-11-18**  
**8301 Flying Cloud Dr. Eden Prairie, MN 55344**

No change since last month inspection. BMP's installed. Construction continues. Parking lot to west is complete. Work on main parking lot is underway. Minor tracking on south side observed. BMP's look good to date.

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**2017-072**                      **O'Reilly Auto Parts Eden Prairie - Private - Commercial/Industrial**                      **2019-11-18**  
**8868 AZTEC DRIVE Eden Prairie, MN 55347**

Construction continues. Perimeter control installed. Site has been cleared. Site rock entrance installed. Inlet protection installed but must have been removed. BMP's good. CA closed. Site will be idled for winter.

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**2017-073**                      **Preserve Village - Private - Residential**                      **2019-11-18**  
**9625 Anderson Lakes Pkwy Eden Prairie, MN 55344**

No change since last month's inspection. Construction of building complete. Landscaping is complete. All temporary BMP's have been removed except catch basin protection still installed at one location-missed during removal. Vegetation established. Site representative was notified about removal of catch basin protection-Sept./2019 and again this month (November)

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**2018-004**                      **903 Lake Drive Chanhassen - Government - Other**                      **2019-11-19**  
**903 Lake Drive Chanhassen, MN 55317**

Construction completed. Site is in good condition. Site is stable. Vegetation is established. All temporary BMP's have been removed. This will be last field inspection for this permit.

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<b>2018-014</b>	<b>Eden Prairie Road Reconstruction Government - Linear Eden Prairie Road Eden Prairie, MN 55344</b>	<b>2019-11-18</b>
	Construction continues on roadway. Road closed on north end. Additional silt fences installed on slope where old roadway existed. All slopes have been recently spray-tac'd or covered with matting. Steep slopes covered with matting. BMP's installed look good. Road and curb/gutter complete.	
<b>2018-016</b>	<b>Avienda - Private - Commercial/Industrial SW corner of Powers and Lyman Boulevard Chanhassen, MN 55317</b>	<b>2019-11-19</b>
	No activity observed to date.	
<b>2018-025</b>	<b>Magellan Pipeline UCD Dig 8 through 12</b>	<b>2019-11-19</b>
	No change since last inspection. Work halted until fall-winter 2019.	
<b>2018-027</b>	<b>MAMAC - Private - Commercial/Industrial 8189 Century Boulevard Chanhassen, MN 55317</b>	<b>2019-11-19</b>
	No change since last inspection.	
<b>2018-028</b>	<b>Oak Point Elementary School Parking Lot - Government - Other 13400 Staring Lake Parkway Eden Prairie, MN 55347</b>	<b>2019-11-18</b>
	Parking lot construction complete. Bare soils have been sprayed. BMP's in place.	
<b>2018-034</b>	<b>Basin 05-11-A Cleanout - Government - Other Corner of Sequioa and Ginger Eden Prairie, MN 55346</b>	<b>2019-11-18</b>
	No change since last monthly inspection.	
<b>2018-038</b>	<b>Eden Prairie Senior Living - Private - Residential 8460 Franlo Rd Eden Prairie, MN 55344</b>	<b>2019-11-18</b>
	Construction completed. Perimeter control removed. Corrective Action still open for west side-sediment in parking areas clean up. Site representative was notified-September/2019.	
<b>2018-041</b>	<b>Abra Auto Body - Private - Commercial/Industrial 13075 Pioneer Trail Eden Prairie, MN 55347</b>	<b>2019-11-18</b>
	Construction complete. Final grading completed Parking lot paving completed. Landscaping completed. Site is stable. Will inspect next spring for vegetation growth on covered slopes and in infiltration basins. BMP's good.	
<b>2018-043</b>	<b>Control Concepts - Private - Commercial/Industrial 8077 Century Boulevard Chanhassen, MN 55317</b>	<b>2019-11-19</b>

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Construction continues. Site grading continues. Perimeter silt fence installed. BMP's to date look good. Tracking to street observed. Sweeper is onsite.

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**2018-044**                      **Smith Village - Private - Residential**                      **2019-11-19**  
**16389 Glory Lane Eden Prairie, MN 55344**

Demolition completed. BMP's installed. Earthwork continues and construction has begun. Minor tracking from all three construction sites-- sweeper is onsite.

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**2018-047**                      **Peterson Borrow Site - Private - Commercial/Industrial**                      **2019-11-18**  
**15900 Flying Cloud Drive Eden Prairie, MN 55347**

No change since last monthly inspection. BMP's in place. Pit appears to be done being used. Soils in areas have been spray-tac'd. Entrance installation underway.

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**2018-052**                      **HCRRR Culvert Replacement - Government - Linear**                      **2019-11-19**  
**Hennepin County Wayzata and Deephaven, MN 55401**

Construction complete. BMP's installed. Vegetation growing observed and filling in; some bare areas of no growth-matting is protecting bare soils. Site is stable. Fence and Watershed signage installed. Will check in late spring-2020 for vegetation establishment. Silt fences and bio-rolls in place.

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**2018-055**                      **Park Trail Improvement Project - Government - Other**                      **2019-11-18**  
**1700 W. 98th Street Bloomington, MN 55431**

No change since last monthly inspection. Construction complete. Grading and seeding complete. Vegetation established. Bio-rolls onsite have been removed. Small area of bare soil across from Oregon Ave. --could use a reseeding--trail at Sunrise Park has bare areas at both entrances/ catch basin protection still in place at one location on west side---site representative was notified-August/2019. Reseeding may occur late spring--2020.

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**2018-056**                      **Bluff Creek Restoration - Government - Other**                      **2019-11-19**  
**Liberty on Bluff Creek, Outlot B Audubon Road Chanhassen, MN 55317**

Site access completed. Brushing and tree removal completed. Rock entrance installed. No BMP's installed to date. Boulder stockpile onsite.

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**2018-058**                      **Walker Home - Existing Single-Family**                      **2019-11-18**  
**9108 Stephens Pointe Eden Prairie, MN 55347**

No change since last month inspection. New CA updates see photos. Silt-fence 50% full of sediment. Neighbors path to lake washed out and silt filled to lake. CA opened for slope not covered. Site representative is aware of situation. Ryan: 651-398-3622. Same as last month.

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<b>2018-059</b>	<b>Mason Point Landscaping - Existing Single-Family 15363 Mason Pointe Eden Prairie, MN 55347</b> Construction complete. BMP's installed. Final landscaping will occur in spring 2020.	<b>2019-11-18</b>
<b>2018-060</b>	<b>Loichinger Residence - Existing Single-Family 16396 Stratus Court Eden Prairie, MN 55347</b> Construction complete. Perimeter controls removed. Landscaping completed. Silt fence on north side still in place. Site is stable.	<b>2019-11-18</b>
<b>2018-061</b>	<b>McCoy Lake Inlet Sediment Removal - Government - Other Mitchell Road and Cumberland Road Eden Prairie, MN 55347</b> No change since last monthly inspection. Access to site completed. No BMP's installed to date. No construction to date.	<b>2019-11-18</b>
<b>2018-062</b>	<b>Lower Riley Creek Stabilization Project - Government - Other Ridge on Riley Creek, Outlot A Eden Prairie, MN 55344</b> Tree removal has begun. Construction limits being surveyed in.	<b>2019-11-18</b>
<b>2018-066</b>	<b>Castle Ridge Redevelopment - Private - Residential 615-635 Prairie Center Drive Eden Prairie , MN 55344</b> Construction started. Perimeter controls installed. BMP's to date look good.	<b>2019-11-18</b>
<b>2018-067</b>	<b>Hennepin Co Library - Eden Prairie Branch Refurb - Government - Other 565 Prairie Center Drive Eden Prairie, MN 55344</b> Construction continues. Perimeter controls installed. Soils on slopes covered-landscaping underway. BMP's look good to date.	<b>2019-11-18</b>
<b>2018-068</b>	<b>DriSteem Warehouse Expansion - Private - Commercial/Industrial 14949 Technology Drive Eden Prairie, MN 55344</b> No change since last monthly inspection.	<b>2019-11-18</b>
<b>2018-072</b>	<b>Hyland Park Parking Lot Improvements - Government - Other 10145 E Bush Lake Rd Bloomington, MN 55438</b> Construction nearing completion . BMP's installed. Perimeter control good. Site control good. Lower parking lot area completed--areas have been seeded and vegetation is growing.	<b>2019-11-18</b>
<b>2018-073</b>	<b>Preserve Boulevard - Government - Linear Preserve Boulevard Eden Prairie, MN 55344</b> Construction continues. Minor tracking on onsite due to grading work underway. Final grading still underway. Bare soils will need to be covered for winter. BMP's good.	<b>2019-11-18</b>

To: RPBCWD Board of Managers  
From: Dave Melmer  
Subject: November 18-19, 2019—Erosion Inspection  
Date: December 1, 2019  
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<b>2018-074</b>	<b>Eden Prairie Ground Storage Reservoir - Government - Other XXXX Eden Prairie Road Eden Prairie, MN 55344</b> Earthwork continues and site grading continues. Perimeter control installed. BMP's to date are good. Soils covered in plastic or with spray-tac--recently redone since last month. Construction has begun.	<b>2019-11-19</b>
<b>2019-001</b>	<b>Park-Galpin Nelson Property - Private - Residential 7141 Galpin Blvd Chanhassen, MN 55317</b> Grading continues. Perimeter silt fence installation complete BMP's to are good. Site access is limited due to roadway and underground utilities installations. Roadway beds installed.	<b>2019-11-19</b>
<b>2019-003</b>	<b>Stable Path - Private - Residential 9650 Stable Path Eden Prairie, MN 55347</b> <b>Open CA(s): Heavy tracking to street/ Catch basin removed for winter. CA opened for tracking. Site representative was notified. Deadline: 11/30/2019</b> Additional home sites started. Roadway and curb/gutter installed. Most bare soils covered with straw. Infiltration basin installed and slopes covered in some areas. BMP's installed where needed. Heavy tracking to street/ Catch basin removed for winter. CA opened for tracking. Site representative was notified.	<b>2019-11-18</b>
<b>2019-004</b>	<b>Duck Lake Road - Government - Linear Duck Lake Road Eden Prairie, MN 55344</b> No activity observed to date.	<b>2019-11-19</b>
<b>2019-007</b>	<b>Beverly Hill - Private - Residential 16540 Beverly Drive &amp; 9800 Eden Prairie Road Eden Prairie, MN 55347</b> Construction continues. Perimeter controls installed. Site grading completed and roadway construction completed. BMP's to date look good. First two houses are under construction.	<b>2019-11-18</b>
<b>2019-008</b>	<b>Staring Lake Pavilion - Government - Other 14800 Pioneer Trail Eden Prairie, MN 55347</b> Construction complete. Site perimeter control removed. Final grading completed and sod installed. Parking lot work complete BMP's are good to date. Will inspect next spring for vegetation growth.	<b>2019-11-18</b>
<b>2019-011</b>	<b>Westwind Plaza - Private - Commercial/Industrial 4795 County Rd. 101 Minnetonka, MN 55345</b> Security fence installed. BMP's installed. No construction or earthwork to date.	<b>2019-11-19</b>

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<b>2019-017</b>	<b>Pawnee Drive - Existing Single-Family 6650 Pawnee Dr. Chanhassen, MN 55317</b> Catch basin protection area needs clean up along with street-- Corrective Action remains open. Site has been landscaped and is stable. No change since last month.	<b>2019-11-19</b>
<b>2019-018</b>	<b>Deerwood Drive - Existing Single-Family 6657 Deerwood Dr Chanhassen, MN 55317</b> Heavy sediment runoff /tracking from site. Site still needs attention to control runoff during heavy rainfall events and after each rainfall event. Corrective Action remains opened. Both sites share same drainage and contribute to runoff issues. Some issues being addressed but not completed. Site grading appears to be underway. CA's will remain open.	<b>2019-11-19</b>
<b>2019-019</b>	<b>Sheldon Place - Private - Residential 7960 Eden Prairie Rd Eden Prairie, MN 55347</b> Demolition and site clearing completed. BMP's installed. Underground work and earthwork continues. Minor tracking to street from all three construction sites. Sweeper is onsite.	<b>2019-11-19</b>
<b>2019-022</b>	<b>Woodcrest Place - Private - Residential 17170 Beverly Drive Eden Prairie, MN 55347</b> House tear down is underway. No BMP's installed to date.	<b>2019-11-18</b>
<b>2019-023</b>	<b>Minnetonka Library - Government - Other 17524 Excelsior Blvd. Minnetonka, MN 55345</b> Construction complete. BMP's in place. All bare soils have been sprayed.	<b>2019-11-19</b>
<b>2019-024</b>	<b>Conifer Heights - Private - Residential 5615 Conifer Trail 5616 Mahoney Ave Minnetonka, MN 55345</b> Site has been surveyed and some brush clearing underway. No construction activity observed to date.	<b>2019-11-19</b>
<b>2019-026</b>	<b>Ridgewood Church Parking Lot - Private - Other 4420 County Road 101 Minnetonka, MN 55345</b> Construction complete. Perimeter controls installed. BMP's installed. Bare soils covered at infiltration basin. Final grading at back of curbs underway.	<b>2019-11-19</b>
<b>2019-028</b>	<b>Lifetime Parking Lot Chanhassen - Private - Commercial/Industrial 2970 Water Tower Place Chanhassen, MN 55317</b> Rock parking lot pad installed--completed. Bio rolls installed around pad. Pad has been paved. Construction complete. Site is stable. Bio- rolls will stay in place --many have pavement over top.	<b>2019-11-19</b>

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<b>2019-032</b>	<b>West 79th St Chanhassen Parking Lot - Government - Other Unassigned - W. 79th St and Markett Blvd Chanhassen, MN 55317</b> Construction complete. BMP's in place. All bare soils have been sprayed.	<b>2019-11-19</b>
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Please contact me at 952.832-2687 or [dmelmer@barr.com](mailto: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.



November 19, 2019

President Dick Ward and Board of Managers  
Riley-Purgatory-Bluff Creek Watershed District  
18681 Lake Drive East  
Chanhassen, MN 55317

**Re: Bluff Creek Southwest Branch Stabilization and Restoration Project – Pay Application #1  
Barr Project # 23/27-0053.14-021**

Dear President Ward and Board of Managers:

Enclosed is the Application for Payment #1 from Sunram Construction Company for work completed through 10/29/19, 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, grading, and clearing and grubbing in project area.

Barr Engineering has reviewed the application, and is recommending payment in the amount of **\$46,735.45**. Payments shall be made directly to Sunram Construction Company.

Please call me at 952-832-2755 if you have any questions or concerns about the application for payment, or about any other related matters.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Sobiech". The signature is fluid and cursive.

Scott Sobiech, P.E.  
Barr Engineering Co.

c: Claire Bleser, RPBCWD  
Ryan Sunram, Sunram Construction Company

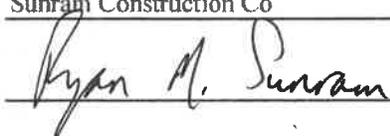
Enclosure #1 – Application for Payment – Progress Payment 1

**Bluff Creek Southwest Branch Stabilization and Restoration Project  
Progress Payment Number 1**

1.0	Total Completed Through This Period	<u>\$49,195.21</u>	
2.0	Total Completed Previous Period		<u>\$0.00</u>
3.0	Total Completed This Period		<u>\$49,195.21</u>
4.0	Amount Retained, Previous Period		<u>\$0.00</u>
5.0	Amount Retained, This Period (See Note 1)	<u>\$2,459.76</u>	
6.0	Total Amount Retained	<u>\$2,459.76</u>	
7.0	Retainage Released Through This Period:		<u>\$0.00</u>
8.0	Amount Due This Period		<u>\$46,735.45</u>

Note 1: At rate of 5% until Completed to Date equals 50% of current Contract Price and a rate of 0% thereafter.

**SUBMITTED BY:**

Name: Ryan Sunram Date: 11/18/19  
 Title: Project Manager  
 Contractor: Sunram Construction Co  
 Signature: 

**RECOMMENDED BY:**

Name: Scott Sobiech Date: 11/18/19  
 Title: District Engineer  
 Engineer: Barr Engineering Company  
 Signature: 

**APPROVED BY:**

Name: Dick Ward Date: \_\_\_\_\_  
 Title: President  
 Owner: Riley Purgatory Bluff Creek Watershed District  
 Signature: \_\_\_\_\_

**Bluff Creek Southwest Branch Stabilization and Restoration Project  
Piley Purgatory Bluff Creek Watershed District  
Summary of Work Completed Through October 29, 2019- for Progress Payment Number 1**

104 Item	Description	Unit	Quantity	Unit Price	Extension	(1) Total Completed Through This Period		(2) Total Completed Previous Period		(3) Total Completed This Period	
						Quantity	Amount	Quantity	Amount	Quantity	Amount
A	Mobilization/Demobilization	LS	1	15,300.85	15,300.85	0.25	\$3,825.21	0	\$0.00	0.25	\$3,825.21
B	Control of Water	LS	1	1,500.00	1,500.00	0	\$0.00	0	\$0.00	0	\$0.00
C	Traffic Control	LS	1	1,500.00	1,500.00	0	\$0.00	0	\$0.00	0	\$0.00
D	Rock Construction Entrance	Each	1	1,500.00	1,500.00	1	\$1,500.00	0	\$0.00	1	\$1,500.00
E	Sediment Log	LF	200	4.00	800.00	0	\$0.00	0	\$0.00	0	\$0.00
F	Silt Fence	LF	50	5.00	250.00	0	\$0.00	0	\$0.00	0	\$0.00
G	Floating Silt Curtain	Each	1	400.00	400.00	0	\$0.00	0	\$0.00	0	\$0.00
H	Tree Protection Fencing	LF	100	5.00	500.00	0	\$0.00	0	\$0.00	0	\$0.00
I	Inlet Protection	Each	5	150.00	750.00	0	\$0.00	0	\$0.00	0	\$0.00
J	Street Sweeping	LS	1	1,000.00	1,000.00	0	\$0.00	0	\$0.00	0	\$0.00
K	Clearing and Grubbing	Acres	1.5	16,300.00	24,450.00	2.2	\$35,860.00	0	\$0.00	2.2	\$35,860.00
L	Remove and Dispose of Trash and Non-Woody Debris	LS	1	2,750.00	2,750.00	0	\$0.00	0	\$0.00	0	\$0.00
M	Remove Storm Sewer	LS	1	850.00	850.00	0	\$0.00	0	\$0.00	0	\$0.00
N	Furnish and Install Manhole	Each	1	4,500.00	4,500.00	0	\$0.00	0	\$0.00	0	\$0.00
O	Furnish and Install Manhole Casing	Each	1	500.00	500.00	0	\$0.00	0	\$0.00	0	\$0.00
P	Furnish and Install Storm Sewer	LF	20	155.00	3,100.00	0	\$0.00	0	\$0.00	0	\$0.00
Q	Furnish and Install Flared End Section	Each	1	2,500.00	2,500.00	0	\$0.00	0	\$0.00	0	\$0.00
R	Common Excavation (P)	CY	2.200	10.80	23,760.00	0	\$0.00	0	\$0.00	0	\$0.00
S	Grading (P)	SY	7.240	1.40	10,136.00	0	\$0.00	0	\$0.00	0	\$0.00
T	Furnish and Install Riprap (CL I)	Ton	325	76.25	24,781.25	0	\$0.00	0	\$0.00	0	\$0.00
U	Furnish and Install Riprap (CL III)	Ton	12	73.00	876.00	0	\$0.00	0	\$0.00	0	\$0.00
V	Clear and Salvage Trees and Install as Root Wad	Each	19	445.00	8,455.00	18	\$8,010.00	0	\$0.00	18	\$8,010.00
W	Import and Install Root Wad	LF	200	100.00	20,000.00	0	\$0.00	0	\$0.00	0	\$0.00
X	Furnish and Install Boulder Vane	SY	103	12.00	1,236.00	0	\$0.00	0	\$0.00	0	\$0.00
Y	Turf Reinforcement Mat	CY	5	100.00	500.00	0	\$0.00	0	\$0.00	0	\$0.00
Z	Import Topsoil	Acres	1	6,300.00	6,300.00	0	\$0.00	0	\$0.00	0	\$0.00
AA	Seed Area	LB	152	0.55	83.60	0	\$0.00	0	\$0.00	0	\$0.00
BB	Seed Mix - Cover Crop	LB	48	115.00	5,520.00	0	\$0.00	0	\$0.00	0	\$0.00
BB	Seed Mix - Upland Construction Mix	LB	8	95.00	722.00	0	\$0.00	0	\$0.00	0	\$0.00
CC	Plant Shrubs	Each	150	64.00	9,600.00	0	\$0.00	0	\$0.00	0	\$0.00
DD	Plant Trees	Each	15	240.00	3,600.00	0	\$0.00	0	\$0.00	0	\$0.00
EE	Furnish and Install Erosion Control Blanket	SY	5,772	2.45	14,141.40	0	\$0.00	0	\$0.00	0	\$0.00
FF	Furnish and Install Straw Mulch	SY	1,643	0.30	492.90	0	\$0.00	0	\$0.00	0	\$0.00
GG	Furnish and Install Buffer Markers	Each	15	200.00	3,000.00	0	\$0.00	0	\$0.00	0	\$0.00
HH	Vegetation Establishment and Warranty Period	LS	1	6,765.00	6,765.00	0	\$0.00	0	\$0.00	0	\$0.00

Total of Extensions = \$ 213,599.00

\$49,195.21

\$0.00

\$49,195.21



November 13, 2019

President Dick Ward 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 #7  
Barr Project # 23/27-0053.14-023**

Dear President Ward and Board of Managers:

Enclosed is the Application for Payment #7 from Landbridge Ecological for work completed in July and August 2019, 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 two site management visits including herbicide applications to control buckthorn resprouts and garlic mustard.

Because the majority of the work for this project is complete, work performed by the contractor is meeting expectations, and the only work remaining is additional site management; this pay application includes releasing retainage of \$4,980.62, which is consistent with the contract documents.

Barr Engineering has reviewed the application, and is recommending payment in the amount of **\$9,980.62**. Payments shall be made directly to Landbridge Ecological at 670 Vandalia Street, St. Paul, MN 55114.

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,

A handwritten signature in black ink, appearing to read "Matthew Kumka", with a long horizontal flourish extending to the right.

Matthew Kumka, PLA  
Barr Engineering Co.

c: Claire Bleser, RPBCWD  
Elissa Thompson, Landbridge Ecological

Enclosure #1 – Application for Payment – Progress Payment 7

**Scenic Heights School Forest Restoration Project  
Progress Payment Number 7**

1.0	Total Completed Through This Period	<u>\$160,022.50</u>		
2.0	Total Completed Previous Period		<u>\$2,500.00</u>	
3.0	Total Completed This Period			<u>\$5,000.00</u>
4.0	Amount Retained, Previous Period		<u>\$9,961.25</u>	
5.0	Amount Retained, This Period (See Note 1)		<u>\$0.00</u>	
6.0	Total Amount Retained		<u>\$4,980.63</u>	
7.0	Retainage Released Through This Period:			<u>\$4,980.62</u>
8.0	Amount Due This Period			<u><u>\$9,980.62</u></u>

Note 1: At rate of 5% until Completed to Date equals 50% of current Contract Price and a rate of 0% thereafter.

Note 2: Current Contract Price \$199,225.00

SUBMITTED BY:

Name: Elissa Thompson Date: 11/13/2019  
 Title: Project Manager  
 Contractor: Landbridge Ecological

Signature: 

RECOMMENDED BY:

Name: Matt Kumka Date: 11/13/2019  
 Title: Project Manager  
 Engineer: Barr Engineering Co.

Signature: 

APPROVED BY:

Name: Dick Ward 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 October 22, 2019 for Progress Payment Number 7 (INVOICE #2989)



Item	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	BID - LANDBRIDGE ECOL		(1) Total Completed Through This Period		(2) Total Completed Through This Period		(3) Total Completed Through This Period		(4) Total Completed Through This Period		(5) Total Completed Through This Period		(6) Total Completed Through This Period		(7) Total Completed Through This Period	
				UNIT COST	EXTENSION	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
1.06.A	Mobilization/Demobilization	L.S.	1	\$15,500.00	\$15,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$15,500.00	0	\$0.00	0	\$0.00
1.06.B	Erosion Control Construction Entrance	Each	1	\$2,500.00	\$2,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.C	Desirable Plant Marking for Protection	L.S.	1	\$1,750.00	\$1,750.00	1	\$1,750.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
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	\$4,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.F	Clear and Grub Woody Invasive Plant Removal (Trees over 8")	Each	40	\$450.00	\$18,000.00	33	\$14,850.00	7	\$3,150.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.H	Remove and Dispose of Adopt-A-Plots Signs	Each	30	\$85.00	\$2,550.00	30	\$2,550.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.I	Heavy Duty Silt Fence	L.F.	85	\$15.50	\$1,317.50	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.J	Erosion Control Blanket	S.Y.	125	\$5.50	\$687.50	0	\$0.00	125	\$687.50	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.K	Remove and Salvage Topsoil (P)	C.Y.	80	\$45.00	\$3,600.00	0	\$0.00	80	\$3,600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.L	Grading	L.S.	1	\$5,900.00	\$5,900.00	0	\$0.00	1	\$5,900.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.M	Rock Riffle	Each	3	\$3,500.00	\$10,500.00	0	\$0.00	3	\$10,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	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	0	\$0.00	0	\$0.00	0	\$0.00	4.7	\$10,340.00	0	\$0.00	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	0	\$0.00	0	\$0.00	1.3	\$2,535.00	0	\$0.00	0	\$0.00	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	0	\$0.00	0	\$0.00	0	\$0.00	1.2	\$2,220.00	0	\$0.00	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	0.3	\$1,050.00	0	\$0.00	0	\$0.00	0.2	\$700.00	0	\$0.00	0	\$0.00
1.06.R	Live Stake (Furnish and Install)	Each	148	\$15.50	\$2,294.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	148	\$2,294.00	0	\$0.00	0	\$0.00
1.06.S	#10 Cont. Tree (Furnish and Install)	Each	30	\$350.00	\$10,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	30	\$10,500.00	0	\$0.00	0	\$0.00
1.06.T	Shrub, Bare Root (Furnish and Install)	Each	182	\$25.50	\$4,641.00	0	\$0.00	101	\$2,575.50	0	\$0.00	0	\$0.00	81	\$2,065.50	0	\$0.00	0	\$0.00
1.06.U	Herbaceous Plug (Furnish, Install by others)	Each	2520	\$1.50	\$3,780.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	2520	\$3,780.00	0	\$0.00	0	\$0.00
1.06.U	Straw Mulch	AC	7.7	\$1,550.00	\$11,935.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$1,550.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.V	Shredded Hardwood Mulch	C.Y.	45	\$65.00	\$2,925.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	45	\$2,925.00	0	\$0.00	0	\$0.00
1.06.W	Herbaceous Management Site Visit 2018	Each	7	\$2,500.00	\$17,500.00	0	\$0.00	3	\$7,500.00	3	\$7,500.00	1	\$2,500.00	0	\$0.00	0	\$0.00	0	\$0.00
1.06.X	Herbaceous Management Site Visit 2019	Each	7	\$2,500.00	\$17,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$2,500.00	1	\$2,500.00	2	\$5,000.00
1.06.Y	Herbaceous Management Site Visit 2020	Each	7	\$2,500.00	\$17,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
CONSTRUCTION SUBTOTAL					\$199,225.00		#####		\$39,463.00		\$7,500.00		\$6,585.00		\$52,824.50		\$2,500.00		\$5,000.00



**INVOICE # 2989**

670 Vandalia Street | Saint Paul, MN 55114  
612.503.4420 | [www.landbridge.eco](http://www.landbridge.eco) | [info@landbridge.eco](mailto:info@landbridge.eco)

**BILL TO** Riley Purgatory Bluff Creek WD  
18681 Lake Dr. E.  
Chanhassen, MN 55317

**PROJECT** 17-054 Scenic Heights Restoration  
**DATE** 10/1/19  
**TERMS** Net 30

<b>DESCRIPTION</b>	<b>QTY</b>	<b>RATE</b>	<b>AMOUNT</b>
Herbaceous Management Site Visit 2019 (EA) - July and August	2	2,500.00	5,000.00

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TOTAL \$5,000.00

PAYMENTS / CREDITS \$0.00

**BALANCE DUE \$5,000.00**



November 6, 2019

Claire Bleser  
Riley Purgatory Bluff Creek Watershed District  
18681 Lake Drive East  
Chanhassen, MN 55317

**Subject: Permit and Grant Database System Project Agreement**

Dear Ms. Bleser,

Over the past few months we have been in discussion with Terry Jeffrey, the districts permit coordinator. The purpose of the letter is to provide the district with an updated agreement where the district would purchase Houston Engineering, Inc's MS4Front software to use for their Permit and Grant database management system. The district would also contract for professional services for implementation, data migration and training.

This letter is to memorialize the agreement ("Agreement") among Houston Engineering, Inc. ("Engineer") and the Riley Purgatory Bluff Creek Watershed District ("Client") for this project.

Following the cover letter, you will find these attachments that make up the agreement for the project.

- Attachment A is the agreement for professional services.
- Attachment B is the scope of services for the professional services agreement.
- Attachment C is the general terms and conditions for HEI's professional services agreement.
- Attachment D is the MS4Front software subscription agreement and pricing.

Please have an authorized representative sign both Attachment A and D email it back to me to proceed with the project.

Sincerely,

HOUSTON ENGINEERING INC.

A handwritten signature in black ink that reads "Brian Fischer".

Brian Fischer  
GIS Project Manager



**Attachment A - CLIENT/OWNER SERVICES AGREEMENT**

PROJECT NAME: MS4Front Implementation, Data Migration and Training Professional Services  
 HOUSTON JOB NO.: 7768-0005 HOUSTON PROJ. MGR.: Brian Fischer  
 CLIENT/OWNER NAME: Riley Purgatory Bluff Creek WD  
 CLIENT/OWNER ADDRESS: 18681 Lake Drive East, Chanhassen, MN 55317  
 CLIENT/OWNER PHONE NO.: 952-607-6512 CLIENT/OWNER CONTACT: Claire Bleser

This Client/Owner Services Agreement ("Agreement") is made and entered into effective as of this 1st day of December, 2019, by and between **HOUSTON ENGINEERING, INC.** ("Houston") and Riley Purgatory Bluff Creek Watershed District("Client").

Recitals

- A. Client has requested Houston to perform certain professional services in connection with a project generally referred to as MS4Front Implementation, Data Migration and Training Professional Services ("Project").
- B. Houston desires to provide the professional services requested by Client in accordance with this Agreement.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Houston and Client agree as follows:

1. **Services.** Houston shall perform the services set forth in Attachment A ("Services") in accordance with the terms and conditions of this Agreement.

2. **Term of Agreement.** This Agreement shall commence on the date first stated above, and Houston is authorized to commence performance of the Services as of that date. This Agreement shall terminate on the 31 day of December, 2019, unless terminated earlier pursuant to the terms and conditions of this Agreement.

3. **Attachments.** The Attachments below, which have been marked for inclusion, are hereby specifically incorporated into and made a part of this Agreement:

- ATTACHMENT B – SCOPE OF SERVICES
- ATTACHMENT C - GENERAL TERMS AND CONDITIONS
- ATTACHMENT D - MS4Front Software Subscription Agreement
- FEE SCHEDULE - DATED \_\_\_\_\_.

4. **Compensation.**

- \$ 27,000 Lump Sum Fee - Based on the Scope of Services for professional services defined herein
- \$ \_\_\_\_\_ Estimated Fee - Client invoiced on an hourly basis commensurate with the attached Fee Schedule
- \$ \_\_\_\_\_ Percentage of Estimated Construction Cost
- \$ 18,000 Other - MS4Front Subscription and Additional Modules Subscription Fee

\$ 45,000 Total Compensation for this Agreement

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the date first above written:

CLIENT/OWNER

HOUSTON ENGINEERING, INC.

BY: \_\_\_\_\_  
 AUTHORIZED REPRESENTATIVE

BY: \_\_\_\_\_  
 AUTHORIZED REPRESENTATIVE

TITLE: \_\_\_\_\_

TITLE: \_\_\_\_\_

## EXHIBIT B – SCOPE OF SERVICES

### Overview

Houston Engineering, Inc. (HEI) will implement their MS4Front data management software as a Software as a Service (SaaS) solution. This scope of service is for labor hours for project management, implementation, configuration, data migration, testing, deployment, and training.

#### TASK 1: INITIAL SOFTWARE CONFIGURATION AND SETUP

HEI will setup an MS4Front account for the RPBCWD. As part of the initial setup HEI will:

- Setup a unique domain name to access the web application.
- Brand the MS4Front header with RPBCWD's logo.
- Setup two initial logins as administrators.
- Configure permit pages and data entry forms. The permit data entry forms will closely match the permit forms of Capitol Region Watershed District's (CRWD) and incorporate the changes outlined in a project definition phase HEI did with the RPBCWD in winter of 2019/20. HEI will also configure statuses and review workflow like CRWD's. This work also includes configuring email alerts associated with status changes in the permit workflow. The revisions to the permit forms are listed below.
  - **Description tab** – change the Amendment group label to Permit Modification as shown in **Figure 1**.
  - **Status/Tracking tab** – update Status drop down to: Completeness Review; Incomplete; Complete and Under Review; Board Meeting Scheduled; Permit Approved with Conditions; Permit Executed; Under Construction; Construction Complete; Monitoring Period; Permit Close. Change Comment Logs label to Correspondence Logs and add communication type drop down, contact name, and topic as new fields. Change Comment to Notes. Shown in **Figure 2**.
  - **Review tab**:
    - Modify flags to: Alt Comp, Govt Agency, Commercial, Residential, Industrial, Redevelopment, Linear, I&M plan, Maintenance Agreement/Declaration, Permit Fee, Signed Application, Resp EPCS Contact, Native H&H Model, Native WQ Model, Atlas 14, Nested Distribution, 10-day snowmelt, Electronic Submittal, EOC.
    - Modify Rules checkboxes to Rule B through Rule K.
    - Rename Volume Control label to Stormwater Management.
    - Delete Filtration checkbox.
    - Add greyed out fields for Existing Impervious, Proposed Impervious, Newly Constructed Impervious, Total Disturbed Area, Regulated Volume, 1.1 Volume, Abstracted Volume, Offsite Abstraction, TP Regulated Load, TP 90% removal, TSS Regulated Load, TSS 90%, TSS Removal, and Eligible Bank Volume from best management practice (BMP) attributes associated with this permit.
    - Add a new group section titled Wetlands to the tab. In this section add a table that has columns Wetland Number, Management Class, Buffer area required, Buffer area provided, Notes. Table should allow for as many rows to be added as needed.
    - Under Conditions section. Move completed to after notes column and add a new column for Date Completed.
  - **Surety & Fees tab** – revise this tab to **Figure 3**.
  - **Inspection tab** – no updates to the inspection tab or checklists. Only need to modify the inspection report with a new header.

- **Configure letter templates for the permit program.** This includes configuring nine template letters and reports. HEI will work with the permit coordinator to draft these in a Microsoft Word format. These letters include Application Received; Application Incomplete; Application Complete; Permit Conditionally Approved; Permit Issuance Cover Letter; Annual Monitoring Report Due; Permit Expiring; Notice of Probable Violation; Permit Closeout.
- **Configure Permit Review File/Pre-Application pages.**
- **Configure grant pages and data entry forms.** The grant data entry forms will closely match the permit forms of CRWD's and incorporate the changes outlined in a project definition phase HEI did with the RPBCWD in winter of 2019/20. HEI will also configure a status and review workflow like CRWD's. This work also includes configuring email alerts associated with status changes in the permit workflow.
  - **Dashboard** – Adjustment to lists section to include or exclude on the RPBCWD grant types.
  - **Description Tab** – modify grant type list with six types. They include CS – Local Govt/Business; CS – Non-Profit; CS – Individual; Earth Day Mini; Action Projects; Master Water Stewards
- **Configure letter templates for the grant program.** This includes three letter templates.
- **Configure the map viewer and load up to 10 GIS layers.** These layers include district boundary, subwatershed boundaries, parcels, D soils, DWSMA emergency response areas, flood plains, public waters, NWI, and historic aerial photos.
- **Configure an advance search page like CRWD page.**
- **ESRI's ArcGIS Field data collection mobile app integration** – HEI will work with the RPBCWD to get access to their ArcGIS online account. Then HEI will configure four mobile inspection forms for use in the Survey123 mobile app. Additionally, HEI will configure the mobile inspections to be automatically written back to the MS4Front database for reporting.

## TASK 2: IMPLEMENTATION OF ADDITIONAL MODULES

During the project definition period there were several additional modules that the district identified they would like added and configured in MS4Front. These modules are listed below with applicable details.

**Public Application Forms Module** – this module includes the capability to create an application form that can be used by the public as an applicant to a program. Specifically, for RPBCWD this would be application forms for their permit and grant programs. HEI will setup these forms based on current PDF forms and connect the data into MS4Front as a new grant or permit that can be tracked inside of MS4Front. The costs assume one permit application form and three grant forms. The functionality will be like CRWD's public application forms and workflows that have been demonstrated to the RPBCWD in the definition process.

**BMP Module** - this module is a new page that will be in the MS4Front account that aggregates all BMPs that were created in the Permit, Grant, or Capital Projects pages and provides a list and map views for them. These BMP page will also show summary statistics for the BMPs and allow users to export them into shapefile or excel.

**Contacts Module** – this module is a new page that will be in the MS4Front account that aggregates all contacts into a common table where they can be updated or viewed. The contact detail record will also show the related permits or grants associated with them. The contact list can be exported into an excel to use for marketing purposes.

## TASK 3: DATA MIGRATION AND FINAL CONFIGURATION

The RPBCWD previously had two databases that collected permit information which can be exported into an Excel file. HEI will merge the two spreadsheets into one master permit database spreadsheet and map the columns to the new database structure. HEI will then write an import script to import the historic permit

information into the new database. HEI will only be able to populate information that matches between the two sources. Historic inspection information from previous field mobile apps will not be migrated into the database at this time.

#### **TASK 4: TESTING, REVISIONS, GO LIVE AND TRAINING**

Upon completion of **Task 3**, HEI will provide access to the application via a URL. RPBCWD will use the URL to test three specific workflows within MS4Front. The workflows include creating a new permit and grant from the public application form and taking it through closeout. The other workflow is creating a new capital project in MS4Front. Upon the completion of testing by the RPBCWD, they will provide a prioritize list of feedback to HEI for configuration revisions. HEI will make up to 24 hours of revisions based on the prioritization list. HEI assumes these revisions will be limited to the current functionality within MS4Front and no new enhancements will be added. After revisions have been made, HEI will work with the RPBCWD on a Go Live launch and then follow-up up with a web-based training session.

#### **MAINTENANCE AND SUPPORT**

MS4Front is a SaaS so bug fixes, technical support, and hosting are provided through that service agreement. Any configuration revisions or enhancements to the software can be performed under HEI's professional services at an hourly fee.

#### **COST ESTIMATE**

This contract will be setup as a fixed fee. Invoices will be submitted periodically (customarily on a monthly basis) and are due and payable upon receipt. Invoices will include the amount of work currently performed on the total project costs for that given period. Hosting will start at the development of the software product.

#### **Costs:**

**Task 1:** Initial Software Configuration and Setup: \$11,000

**Task 2:** Implementation of Additional Modules: \$6,000

**Task 3:** Data Migration: \$5,500

**Task 4:** Testing, Configuration Revisions, Go Live and Training: \$4,500

**Total Cost Estimate for Professional Services:** \$27,000

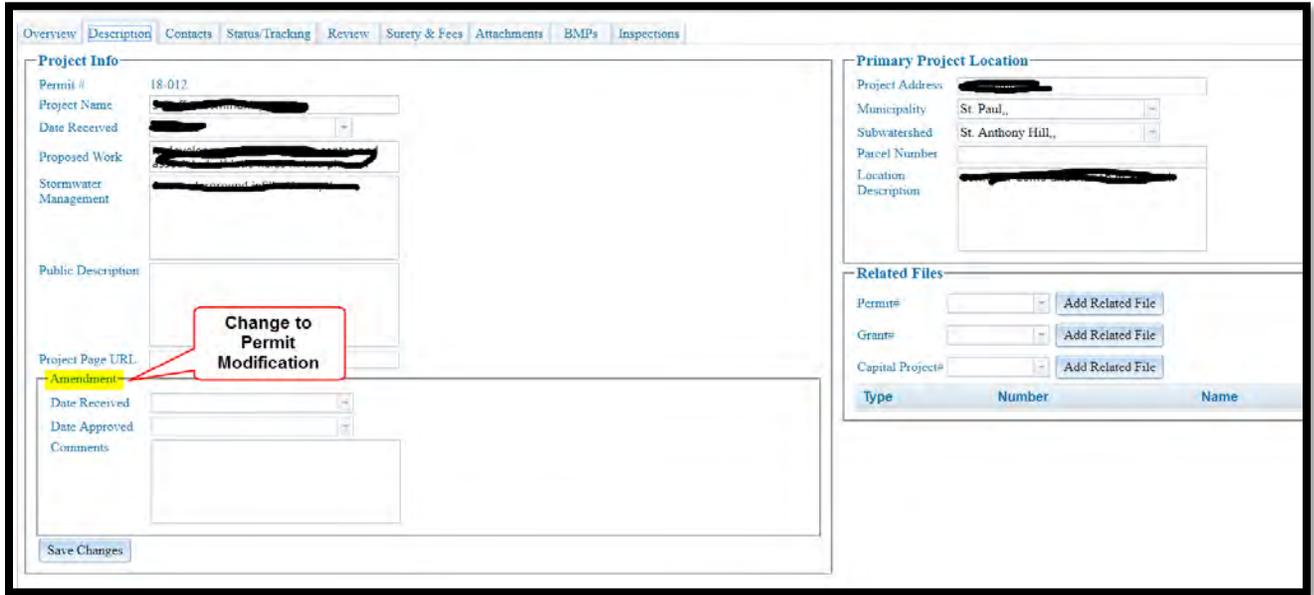
**MS4Front Subscription Fee for First Year:** \$18,000 as specified in Attachment D

**Total Cost:** \$45,000

#### **IMPLEMENTATION SCHEDULE**

HEI would work with the district to do the configuration and integration services by March 1, 2019 and then allow for one month of testing and configuration revisions with a tentative Go Live date of April 1, 2019.

## FIGURES



Overview | Description | Contacts | Status Tracking | Review | Surety & Fees | Attachments | BMP's | Inspections

**Project Info**

Permit # 18.012  
 Project Name [REDACTED]  
 Date Received [REDACTED]  
 Proposed Work [REDACTED]  
 Stormwater Management [REDACTED]

Public Description

Project Page URL

**Amendment**

Date Received [REDACTED]  
 Date Approved [REDACTED]  
 Comments [REDACTED]

Save Changes

**Primary Project Location**

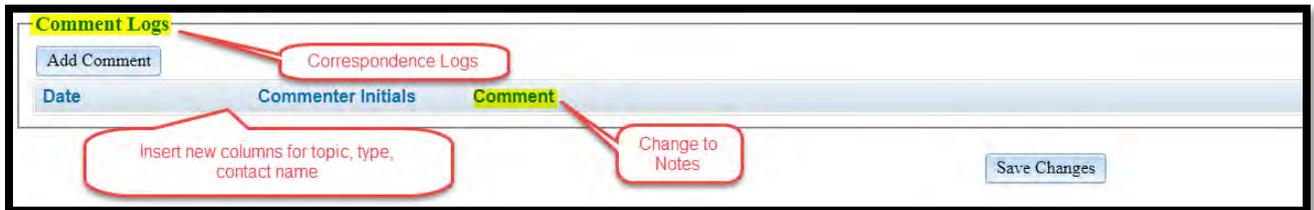
Project Address [REDACTED]  
 Municipality St Paul,  
 Subwatershed St. Anthony Hill,  
 Parcel Number [REDACTED]  
 Location [REDACTED]  
 Description [REDACTED]

**Related Files**

Permit# [REDACTED] Add Related File  
 Grant# [REDACTED] Add Related File  
 Capital Project# [REDACTED] Add Related File

Type	Number	Name
------	--------	------

Figure 1. Change to the Amendment Group Label to "Permit Modification"



**Comment Logs**

Add Comment

Correspondence Logs

Date	Commenter Initials	Comment
------	--------------------	---------

Insert new columns for topic, type, contact name

Change to Notes

Save Changes

Figure 2. Change to Comment Logs

**Application Fees**

Total Collected: \$2,100.00

Date	Check #	Payer	Amount	Type	Comment
01/18/2018	6110	[REDACTED]	\$2,100.00	application fee	

+ Add Record

---

**Surety Notes**

General Comments

Escrow Agreement Required

Escrow Agreement Received

---

Surety Returned as Undeliverable

Date

Amount \$

---

Surety Returned to MN

Date

Amount \$

---

Surety to Regional Compliance Fund

Date

Amount \$

Fund

Date Spent

Save Changes

---

**Surety Register**

Balance: \$12,100.00

Date	Type	Expires	Draw By	Check #	Payer	Debit	Credit	Memo	RCWD Used Surety
03/07/2018	cash				[REDACTED]		\$5,000.00		
03/07/2018	cash	03/05/2020	01/05/2020	1043	[REDACTED]		\$7,100.00	[REDACTED]	

+ Add Record

Export to CSV

Figure 3. Surety & Fees tab

## MEMORANDUM

TO: Claire Bleser, Administrator

FROM: Terry Jeffery, Watershed Planning Manager  
Josh Maxwell, Water Resources Coordinator

DATE: December 5, 2019

RE: Purchase of Trimble R8 Survey Grade Antenna/Receiver & Trimble T7 Tablet Controller

---

Throughout the year there are numerous situations for which precise survey data is required in the vertical axis as well as horizontal (x, y, and z). In these instances, we are required to contract with a surveying firm and wait for their schedule to accommodate the collection of data which staff could quickly and accurately obtain.

To illustrate these items, we provide the following partial listing of instances.

- Installation of gauges.
- Location and elevation of pipe inverts, flared end sections, and other conveyances.
- Delineation of wetland boundaries.
- Verification of BMP installation.
- Measuring water levels.
- Measuring rate of change of eroded features.
- Measuring subsidence at the PCRA berm.
- Topographic survey for model calibration or project design.

This would not eliminate the need to retain the services of a surveying firm as there are times when the data collected must be certified by a registered land surveyor (RLS). However, the majority of data would not require such assurances.

In addition to the R8 and T7, we also received quotes for the R10 antenna/receiver and TSC7 controller. Both are future ready, meaning they can upgrade to accommodate future satellites. The T7 is a tablet where the TSC7 also has a qwerty keyboard. The R10 is ruggedized whereas the R8 is not. The cost for the R8 and T7, including training and support, is \$22,662.60 whereas the cost for the R10 and TSC7 is \$33,147.60.

To provide a reference, a two-person survey crew can range from \$150 to \$300 per hour. This does not include the cost of post processing the data and providing it in a format that can be digested by us as the consumer. This ranges from \$76 to \$148 an hour. Finally, the RLS is \$102 to \$185 an hour. With a median rate, a day long survey, with two hours of tech time and one hour of time for the RLS would run approximately \$2,410.

I have attached both quotes for your benefit.

**Staff Recommendation**

Approve purchase of the Trimble R8 receiver/antenna, the Trimble T7 tablet controller and the appurtenances for \$22,662.60 with half the funds to come from Data Collection and the other half of the funding to come from the Wetlands Program.



**Frontier Precision, Inc.**  
 10900 73rd Avenue North  
 Maple Grove, MN 55369  
 763.496.1366  
 www.frontierprecision.com

**Quote**  
 Date: 10/07/2019 03:33 PM  
 Quote Number: 34686  
 Valid Until: 11/07/2019  
 Quotation by: Dustin Harr

For questions, contact dharr@frontierprecision.com

**BILL TO:**

**Riley Purgatory Bluff Creek WSD**  
 Terry Jeffery

tjeffery@rpbcwd.org

**SHIP TO:**

**Riley Purgatory Bluff Creek WSD**  
 Terry Jeffery

tjeffery@rpbcwd.org

Product Details	Qty	Price	Total
<b>1. TSC7-1-1111-00 Trimble TSC7 controller - QWERTY keypad, USB/Serial boot, Wo</b> Trimble TSC7 controller - QWERTY keypad, USB/Serial boot, Worldwide region, Standalone	1	\$ 4,800.00	\$ 4,320.00
<b>2. TA-GENSURV-P Trimble Access</b> Trimble Access - General Survey; Perpetual License	1	\$ 2,500.00	\$ 2,250.00
<b>3. 121358-01-1 TSC7 Ext. Battery Charger w/Int. Cord, Battery 2-pack</b> Trimble TSC7 Accessory - Ext. Battery Charger w/ Int. Cord, Battery 2-pack	1	\$ 420.00	\$ 378.00
<b>4. 121349-01-1 TSC7 Pole Mount</b> Trimble TSC7 Accessory - Pole Mount	1	\$ 199.00	\$ 179.10
<b>5. 121354-01-1 TSC7 Shoulder Sling Bag</b> Trimble TSC7 Accessory - Shoulder sling bag	1	\$ 60.00	\$ 54.00
<b>6. R10-102-60-01 Trimble R10-2, Model 60- SINGLE RECEIVER KIT WITH TRANSPORT</b> Trimble R10-2, Model 60, single receiver transport case, ROW	1	\$ 6,500.00	\$ 5,850.00
<b>7. R10-CFG-002-41 Trimble R10-2 Configuration Level - R10 Base and Rover Mode</b> Trimble R10-2 Configuration Level - R10 Base and Rover Mode	1	\$ 19,000.00	\$ 17,100.00
<b>8. 101071-00-01 Power Supply and Power Cord For Dual Charger</b> Trimble Geospatial Accessory - Power Supply and Power Cord for Dual Battery Charger (North America)	1	\$ 95.00	\$ 85.50
<b>9. 63607-00 Trimble Business Center Field Data - Dongle License</b> Trimble Business Center Field Data - Dongle License	1	\$ 595.00	\$ 535.50
<b>10. 63625-00 Add GIS to Existing Base/Complete/Advanced Hardware Key (R</b> Add GIS to Existing TBC Base/Complete/Advanced Hardware Key (Reqs HASP key ID)	1	\$ 995.00	\$ 895.50
<b>11. FPI-TRAINING-SURVEY Training Fee / Onsite Installation</b> Onsite training or new product installation and training - Daily rate.	1	\$ 1,500.00	\$ 1,500.00
		Sub Total:	<b>\$ 33,147.60</b>
		Tax:	\$ 0.00
		Shipping:	\$ 0.00
		<b>Grand Total:</b>	<b>\$ 33,147.60</b>

**Special Notes:**

Shipping, handling, and applicable sales tax will be added to invoice.

**Terms and Conditions**

All invoices are in U.S. Dollars.

Payment terms are Net 30 day upon approved credit. We also accept VISA, MasterCard, American Express. Returns - A standard restocking fee of 20% will be charged for any returned equipment.

Shipping and handling charges are prepaid and added to invoice. Shipment will be made by UPS Ground unless otherwise specified, FOB

shipping point.



**Frontier Precision, Inc.**  
 10900 73rd Avenue North  
 Maple Grove, MN 55369  
 763.496.1366  
 www.frontierprecision.com

**Quote**

Date: 11/21/2019 04:23 PM  
 Quote Number: 35942  
 Valid Until: 12/21/2019  
 Quotation by: Dustin Harr

For questions, contact dharr@frontierprecision.com

**BILL TO:**

**Riley Purgatory Bluff Creek WSD**  
 Terry Jeffery

tjeffery@rpbcwd.org

**SHIP TO:**

**Riley Purgatory Bluff Creek WSD**  
 Terry Jeffery

tjeffery@rpbcwd.org

Product Details	Qty	Price	Total
<b>1. TA-GENSURV-P Trimble Access</b> Trimble Access - General Survey; Perpetual License	1	\$ 2,500.00	\$ 2,250.00
<b>2. 121358-01-1 Trimble Accessory - External Battery Charger w/ Int. Cord, Battery 2-pack2-pack</b> Trimble TSC7 Accessory - Ext. Battery Charger w/ Int. Cord, Battery 2-pack	1	\$ 420.00	\$ 378.00
<b>3. 121354-01-1 Trimble Accessory - Carry Case Shoulder Bag</b> Trimble TSC7 Accessory - Shoulder sling bag	1	\$ 60.00	\$ 54.00
<b>4. 101071-00-01 Power Supply and Power Cord For Dual Charger</b> Trimble Geospatial Accessory - Power Supply and Power Cord for Dual Battery Charger (North America)	1	\$ 95.00	\$ 85.50
<b>5. 63607-00 Trimble Business Center Field Data - Dongle License</b> Trimble Business Center Field Data - Dongle License	1	\$ 595.00	\$ 535.50
<b>6. 63625-00 Add GIS to Existing Base/Complete/Advanced Hardware Key (R</b> Add GIS to Existing TBC Base/Complete/Advanced Hardware Key (Reqs HASP key ID)	1	\$ 995.00	\$ 895.50
<b>7. FPI-TRAINING-SURVEY Training Fee / Onsite Installation</b> Onsite training or new product installation and training - Daily rate.	1	\$ 1,500.00	\$ 1,500.00
<b>8. R8S-101-60 Trimble R8s, Model 60, single receiver transport case</b> Trimble R8s, Model 60, single receiver transport case	1	\$ 4,405.00	\$ 3,964.50
<b>9. R8S-CFG-001-42 R8S, CONFIG LEVEL - ROVER/NETWORK ROVER MODE</b> Trimble R8s Configuration Level - Rover / Network Rover mode	1	\$ 10,900.00	\$ 9,810.00
<b>10. TAB-T7-11-00 Trimble T7 Tablet (Worldwide)</b> Trimble T7 Tablet (Worldwide)	1	\$ 3,295.00	\$ 2,965.50
<b>11. 121648-01 Trimble T7 Accessory - Pole Mount with Quick Release</b> Trimble T7 Accessory - Pole Mount with Quick Release	1	\$ 249.00	\$ 224.10
		Sub Total:	<b>\$ 22,662.60</b>
		Tax:	\$ 0.00
		Shipping:	\$ 0.00
		<b>Grand Total:</b>	<b>\$ 22,662.60</b>

**Special Notes:**

Shipping, handling, and applicable sales tax will be added to invoice.

**Terms and Conditions**

All invoices are in U.S. Dollars.

Payment terms are Net 30 day upon approved credit. We also accept VISA, MasterCard, American Express. Returns - A standard restocking fee of 20% will be charged for any returned equipment.

Shipping and handling charges are prepaid and added to invoice. Shipment will be made by UPS Ground unless otherwise specified, FOB

shipping point.

December 2, 2019

To: The RPBCWD Board of Managers

Re: Ridgewoods Condominiums Number 1 Association Application for a Watershed Stewardship Grant

The Watershed Stewardship (cost-share) Grant review committee met on November 18<sup>th</sup> to review grant applications. One application was received from an association with a request over \$10,000. As per the updated grant process, the application was reviewed by the review committee and a funding recommendation made. The application is now being presented to the Board for a final approval decision.

**Applicant:** Ridgewoods Condominium Number 1 Association

**Project Title:** Ridgewoods Condominium 21<sup>st</sup> Century Upgrades

**Description:** A three-part project

1. Restore 3,200 sf of side yard near Neill Lake to a native prairie
2. Reclaim 1,200 sf near parking area from buckthorn and replace with a native plant mix
3. Stabilize 654 sf of an eroded slope using native plants and install rain barrel

**Cost:** \$15,972.00

**Grant request:** \$11,979.00

**Committee recommendation:** \$10,334.00

**Recommendation rationale:**

Areas 1,2, and 3 were each scored independently due to their differing goals and methods. Area 1 has a large footprint, is in close proximity to Neill Lake, and demonstrates four strategies to meet the District's 10-Year Plan goals. Area 1 received a score of 10 and thus the committee recommends funding it at a rate of 75% of applicable costs (\$6,790.50). Area 2 is currently overrun with buckthorn and as such will require extensive management. Though Area 2 provides habitat enhancement and demonstrates three water quality strategies, the water quality impacts are minimal and the site would receive little visibility. The committee awarded Area 2 a score of six and as such recommends funding Area 2 at a rate of 50% of applicable costs (\$941.00). Though Area 3 has the smallest footprint of the three areas, it is the most visible. The rain barrel included enables the area to demonstrate both water quality and quantity strategies, as outlined in the 10-Year Plan. Because of its visibility and use of both native plants and a rain barrel, the committee assigned a score of 10 to Area 3 and recommends funding 75% of applicable costs of the project area (\$2,602.50).

Please find attached the review sheets and application for your consideration.

Sincerely,

B Lauer

Education and Outreach Assistant

**Staff Recommendation**

It was moved by Manager \_\_\_\_\_ and seconded by Manager \_\_\_\_\_ to fund the Ridgewoods Condominium Number 1 Association's application for Ridgewoods Condominium 21<sup>st</sup> Century Upgrades at up to \$\_\_10,334.00\_\_\_\_\_.

11/18/19

# Original application review Modification/clarification requested

Last updated: March 14, 2019

## APPLICATION EVALUATION WORKSHEET

### Reviewer instructions

Please be specific when commenting. Include application sections/quotations where possible. Project must score at least a 5 to be eligible for funding. Projects that score a zero for questions 4 or 5 may be recommended for funding on condition that additional information or modification be provided.

### Section 1: Applicant information

Name Ridgewoods Condominiums Address 8928-8952 Neill Lake Rd Eden Prairie, MN 55347 Applicant type HOA  
 Project type Habitat restoration erosion control Project cost \$15,472.00 Amount requested \$10,632.00

### Section 2: Eligibility pre-screening

If yes, forward to grant review committee. If no, stop reviewing. Return to applicant with request for information.

- Does the project take place within the watershed district?..... Y / N
- Did CCSWCD technician conduct a site visit?..... Y / N / NA + Terry Jeffrey
- Are the following application pieces included? (check all present) ..... Y / N
  - Grant application form
  - Project designs (including map and plant list if applicable)
  - Project cost estimate (with contractor bids as appropriate)

### Section 3: Project design

If yes, score a 1. If no, score a 0.

- Are the designs thorough and provide adequate detail? ..... 1  
Explain:
- Are the cost estimate and bids reasonable?..... 1  
Explain:

### Section 4: Program outcomes

Goals are listed on page two. Score a point for each plan goal the project addresses up to a maximum of 5 points. If none, application does not qualify for funding.

6. Does the project support any of the 10-Year Plan goals? .....	_____	Areas		
		①	②	③
		4	3	3
7. Does the project have quantifiable benefits to water quality, habitat, flooding?.....	_____	1	0	1
Explain:				
8. Will the project increase awareness of water resource issues? .....	_____	1	0	1
Explain:				
9. Will the project increase visibility and general knowledge of clean water projects? .....	_____	1	0	1
Explain:				
10. Is the applicant willing to have the project shared (on website, social media, tours etc)? .....	_____	1	1	1
Total:	_____	10	6	9

### Funding recommendation:

- Fund fully    Do not fund    Fund partially    Request modification/clarification

Review notes: Request cost breakdown by area  
Request addition of rain barrel to area 3 to increase water quality + conservation impacts

### Reviewer guide

- Points possible: 15  
 1-4 = do not fund  
 5-8 = fund/request modification if needed  
 9-15 = fund

Last updated: March 14, 2019

## 10 YEAR PLAN GOALS

Use these goals in evaluating question #6

Goal	Strategy
WQual1, WQual2, & WQual3 (Water Quality)	WQual S1. The District seeks to minimize the negative impacts of erosion and sedimentation through the District's regulatory, education and outreach, and incentive programs. WQual S3. The District encourages cities and developers to seek opportunities to incorporate habitat protection or enhancement into development and redevelopment projects. WQual S6. The District will seek opportunities to establish and preserve natural corridors for wildlife habitat and migration. WQual S7. The District will promote the use of natural materials and bioengineering for the maintenance and restoration of shorelines and streambanks where appropriate. WQual S11. The District recognizes the multiple benefits of vegetated buffers and promotes the use of vegetated buffers around all waterbodies. WQual S12. The District will assist and cooperate with cities, MPCA, MDNR, MnDOT, other watershed and other stakeholders in implementing projects or other management actions based on the Minnesota Pollution Control Agency's Twin Cities Metro Chloride TMDL. WQual S13. The District will continue to minimize pollutant loading to water resources through implementation of the District's capital improvement, regulatory, education and outreach, and incentive programs. WQual S15. The District will cooperate with other entities to investigate treatment effectiveness of emerging practices.
WQuan2 (Water Quantity)	WQuan S1. The District will preserve and enhance the natural function of the floodplain and maintain floodplain storage volume. WQuan S2. The District will promote strategies that minimize baseflow impacts. WQuan S3. The District will continue to promote infiltration, where feasible, as a best management practice to reduce runoff volume, improve water quality, and promote aquifer recharge. WQuan S7. The District promotes/encourages cities and developers to implement Low Impact Development (LID) practices and will work with cities to reduce regulatory barriers to LID practices. WQuan S9. The District will work with cities and other stakeholders to encourage conservation practices (e.g. water reuse) to protect creeks, lakes and wetlands.

## QUATIFICATION OF BENNEFITS

Use for evaluating question #7. Check and fill in all those that apply.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Habitat restoration: <u>5,034</u> ft <sup>2</sup> | <input type="checkbox"/> Flood reduction _____ gal water captured/year    |
| <input type="checkbox"/> Pollution reduction: _____ lb phosphorus/year                | <input type="checkbox"/> Flood reduction _____ gal water infiltrated/year |
| <input type="checkbox"/> Pollution reduction: _____ lb sediment/year                  | <input type="checkbox"/> Flood reduction _____ gal water abstracted/year  |
| <input type="checkbox"/> Pollution reduction: _____ lb salt/year                      | <input type="checkbox"/> Other _____                                      |

Updated

Last updated: March 14, 2019

### APPLICATION EVALUATION WORKSHEET

#### Reviewer instructions

Please be specific when commenting. Include application sections/quotations where possible. Project must score at least a 5 to be eligible for funding. Projects that score a zero for questions 4 or 5 may be recommended for funding on condition that additional information or modification be provided.

#### Section 1: Applicant information

Name Ridgewoods Condominiums Address 8928-8952 Weill Lake Rd Eden Prairie, MN 55247 Applicant type HOA  
Project type Habitat restoration erosion control Project cost \$15,972.00 Amount requested \$11,979

#### Section 2: Eligibility pre-screening

If yes, forward to grant review committee. If no, stop reviewing. Return to applicant with request for information.

- Does the project take place within the watershed district?..... Y / N
- Did CCSWCD technician conduct a site visit?..... Y / N / NA *Terry Jeffrey*
- Are the following application pieces included? (check all present) ..... Y / N
  - Grant application form
  - Project designs (including map and plant list if applicable)
  - Project cost estimate (with contractor bids as appropriate)

#### Section 3: Project design

If yes, score a 1. If no, score a 0.

- Are the designs thorough and provide adequate detail? ..... 1  
Explain:
- Are the cost estimate and bids reasonable?..... 1  
Explain:

#### Section 4: Program outcomes

Goals are listed on page two. Score a point for each plan goal the project addresses up to a maximum of 5 points. If none, application does not qualify for funding.

- |  |       |              |   |    |
|--|-------|--------------|---|----|
|  |       | <u>Areas</u> |   |    |
|  |       | ①            | ② | ③  |
| 6. Does the project support any of the 10-Year Plan goals? .....                                     | _____ | 4            | 3 | 4  |
| Score a 1 for each item the project addresses. Score a 2 if the project excels at addressing it.     |       |              |   |    |
| 7. Does the project have quantifiable benefits to water quality, habitat, flooding?.....             | _____ | 1            | 0 | 1  |
| Explain:   |       |              |   |    |
| 8. Will the project increase awareness of water resource issues? .....                               | _____ | 1            | 0 | 1  |
| Explain:   |       |              |   |    |
| 9. Will the project increase visibility and general knowledge of clean water projects? .....         | _____ | 1            | 0 | 1  |
| Explain:   |       |              |   |    |
| 10. Is the applicant willing to have the project shared (on website, social media, tours etc)? ..... | _____ | 1            | 1 | 1  |
| Total:   | _____ | 10           | 6 | 10 |

#### Funding recommendation:

- Fund fully    Do not fund    Fund partially    Request modification/clarification

Review notes: Subtract maintenance costs from project totals  
Fund areas 1 + 3 @ 75% + area 2 @ 50%

#### Reviewer guide

Points possible: 15  
1-4 = do not fund  
5-8 = fund/request modification if needed  
9-15 = fund

Project costs: ① \$9,054.00 → fund @ 75%   Grant amounts: ① \$6,790.50  
 ② \$1,882.00 → fund @ 50%   ② ~~\$1,381.50~~ \$941.00   Total = \$10,334.00  
 ③ \$4,796.00 → fund @ 75%   ③ \$3,602.50

Last updated: March 14, 2019

## 10 YEAR PLAN GOALS

Use these goals in evaluating question #6

Goal	Strategy
<p>WQual1, WQual2, &amp; WQual3 (Water Quality)</p> <p>area 1, 2, 3</p>	<p>WQual S1. The District seeks to minimize the negative impacts of erosion and sedimentation through the District's regulatory, education and outreach, and incentive programs.</p> <p>WQual S3. The District encourages cities and developers to seek opportunities to incorporate habitat protection or enhancement into development and redevelopment projects.</p> <p>WQual S6. The District will seek opportunities to establish and preserve natural corridors for wildlife habitat and migration.</p> <p>WQual S7. The District will promote the use of natural materials and bioengineering for the maintenance and restoration of shorelines and streambanks where appropriate.</p> <p>WQual S11. The District recognizes the multiple benefits of vegetated buffers and promotes the use of vegetated buffers around all waterbodies.</p> <p>WQual S12. The District will assist and cooperate with cities, MPCA, MDNR, MnDOT, other watershed and other stakeholders in implementing projects or other management actions based on the Minnesota Pollution Control Agency's Twin Cities Metro Chloride TMDL.</p> <p>WQual S13. The District will continue to minimize pollutant loading to water resources through implementation of the District's capital improvement, regulatory, education and outreach, and incentive programs.</p> <p>WQual S15. The District will cooperate with other entities to investigate treatment effectiveness of emerging practices.</p>
<p>WQuan2 (Water Quantity)</p> <p>area 3</p>	<p>WQuan S1. The District will preserve and enhance the natural function of the floodplain and maintain floodplain storage volume.</p> <p>WQuan S2. The District will promote strategies that minimize baseflow impacts.</p> <p>WQuan S3. The District will continue to promote infiltration, where feasible, as a best management practice to reduce runoff volume, improve water quality, and promote aquifer recharge.</p> <p>WQuan S7. The District promotes/encourages cities and developers to implement Low Impact Development (LID) practices and will work with cities to reduce regulatory barriers to LID practices.</p> <p>WQuan S9. The District will work with cities and other stakeholders to encourage conservation practices (e.g. water reuse) to protect creeks, lakes and wetlands.</p>

## QUANTIFICATION OF BENEFITS

Use for evaluating question #7. Check and fill in all those that apply.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Habitat restoration: <u>5,084</u> ft <sup>2</sup> | <input type="checkbox"/> Flood reduction _____ gal water captured/year    |
| <input type="checkbox"/> Pollution reduction: _____ lb phosphorus/year                | <input type="checkbox"/> Flood reduction _____ gal water infiltrated/year |
| <input type="checkbox"/> Pollution reduction: _____ lb sediment/year                  | <input type="checkbox"/> Flood reduction _____ gal water abstracted/year  |
| <input type="checkbox"/> Pollution reduction: _____ lb salt/year                      | <input type="checkbox"/> Other _____                                      |

# 1. Applicant information

## **Applicant type**

Association

## **PROPERTY OWNER INFORMATION**

### **Name (s)**

Ridgewoods Condominium Number 1 Association

### **Mailing address**

8928-8952 Neill Lake Rd, Eden Prairie, MN 55347

### **Phone**

952-334-6611

### **Email**

cooperalex2004@yahoo.com

## **PRIMARY CONTACT**

Who should the watershed district contact about questions with the application?

### **Same as above**

Yes

### **Name (s)**

### **Role**

### **Phone number**

### **Email**

# 2. Project summary

## **Project title**

Ridgewoods Condominium 21st Century Upgrades

Our property is an irregular shape consisting of hilly terrain, split level buildings/roadways, and a mainly turfgrass, rock garden, and wooded landscape. Through ongoing repairs to turfgrass and landscaping, the association works to maintain a positive appearance but falls short on ideas for erosion and large areas needing repair. We see this as an opportunity to revitalize multiple sections of the property, introduce native plants not yet seen on our property, and provide a stability fix for future erosion damage to our complex.

## PROJECT DESCRIPTION

**Describe the project in more detail, including any site issues you are hoping to address through it.**

Our project is split into three components: sidelot, woodland, and eroded slope. The sidelot provides a chance to make a blank slate of native plantings in a large square area next to 8952 Neill Lake Road which has had issues with losing a large tree, hilly terrain, and slope erosion on the edge facing Neill Lake down the hillside. We plan to stabilize the hillside erosion and provide habitat restoration through the grading of the sidelot, removal of limited growth/buckthorn, and planting of a mix of items to provide a long term solution to the 3,200 SF area. The woodland area is located in front of 8952 between a driveway turnaround lane and the lowest parking lot. The area faces a growing struggle with buckthorn crowding vehicle traffic and damaging other nearby trees. The plan would remove the problem and replant/seed suitable species to allow for a clean and uniform look to return to our woodland area including this 1,200 SF section. The final area is an 800 SF hillside nearest to our property entrance and is the showpiece of our association's entering traffic. The area has a sizable tree but has faced issues with growth due to slope, erosion, and shade. The plan adds suitable material after cleaning up the growth from tree roots in the area. We hope to showcase shade plants and erosion repair

The watershed district is guided by a planning document called the 10-Year Watershed Management Plan. The Watershed Stewardship Grant Program exists to support the goals and strategies of that plan. Which of the following 10-Year Plan strategies will your project support?

**Select all that apply**

WQual S1. The District seeks to minimize the negative impacts of erosion and sedimentation through the District's regulatory, education and outreach, and incentive programs.

WQual S3. The District encourages cities and developers to seek opportunities to incorporate habitat protection or enhancement into development and redevelopment projects.

WQual S6. The District will seek opportunities to establish and preserve natural corridors for wildlife habitat and migration.

WQual S13. The District will continue to minimize pollutant loading to water resources through implementation of the District's capital improvement, regulatory, education and outreach, and incentive programs.

WQuan S1. The District will preserve and enhance the natural function of the floodplain and maintain floodplain storage volume.

WQuan S2. The District will promote strategies that minimize baseflow impacts.

WQuan S3. The District will continue to promote infiltration, where feasible, as a best management practice to reduce runoff volume, improve water quality, and promote aquifer recharge.

## QUANTIFIABLE BENEFITS

The grant program seeks to fund projects that have quantifiable benefit to water quality, habitat, and flood risk reduction. Please indicate the benefits your project will have. Select all that apply.

something Seth did not feel were needed for this type of project. These areas do not utilize or have much exposure to roadway salt or other chemical issues outside of the lawn treatments being avoided in the sidelot and we are not planning any capture/storage methodology. Based on a yearly rainfall in our region of 30 inches, the USGS calculates that our project area would see around 74,820 gallons of water so we would be working to better utilize plants/loosened soils to capture more of it during each storm. Being on top of the hill we serve in a unique capacity to mitigate flood damages and pollution for Neill Lake located just a few hundred feet down the hill. Our forests and lack of building density also create an ideal environment where we regularly see deer, raccoons, squirrels, and numerous types of birds utilizing the land for their habitat. In balancing our property appearance and available project funds this project does a great job to jumpstart a discussion for our community on doing a bit more maintenance for a larger purpose in preventing future issues with the terrain and keeping the Neill Lake area beautiful for years to come.

## EDUCATION

The grant program also exists to increase awareness and stewardship around water issues and solutions. Projects that incorporate community education and outreach are given preference. We encourage you to be creative as you think of ways to weave education into your project.

### **How will your project increase awareness of water resource issues?**

The eroded slope will become the centerpiece of the project as it is showcased to all 35 homeowners of our association along with at least 20 townhomes which share that driveway access. We hope to showcase that through a bit of remediation and upkeep there are way to prevent erosion and maintain a clean property

Their plan would ensure the first years are carefully maintained while we work to educate our board/homeowners and engage with our lawn/landscape vendor to possibly take over the management or stay with Natural Shore moving forward. We would provide board supervision of each area and ensure that our budget each year reflects accurate needs for maintenance/upkeep.

## 6. Reporting

Grant recipients must submit a project report within 30 days of completing the project, and a yearly report with updates on maintenance and function. These are submitted online.

### **How/what will you track to fulfill these requirements?**

We would track whether each area was completed in the specified manor (square footage, materials, desired outcomes). Moving forward we would illustrate any challenges faced due to a wet/dry season, unexpected challenges, or trouble with a specific solution/implemented item.

## 7. Site visit

Most applications require a site visit from the Carver County Soil and Water Conservation District (CCSWCD) technician prior to applying, or at least prior to the application deadline.

### **Have you had a site visit with the CCSWCD technician?**

Yes

## Authorization to submit application

Name of landowner(s) or responsible party authorized to submit this application and sign any subsequent funding agreement(s).

**Name (s)**

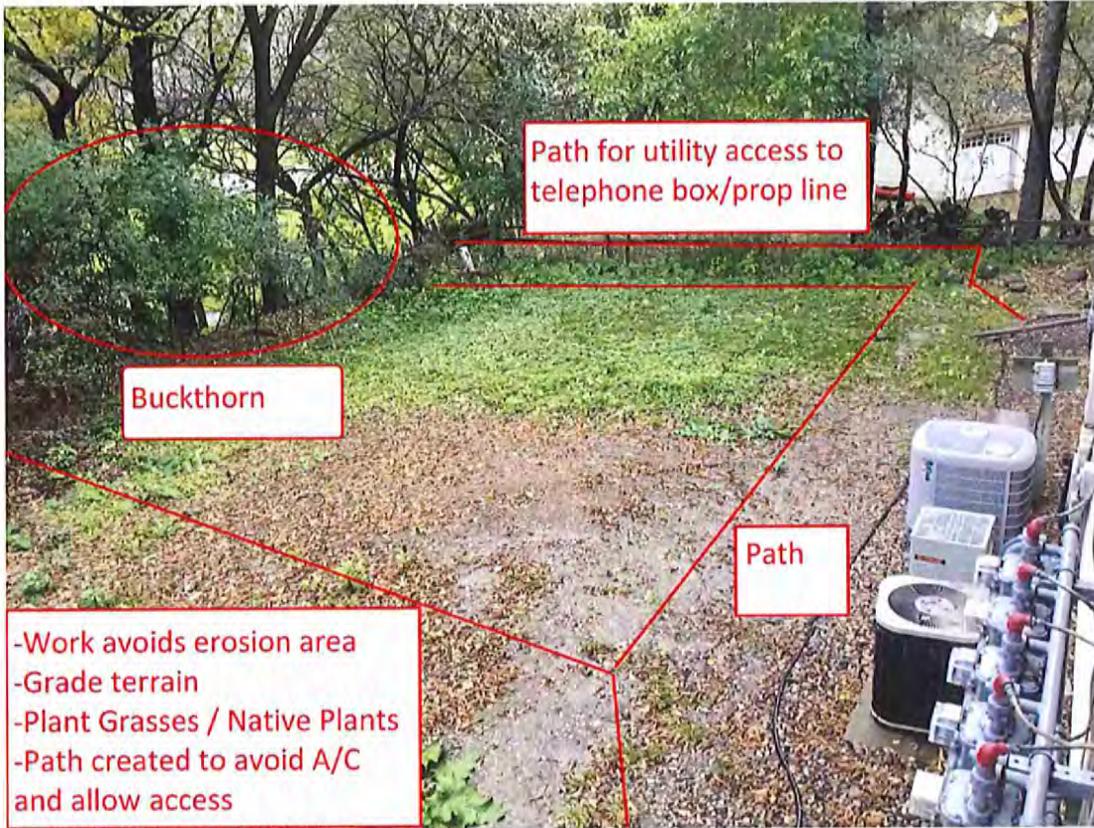
Ridgewoods Condominium Number I Association Project Maps / Photos

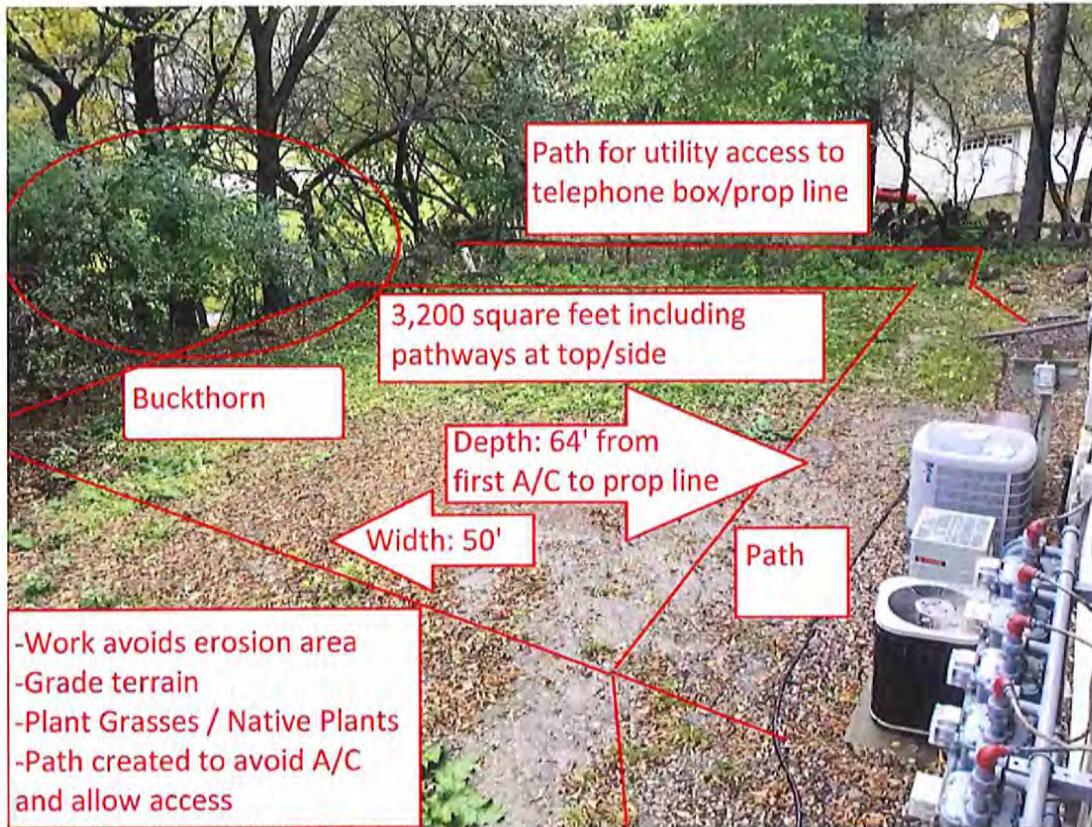
8928 – 8952 Neill Lake Road, Eden Prairie, MN 55347



- 1. 8952 Side Yard
- 2. Parking Lot and Driveway Turnaround Buckthorn
- 3. Hillside Project – East Side of Garages

1. 8952 Side Yard – Grade and Replant Prairie Grass, Remove Buckthorn, and Add Pathway





**2. Lower Parking Lot / Driveway Turnaround Buckthorn**

Buckthorn on turnaround up to parking spots (replant native seed)



Buckthorn in Lower Lot (property line extends over four parking spots)



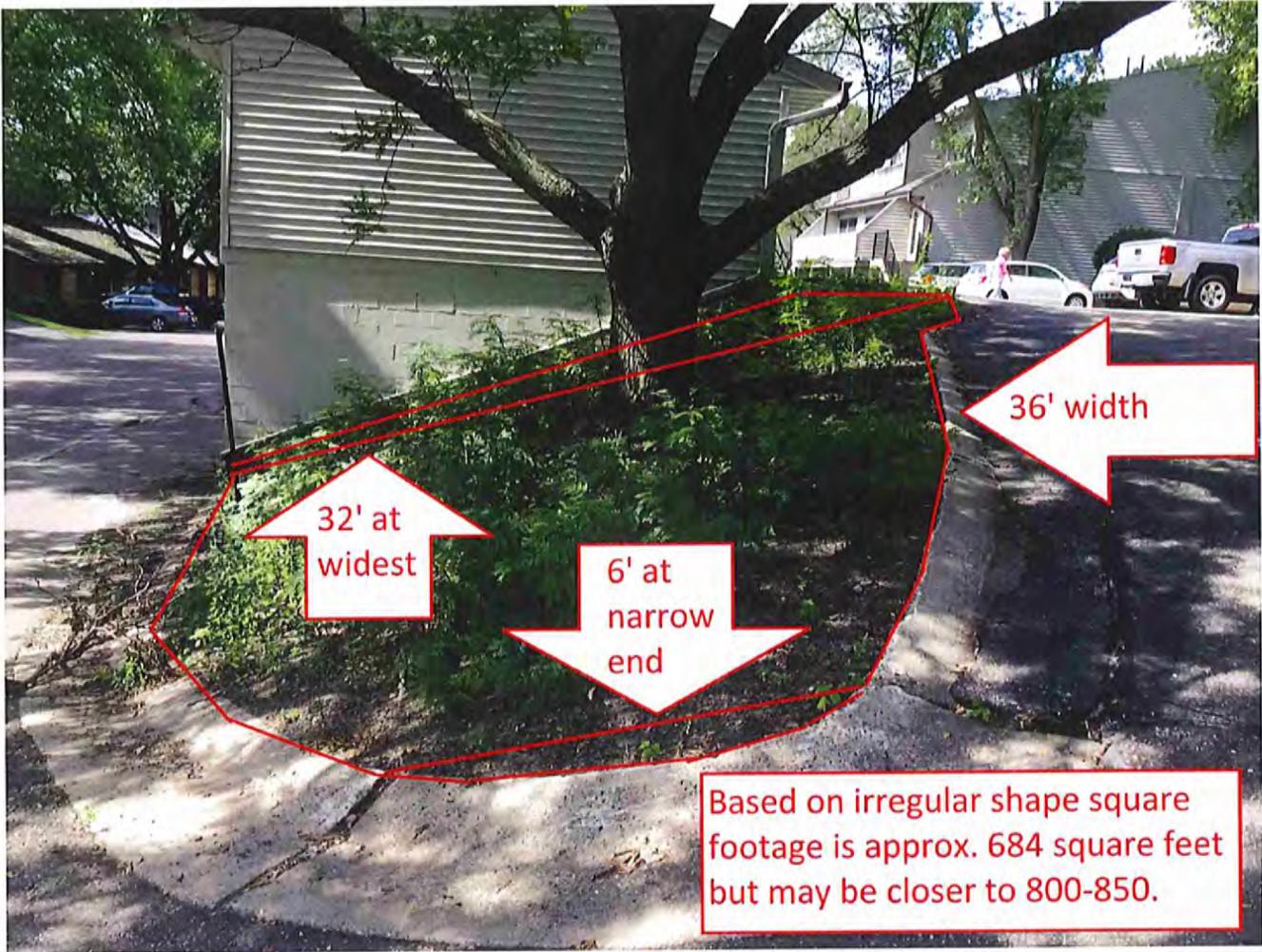


Area is 40' wide (4 parking spots) with variable depth to the turnaround roadway (20'-40'). Buckthorn is mixed with other species. 1200 square feet. Area circled has already cut stumps.

### 3. Eroded hillside near Neill Lake Rd entrance / East end of stacked garages

Root growth cut, covered, buried, and shade plant plugs used. Optional rain barrel recommended by Watershed Inspector would be placed on upper side below gutter.



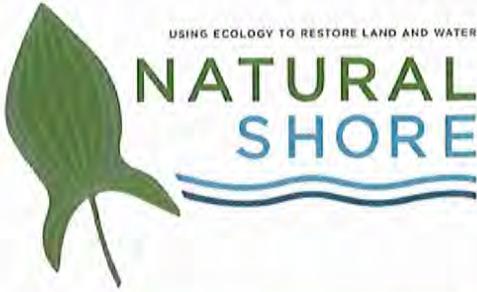


32' at  
widest

6' at  
narrow  
end

36' width

Based on irregular shape square  
footage is approx. 684 square feet  
but may be closer to 800-850.



## Cost Breakdown for Each Restoration Area

### Comprehensive bid estimate

Site Design, Project Management, Mobilization	\$1,376.00
Site preparation, herb. trts, grading, buckthorn removal, mulch	\$4,447.00
Plants - 3" and 4" containers - 1,970	\$8,083.00
Rain barrel - standard install with existing downspout	\$500.00
Maintenance - 2 yr plan	\$1,566.00
<b>TOTAL</b>	<b>\$15,972.00</b>

### Prairie area ①

Site Design, Project Management, Mobilization	\$700.00
Site preparation, herb. trts, grading, mulch	\$2,890.00
Plants - 3" and 4" containers - 1,457	\$5,464.00
Rain barrel - standard install with existing downspout	\$500.00
<del>Maintenance - 2 yr plan</del>	<del>-\$750.00</del>
<b>TOTAL</b>	<b>\$10,304.00</b>

9,054.00 @ 75% =

**\$6,790.50**

### Eroded Hillside ③

Site Design, Project Management, Mobilization	\$300.00
Site preparation, herb. trts, clearing, mulch	\$820.00
Plants - 3" and 4" containers - 363	\$1,850.00
<del>Rain barrel - 2 yr plan</del>	<del>-\$400.00</del>
<b>TOTAL</b>	<b>\$3,370.00</b>

3,470.00 @ 75% =

**\$2,602.50**

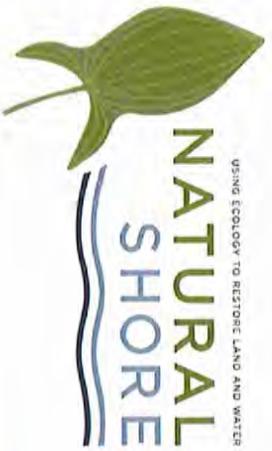
### Buckthorn slope ②

Site Design, Project Management, Mobilization	\$376.00
Site preparation, herb. trts, buckthorn removal	\$737.00
Plants - 3" and 4" containers - 150 - seed mix	\$769.00
<del>Maintenance - 2 yr plan</del>	<del>-\$416.00</del>
<b>TOTAL</b>	<b>\$2,298.00</b>

1,882.00 @ 50% =

**\$941.00**

Total = \$10,334.00



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## Restoration Proposal for:

Mr. Alex Cooper  
Ridgewoods Condominium Association  
8952 Neil Lake Road, Eden Prairie, MN

Proposal Date: **October 29, 2019**

Prepared by: Bill Bartodziej M.S., Senior Restoration Ecologist  
Natural Shore Technologies, Inc.  
612.730.1542 [bill.b@naturalshore.com](mailto:bill.b@naturalshore.com)





USING ECOLOGY TO RESTORE LAND AND WATER.

401-253-7700 | [www.naturalshore.com](http://www.naturalshore.com) | OFFICE & HEADQUARTERS | 1480 COUNTY RD 581 | WOODBRIDGE, VA 22191

October 29, 2019

Dear Alex:

Thank you again for giving Natural Shore Technologies the opportunity to bid on your project. Below is a *Project Summary* which outlines our *restoration methods* and *cost breakdown*. We would like to emphasize that we tailor our restoration approach to fit your site characteristics and specific objectives. We look forward to developing a partnership with you to produce an exceptional restoration that exceeds your expectations.

We would enjoy the chance to answer any questions that you have regarding this restoration proposal. We take great pride in our reputation and attention to customer satisfaction. After you have read through and are comfortable with the proposed plan and specified cost, please sign the contract that is provided. A down payment and a signed contract are required to book your project.

Best regards,

Bill Bartodziej, M.S.  
Senior Restoration Ecologist  
Natural Shore Technologies, Inc.

## ***Project Summary – Side lot - Prairie***

1. Project site: 3,200 SF
2. Site assessment and plan development include: detailed site preparation methods, plant selection, and a project timeline and work schedule for our staff. Because most of projects involve the establishment of natural buffers, site drawings and planting plans are not necessary. We have found that over time, native plants will seek out the optimal micro-habitats and flourish.
3. Delineate and verify total restoration project area.
4. Kill selected turf areas and weeds with an herbicide appropriate for upland or aquatic use. A licensed herbicide applicator from Natural Shore Technologies will apply the treatment. Some turf/swale area will remain as specified by the owner.
5. Cut and remove any weedy plant material from planting area.
6. Till to loosen soil and grade area to direct flow away from building structure.
7. Apply a 2-3" layer of shredded hardwood mulch in areas that will be planted. Mark path area closer to the house.
8. Lay out plants in a random fashion.
9. We will use 1,457 – 3-4" containers for your planting, installed at 1.5' spacing.
10. Move mulch aside and a light mulch layer will be returned around the base of the plants to hold moisture.
11. Site monitoring will be conducted and appropriate maintenance will be provided throughout the 2020 growing season.



***Using Ecology to Restore Land and Water***

# Preliminary Plant List - Prairie

Common Name	Scientific Name	Height (ft)	Color	Bloom Time	Sun Exposure	Number
[grasses, sedges, rushes]						
Side Oats Grama	<i>Bouteloua curtipendula</i>	1.5 to 2.5	Red-green	July - September	S PS	100
Canada Wild Rye	<i>Elymus canadensis</i>	3 to 4	Green	July - August	S PS	50
June grass	<i>Koeleria macrantha</i>	1 to 2	Amber	May-June	S	50
Little Bluestem	<i>Schizachyrium scoparium</i>	1.5 to 3	Amber	July - September	S PS	100
Indian Grass	<i>Sorghastrum nutans</i>	4 to 6	Amber	July - September	S PS	50
Prairie Dropseed	<i>Sporobolus heterolepis</i>	1.5 to 3	Green	August - October	S PS	50

[forbs, flowers]

Aromatic aster	<i>Aster oblongifolium</i>	2	Purple	August- November	S PS	40
Anise Hyssop	<i>Agastache foeniculum</i>	2 to 4	Purple	June-October	S SH	40
Prairie Onion	<i>Allium stellatum</i>	1 to 1.5	Pink	July - September	S PS	40
Butterfly Milkweed	<i>Asclepias tuberosa</i>	1 to 2	Orange	June - September	S PS	57
Smooth blue aster	<i>Aster laevis</i>	4	Blue	August-October	S PS	40
Smooth Aster	<i>Aster laevis</i>	1.5 to 2.5	Blue	July - Octoer	S PS	40
Blue wild indigo	<i>Baptisia australis</i>	4.0	Blue	May-July	S PS	40
Harebell	<i>Campanula rotundifolia</i>	1.0	Purple	June-August	S PS	40
Prairie Coreopsis	<i>Coreopsis palmata</i>	1.5 to 2.5	Yellow	June - September	S PS	80
White prairie clover	<i>Dalea candida</i>	2.0	White	June - September	S PS	40
Purple prairie clover	<i>Dalea purpurea</i>	2.0	Purple	July-September	S PS	40
Purple coneflower	<i>Echinacea pallida</i>	4.0	Purple	July-September	S PS	80
Rattlesnake master	<i>Eryngium yuccifolium</i>	4.0	White	July-September	S	40
Prairie Smoke	<i>Geum triflorum</i>	0.5 to 1	Red	May - June	S PS	40
Rough Blazingstar	<i>Liatris aspera</i>	1.5 to 3	Purple	July - September	S PS	40
Meadow blazing star	<i>Liatris ligulistylis</i>	4 to 5	Purple	August,	S PS	40

					September		
Wild bergamot	<i>Monarda fistulosa</i>	4.0	Purple	July-September	S PS	40	
Prairie Phlox	<i>Phlox pilosa</i>	1.5 to 2	Pink	May - June	S PS	40	
Mountain Mint	<i>Pycnanthemum virginianum</i>	2 to 3	White	July - September	S PS	40	
Yellow coneflower	<i>Ratibida pinnata</i>	5.0	Yellow	July-September	S PS	40	
Black Eyed Susan	<i>Rudbeckia hirta</i>	2 to 3	Yellow	June - October	S PS	40	
Spiderwort	<i>Tradescantia ohioensis</i>	2 to 4	Blue	July - October	S SH	80	
Golden Alexanders	<i>Zizia aurea</i>	1 to 3	Yellow	May-July	S PS	40	
					total =	1457	

## ***Project Summary – Woodland (buckthorn control area)***

1. Project site: 1,200 SF
2. Site assessment and plan development include: detailed site preparation methods, plant selection, and a project timeline and work schedule for our staff. Because most of projects involve the establishment of natural buffers, site drawings and planting plans are not necessary. We have found that over time, native plants will seek out the optimal micro-habitats and flourish.
3. Delineate and verify total restoration project area.
4. Cut and remove buckthorn and other weedy shrub material from the restoration area.
5. Treat all stumps with an herbicide appropriate for upland or aquatic use. A licensed herbicide applicator from Natural Shore Technologies will apply the treatment.
6. Broadcast a native seed mix (MNL – buckthorn replacement mix or equivalent) and an oats cover crop and harrow by hand.
7. Randomly install 150 3-4” container plants at approximately 3’ centers (see plant list below).
8. Site monitoring will be conducted and appropriate maintenance will be provided throughout the 2020 growing season.



***Using Ecology to Restore Land and Water***

## Preliminary Plant List – Woodland (buckthorn control area)

Common Name	Scientific Name	Height (ft)	Color	Bloom Time	Sun Exposure	Number
[grasses, sedges, rushes]						
Canada Wild Rye	<i>Elymus canadensis</i>	3 to 4	Green	July - August	S PS	10
Bottlebrush Grass	<i>Elymus hystrix</i>	2 to 3	Green	September- October	S PS	10
Indian Grass	<i>Sorghastrum nutans</i>	4 to 6	Amber	July - September	S PS	5
Prairie Dropseed	<i>Sporobolus heterolepis</i>	1.5 to 3	Green	August - October	S PS	5
Sprengel's sedge	<i>Carex sprengelii</i>	1 to 2	yellow	April-June	PS SH	10
[forbs, flowers] - edge spp						
Anise Hyssop	<i>Agastache foeniculum</i>	2 to 4	Purple	June-October	S SH	5
Pale purple coneflower	<i>Echinacea purpurea</i>	2 to 4	Purple	June-July	S PS	5
Wild bergamot	<i>Monarda fistulosa</i>	4.0	Purple	July-September	S PS	5
Mountain Mint	<i>Pycnanthemum virginianum</i>	2 to 3	White	July - September	S PS	5
Yellow coneflower	<i>Ratibida pinnata</i>	5.0	Yellow	July-September	S PS	5
Black Eyed Susan	<i>Rudbeckia hirta</i>	2 to 3	Yellow	June - October	S PS	5
Spiderwort	<i>Tradescantia ohimensis</i>	2 to 4	Blue	July - October	S SH	5
Golden Alexanders	<i>Zizia aurea</i>	1 to 3	Yellow	May-July	S PS	5
SAVANNA - WOODLAND						
Big Leaf Aster	<i>Aster macrophylla</i>	.5 to 1.5	Blue	August - October	S SH	10
Thimbleweed	<i>Anemone virginiana</i>	1 to 2	white	June-August	PS SH	10
Wild Columbine	<i>Aquilegia canadensis</i>	1.5 to 3	Red	May - June	PS SH	10
Wild Geranium	<i>Geranium maculatum</i>	1.5	Pink	May - June	PS SH	10
Virginia bluebells	<i>Mertensia virginica</i>	1 to 2	blue	April-May	PS SH	10
Jacobs Ladder	<i>Polemonium reptans</i>	0.5 to 1	blue	April-June	S SH	10
Zig Zag Goldenrod	<i>Solidago flexicaulis</i>	2.0	Yellow	August - September	PS SH	10
total =						150

## ***Project Summary – Eroded slope***

1. Project site: 800 SF
2. Site assessment and plan development include: detailed site preparation methods, plant selection, and a project timeline and work schedule for our staff. Because most of projects involve the establishment of natural buffers, site drawings and planting plans are not necessary. We have found that over time, native plants will seek out the optimal micro-habitats and flourish.
3. Delineate and verify total restoration project area.
4. Kill all weeds with an herbicide appropriate for upland or aquatic use. A licensed herbicide applicator from Natural Shore Technologies will apply the treatment.
5. Cut all suckers from the tree roots.
6. Cut and remove any weedy plant material from planting area.
7. Apply a 2-3" layer of shredded hardwood mulch in areas that will be planted.
8. Lay out plants in a random fashion.
9. We will use 363 – 3-4" containers for your planting, installed at 1.5' centers.
10. Move mulch aside and a light mulch layer will be returned around the base of the plants to hold moisture.
11. Site monitoring will be conducted and appropriate maintenance will be provided throughout the 2020 growing season.



***Using Ecology to Restore Land and Water***

# Preliminary Plant List – Eroded slope

Common Name	Scientific Name	Height (ft)	Color	Bloom Time	Sun Exposure	Number
Aromatic aster	<i>Aster oblongifolium</i>	2	Purple	August- November	S PS	10
Anise Hyssop	<i>Agastache foeniculum</i>	2 to 4	Purple	June-October	S SH	10
Prairie Onion	<i>Allium stellatum</i>	1 to 1.5	Pink	July - September	S PS	10
Harebell	<i>Campanula rotundifolia</i>	1.0	Purple	June-August	S PS	10
Prairie Coreopsis	<i>Coreopsis palmata</i>	1.5 to 2.5	Yellow	June - September	S PS	10
Prairie Phlox	<i>Phlox pilosa</i>	1.5 to 2	Pink	May - June	S PS	10
Mountain Mint	<i>Pycnanthemum virginianum</i>	2 to 3	White	July - September	S PS	10
Yellow coneflower	<i>Ratibida pinnata</i>	5.0	Yellow	July-September	S PS	10
Black Eyed Susan	<i>Rudbeckia hirta</i>	2 to 3	Yellow	June - October	S PS	10
Blue-eyed grass	<i>Sisyrinchium campestre</i>	0.5	blue	May-June	S PS	10
Spiderwort	<i>Tradescantia ohimensis</i>	2 to 4	Blue	July - October	S SH	10
Golden Alexanders	<i>Zizia aurea</i>	1 to 3	Yellow	May-July	S PS	10
Big Leaf Aster	<i>Aster macrophylla</i>	.5 to 1.5	Blue	August - October	S SH	33
Thimbleweed	<i>Anemone virginiana</i>	1 to 2	white	June-August	PS SH	30
Wild Columbine	<i>Aquilegia canadensis</i>	1.5 to 3	Red	May - June	PS SH	40
Sprengel's sedge	<i>Carex sprengelii</i>	1 to 2	yellow	April-June	PS SH	30
Wild Geranium	<i>Geranium maculatum</i>	1.5	Pink	May - June	PS SH	30
Virginia bluebells	<i>Mertensia virginica</i>	1 to 2	blue	April-May	PS SH	20
Jacobs Ladder	<i>Polemonium reptans</i>	0.5 to 1	blue	April-June August -	S SH	30
Zig Zag Goldenrod	<i>Solidago flexicaulis</i>	2.0	Yellow	September	PS SH	30
total =						363

## Project Cost

This bid includes project design and management, all materials, labor, and a one year maintenance plan. This is a comprehensive bid estimate and valid for thirty days. We require a 50% down payment to schedule your project.

### Cost Breakdown

Site Design, Project Management, Mobilization	\$1,376.00
Site preparation, herb. trts, grading, buckthorn removal, mulch	\$4,447.00
Plants - 3" and 4" containers - 1,970	\$8,083.00
Maintenance plan	\$1,566.00
<b>TOTAL=</b>	<b>\$15,472.00</b>

## Site maintenance

Site maintenance includes three visits per year during the growing season to monitor and conduct activities that will ensure proper restoration establishment. We use the most appropriate, up-to-date maintenance techniques such as targeted herbicide application, hand pulling, mowing, and spot weed whipping to effectively control invasive weeds. Our lead maintenance supervisor has a B.S. in Biology and 10 years of field experience.

***\*Note we do offer long-term maintenance contracts. Over 90% of our clients use that service.***



## Staff Qualifications

Our company has over 50 years of combined ecological restoration experience. We are a local company that focuses on quality ecological restoration in the Metro area. Our clients vary from private estates on Lake Minnetonka, to large corporate headquarters in Eden Prairie. We also work with many city and county governments and watershed management organizations. We are fully insured.

Our specialty is lakeshore and wetland restoration. We have restored many miles of lakeshore in Minnesota, more than any other company. Please see our portfolio for examples of our restoration projects that include: shorelines, wetlands, prairies, savannas, and rain gardens.

Please see our *project photo book* at: <http://www.blurb.com/books/6034090-natural-shore-technologies-inc-photobook>

## Natural Shore Technologies Plant Material

We have commercial and retail greenhouses in Maple Plain. Our plants are Minnesota native perennials that will flourish year after year. Utilizing our own plant material in our projects assure quality control. Our wetland and prairie plants are guaranteed to establish during the first growing season. Perennial plants put most of their energy into establishing root systems so please keep in mind that the first year of growth will be mainly underground. You will see some flowering the first year, but significantly more flowering during the second year of establishment.

Information about our *retail native plant greenhouses* located in Maple Plain is also available at: [www.naturalshore.com](http://www.naturalshore.com)



*Using Ecology to Restore Land and Water*

## Guarantee

We stand by our native plant material and our ecological restoration services.

Native plants that we install are guaranteed to establish during the first growing season. Any plant material that does not make it through the first growing season will be replaced at no charge to the client.

On projects that we install and manage, we will guarantee successful establishment of your ecological restoration within three full growing seasons. This proposal provides a plan for accomplishing the restoration of the project site. If successful establishment does not occur within three growing seasons, all necessary steps will be taken to ensure the eventual success of the project, at no additional charge. For purposes of this guarantee, successful establishment is defined as follows: That the presence of at least 80% of the original seeded or planted species can be found on the site, and that the overall density of vegetation is comprised of no less than 80% native species.

The only exceptions to this guarantee have to do with plant death due to acts of God (floods or drought) the actions of others (vandalism), or animal herbivory (e.g., geese, muskrats). If these extreme circumstances do happen to occur, we will work with the client at a reduced rate to make all necessary repairs.

Our goal will always be to create successful, long-term partnerships with our clients. Our guarantee is the best in the business, and provides you with a clear understanding that we are here to fully support your ecological restoration endeavor.



*Using Ecology to Restore Land and Water*

## Contract

A down payment of \$7,736.00 is required to schedule your project.  
The remainder of the project cost is due at project completion.

*Please note that this proposal is valid for 30 days from the date on this Contract.*

If you would like to proceed with the above outlined project, please sign the contract below.

Client name: Mr. Alex Cooper

Contract Value: \$15,472.00

Signed: \_\_\_\_\_ Date \_\_\_\_\_

Contractor: **Natural Shore Technologies, Inc.**

Signed: \_\_\_\_\_ Contract Date: Contract Date for 30 Day term



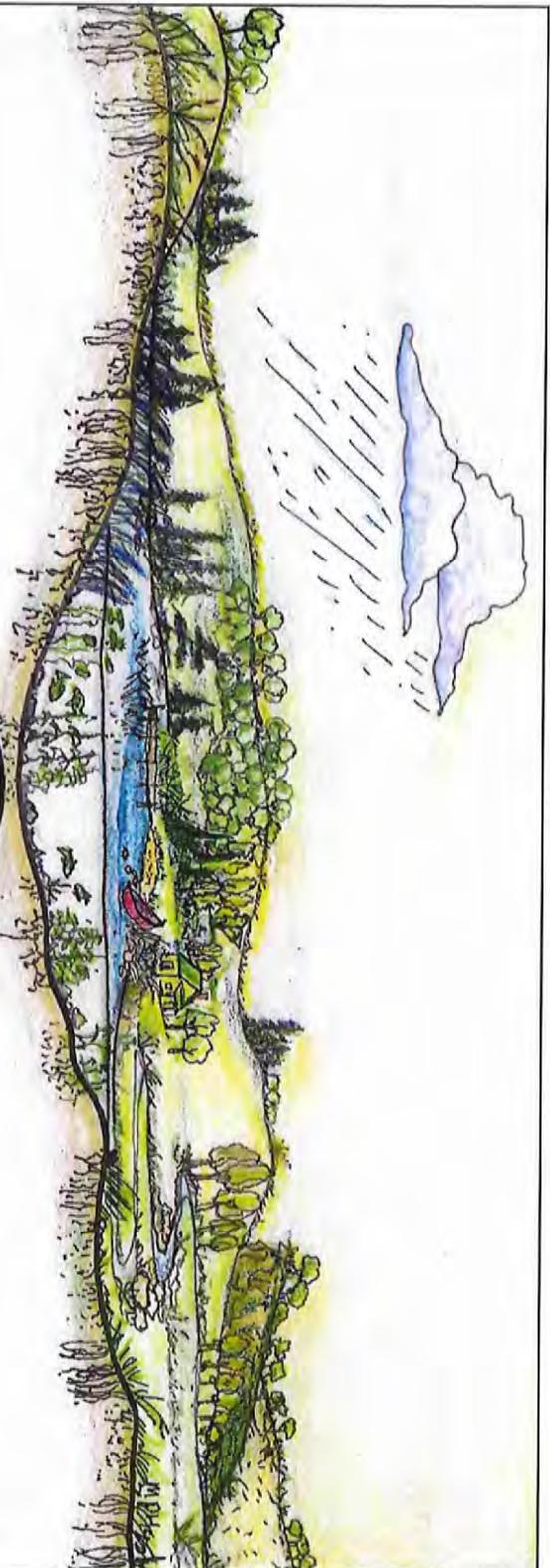
William M. Bartodziej, M.S.  
Senior Restoration Ecologist, Natural Shore Technologies

*Please return a signed copy of this contract and a check to:*

Natural Shore Technologies, Inc.  
6275 Pagenkopf Rd.  
Maple Plain, MN 55359

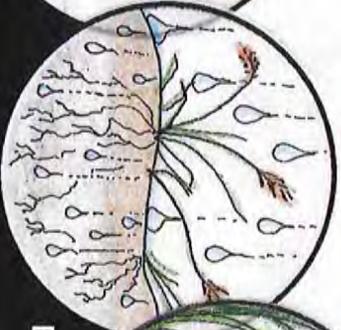


# Benefits of our quality restoration work.



## Conserve Soil

- \* Native plants:
- \* Build soil health
- \* Capture carbon



## Protect Water Quality

- \* Deep roots:
- \* Promote infiltration
- \* Reduce runoff
- \* Prevent erosion from runoff & wave action



## Beautiful Landscapes

- \* Connect with nature
- \* Enjoy your view
- \* Wild experiences in your own backyard



## Create Habitat

- \* For: birds, fish, insects & other wildlife
- \* Diverse plant communities
- \* Food sources
- \* Attract pollinators



## Educate Future Conservationists

- \* Field experience
- \* Make connections between human impact & ecosystem health

**SERVICE AGREEMENT BETWEEN  
THE RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT AND THE  
CARVER SOIL AND WATER CONSERVATION DISTRICT**

This agreement is between the Riley Purgatory Bluff Creek Watershed District (RPBCWD) and the Carver Soil and Water Conservation District (CSWCD).

**Agreement**

**1 Terms of Agreement**

- 1.1 **Effective date:** The date all required signatures are obtained.
- 1.2 **Expiration date:** December 31, 2021. Obligations to hold harmless, defend and indemnify survive termination and expiration.

**2 Purposes**

WHEREAS the RPBCWD has cost share assistance available for individuals and organizations within the watershed for making improvements to water quality by installing best management practices, and the RPBCWD wishes to pursue voluntary implementation of these practices; and

WHEREAS the RPBCWD has adopted water rules that requires best management practices for land disturbing activities and water quality protection.

WHEREAS the CSWCD is authorized to enter into agreements to provide such assistance pursuant to MINN. STAT. §§ 103C.331, SUBD. 3 and 7 and 103D.335, subd. 21, and the CSWCD has a long history of working with private landowners to address soil erosion and water quality issues.

**3 Scope of Services**

The CSWCD will provide technical support to the RPBCWD by meeting with cost share applicants to complete a site assessment. The site assessment work includes but is not limited to meeting with landowners to encourage the use of the proper BMP, preparing a site plan design, preparing a cost estimate. If the application is approved for funding, the CSWCD will also inspect the installation of the BMP, and complete reporting or maintenance inspections as requested by RPBCWD.

At the request of the RPBCWD, the CSWCD will assist with inspections of construction activity for compliance with the District regulatory program.

**4 Cost**

In full consideration for services provided by the CSWCD under this agreement, the RPBCWD will reimburse the CSWCD for services upon receipt of itemized invoices from the CSWCD. The hourly rate of billing from the CSWCD shall not exceed \$55 per hour for technical assistance and \$90 per hour for regulatory assistance, and total compensation for services rendered by CSWCD under this agreement will not exceed \$60,000.

The total obligation of the RPBCWD under this agreement will not exceed \$60,000.

**5 Billing Rate and Payment**

Services will be billed on an hourly basis at the rate of \$55 per hour for technical assistance and \$90 per hour for regulatory assistance, CSWCD will track billable hours in a form acceptable to RPBCWD.

Invoices for services rendered in accordance with this agreement will be sent on a semiannual basis and will list specifically the work performed.

Invoices are payable by the RPBCWD within 60 days.

## **5 Authorized Representatives**

The RPBCWD Authorized Representative is  
Dr. Claire Bleser, District Administrator  
18681 Lake Drive East  
Chanhassen, MN 55317  
952-687-1348

The CSWCD Authorized Representative is  
Mike Wanous, District Manager  
11360 Highway 212  
Cologne, MN 55322  
952-466-5235

## **6 Assignment, Amendments, Waiver, Contract Complete and Severability**

6.1 **Assignment.** The CSWCD may neither assign nor transfer any rights or obligations under this agreement without the prior consent of the RPBCWD and a fully executed Assignment Agreement, executed and approved by the same parties who executed and approved this agreement, or their successors in office.

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

6.3 **Waiver.** If the RPBCWD fails to enforce any provision of this agreement, that failure does not waive the provision or its right to enforce it.

6.4 **Contract Complete.** This agreement contains all negotiations and agreements between the RPBCWD and the CSWCD. No other understanding regarding this agreement, whether written or oral, may be used to bind either party.

6.5 **Severability.** If any part of this Agreement is rendered void, invalid or unenforceable, by a court of competent jurisdiction, such rendering shall not affect the remainder of this Agreement unless it shall substantially impair the value of the entire Agreement with respect to either party. The parties agree to substitute for the invalid provision a valid provision that most closely approximates the intent of the invalid provision.

## **7 Indemnification**

Each party shall be liable for its own acts to the extent provided by law and hereby agrees to indemnify, hold harmless and defend the other, its board members, officers and employees against any and all liability, loss, costs, damages, expenses, claims or actions, including reasonable attorney's fees which the other, its board members, officers and employees may hereafter sustain, incur or be required to pay, arising out of or by reason of any act or omission of the party, its agents, servants or employees, in the execution or performance or failure to adequately perform its obligations pursuant to this Agreement. This paragraph does not diminish, with respect to any third party, any defense, immunity or liability limit that the RPBCWD or the CSWCD may enjoy under law.

## **8 Equal Employment Opportunity – Civil Rights**

During the performance of this agreement, the CSWCD agrees to the following:

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

## **9 Standards**

The CSWCD shall comply with all applicable Federal and State statutes and regulations as well as local ordinances now in effect or hereafter adopted. Failure to comply may be cause for cancellation of this agreement effective as of the date of receipt of notice of cancellation.

## **10 Audits**

The CSWCD's books, records, documents, and accounting procedures and practices relevant to this agreement will be maintained for six years and are subject to examination by the State Auditor or the RPBCWD.

## **11 Government Data Practices**

If the CSWCD receives a request for data pursuant to the Data Practices Act, Minnesota Statutes chapter 13 (DPA), that may encompass data (as that term is defined in the DPA) the CSWCD possesses or has created as a result of this agreement, it will inform the RPBCWD immediately and transmit a copy of the request. If the request is addressed to the RPBCWD, the CSWCD will not provide any information or documents, but will direct the inquiry to the RPBCWD. If the request is addressed to the CSWCD, the CSWCD will be responsible to determine whether it is legally required to respond to the request and otherwise what its legal obligations are, but will notify and consult with the RPBCWD and its legal counsel before replying. Nothing in this section constitutes a determination that the CSWCD is performing a governmental function within the meaning of Minnesota Statutes section 13.05, subdivision 11, or otherwise expands the applicability of the DPA beyond its scope under governing law.

## **12 Independent Contractor**

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

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

The role of the RPBCWD with respect to the installation of BMPs under this agreement is solely to provide funding support and the RPBCWD exercises no control over the design or installation of any BMP. The RPBCWD is responsible for the design, means, method and manner of any such installation.

## **13 Venue**

Venue for all legal proceedings out of this agreement, or its breach, must be in the appropriate State or Federal court with competent jurisdiction in Minnesota.

## **14 Termination**

The RPBCWD or the CSWCD may terminate this agreement at any time, with or without cause, upon 30 days' written notice to the other party's authorized representative as identified herein. If the RPBCWD terminates this

agreement, it may specify work to be performed by the CSWCD before termination is effective and shall pay the CSWCD for services performed by the CSWCD up to the time specified for termination.

In testimony whereof, the parties duly execute this agreement by their duly authorized officers:

1. Riley Purgatory Bluff Creek Watershed District

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Approved as to form and execution:

\_\_\_\_\_  
RPBCWD Attorney

2. Carver Soil and Water Conservation District

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



December 5, 2019

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 ten months ending October 31, 2019.

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

Sincerely,

REDPATH AND COMPANY, LTD.

A handwritten signature in black ink that reads "Mark Gibbs".

Mark C. Gibbs, CPA  
Enclosure



To The Board of Managers  
Riley Purgatory Bluff Creek Watershed District  
Chanhassen, Minnesota

### **Accountant's Opinion**

The Riley Purgatory Bluff Creek Watershed District is responsible for the accompanying October 31, 2019 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.

A handwritten signature in black ink that reads "RedPath and Company, LTD." in a cursive style.

REDPATH AND COMPANY, LTD.  
St. Paul, Minnesota  
December 5, 2019

# RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

## Treasurers Report

October 31, 2019

### REPORT INDEX

<u>Page #</u>	<u>Report Name</u>
1	Cash Disbursements
2	Cash Disbursements
3	Fund Performance Analysis – Table 1
4	Multi-Year Project Performance Analysis – Table 2
5	Balance Sheet
6	VISA Activity

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**  
**Cash Disbursements**  
**October 31, 2019**

**Accounts Payable:**

<b>Check #</b>	<b>Payee</b>	<b>Amount</b>
5012	Megan D'Alessandro	\$5,000.00
5013	David & Suzanne Aschenbeck	2,521.62
5014	Barr Engineering	41,068.71
5015	CenturyLink	95.48
5016	City of Chanhassen	30.89
5017	Coverall of the Twin Cities	316.76
5018	CSM Financial, LLC	7,847.28
5019	ECM Publishers, Inc.	285.60
5020	Fortin Consulting, Inc.	1,000.00
5021	Michelle & Andrew Frost	3,471.44
5022	Frontier Precision, Inc.	22,662.60
5023	HealthPartners	4,062.81
5024	Amy Herbert, LLC	618.19
5025	Jennifer Heyer	249.92
5026	Olivia R. Holstine	512.16
5027	Iron Mountain	129.95
5028	Larry Koch	886.48
5029	Landbridge Ecological Services, Inc.	9,980.62
5030	League of Minnesota Cities	469.00
5031	Lincoln National Life Insurance	448.21
5032	Metro Sales, Inc.	328.88
5033	Nine Mile Creek Watershed District	2,014.64
5034	Redpath & Company, Ltd.	2,468.75
5035	RMB Environmental Laboratories	1,929.00
5036	Smith Partners	11,723.30
5037	Southwest News Media	1,504.58
5038	Southwest Metro Chamber of Commerce	365.00
5039	Maria Vallavicencio	244.86
5040	Wenck, Inc.	2,967.00
5041	Xcel Energy	365.59
5042	Sunram Construction, Inc.	46,735.45
EFT	Deluxe Business Products (a/p checks)	521.81
<b>Total Accounts Payable:</b>		<b><u><u>\$172,826.58</u></u></b>

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**  
**Cash Disbursements**  
**October 31, 2019**

**Payroll Disbursements:**

Payroll Processing Fee	205.00
Employee Salaries	40,975.95
Employer Payroll Taxes	3,297.60
Employer Benefits (H.S.A. Match)	450.00
Employee Benefit Deductions	(345.18)
Staff Expense Reimbursements	935.20
PERA Match	<u>3,004.16</u>

**Total Payroll Disbursements:** \$48,522.73

VISA 8,609.87

Check #5012 Megan D'Alessandro - Surety Release (5,000.00)

**TOTAL DISBURSEMENTS:** \$224,959.18

**Memos**

The 2019 mileage rate is .58 per mile. The 2018 rate was .54.5  
Old National VISA will be paid on-line.

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**  
**Fund Performance Analysis - Table 1**  
**October 31, 2019**

	2019 Budget	Fund Transfers	Revised 2019 Budget	Current Month	Year-to-Date	Year-to Date Percent of Budget
<b>REVENUES</b>						
Plan Implementation Levy	\$3,602,500.00	-	\$3,602,500.00	-	1,845,612.60	51.23%
Minnesota Market Value Credit	-	-	-	22.41	22.41	---
Permit	50,000.00	-	50,000.00	2,931.00	40,393.50	80.79%
Grant Income	708,079.00	-	708,079.00	268,169.57	540,609.57	76.35%
Investment Income	35,000.00	-	35,000.00	7,102.37	87,442.16	249.83%
Miscellaneous Income	-	-	-	56.40	1,502.65	---
Past Levies	2,511,789.00	-	2,511,789.00	-	-	0.00%
Partner Funds	432,000.00	-	432,000.00	-	-	0.00%
<b>TOTAL REVENUE</b>	<b>\$7,339,368.00</b>	<b>\$0.00</b>	<b>\$7,339,368.00</b>	<b>\$278,281.75</b>	<b>\$2,515,582.89</b>	<b>34.28%</b>
<b>EXPENDITURES</b>						
<b>Administration</b>						
Accounting and Audit	42,000.00	-	42,000.00	2,673.75	38,109.97	90.74%
Advisory Committees	5,000.00	-	5,000.00	295.61	1,394.60	27.89%
Insurance and bonds	20,000.00	-	20,000.00	469.00	13,848.00	69.24%
Professional Services	-	-	-	-	6,524.80	---
Engineering Services	106,000.00	-	106,000.00	8,939.18	89,868.20	84.78%
Legal Services	78,000.00	-	78,000.00	7,478.22	56,394.40	72.30%
Manager Per Diem/Expense	20,000.00	-	20,000.00	1,115.38	12,107.62	60.54%
Dues and Publications	12,000.00	-	12,000.00	404.58	13,678.08	113.98%
Office Cost	144,000.00	-	144,000.00	11,935.01	121,357.35	84.28%
Permit Review and Inspection	135,000.00	-	135,000.00	10,378.22	139,918.57	103.64%
Recording Services	10,000.00	-	10,000.00	618.19	9,565.28	95.65%
Staff Cost	550,000.00	-	550,000.00	48,450.54	468,060.82	85.10%
<b>Subtotal</b>	<b>\$1,122,000.00</b>	<b>\$0.00</b>	<b>\$1,122,000.00</b>	<b>\$92,757.68</b>	<b>\$970,827.69</b>	<b>86.53%</b>
<b>Programs and Projects</b>						
<b>District Wide</b>						
10-year Management Plan	5,000.00	-	5,000.00	472.95	23,593.80	471.88%
AIS Inspection and early response	75,000.00	-	75,000.00	560.08	6,201.31	8.27%
Cost-share	267,193.00	-	267,193.00	6,290.06	59,368.18	22.22%
Creek Restoration Action Strategies Phase	-	-	-	-	-	---
Data Collection and Monitoring	186,000.00	-	186,000.00	21,716.85	167,817.40	90.22%
District Wide Floodplain Evaluation - Atlas 14/SMM model	30,000.00	18,000.00	48,000.00	1,359.00	30,697.50	63.95%
Education and Outreach	119,000.00	-	119,000.00	25,222.82	105,746.92	88.86%
Plant Restoration - U of M	42,000.00	-	42,000.00	-	25,238.45	60.09%
Repair and Maintenance Fund *	177,005.00	-	177,005.00	730.50	8,260.50	4.67%
Wetland Management*	145,272.00	-	145,272.00	11,331.30	23,456.00	16.15%
District Groundwater Assessment	-	-	-	-	-	---
Groundwater Conservation*	130,000.00	-	130,000.00	-	-	0.00%
Lake Vegetation Implementation	75,000.00	-	75,000.00	-	7,293.76	9.73%
Opportunity Project*	200,000.00	-	200,000.00	-	9,999.00	5.00%
TMDL - MPCA	10,000.00	-	10,000.00	-	-	0.00%
Stormwater Ponds - U of M	86,092.00	-	86,092.00	-	26,063.33	30.27%
Hennepin County Chloride Initiative	120,800.00	-	120,800.00	355.25	3,722.57	3.08%
Lower Minnesota Chloride Cost-Share	217,209.00	-	217,209.00	-	-	0.00%
<b>Subtotal</b>	<b>\$1,885,571.00</b>	<b>\$18,000.00</b>	<b>\$1,903,571.00</b>	<b>\$68,038.81</b>	<b>\$497,458.72</b>	<b>26.13%</b>
<b>Bluff Creek</b>						
Bluff Creek Tributary*	291,091.00	-	291,091.00	46,735.45	61,118.61	21.00%
Chanhassen High School *	41,905.00	-	41,905.00	157.50	3,609.50	8.61%
Wetland Restoration at Pioneer	561,870.00	-	561,870.00	30.89	544,918.17	96.98%
<b>Subtotal</b>	<b>\$894,866.00</b>	<b>\$0.00</b>	<b>\$894,866.00</b>	<b>\$46,923.84</b>	<b>\$609,646.28</b>	<b>68.13%</b>
<b>Riley Creek</b>						
Lake Riley - Alum Treatment*	5,000.00	-	5,000.00	-	-	0.00%
Lake Susan Water Quality Improvement Phase 2 *	13,420.00	-	13,420.00	180.00	3,311.19	24.67%
Rice Marsh Lake in-lake phosphorus load	73,983.00	-	73,983.00	-	13,414.87	18.13%
Rice Marsh Lake Water Quality Improvement Phase 1	150,000.00	-	150,000.00	-	-	0.00%
Riley Creek Restoration (Reach E and D3)	1,680,562.00	-	1,680,562.00	5,003.26	25,310.14	1.51%
Lake Riley & Rice Marsh Lake Subwatershed Assessment	72,500.00	-	72,500.00	1,638.00	36,408.17	50.22%
Upper Riley Creek Stabilization	425,000.00	-	425,000.00	-	-	0.00%
<b>Subtotal</b>	<b>\$2,420,465.00</b>	<b>\$0.00</b>	<b>\$2,420,465.00</b>	<b>\$6,821.26</b>	<b>\$78,444.37</b>	<b>3.24%</b>
<b>Purgatory Creek</b>						
Purgatory Creek Rec Area- Berm/retention area - feasibility/design	50,000.00	-	50,000.00	-	-	0.00%
Lotus Lake in-lake phosphorus load control	105,772.00	-	105,772.00	-	1,666.30	1.58%
Purgatory Creek at 101	-	-	-	-	90.00	---
Silver Lake Restoration - Feasibility Phase 1	168,013.00	-	168,013.00	1,599.09	4,467.07	2.66%
Scenic Heights	111,226.00	-	111,226.00	499.50	55,385.25	49.80%
Hyland Lake in-lake phosphorus load control	120,000.00	-	120,000.00	-	128,612.41	107.18%
Mitchell Lake Subwatershed Assessment	87,500.00	-	87,500.00	1,329.00	35,935.04	41.07%
Duck Lake watershed load	213,955.00	-	213,955.00	6,990.00	85,352.02	39.89%
<b>Subtotal</b>	<b>\$856,466.00</b>	<b>\$0.00</b>	<b>\$856,466.00</b>	<b>\$10,417.59</b>	<b>\$311,508.09</b>	<b>36.37%</b>
<b>Reserve</b>	<b>\$160,000.00</b>	<b>(\$18,000.00)</b>	<b>142,000.00</b>	<b>-</b>	<b>-</b>	<b>0.00%</b>
<b>TOTAL EXPENDITURE</b>	<b>\$7,339,368.00</b>	<b>\$0.00</b>	<b>\$7,339,368.00</b>	<b>\$224,959.18</b>	<b>\$2,467,885.15</b>	<b>33.63%</b>
<b>EXCESS REVENUES OVER (UNDER) EXPENDITURES</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$53,322.57</b>	<b>\$47,697.74</b>	

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

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**

**Multi-Year Project Performance Analysis - Table 2**

**October 31, 2019**

Programs and Projects	Total Project	FUNDING SOURCE			Month Ended 10/31/19	Year To-Date	Lifetime Costs	Remaining
		District funds	Partner Fund	Grants				
<b>District Wide</b>								
District Wide Floodplain Evaluation - Atlas 14/SMM model	48,000.00	48,000.00	-	-	1,359.00	30,697.50	30,697.50	17,302.50
Repair and Maintenance Fund	202,005.00	177,005.00	-	-	730.50	8,260.50	33,260.50	168,744.50
Wetland Management	150,000.00	150,000.00	-	-	11,331.30	23,456.00	53,184.31	96,815.69
Groundwater Conservation	130,000.00	130,000.00	-	-	-	-	-	130,000.00
Opportunity Project*	200,000.00	200,000.00	-	-	-	9,999.00	9,999.00	190,001.00
Hennepin County Chloride Initiative	120,800.00	19,000.00	-	101,800.00	355.25	3,722.57	3,722.57	117,077.43
Lower Minnesota Chloride Cost-Share	217,209.00	20,000.00	-	197,209.00	-	-	-	217,209.00
Stormwater Ponds - U of M	86,092.00	44,092.00	42,000.00	-	-	26,063.33	26,063.33	60,028.67
<b>Subtotal</b>	<b>\$1,154,106.00</b>	<b>\$788,097.00</b>	<b>\$42,000.00</b>	<b>\$299,009.00</b>	<b>\$13,776.05</b>	<b>\$102,198.90</b>	<b>\$156,927.21</b>	<b>997,178.79</b>
<b>Bluff Creek</b>								
Bluff Creek Tributary*	292,362.00	242,362.00	50,000.00	-	46,735.45	61,118.61	156,778.15	135,583.85
Chanhassen High School *	508,000.00	208,000.00	100,000.00	200,000.00	157.50	3,609.50	454,704.60	53,295.40
Wetland Restoration at Pioneer	561,870.00	450,000.00	-	111,870.00	30.89	544,918.17	544,918.17	16,951.83
<b>Subtotal</b>	<b>\$1,362,232.00</b>	<b>\$900,362.00</b>	<b>\$150,000.00</b>	<b>\$311,870.00</b>	<b>\$46,923.84</b>	<b>\$609,646.28</b>	<b>\$1,156,400.92</b>	<b>\$205,831.08</b>
<b>Riley Creek</b>								
Lake Riley - Alum Treatment 1st dose *	260,000.00	260,000.00	-	-	-	-	254,999.83	5,000.17
Lake Susan Water Quality Improvement Phase 2 *	662,491.00	330,000.00	99,091.00	233,400.00	180.00	3,311.19	652,381.99	10,109.01
Rice Marsh Lake in-lake phosphorus load	150,000.00	150,000.00	-	-	-	13,414.87	89,432.81	60,567.19
Riley Creek Restoration (Reach E and D3) *	1,565,000.00	1,265,000.00	300,000.00	-	5,003.26	25,310.14	205,805.29	1,359,194.71
Lake Riley & Rice Marsh Lake Subwatershed Assessment	72,500.00	12,500.00	5,000.00	55,000.00	1,638.00	36,408.17	36,408.17	36,091.83
Upper Riley Creek Stabilization	450,000.00	450,000.00	0.00	-	-	-	-	450,000.00
<b>Subtotal</b>	<b>\$3,159,991.00</b>	<b>\$2,467,500.00</b>	<b>\$404,091.00</b>	<b>\$288,400.00</b>	<b>\$6,821.26</b>	<b>\$78,444.37</b>	<b>\$1,239,028.09</b>	<b>\$1,920,962.91</b>
<b>Purgatory Creek</b>								
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	-	-	-	1,666.30	240,893.34	104,106.66
Scenic Heights	260,000.00	165,000.00	45,000.00	50,000.00	499.50	55,385.25	204,159.01	55,840.99
Mitchell Lake Subwatershed Assessment	87,500.00	12,500.00	5,000.00	70,000.00	1,329.00	35,935.04	35,935.04	51,564.96
Duck Lake watershed load	220,000.00	220,000.00	-	-	6,990.00	85,352.02	91,396.52	128,603.48
<b>Subtotal</b>	<b>\$962,500.00</b>	<b>\$792,500.00</b>	<b>\$50,000.00</b>	<b>\$120,000.00</b>	<b>\$8,818.50</b>	<b>\$178,338.61</b>	<b>\$572,383.91</b>	<b>\$390,116.09</b>
<b>Total Multi-Year Project Costs</b>	<b>\$6,638,829.00</b>	<b>\$4,948,459.00</b>	<b>\$646,091.00</b>	<b>\$1,019,279.00</b>	<b>\$76,339.65</b>	<b>\$968,628.16</b>	<b>\$3,124,740.13</b>	<b>\$3,514,088.87</b>

**Riley Purgatory Bluff Creek Watershed District**  
**Balance Sheet**  
**As of October 31, 2019**

**ASSETS**

**Current Assets**

General Checking-Old National	\$1,810,439.47
Checking-Old National/BMW	46,115.29
Investments-Standing Cash	11,617.23
Investments-Wells Fargo	4,397,741.14
Accrued Investment Interest	22,486.64
Due From Other Governments	25,021.73
Taxes Receivable-Delinquent	29,411.16
Pre-Paid Expense	27,361.36
Security Deposits	7,244.00

**Total Current Assets:** \$6,377,438.02

**LIABILITIES AND CAPITAL**

**Current Liabilities**

Accounts Payable	\$301,409.78
Retainage Payable	23,657.38
Salaries Payable	18,096.73
Permits & Sureties Payable	790,481.00
Deferred Revenue	29,411.16

**Total Current Liabilities:** \$1,163,056.05

**Capital**

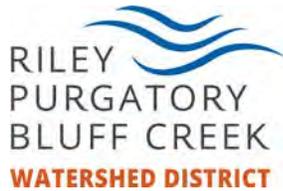
Fund Balance-General	\$5,166,684.23
Net Income	47,697.74

**Total Capital** \$5,214,381.97

**Total Liabilities & Capital** \$6,377,438.02

**RILEY PURGTORY BLUFF CREEK WATERSHED DISTRICT**  
**Old National Bank VISA Activity**  
**October 31, 2019**

DATE	PURCHASED FROM	AMOUNT	DESCRIPTION	ACCOUNT #	RECEIPT
10/11/19	Amazon	38.92	Office Supplies	10-00-4200	Y
10/16/19	Amazon	31.98	Office Supplies	10-00-4200	Y
10/21/19	Verizon	874.70	Phones	10-00-4240	Y
10/22/19	USPS	8.10	Certified Mail	10-00-4280	Y
10/23/19	Microsoft	240.92	Software	10-00-4203	Y
10/25/19	Amazon	294.96	Office Supplies	10-00-4200	Y
10/28/19	Randy's	92.20	Trash Service	10-00-4215	N
10/29/19	Office Supplies	24.57	Office Supplies	10-00-4201	Y
11/03/19	Nostalgia	15.93	Breakfast at Conference	10-00-4321	Y
11/04/19	Adobe	16.10	Software	10-00-4203	Y
11/05/19	Sheraton	16.64	Conference Lunch	10-00-4321	Y
11/07/19	Sheraton	5.62	Conference Breakfast	10-00-4321	Y
11/07/19	Cat Cora	19.24	Dinner at Airport	10-00-4321	Y
11/08/19	Delta	82.30	Ticket Change	10-00-4321	Y
11/11/19	Microsoft	146.06	Technology	10-00-4321	Y
11/13/19	Doubletree	277.00	NALMS	10-00-4321	Y
		<b>\$2,185.24</b>	<b>General Administration Total</b>		
10/15/19	Parking-St. Paul	12.00	Conference Parking	20-08-4321	Y
10/16/19	Facebook	10.01	Education & Outreach	20-08-4260	Y
10/16/19	West Metro Supply	54.85	Data Collection Supply	20-05-4635	Y
10/17/19	Crumb	171.29	Property Manager Workshop	20-08-4275	Y
10/19/19	Panera	160.18	Master Water Stewards Training	20-08-4275	Y
10/22/19	Buca Di Beppo	291.29	Parking Lots & Sidewalk Workshop	20-08-4275	Y
10/22/19	Lunds & Byerlys	87.23	Parking Lots & Sidewalk Workshop	20-08-4275	Y
10/22/19	Lunds & Byerlys	9.63	Parking Lots & Sidewalk Workshop	20-08-4275	Y
10/23/19	Amazon	17.50	Data Collection Supply	20-05-4260	Y
10/23/19	Menards	25.45	Data Collection	20-05-4635	Y
10/24/19	Holiday Station	17.49	Gas for Vehicles	20-05-4322	Y
10/26/19	GIH Global Industrial	32.12	Data Collection	20-05-4530	Y
10/28/19	ESRI	1,010.00	GIS Software	20-13-4203	Y
10/28/19	ESRI	1,010.00	GIS Software	20-05-4203	Y
10/31/19	DRI Printing Services	136.23	Education & Outreach Material	20-08-4260	Y
11/02/19	Albertos	15.20	Dinner at Conference	20-08-4321	Y
11/01/19	Speedway	37.06	Gas for Vehicles	20-05-4322	Y
11/01/19	Holiday Station	38.99	Gas for Vehicles	20-05-4322	Y
11/01/19	Holiday Station	17.00	Gas for Vehicles	20-05-4322	Y
11/03/19	MN Council Non-Profit	80.00	Seminar Communication	20-08-4265	Y
11/05/19	Trusted Employees	60.00	Background Checks	20-08-4260	Y
11/08/19	Sheraton	791.05	AWRA	20-08-4321	Y
11/13/19	Amazon	24.99	Data Collection Supply	20-05-4260	Y
		<b>\$4,109.56</b>	<b>District-Wide Total</b>		
		<b>\$6,294.80</b>	<b>GRAND TOTAL</b>		



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

## Riley-Purgatory-Bluff Creek Watershed District Permit Application Review

**Permit No:** 2019-042

**Received complete:** October 25, 2019

**Considered at Board of Manager's Meeting:** December 11, 2019

**Applicant:** City of Chanhassen; Bruce Loney

**Consultant:** Kimley Horn, Ron Leaf

**Project:** County State Aid Highway 101 Reconstruction – the project proposes to reconstruct County State Aid Highway 101 (CSAH 101) from Pioneer Trail to Flying Cloud Drive (CSAH 61), which will involve filling a portion of the Nieman wetland floodplain. The applicant proposes stormwater management facilities including two pretreatment ponds, two filtration basins, and existing wet pond and vegetated swales to provide water quality treatment, volume abstraction and rate control for runoff prior to discharging offsite.

**Location:** CSAH 101 from Pioneer Trail to Flying Cloud Drive (CSAH 61) in Chanhassen

**Reviewer:** Scott Sobiech, PE Barr Engineering

### **Potential Board Variance Action**

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolution based on the permit report that follows, the presentation of the matter at the December 11, 2019, meeting of the managers and the managers' findings, as well as the factual findings in the permit report that follows:

Resolved that variances 1, 2, and 3, for Permit 2019-042 are approved, subject to the following conditions:

1. [CONDITION(S)]

### **Proposed Board Action**

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the December 11, 2019 meeting of the managers:

Resolved that on determination by the RPBCWD administrator that the conditions of approval of the variances and permit have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver to the applicant Permit 2019-042 on behalf of RPBCWD.

**Upon vote, the resolutions were adopted, \_\_\_\_\_ [VOTE TALLY].**

Rule	Issue		Conforms to RPBCWD Rules?	Comments
B	Floodplain Management and Drainage Alterations		No	See Rule K variance request for providing compensatory storage.
C	Erosion Control Plan		See Comment	See Rule Specific Permit Condition C1.
D	Wetland and Creek Buffers		No	See Rule Specific Permit Condition D1 and Rule K variance request for average or minimum buffer width
J	Stormwater Management	Rate	No	Rule K variance request for rate control.
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J1.
		Chloride Management	Yes	
		Wetland Protection	Yes	
K	Variances and Exceptions		See Comment	See Rule K Variance Request.
L	Permit Fees		NA	Governmental Agency
M	Financial Assurances		NA	Governmental Agency

### **Project Background**

The City of Chanhassen and Carver County will jointly reconstruct and widen a 1.2 mile section of Highway 101 between Pioneer Trail (CSAH 14) and Flying Cloud Drive (CSAH 61) in Chanhassen, Minnesota. The project includes reconstruction and realignment of CSAH 101 from a two-lane undivided roadway to a four-lane divided roadway with turn lanes at key intersections. A paved multi-use trail is proposed along both sides of CSAH 101 from Pioneer Trail to Creekwood Drive and along the east side only from Creekwood Drive to CSAH 61. On the south end, the roadway will connect to an existing roundabout constructed as part of a previous project. The proposed project will conduct land disturbing activities in RPBCWD and the Lower Minnesota Watershed District (LMRWD) as illustrated in Figure 1. About 24 percent of the total project area will be within RPBCWD. The following water resources within RPBCWD’s jurisdiction are within the project site or downgradient of the proposed activities. Table 1 provides a brief explanation of how each resource is implicated in the permit application review process.

**Table 1 Water Resources potential impacts by proposed project**

Water Resource	Potential resource impacts
Bluff Creek	Primary site discharge and creek buffers
Wetland D (Wetland in NW corner of CSAH 101 & Pioneer Trail)	Wetland bounce and inundation
Niemela Wetland	Floodplain fill and wetland buffer

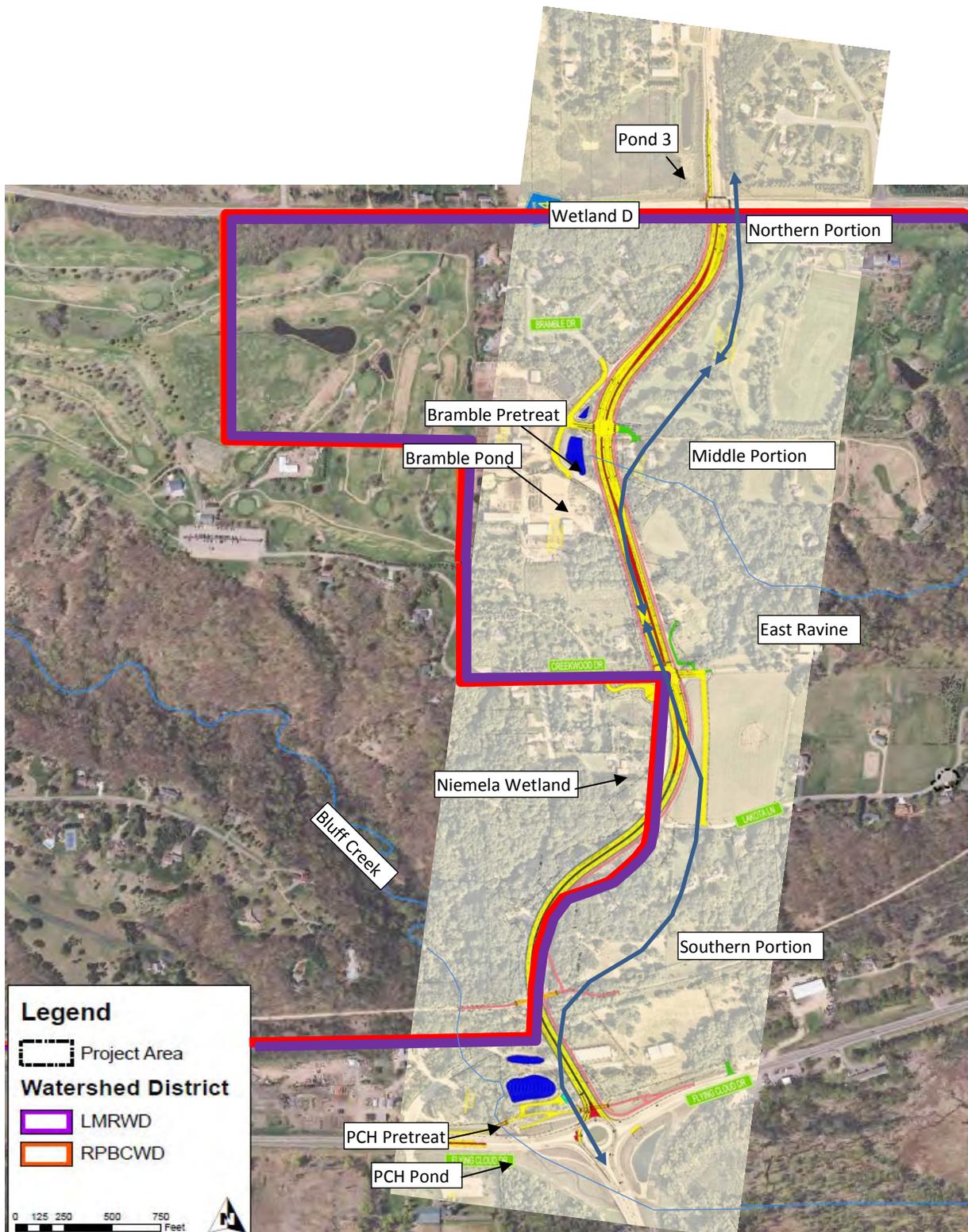


Figure 1. Project area within RPBCWD

The project area is generally split into three distinct work areas and routed to three treatment trains as described below:

- In the northern portion of the project limits within RPBCWD the runoff is to be routed to an existing wet pond (Pond 3) with a filtration bench located north of Pioneer Trail. This pond was built as part of the reconstruction project for CSAH 101 north of Pioneer Trail. This pond has remaining hydraulic and water quality capacity to accept the additional impervious surfaces and infrastructure is already in place to route that portion of the roadway to the existing wet pond-filtration system.
- In the middle portion of the project near Bramble Drive, which is in LMRWD, a filtration basin will be constructed with a composite liner. This location is within the LMRWD's Steep Slope overlay district that prohibits infiltration with the intent to reduce the extent of erosion to the steep slopes and bluff areas that are highly susceptible to erosion. The filtration basin (Bramble Pond) design approach was to route filtration water to the ravine, flows up to the 25-year event away from the erosive ravine and to the south via trunk storm sewer to PCH pond, and flows exceeding the 25-year event high water level be routed to the east.
- At the southern end of the project a filtration basin (PCH Pond) is proposed. Because of site constraint, runoff from the project area within RPBCWD is combined with flows from LMRWD in storm sewer and routed down the steep slopes to PCH pond prior to discharging to Bluff Creek. As a result, compliance with RPBCWD stormwater management requirements will be analyzed at the PCH pond discharge location.
- A small area adjacent to and just north of the existing roundabout will be routed to the existing NE Pond constructed with the TH 101-CSAH 61 River Crossing project, all of which is in LMRWD.

The project site information (within RPBCWD) is summarized in Table 2.

Table 2. Project site information

	Project Total	Project Total within RPBCWD
Existing Site Impervious (acres)	7.0	1.12
Existing Impervious Area Disturbed (acres)	NA	1.12
New (Increase) in Site Impervious Area (acres)	8.2	1.44
Proposed Impervious Area (acres)	15.2	2.84
Reconstructed/disturbed Impervious Area (acres)	NA	1.12
Exempt Trail and Sidewalk Area (acres)	0.28	0.28
Total Disturbed Area (acres)	32.0	7.54
Total Site Area (acres)	32.0	7.54

The remainder of this report pertains only to application of RPBCWD’s regulatory requirements to that portion of the project within RPBCWD’s jurisdiction, except that with regard to certain resource/risk concerns, LMRWD’s policies and requirements are specifically cited. Permit 2019-042, if issued, will authorize only activity within RPBCWD’s jurisdiction.

**Rule A: Procedural Requirements**

Rule A, Subsection 2.1 requires that an application bearing the original signature of the property owner(s) must be submitted to the District to obtain a permit. The city of Chanhassen submitted an application signed by the interim public work director on behalf of the city. Because the construction of roadway is on County property and RPBCWD property, the City must provide documentation demonstrating that the necessary land-use rights have been obtained for the proposed activities.

**Rule B: Floodplain Management and Drainage Alterations**

Because the proposed project involves the placement of fill below the 100-year flood elevation of Niemela Wetland and altering surface flow below the 100-year flood elevation, the project activities must conform to the RPBCWD’s Floodplain Management and Drainage Alterations rule (Rule B).

Because the project does not proposed to construct or reconstruct structures that have low floors, Rule B subsection 3.1 does not apply.

Table 3 below summarizes the locations where filling of land below the 100-year flood elevation is proposed.

**Table 3. Compensatory storage analysis**

Floodplain Description	Floodplain Fill (CY)	Compensatory Storage Provided (CY)	100-yearFlood Elevation (M.S.L.)	Cause of Impact
Niemela Wetland	9,628	0	915.40 (ex) 914.97 (prop)	Fill from proposed Cul De Sac and CSAH 101 Construction

The supporting materials demonstrate, and the RPBCWD Engineer concurs, that fill will be placed and 0% of the required compensatory storage will be created below the 100-year flood elevation as summarized in the table above, resulting in a net decrease in the floodplain storage. The applicant is not proposing any compensatory storage for the 9,628 of fill in the Niemela Wetland. Because the project plans does not comply with the compensatory storage requirement, the Applicant has requested a variance from the criteria of Rule B, Subsection 3.2. (see variance discussion below).

Because the applicant proposes to replace the existing excavated channel outlet from the wetland with a 15-inch storm sewer the discharge from the wetland will increase from roughly 5 cubic feet per second (cfs) to about 10 cfs for the 100-year event. The applicant proposes to mitigate this increase in

discharge by detaining flows in the PCH pond and providing energy dissipation in the form of riprap at the outlet into Bluff Creek. Because the flows are detained, there is a reduction in the 2-, 10-, and 100-year, 24-hour peak flow rates entering the creek at this location. Further, the riprap will reduce the flow energy to minimize erosion and maintain channel stability. The applicant also proposes a filtration basin to reduce the total suspended solids and total phosphorus loads to Bluff Creek to less than existing conditions, thus the project will not materially adversely impact flood risk, basin or channel stability, or water quality. (Rule B, Subsection 3.3).

The design plans include temporary and permanent erosion control measures as well as appropriate site restoration methods (Rule B, Subsection 3.5). The design plans also include a note indicating that activities 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 (Rule B, Subsection 3.6).

Aside from the variance request for the lack of compensatory storage, the project is in conformance with RPBCWD Rule B.

#### **Rule C: Erosion and Sediment Control**

Because the project will alter more than 7.54 acres of surface area the project must conform to the requirements in the RPBCWD Erosion Prevention and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plans prepared by Kimly-Horn include installation of silt fence, sediment control log, floating silt curtain, inlet protection for storm sewer catch basins, placement of a minimum of 6 inches of topsoil, decompaction of pervious areas compacted during construction prior to topsoil placement, 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 proposed work triggers a permit under RPBCWD Rules B and J and one wetland (Niemela Wetland) will be disturbed by the proposed construction activities, Rule D, Subsections 2.1a and 3.1a require buffer around the entirety of wetland disturbed by the proposed work. Bluff Creek is also downgradient of the land-disturbing activities so Rule D, Subsections 2.1a and 3.1b require buffer on the edge of the creek that is downgradient from land-disturbing activity. Because Wetland D is not directly downgradient from the proposed land disturbing activities, wetland buffers are not required for Wetland D.

The applicant provided a MnRAM wetland analyses indicating that the Niemela Wetland is medium value (Appendix D1). Rule D, Subsection 3.2.a.iii requires a wetland buffer with an average of 40 feet from the delineated edge of the wetland, minimum 20 feet. Using buffer averaging (subsection 3.2d) the require buffer area for a 40 foot width buffer adjacent to portion of the Niemela Wetland on the site is 15,280 square feet. The applicant's proposed buffer totals 14,924 square feet with an average width of 39 feet, minimum 10. The Applicant requested a variance from the criteria of Rule D, Subsection 3.2 for not providing the average or minimum buffer width for the Niemela Wetland. (see variance discussion below)

Bluff Creek is also downgradient of the project site and requires an average buffer width of 50 feet from the creek centerline, minimum 30 feet in accordance with Rule D, Subsection 3.2.a.v for a public water watercourse. While the proposed work within RPBCWD is greater than 50 feet from the centerline of Bluff Creek, the area between Bluff Creek and the proposed project is consider a steep slope according to Rule D, Subsection 3.2.b, thus creek buffer is required to the top of the steep slope. Because buffer requirements for linear projects limits in width to the extent of available ROW, the applicant provided a buffer zone and marker location map on the construction drawings confirming that the proposed buffer area extends to the right-of-way limits (Rule D, Subsection 3.2.f)

The Applicant is proposing revegetating disturbed areas within the proposed buffers with native vegetation in conformance with Rule D, Subsection 3.3. The Applicant provided buffer marker locations and sign detail information on the construction drawings confirming that the proposed buffer markers meet Rule D, subsection 3.4. A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible conforming to Rule D, Subsection 3.5.

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

- D1. Buffer areas and maintenance requirements must be documented in an agreement approved by RPBCWD. As a public entity, the city of Chanhassen may comply with this requirement by entering into a maintenance agreement with the 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 alter more than 7.54 acres of surface area, conformance with RPBCWD's Stormwater Management Rule (Rule J) is required.

The project entails construction/reconstruction of 2.84 acres of linear impervious surface; therefore, stormwater management for this linear portion of the project must be provided in accordance with the criteria of Subsection 3.2 (Rule J, Subsection 2.4). The 2.84 acres of constructed/reconstructed

impervious surface includes 0.28 acres of trail and sidewalk that is 10 feet or less in width bordered downgradient by a pervious area extending at least half the trail width; therefore, 0.28 acres of trail and sidewalk is exempt from RPBCWD’s stormwater management rule (Rule J, Subsection 2.2).

**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.

The Applicant used HydroCAD models 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 Table 4. The applicant requested a variance from the criteria of Rule J, Subsection 3.1a because the proposed project will increase peak discharge rates at the site boundary for the 100-year frequency, 10-day snowmelt event (See Rule K variance discussion).

Table 4. Rate control summary:

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
Pond 3	0.4	0.4	1.4	1.4	2.9	2.8	2.7	2.7
PCH Pond	13.7	10.3	38.1	37.5	102.1	99.9	12.8	35.7

**Volume Abstraction**

Subsection 3.2c of Rule J requires the abstraction onsite of the larger of 0.55 inches of runoff from the new and fully reconstructed linear impervious surfaces or 1.1 inches from the net increase in linear impervious area. In this case 0.55 inches of runoff from the new and fully reconstructed impervious surfaces is the larger volume. An abstraction volume of 9,293 cubic feet is required from the 2.56 acres of new and fully reconstructed impervious surface on the site for volume retention.

Soil information from 21 borings collected by AET indicate the soils on the site vary with depth and location. The surface soils are generally loamy sand in the middle portion of the project while there is fill over swamp deposits and silt loam soils in the southern portion of the project. Groundwater was encountered at 9 of the 21 borings at depths ranging between 5.5 feet and 13.1 feet below grade. This correlates to elevations ranging between 714.1 feet and 733.8 feet. At the PCH pond location groundwater was observed at 8.8 feet or elevation 732.6 feet in boring SB-14. Soil boring PB-5 collected to the west of SB-14 shows slightly organic silty clay loam at the proposed bottom elevation of the

filtration basin and a water table at approximately elevation 722 feet, which is three feet below the proposed bottom elevation of the basin 725 feet. Based on the boring information the seasonally high water table at PCH appears to be above the bottom of the basin, thus the required 3-foot separation between the groundwater elevation and bottom of a infiltration practice could not be met. Because the engineer concurred that the soil boring information, high groundwater, and limited area within the linear corridor support that the abstraction standard in subsection 3.2 of Rule J cannot practicably be met, the site is considered a restricted site and stormwater runoff volume must 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 paragraph 3.2, 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. Because of steep slope with highly erodible soils, high groundwater, and limited space within the linear corridor, the abstraction standard in Subsection 3.3a of Rule J cannot practicably be achieved.

Several parcels that are being acquired as part of the project include properties with soils suitable for infiltration. However, these properties contain steep slopes adjacent to Bluff Creek and concentrated infiltration features would create an increase in slope stability risks. Roadside ditches that collect some site runoff from pervious areas and offsite drainage from the cut slope areas and other offsite drainage areas were also explored by the applicant. The potential for concentrated infiltration below the ditch bottom would again create risks associated with stability of the cut slopes as well as for the adjacent bluff areas. The final design includes roadside ditches with combination earth/rock ditch checks to collect runoff into catch basins at selected locations along the slope. These vegetated ditches will provide some degree of infiltration and volume reduction, but the extent of this reduction has not been specifically quantified. Similarly, the applicant proposes to elevate the draitile below the proposed PCH filtration basin to promote infiltration to the maximum extent possible. The Engineer concurs that because there is insufficient separation to the groundwater table, steep slopes, limited space within the linear corridor, and limited space to reuse stormwater, it is not practically feasible for the Applicant to provide abstraction on the project site and the proposed activity conforms to Rule J, Subsection 3.3b.

### ***Water Quality Management***

Subsection 3.1.c of Rule J requires the Applicant to 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), as well as no net increase in pollutant loading from existing conditions. Because the applicant has demonstrated and the engineer concurs with the information presented, the site was

determined to be a restricted site. Rule J, subsection 3.3c allows for off-site abstraction and treatment in the watershed. To provide rate control and water quality treatment for runoff from the portion of the project within RPBCWD the applicant proposes construction of a pretreatment basins connected to a filtration basin and an existing wet pond with filtration bench. A P8 water quality model was developed to estimate the TP and TSS loading from the watersheds and the removal capacity of the proposed BMPs. The results of this modeling are summarized in Table 5 and Table 6 below. The tables show the annual TSS and TP removal requirements are achieved and that there is no net increase in TSS and TP leaving the site. The engineer concurs with the modeling, and finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

**Table 5. Annual TSS and TP removal summary**

Pollutant of Interest	Receiving Resource	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	Bluff Creek	1578	1420 (90%)	1421 (90.1%)
	Wetland D	175	157 (90%)	165 (94.3%)
Total Phosphorus (TP)	Bluff Creek	5.0	3.0 (60%)	3.6 (71.4%)
	Wetland D	0.6	0.36 (60%)	0.39 (65.0%)

**Table 6. Summary of net change in TSS and TP leaving the site**

Pollutant of Interest	Receiving Resource	Existing Site Loading (lbs/yr)	Proposed Site Load after Treatment (lbs/yr)	Change (lbs/yr)
Total Suspended Solids (TSS)	Bluff Creek	573.7	157.0	-416.7
	Wetland D	76.5	10.0	-66.5
Total Phosphorus (TP)	Bluff Creek	1.7	1.4	-0.3
	Wetland D	0.2	0.2	0.0

***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, Subsection 3.6. In addition, a stormwater-management facility must be constructed at an elevation that ensures that no adjacent habitable building will be brought into noncompliance with a standard in this subsection 3.6. The project does not propose to construct or reconstruct structures that have low-floor elevations within RPBCWD. In addition, there are no adjacent habitable structures within RPBCWD. The RPBCWD Engineer concurs that the proposed project is in conformance 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 must provide a draft maintenance and inspection plan. As a public entity, the city of Chanhassen may comply with this requirement by entering into a maintenance agreement with the RPBCWD.

**Chloride Management**

Subsection 3.8 of Rule J requires the submission of chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan. For this project, Carver County will be responsible for completing winter snow and ice control for the roadway and has incorporated best practices into its snow and ice control operations on a county-wide basis. Carver County Public Works employee, Michael Legg, is authorized to implement the County’s chloride management plan and documentation provided confirms he is certified by the Minnesota Pollution Control Agency as a certified salt applicator, thus conforming with Rule J, subsection 3.8.

**Wetland Protection**

Because the proposed activities discharge to a protected wetland (Wetland D) on the site and alter the discharge Wetland D and Niemela Wetland receive from the site, the proposed activities must conform to RPBCWD wetland protection criteria (Rule J, subsection 3.10). Niemela Wetland is a medium value wetland. No MNRAM was provided for Wetland D so this review analyzes the wetland protection criteria for an exceptional value wetland. The applicant provided and the Engineer concurs with the below analysis of potential wetland impacts based on Table J1 of RPBCWD Rule J.

Table 7 summarizes the allowable change in bounce and inundation duration from Table J1 of RPBCWD Rule J. The information summarized in Table 8 summarizes the applicant’s analysis for wetland protection and the potential impacts on the wetlands. The proposed project conforms to the wetland bounce and inundation requirements. Because the project does not propose to use the existing wetlands for stormwater treatment, Rule J, subsection 3.10b is not applicable.

Table 7. Summary of allowable impacts on onsite wetland from Rule J, Table J1

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
Medium	Existing + 1.0 feet	Existing+2 days	Existing +14 days	0 to 1.0 ft above existing runout

Table 8. Impacts of Project on Wetlands

Wetland	RPBCWD Wetland Value	Change in Bounce for, 10-Year Event (feet)	1-year change in Inundation Period (days)	2-year change in Inundation Period (days)	10-year change in Inundation Period (days)	Runout Control Elevation <sup>1</sup>
Wetland D	Exceptional	0	0	0	0	No change
Niemela Wetland	Medium	-0.3	0.1	0.1	0.1	0.26

**Rule K: Variances and Exceptions**

Table 9 summarizes the Applicant’s request for three variances from the RPBCWD regulatory requirements.

Table 9. Variance request summary

Variance number	Rule	Subsection	Requested Variance	Notes
1.	B	3.2	Floodplain compensatory storage	Not providing full compensatory storage
2.	D	3.2	Buffer width	Not providing minimum or average buffer width
3.	J	3.1a	Rate control	Increase rate leaving the site for snowmelt event

Rule K requires the Board of Managers to find that because of unique conditions inherent to the subject property the application of rule provisions will impose a practical difficulty on the Applicant. Assessment of practical difficulty is conducted against the following criteria:

1. how substantial the variation is from the rule provision;
2. the effect of the variance on government services;
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;
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;
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
6. in light of all of the above factors, whether allowing the variance will serve the interests of justice.

It is the applicant’s obligation to address these criteria to support a variance request. The applicant’s variance request, taken from their October 25, 2019 submittal and supplemental information received

on November 22, 2019, is attached to this review. Following is the RPBCWD engineer’s assessment of information received relevant to the applicant’s variance requests.

**Variance Requests #1**

Following is the RPBCWD engineer’s assessment of information received relevant to the applicant’s request for a variance from the compensatory flood storage criteria to be at or below the same elevation for fill in the floodplain of the water basin.

- Related to variance criterion 1 – The supporting materials demonstrate the proposed project will involve an aggregate total of 9,628 cubic feet of fill and no compensatory storage below the 100 year floodplain, thus providing a net decrease in the floodplain storage by 9,628 cubic feet (a 100% shortfall). The deviation from RPBCWD standard is substantial.
- With regard to variance criteria 2 – The supporting materials demonstrate that the proposed project design involves altering the drainage patterns to the wetland and placing the fill in the floodplain of the wetland to widen CSAH 101, construct a cul de sac, and provide driveway access to two private residences will reduce the flood elevation in the wetland, thus reducing flood risk and improving services by providing increased transportation safety .
- With regard to variance criteria 3 –
  - Because the applicant’s proposed site grading, cul de sac construction, and storm sewer installation decrease the watershed area contributing runoff to the wetland under proposed conditions, the flood elevations will be reduced. Table 10 summarizes the impacts to flood elevation (a.k.a., flood stage) for various precipitation events and shows that despite the applicant providing no compensatory storage, the flood levels in Niemela Wetland will be reduced by the project. The runoff diverted away from the wetland is routed to the PCH BMPs prior to discharging to Bluff Creek

Table 10. Summary of flood elevations at Niemela Wetland

Metric	Existing Condition	Proposed Condition	Change
2-Year (M.S.L.)	914.12	914.11	-0.01
10-Year (M.S.L.)	914.60	914.30	-0.30
100-Year (cfs)	915.40	914.97	-0.43

- Because the applicant proposes to replace the existing excavated channel outlet from the wetland with a 15 inch storm sewer the discharge from the wetland will increase from roughly 5 cubic feet per second (cfs) to about 10 cfs for the 100-year event. The applicant proposes to mitigate this increase in discharge with the PCH pond and provide energy dissipation in the form of riprap at the outlet into Bluff Creek, thus the project will not materially adversely impact flood risk, basin or channel stability, groundwater hydrology, stream base flow, water quality or aquatic or riparian habitat

- With regard to variance criterion 4, the applicant evaluated several corridor layouts to minimize the environmental impacts of the proposed fill on the Niemela Wetland as part of the Wetland Conservation Act (WCA) permitting of the project. The local governmental unit responsible for administering WCA is the city of Chanhassen, which approved the filling of the wetland.

Technical measures incorporated into the project plan to alleviate the practical difficulty include slightly reducing the area contributing runoff to the wetland, minimizing the driveway widths, increasing the outlet elevation from the wetland to maintain adequate wetland hydrology, and lowering the cul-de-sac elevation to allow some ponding in the west half of the cul-de-sac during a 100-year event.

- With regard to variance criterion 5, the applicant has created the circumstances leading to the variances, but did so to improve the public vehicular safety on CSAH 101, provide access to two private properties, and have a cul-de-sac that can be maintained (e.g., snow removal) in a safe and efficient manner.

Because the proposed project will slightly reduce the flood elevations of Niemela Wetland, the engineer finds there is adequate technical basis for the managers to rely on to grant the requested variance to allow the shortfall in compensatory storage.

### ***Variance Request #2***

The second variance request is from the average and minimum buffer width requirement for Niemela Wetland, a medium value wetland (Rule D, Subsection 3.1.a.iii) Subsection 3.1.a.iii states that buffer with an average width of 40 feet, minimum width of 20 must be created. For purposes of the Board of Managers' consideration, the following factors were analyzed based on Rule K.

- Related to variance criterion 1 – The proposed buffer for Niemela Wetland will have an average width of 39 feet, minimum width of 10 feet, which is 98% and 50% of the required average and minimum. While the provided minimum width is only 50% of the required, the short fall is less than 50 linear feet of buffer along the project. This represents about 13% of the length of impact along the project area and less than 5% of the perimeter of the wetland overall.
- With regard to variance criteria 2 and 3 – The information submitted demonstrates that the proposed buffer minimum width of 10 feet will not cause material adverse effects to the resource because the runoff from the proposed cul de sac and roadway, which are within the minimum 20 foot width, is captured by storm sewer and routed to the proposed stormwater facilities. Because adequate minimum buffer width is provided for 95% of the wetland perimeter within the project area the wetland, it is unlikely there will be material adverse effect to the wetland functions.
- Technical measures considered to alleviate the practical difficulty (variance criterion 4) include narrower driveways and switching the cul de sac to a hammer handle design. The hammer handle design resulted in the roadway being closer to the wetland and slightly greater wetland impacts overall. The proposed layout represents the smallest practical footprint for a cul-de-sac

that can provide adequate turning movements for safety vehicles and snow plow equipment. In addition, the two driveways were necessary to provide individual access for the homeowners from the public cul-de-sac. The private driveways represent the minimum width and geometrics necessary to allow turning movements for recreational vehicles and boat trailers.

- With regard to variance criterion 5, the applicant has created the need for the variance by choosing the cul de sac design though it did so with the approval of another relevant regulatory body, the LGU administering WCA and to provide adequate access routes for the two private residences and a safe turning radius for snow removal equipment on the public cul de sac.

The engineer finds there is adequate technical basis for the managers to rely on to grant the requested variance from the average and minimum buffer widths.

### ***Variance Request #3***

The third variance request is from the requirement to limit peak runoff flow rates to that from existing conditions for the 100-year, 10-day snowmelt event. (Rule J, Subsection 3.1.a). As a direct result of the diversion of the flows up to the 25-year event to the south and into PCH Pond instead of to the east ravine as requested by LMRWD, the peak snowmelt discharge to the Bluff Creek discharge point is increased from the existing to proposed snowmelt conditions. The discharge to the east ravine is reduced by the same order of magnitude as the increase to Bluff Creek. LMRWD requested this diversion during preapplication discussion attended by RPBCWD staff in hopes of reducing erosion potential in the east ravine and thus improve ravine stability. For purposes of the Board of Managers' consideration, the following factors were analyzed based on Rule K.

- Related to variance criterion 1 – The applicant supplied modeling results of peak site discharges as summarized in Table 4. The peak discharge rate leaving the PCH pond increases by 22.9 cfs (a 2.8 fold increase) for the snowmelt event.
- With regard to variance criteria 2 and 3 – To gauge the magnitude of the change in rates and the potential for changes in response at Bluff Creek, the applicant created a very simplistic HydroCAD models that representing the larger Bluff Creek watershed contributing to the creek at the PCH pond outlet point. Resulting estimated peak snowmelt event flows from the larger area were 763 cfs. When combined with the project area flows at Node 3L (downstream of the PCH Pond outlet) the peak flow results for existing and proposed conditions were 766 cfs and 778, respectively. This represent an approximate 1.5% increase in the peak snowmelt flow in Bluff Creek. In addition, the location where PCH pond discharges into Bluff Creek is currently stabilized with gabion baskets and Class IV and Class V riprap, thus constituting a relatively low potential to cause material adverse effect to the water resources, flood levels, and channel stability, or be a substantial detriment to neighboring properties.
- The applicant investigated several alternatives to alleviate the need for and/or reduce the magnitude of the variance (variance criterion 4). Below is a summary of several options considered:

- Operational changes to the Bramble Pond outlet. This would involve manually installing a plug at the primary outlet from the Bramble Pond prior to an anticipated (100-yr 10-day) snowmelt event. This option would still result in an increase at the discharge point from 12.8 cfs to 15.6 cfs because other off site areas that get captured in the trunk line still contribute to the system such that the rate cannot meet existing. This approach would route the entire snowmelt flow to the east ravine. The applicant's engineer eliminated this option because of concerns about the operational challenges to manually plug the outlet and then have to remove the plug to be ready for spring rain events. While there are technologies available (e.g., Agri Drain's Smart Drainage System) to automate a control valve, including remote telemetry, to "plug" the discharge from Bramble Pond toward PCH Pond during snowmelt events, this snowmelt routing configuration has the potential to conflict with the LMRWD's desire to reduce erosion in the east ravine.
- Modify PCH Pretreatment cell and/or PCH outlet structures (multi-stage options) to take advantage of available storage. These options have relatively little effect on the peak discharge due to the volume of snowmelt, thus they were eliminated.
- The applicant presented a summary demonstrating that somewhere in the 2.3 to 2.8 times the current storage volume proposed would be needed in order to meet the snowmelt rate control at this discharge point to Bluff Creek. There is inadequate space to provide the needed storage because of the limited right of way and steep topography. In terms of underground storage or oversized pipes, the additional volume is on the order of 200,000 – 300,000 CF. Underground storage was also dismissed by the applicant because of the anticipated cost. The applicant used a cost range for underground detention of \$5-\$10/CF which could result in adding \$1M plus to the project.
- With regard to variance criterion 5, the applicant has created the circumstances leading to the variances, but did so at the request of the LMRWD to reduce flows entering the east ravine within the LMRWD in efforts to reduce known erosion problems along the ravine and thus reduce sediment loading to downstream resources.

The engineer finds that because the increased rates would have an immaterial impact on Bluff Creek, there is adequate technical basis for the managers find that practical difficulty presented outweighs the significance of the deviance from the RPBCWD standard at issue.

**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 Applicant has requested a variance from compliance with the Rules B, D, and J criteria related to compensatory storage, average and minim buffers, and rate control.
3. Aside from the variance requests for Rules B, D, and J, the proposed project will conform to the remaining criteria of Rules B, D, and J if the Rule Specific Permit Conditions listed above are met.
4. The proposed project will conform to Rule C if the Rule Specific Permit Conditions listed above are met.

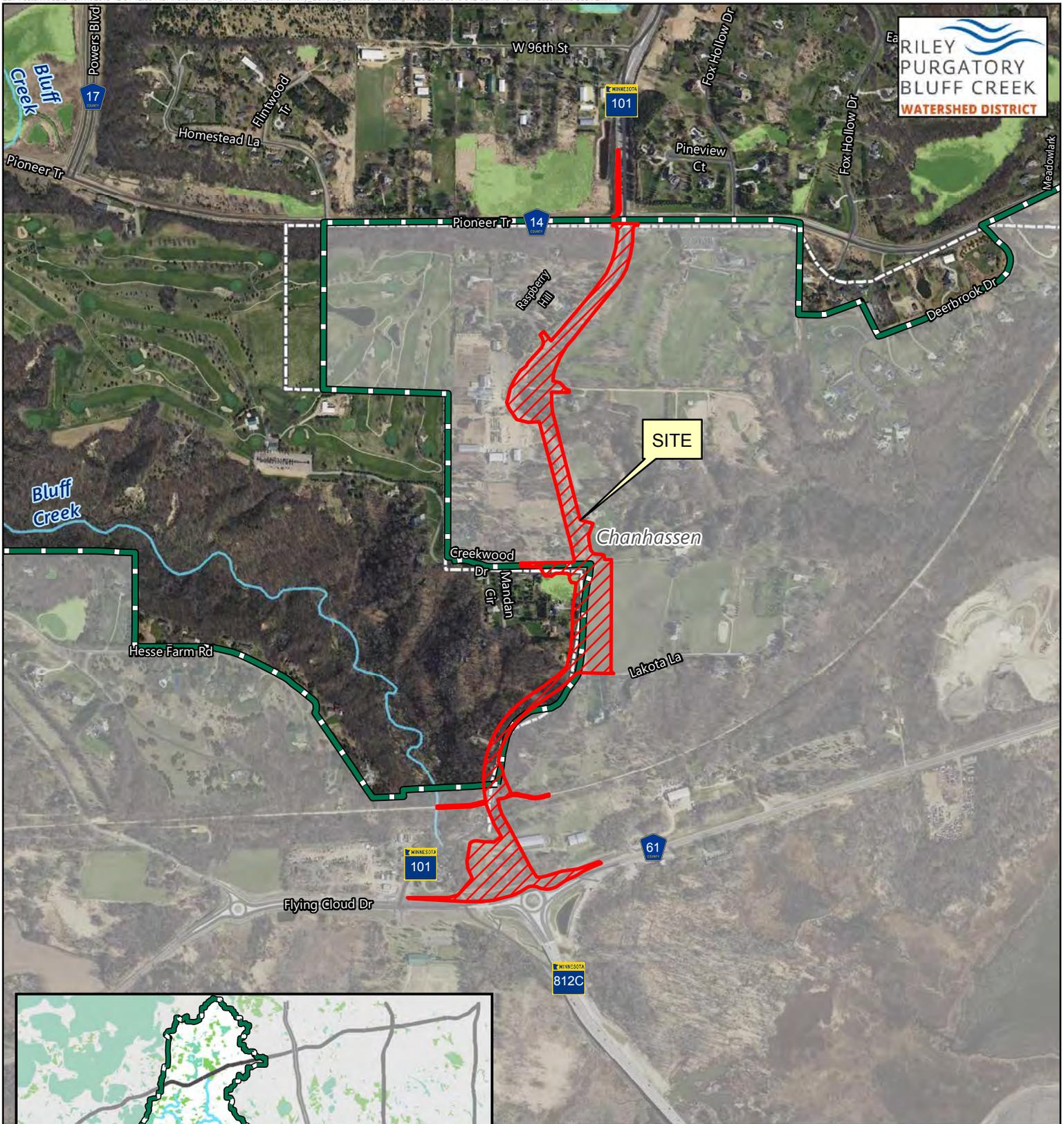
## **Recommendation:**

If the managers grant the variances (with such conditions as the managers may impose), the engineer recommends approval of the permit, contingent upon:

1. A two-year permit term is recommended since the construction is anticipated to continue through 2021.
2. Continued compliance with General Requirements
3. No approval is issued for work on any property until documentation of acquisition of the necessary rights to work on the property and authorization of the underlying fee owner is provided to the District administrator.
4. Permit 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.
5. Permit applicant must provide a draft maintenance agreement and inspection plan for the wetland and creek buffers and management of stormwater BMPs, including exhibits clearly identifying stormwater BMPs, buffers, and buffer monument location. Once approved by RPBCWD, the City must enter an agreement with RPBCWD to maintain the project facilities in accordance with the plan.

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.



Permit Location Map

CSAH 101-CHANHASSEN  
**Permit 2019-042**  
Riley Purgatory Bluff Creek  
Watershed District



Feet



# CITY OF CHANHASSEN CARVER COUNTY CSAH 101 IMPROVEMENTS PIONEER TR TO FLYING CLOUD DR

LOCATED ON: CSAH 101 FROM CSAH 14 (PIONEER TRAIL) TO CSAH 61 (FLYING CLOUD DRIVE) (GEOGRAPHIC DESCRIPTION)

CONSTRUCTION PLANS FOR:

GRADING, AGGREGATE BASE, BITUMINOUS AND CONCRETE SURFACING, CONCRETE CURB AND GUTTER, ADA IMPROVEMENTS, STORM SEWER, PUBLIC UTILITY IMPROVEMENTS, STREET LIGHTING, TRAFFIC SIGNAL MODIFICATIONS, REMOVE INPLACE BRIDGE NO. 10044, CONSTRUCT BRIDGE NO. 10555, CONSTRUCT BRIDGE NO. R0827, CONSTRUCT BOX CULVERT NO. 10J49, AND RETAINING WALLS.

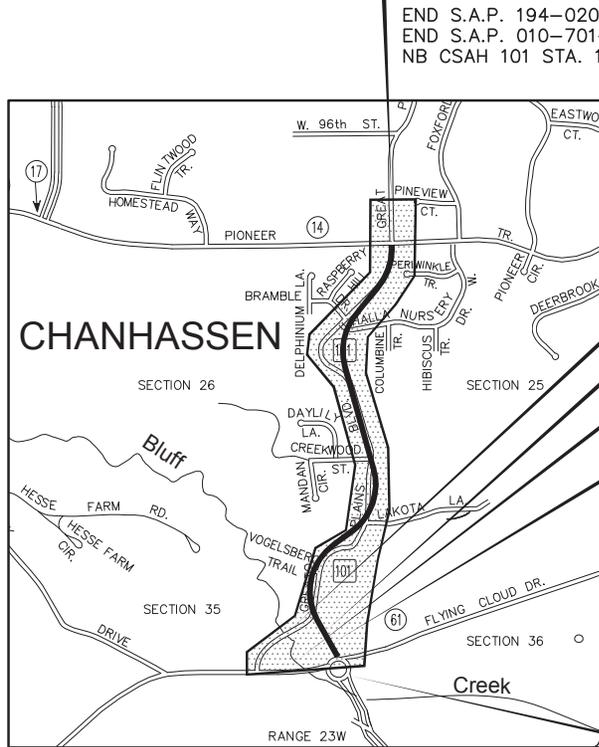
### LEGEND

- INPLACE GATE VALVE
- INPLACE HYDRANT
- INPLACE CURB BOX
- INPLACE WATERMAIN MANHOLE
- INPLACE SANITARY MANHOLE
- INPLACE STORM MANHOLE
- INPLACE CATCH BASIN
- INPLACE GAS VALVE
- INPLACE CABLE TV BOX
- INPLACE TELEPHONE BOX
- INPLACE POWER POLE
- INPLACE ELECTRICAL MANHOLE
- INPLACE ELECTRICAL TRANSFORMER
- INPLACE LIGHT POLE
- INPLACE WATERMAIN
- INPLACE SANITARY SEWER
- INPLACE STORM SEWER
- INPLACE GAS MAIN
- INPLACE CABLE TV
- INPLACE UNDERGROUND TELEPHONE LINE
- INPLACE UNDERGROUND POWER
- INPLACE OVERHEAD POWER
- INPLACE CURB AND GUTTER
- INPLACE PAVEMENT
- INPLACE FENCE
- INPLACE RIGHT-OF-WAY
- INPLACE EASEMENT
- INPLACE MAILBOX
- INPLACE SOIL BORING
- INPLACE STREET SIGN
- INPLACE TREE
- INPLACE TREE LINE
- INPLACE WETLAND
- INPLACE CONTOUR
- PROPOSED CONTOUR
- PROPOSED GATE VALVE
- PROPOSED HYDRANT
- PROPOSED MANHOLE (STORM/SANITARY)
- PROPOSED CATCH BASIN
- PROPOSED WATERMAIN
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED FORCE MAIN
- PROPOSED DRAIN TILE
- PROPOSED CURB AND GUTTER
- PROPOSED CONSTRUCTION LIMITS
- PROPOSED TEMPORARY EASEMENT
- PROPOSED RIGHT-OF-WAY

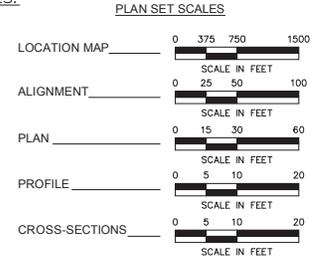
**NOTE:**  
THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF C/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

THE EXACT LOCATION OF UNDERGROUND UTILITIES SHOWN IN THIS PLAN SET ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE PRIOR TO STARTING ANY EXCAVATION.

GOPHER STATE ONE CALL SYSTEM.....1-800-252-1166

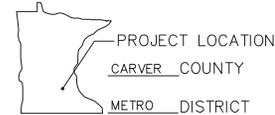


END S.A.P. 194-020-014  
END S.A.P. 010-701-004  
NB CSAH 101 STA. 117+05.64



- REMOVE BRIDGE NO. 10044
- CONSTRUCT BRIDGE NO. 10555
- CONSTRUCT BRIDGE NO. R0827
- CONSTRUCT CULVERT BRIDGE UNDERPASS NO. 10J49

CSAH 101 STATE PROJ. NO.	S.A.P. 194-020-014, S.A.P. 010-701-004
GROSS LENGTH	6415 FEET 1.215 MILES
BRIDGE LENGTH	445 FEET 0.084 MILES
EXCEPTION LENGTH	NA FEET NA MILES
NET LENGTH	6415 FEET 1.215 MILES



BEGIN S.A.P. 194-020-014  
BEGIN S.A.P. 010-701-004  
NB CSAH 101 STA. 52+90.76

DESIGN DESIGNATION: TRAIL VS. CSAH 101 (S.A.P. 194-020-014, S.A.P. 010-701-004)  
BLUFF TRAIL, FLYING CLOUD TRAIL  
CSAH 101 TRAIL UNDERPASS

Functional Classification: TRAIL  
Design Speed 20 mph  
Based on Stopping Sight Distance  
Height of eye 4.5' Height of Object 0.0'  
Design Speed not achieved at: N.A.

DESIGN DESIGNATION: CSAH 101 - (S.A.P. 194-020-014, S.A.P. 010-701-004)  
STA. 52+90.76 TO 117+05.64

Functional Classification: A-MINOR ARTERIAL EXPANDER  
No. of Traffic Lanes = 4 No. of Parking Lanes = 0  
ADI (Current Year) 2020 = 5,300 Design Speed = 40 mph  
ADI (Future Year) 2040 = 23,000 Based on STOPPING Sight Distance  
DHV (Design Hr. Vol.) =        Height of eye 3.5' Height of Object 2.0'  
D (Directional Distr.) = 45 % Design Speed Not Achieved at Roundabout Approaches.  
T (Heavy Commercial) = 9.65 %  
R-Value 5 20 YR BESALS 4,391,000 Design Load 10 ton

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, OF THIS PLAN WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGINEER \_\_\_\_\_  
DATE \_\_\_\_\_ LIC. NO. \_\_\_\_\_

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

CITY PROJ. NO. 14-08  
STATE AID PROJ. NO. 194-020-014 & 010-701-004

### GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL, SIGNING AND DEVICES SHALL CONFORM TO THE MUTCD, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

### SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2-5	STATEMENT OF ESTIMATED QUANTITIES
6	GENERAL NOTES, STANDARD PLATES, AND UTILITY CONTACTS
7-16	TABULATIONS
17-26	TYPICAL SECTIONS
27-40	CONSTRUCTION DETAILS
41-88	CONSTRUCTION PHASING AND DETOUR PLANS
89-104	ALIGNMENT PLANS AND TABULATIONS
105-123	INPLACE CONDITIONS PLANS
124-126	STORM WATER POLLUTION PREVENTION PLANS
127-151	EROSION CONTROL PLANS
152-170	REMOVAL PLANS
171-180	CSAH 101 CONSTRUCTION PLANS
181-190	CSAH 101 ROADWAY PROFILES
191-208	STREET CONSTRUCTION PLAN AND PROFILES
209-213	SUPERELEVATION PLANS
214-225	INTERSECTION DETAILS
226-240	STORM SEWER PLAN AND PROFILES
241-246	STORM SEWER LATERAL PROFILES
247-251	GRADING PLANS
252-266	WATER MAIN PLAN AND PROFILES
267-278	SANITARY SEWER PLAN AND PROFILES
279-285	STREET LIGHTING PLANS
286-295	TRAFFIC SIGNAL AND FIBER OPTIC PLANS
296-301	PEDESTRIAN CROSSWALK FLASHER SYSTEM PLANS
302-307	RETAINING WALL PLANS
308-316	BOX CULVERT PLANS
317-361	SIGNING AND PAVEMENT MARKING PLANS
362-386	LANDSCAPING AND TURF ESTABLISHMENT PLANS
387-429	CROSS SECTIONS
B1-B11	BRIDGE NO. 10555 PLANS
S1-S10	BRIDGE NO. R0827 PLANS

THIS PLAN SET CONTAINS 450 SHEETS

## Kimley»Horn

767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114  
PHON 651-645-4197  
WWW.KIMLEY-HORN.COM

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 10/14/19 LIC. NO. 41864

ENGINEER \_\_\_\_\_  
CHADD B. LARSON, PE

APPROVED \_\_\_\_\_ 2019  
CARVER COUNTY ENGINEER

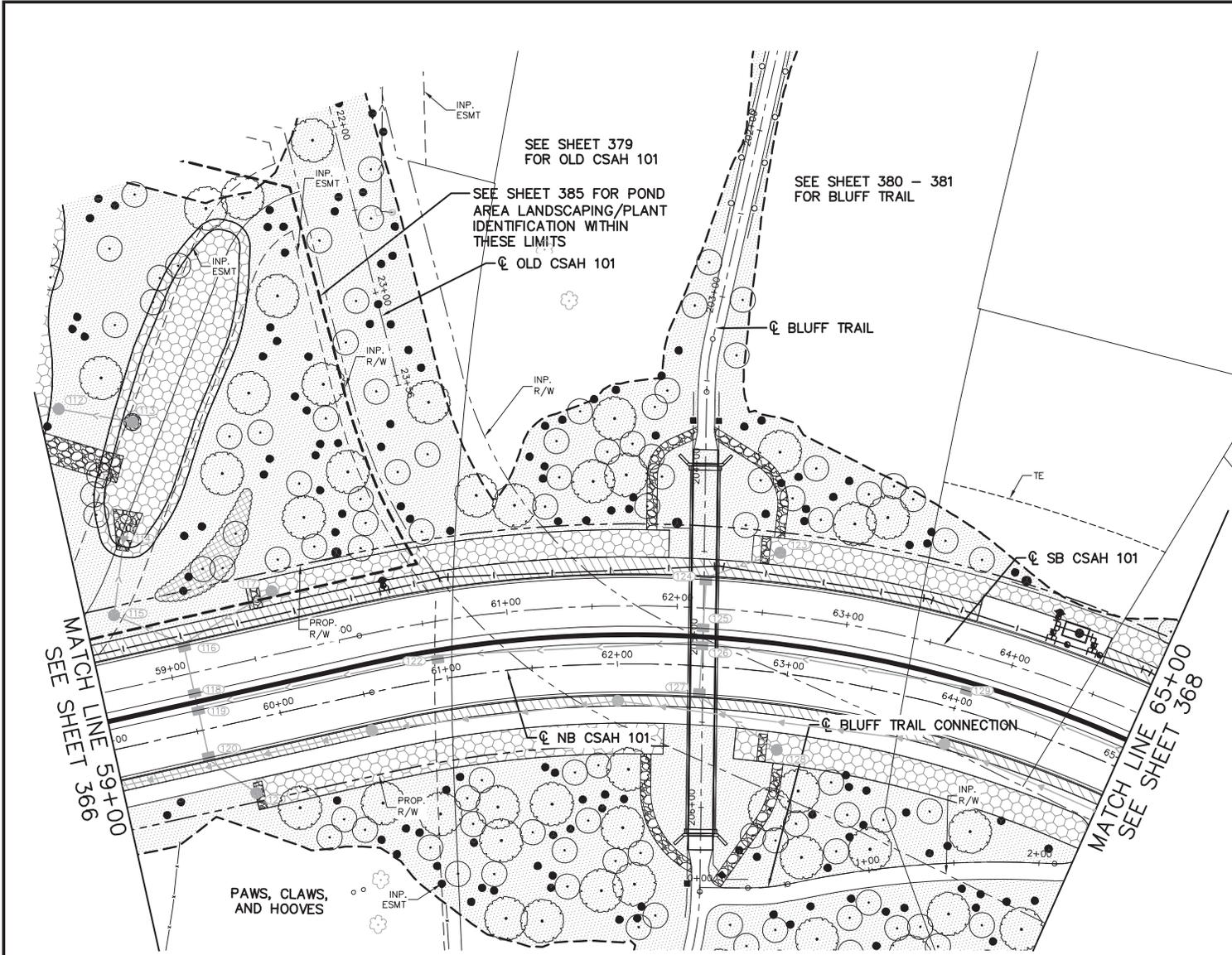
APPROVED \_\_\_\_\_ 2019  
CITY OF CHANHASSEN ENGINEER

APPROVED \_\_\_\_\_ 2019  
DISTRICT STATE AID ENGINEER- REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

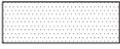
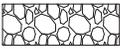
APPROVED FOR STATE AID FUNDING: STATE AID ENGINEER

SHEET NO. **1** OF **429** SHEETS

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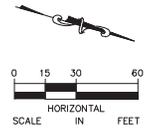


**LEGEND**

-  SEED MIXTURE 33-261  
FERTILIZER TYPE 3  
EROSION CONTROL BLANKETS CATEGORY 4N
-  SEED MIXTURE 25-121  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
-  SEED MIXTURE 35-241  
FERTILIZER TYPE 3  
HYDRAULIC BONDED FIBER MATRIX
-  SEED MIXTURE 25-151  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
-  RANDOM RIP RAP CLASS III
-  2" CAL. B&B DECIDUOUS TREE
-  #20 CONT. DECIDUOUS TREE
-  BARE ROOT SEEDLING DECIDUOUS TREE (MIN. 4' TALL)
-  6" B&B EVERGREEN TREE
-  SHRUB MASSING
-  LIMITS OF CONSTRUCTION
-  RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT NATIVE BUFFER SIGN LOCATION

**GENERAL NOTES**

1. CONTRACTOR SHALL PURCHASE ALL SEED MIXES FROM A REPUTABLE VENDOR THAT HAS BEEN VETTED AND HAS YELLOW TAG STATUS FROM MNDOT.
2. SEEDING MUST OCCUR IN THE APPROPRIATE SEEDING WINDOW. NATIVE SEEDING SHALL OCCUR AFTER THE FIRST FROST.
3. SOIL BED SHALL BE PREPPED AND LOOSENED WITH DISK OR PLOW PRIOR TO SEEDING. SEED SHALL BE DISC ANCHORED/CULTIPACKED TO ENSURE ADEQUATE SOIL AND SEED CONTACT.
4. UPON COMPLETION OF ROADSIDE DITCH GRADING, SOIL SHALL BE LOOSENED PRIOR TO SEEDING.



No.	Date	Revisions	App.	DRAWING NAME
				TH101_Turf_Plan
				DESIGNED BY: MPI
				DRAWN BY: MPI
				CHECKED BY: MC
				DATE: 10/14/19
				PROJECT NO. 16051044

**Kimley»Horn**  
 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114  
 PHONE: 651-645-4197  
 WWW.KIMLEY-HORN.COM

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.  
*Mitchell Cookas, PLA*  
 MITCHELL COOKAS, PLA  
 DATE: 10/14/19 MN LIC. NO. 56522

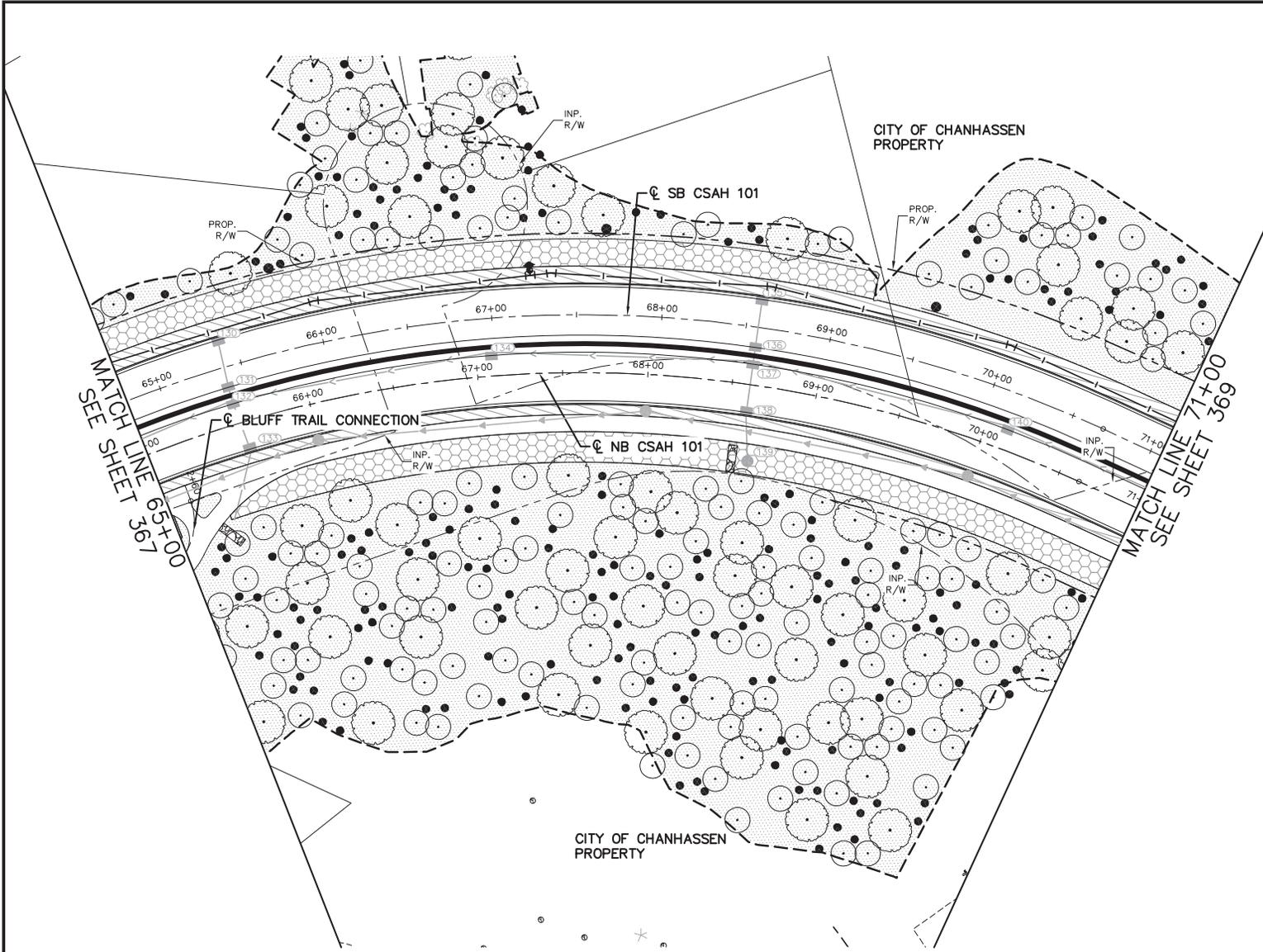


CITY OF CHANHASSEN  
 CSAH 101 IMPROVEMENTS  
 PIONEER TR TO FLYING CLOUD DR  
 CSAH 101  
 LANDSCAPING AND  
 TURF ESTABLISHMENT PLANS  
 STA. 59+00 TO STA. 65+00

CITY PROJECT	14-08
COUNTY PROJECT	
S.A.P.	194-020-014
S.A.P.	010-701-004

SHEET NO.  
**367**  
**429**

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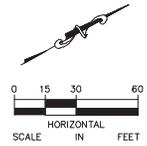


**LEGEND**

- SEED MIXTURE 33-261  
FERTILIZER TYPE 3  
EROSION CONTROL BLANKETS CATEGORY 4N
- SEED MIXTURE 25-121  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
- SEED MIXTURE 35-241  
FERTILIZER TYPE 3  
HYDRAULIC BONDED FIBER MATRIX
- SEED MIXTURE 25-151  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
- RANDOM RIP RAP CLASS III
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- BARE ROOT SEEDLING DECIDUOUS TREE (MIN. 4" TALL)
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- SHRUB MASSING
- LIMITS OF CONSTRUCTION
- RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT NATIVE BUFFER SIGN LOCATION

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				TH101_Turf_Plan
				DESIGNED BY: MPI
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				DATE: 10/14/19
				PROJECT NO. 160511044

**Kimley»Horn**

767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114  
PHONE: 651-645-4197  
WWW.KIMLEY-HORN.COM

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*Mitchell Cookas, PLA*  
MITCHELL COOKAS, PLA  
DATE: 10/14/19 MN LIC. NO. 56522

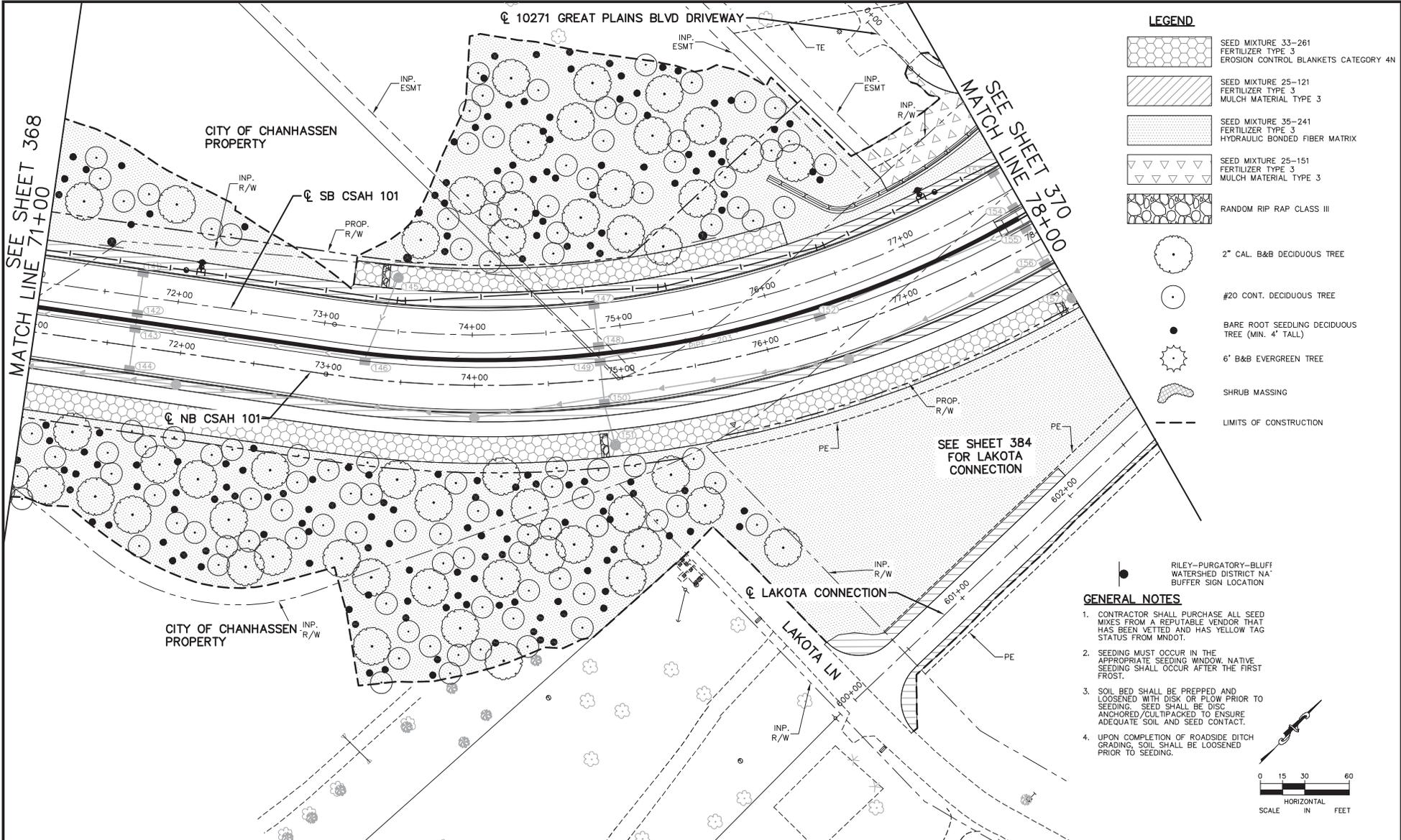


CITY OF CHANHASSEN  
CSAH 101 IMPROVEMENTS  
PIONEER TR TO FLYING CLOUD DR  
CSAH 101  
LANDSCAPING AND  
TURF ESTABLISHMENT PLANS  
STA. 65+00 TO STA. 71+00

CITY PROJECT	14-08
COUNTY PROJECT	
S.A.P.	194-020-014
S.A.P.	010-701-004

SHEET NO.  
**368**  
**429**

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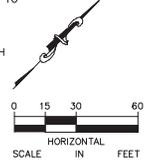


**LEGEND**

- SEED MIXTURE 33-261  
FERTILIZER TYPE 3  
EROSION CONTROL BLANKETS CATEGORY 4N
- SEED MIXTURE 25-121  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
- SEED MIXTURE 35-241  
FERTILIZER TYPE 3  
HYDRAULIC BONDED FIBER MATRIX
- SEED MIXTURE 25-151  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
- RANDOM RIP RAP CLASS III
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DRAWING NAME  
TH101\_Turf\_Plan  
DESIGNED BY: MPI  
DRAWN BY: MPI  
CHECKED BY: MC  
DATE: 10/14/19  
PROJECT NO. 160511044



767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114  
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*Mitchell Cookas, PLA*  
MITCHELL COOKAS, PLA  
DATE: 10/14/19 MN LIC. NO. 56522

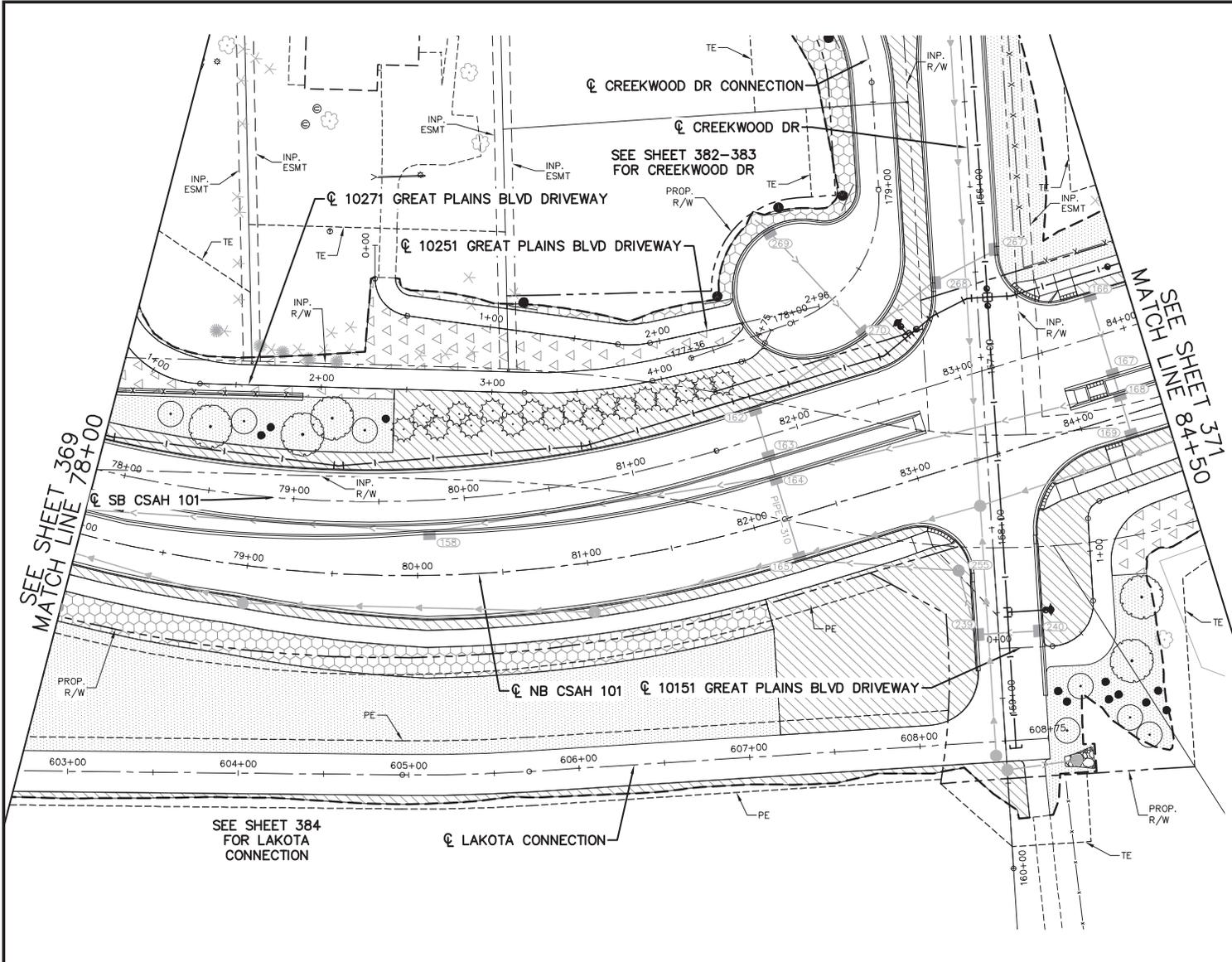


CITY OF CHANHASSEN  
CSAH 101 IMPROVEMENTS  
PIONEER TR TO FLYING CLOUD DR  
CSAH 101  
LANDSCAPING AND  
TURF ESTABLISHMENT PLANS  
STA. 71+00 TO STA. 78+00

CITY PROJECT	14-08
COUNTY PROJECT	
S.A.P.	194-020-014
S.A.P.	010-701-004

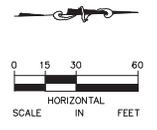
SHEET NO.  
**369**  
**429**

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- LEGEND**
- SEED MIXTURE 33-261  
FERTILIZER TYPE 3  
EROSION CONTROL BLANKETS CATEGORY 4N
  - SEED MIXTURE 25-121  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
  - SEED MIXTURE 35-241  
FERTILIZER TYPE 3  
HYDRAULIC BONDED FIBER MATRIX
  - SEED MIXTURE 25-151  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
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  - LIMITS OF CONSTRUCTION
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No.	Date	Revisions	App.	App.

**Kimley»Horn**

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*Mitchell Cookas*  
MITCHELL COOKAS, PLA  
DATE: 10/14/19 MN LIC. NO. 56522



CITY OF CHANHASSEN  
CSAH 101 IMPROVEMENTS  
PIONEER TR TO FLYING CLOUD DR

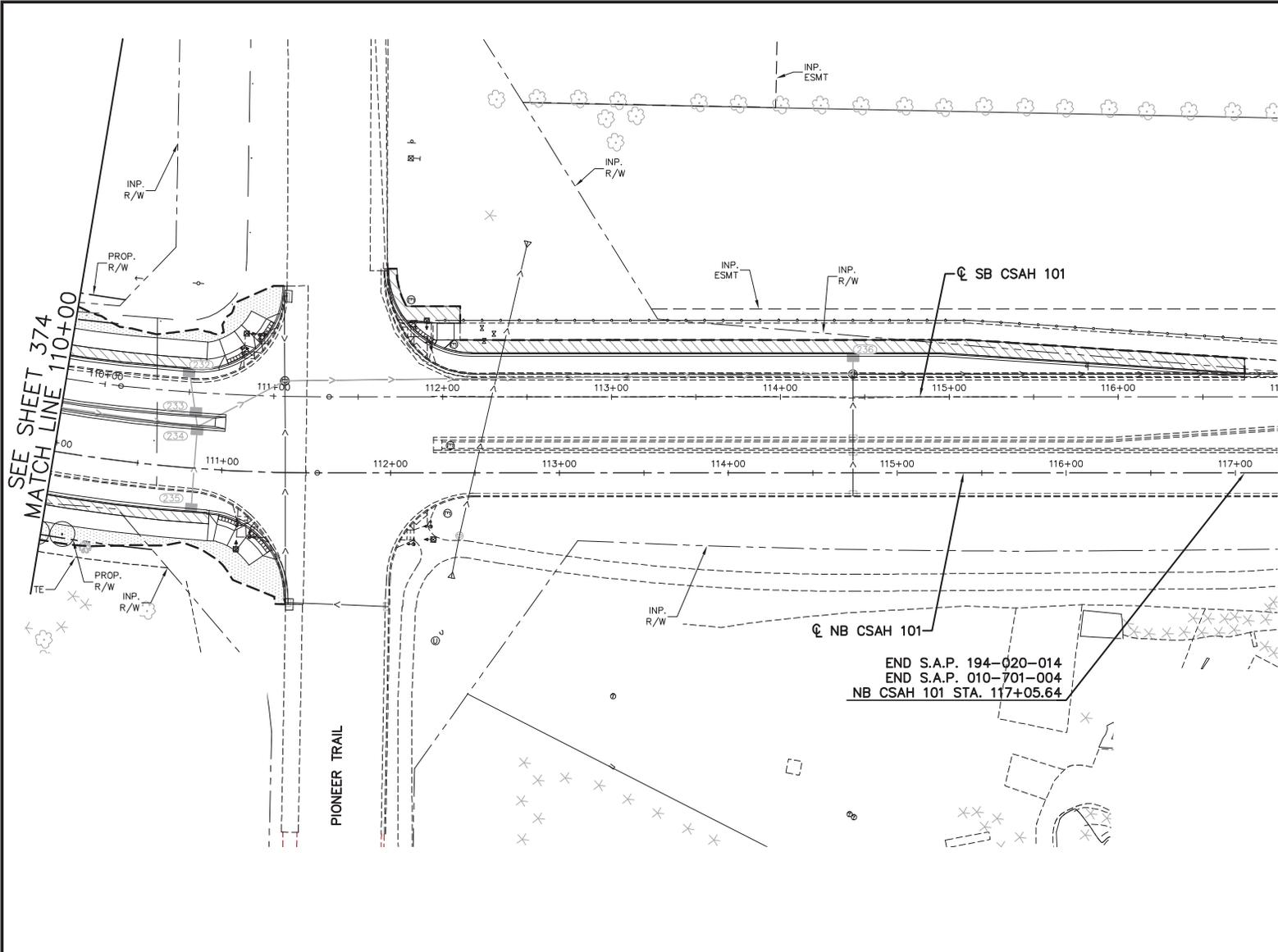
CSAH 101  
LANDSCAPING AND  
TURF ESTABLISHMENT PLANS  
STA. 78+00 TO STA. 84+50

CITY PROJECT	14-08
COUNTY PROJECT	
S.A.P.	194-020-014
S.A.P.	010-701-004

SHEET NO.  
**370**

**429**

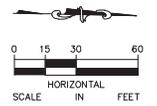
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- LEGEND**
- SEED MIXTURE 33-261  
FERTILIZER TYPE 3  
EROSION CONTROL BLANKETS CATEGORY 4N
  - SEED MIXTURE 25-121  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
  - SEED MIXTURE 35-241  
FERTILIZER TYPE 3  
HYDRAULIC BONDED FIBER MATRIX
  - SEED MIXTURE 25-151  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
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  - 2" CAL. B&B DECIDUOUS TREE
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  - LIMITS OF CONSTRUCTION
  - RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT NATIVE BUFFER SIGN LOCATION

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END S.A.P. 194-020-014  
 END S.A.P. 010-701-004  
 NB CSAH 101 STA. 117+05.64



No.	Date	Revisions	App.	DRAWING NAME
				TH101_Turf_Plan
				DESIGNED BY: MPI
				DRAWN BY: MPI
				CHECKED BY: MC
				DATE: 10/14/19
				PROJECT NO. 160511044

**Kimley»Horn**  
 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114  
 PHONE: 651-645-4197  
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 MITCHELL COOKAS, PLA  
 DATE: 10/14/19 MN LIC. NO. 56522



CITY OF CHANHASSEN  
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 PIONEER TR TO FLYING CLOUD DR

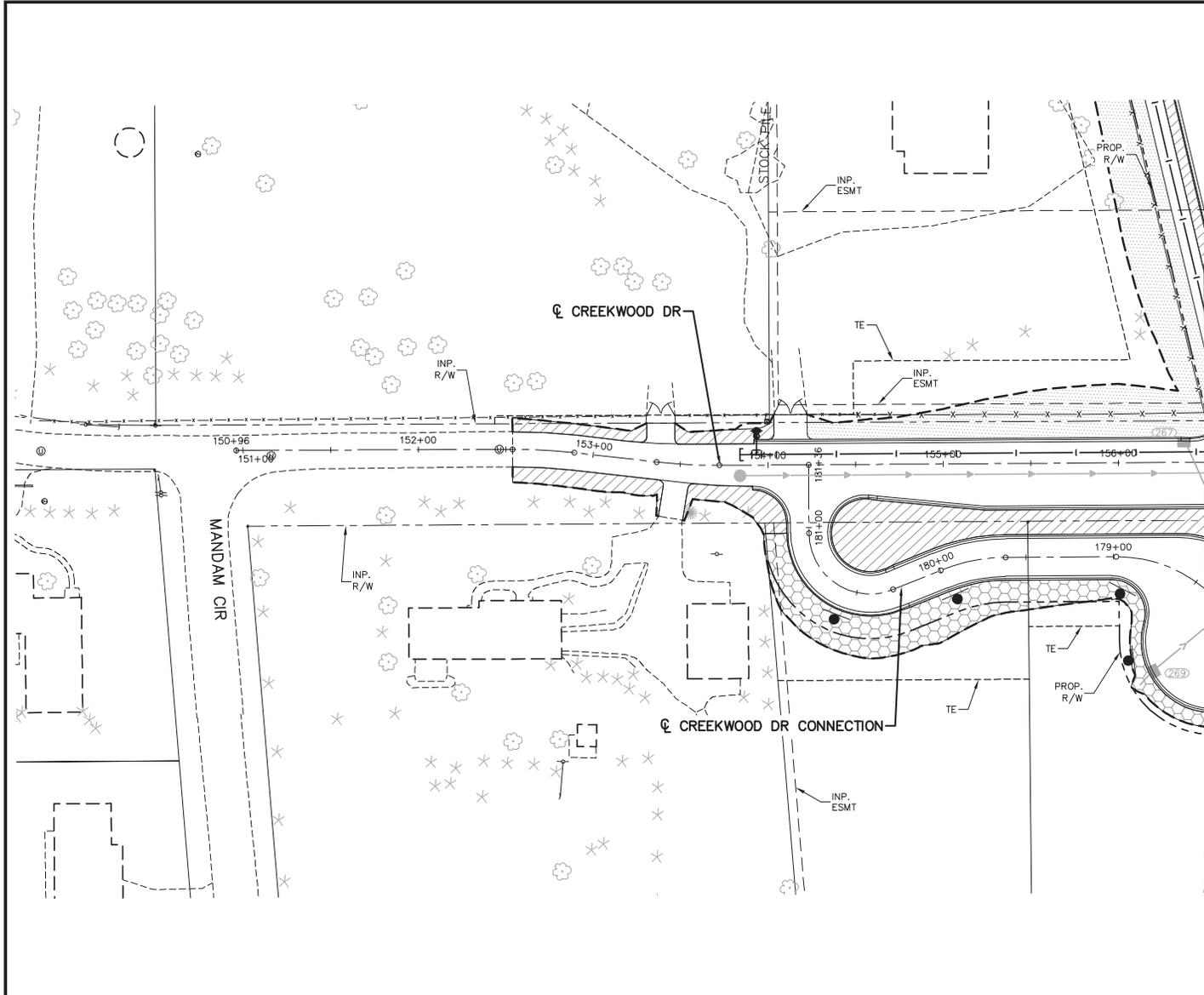
CSAH 101  
 LANDSCAPING AND  
 TURF ESTABLISHMENT PLANS  
 STA. 110+00 TO STA. 118+00

CITY PROJECT	14-08
COUNTY PROJECT	
S.A.P.	194-020-014
S.A.P.	010-701-004

SHEET NO.  
**375**

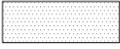
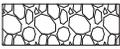
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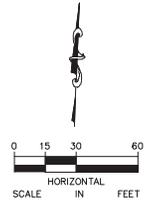
MATCH LINE 156+50  
SEE SHEET 383

**LEGEND**

-  SEED MIXTURE 33-261  
FERTILIZER TYPE 3  
EROSION CONTROL BLANKETS CATEGORY 4N
-  SEED MIXTURE 25-121  
FERTILIZER TYPE 3  
MULCH MATERIAL TYPE 3
-  SEED MIXTURE 35-241  
FERTILIZER TYPE 3  
HYDRAULIC BONDED FIBER MATRIX
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**Kimley»Horn**  
 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114  
 PHONE: 651-645-4197  
 WWW.KIMLEY-HORN.COM

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.  
*Mitchell Cookas*  
 MITCHELL COOKAS, PLA  
 DATE: 10/14/19 MN LIC. NO. 56522



CITY OF CHANHASSEN  
 CSAH 101 IMPROVEMENTS  
 PIONEER TR TO FLYING CLOUD DR  
 CREEKWOOD DR  
 LANDSCAPING AND  
 TURF ESTABLISHMENT PLANS  
 STA. 151+00 TO STA. 156+50

CITY PROJECT	14-08
COUNTY PROJECT	
S.A.P.	194-020-014
S.A.P.	010-701-004

SHEET NO.  
**382**  
**429**

HWL Summary			
Event	Ex	Pr	Pr
2-Yr	914.12	914.11	914.11
10-Yr	914.60	914.30	914.30
100-Yr	915.40	914.97	914.97

Niemela Wetland			
Stage	Existing Storage	Proposed Stage	Storage
912	17		
913	887		
914	6,168	914	2,024
915	36,021	915	28,616
916	65,169	916	54,649
917	100,647	917	86,808

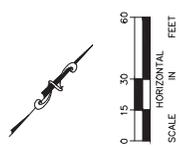
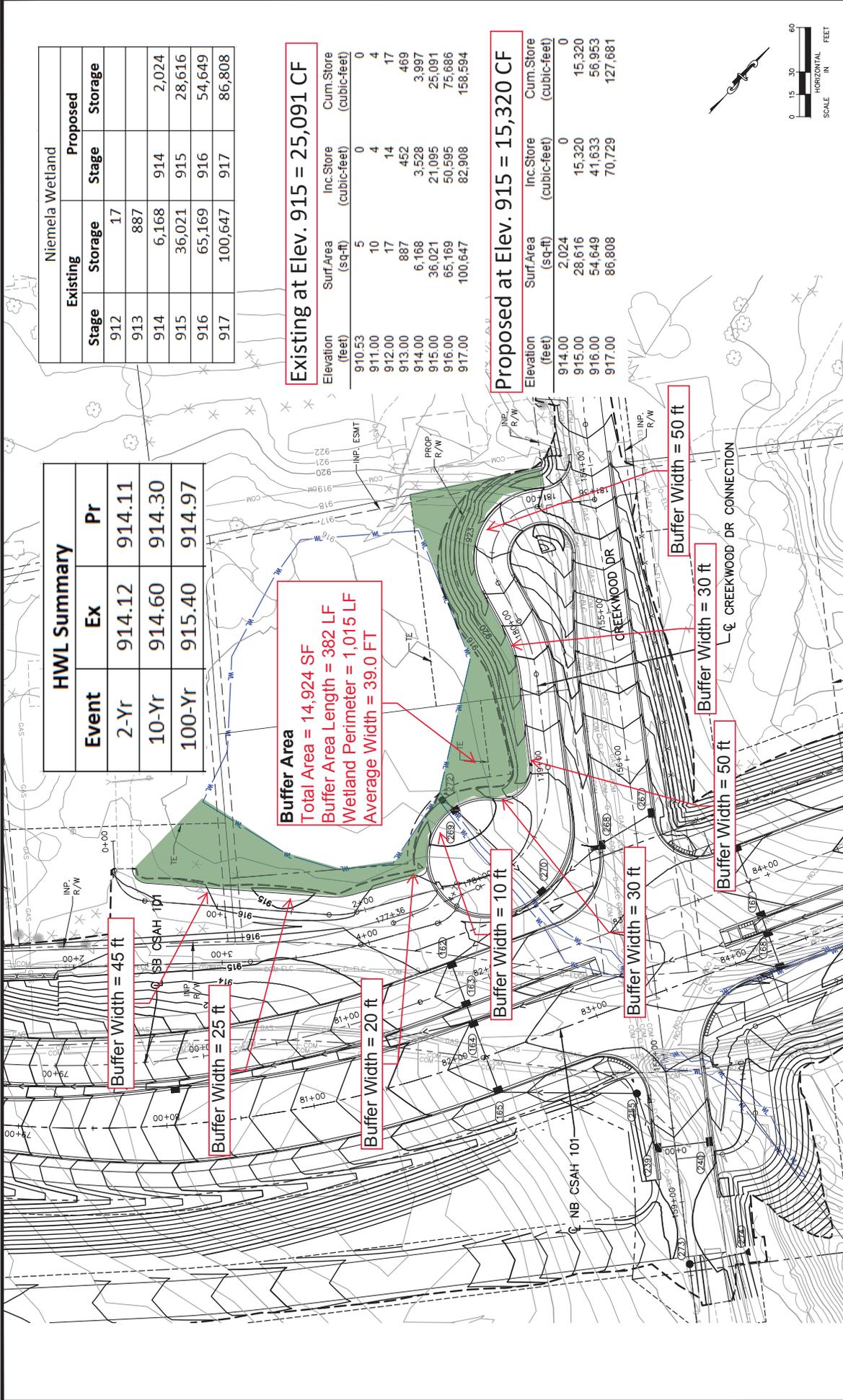
**Buffer Area**  
 Total Area = 14,924 SF  
 Buffer Area Length = 382 LF  
 Wetland Perimeter = 1,015 LF  
 Average Width = 39.0 FT

**Existing at Elev. 915 = 25,091 CF**

Elevation (feet)	Surf Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
910.53	5	0	0
911.00	10	4	4
912.00	17	14	17
913.00	887	452	469
914.00	6,168	3,528	3,997
915.00	36,021	21,095	25,091
916.00	65,169	50,595	75,686
917.00	100,647	82,908	158,594

**Proposed at Elev. 915 = 15,320 CF**

Elevation (feet)	Surf Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
914.00	2,024	0	0
915.00	28,616	15,320	15,320
916.00	54,649	41,633	56,953
917.00	86,808	70,729	127,681



No.	Date	Revisions	DRAWING NAME	CITY PROJECT	SHEET NO.
			_Creekwood Connection Wetland	CITY OF CHANHASSEN	14-08
			DESIGNED BY:	COUNTY PROJECT	
			DRAWN BY:	S.A.P.	1
			CHECKED BY:	S.A.P.	194-020-014
			DATE:	S.A.P.	010-701-004
			PROJECT NO.		

767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114  
 PHONE: 651-645-4197  
 WWW.KIMLEY-HORN.COM

CARVER COUNTY

CITY OF CHANHASSEN

EXHIBIT A  
NIEMELA WETLAND  
SUMMARY

CITY OF CHANHASSEN  
CSAH 101 IMPROVEMENTS  
PIONEER TR TO FLYING CLOUD DR  
CREEKWOOD DR CONNECTION  
STORM SEWER  
PLAN AND PROFILES  
STA. 17+281 TO STA. 18+26

**WATER RESOURCES NOTES**

THESE NOTES ALONG WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE ARE INTENDED TO GIVE INFORMATION ON CRITICAL DRAINAGE FEATURES, NATURAL RESOURCES AND CONTRACTOR OPERATIONS THAT MAY IMPACT DRAINAGE AND NATURAL RESOURCES.

1. THE SIZE AND ELEVATION OF STORM SEWER PIPES, INLETS PERMEABLE DITCH BLOCKS AND OVERFLOW DEVICES HAVE BEEN SPECIFICALLY DESIGNED TO CONFORM TO PROJECT DESIGN STANDARDS. MINNESOTA POLLUTION CONTROL AGENCY (MPCA), AND WATERSHED DISTRICT PERMIT REQUIREMENTS. THE DESIGN COMPUTATIONS ARE AVAILABLE FROM THE COUNTY, UPON REQUEST. CHANGING THE DIRECTION OF FLOW FROM WHAT IS SHOWN ON THE PLANS MAY CAUSE PROBLEMS OFF THE PROJECT, AND COULD MEAN THE DRAINAGE SYSTEM IS OUT OF COMPLIANCE WITH MINNESOTA POLLUTION CONTROL AGENCY STANDARDS TO THE SIZE, ELEVATION OR DIRECTION OF FLOW OF THE DRAINAGE SYSTEM MUST BE APPROVED BY THE WATER RESOURCES DESIGNER.

2. THE FOLLOWING PERMITS APPLY TO THIS PROJECT:
  - A. NPDES - THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING THE ONLINE FORM AND SUBMITTING TO THE MPCA PRIOR TO THE START OF CONSTRUCTION.
  - B. CITY OF CHANHASSEN EROSION CONTROL PERMIT - THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING AN EROSION CONTROL PERMIT WITH THE CITY.
  - C. LOWER MINNESOTA RIVER WATERSHED DISTRICT PERMIT - THE OWNER HAS COMPLETED THE PERMIT APPLICATION FORM WITH THE DISTRICT. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING THE PERMIT APPLICATION FORM WITH THE DISTRICT.
  - D. MINNESOTA DEPARTMENT OF NATURAL RESOURCES PUBLIC WATERS WORK PERMIT - THE OWNER HAS COMPLETED THE PERMIT APPLICATION FORM WITH THE MNDNR, BUT THE CONTRACTOR IS RESPONSIBLE FOR MEETING THE CONSTRUCTION REQUIREMENTS OF THE PERMIT.
  - E. MINNESOTA BOARD OF WATER AND SOIL RESOURCES WETLAND CONSERVATION ACT REPLACEMENT PLAN - THE OWNER HAS COMPLETED THE PERMIT APPLICATION FORM WITH THE MNDNR, BUT THE CONTRACTOR IS RESPONSIBLE FOR MEETING THE CONSTRUCTION REQUIREMENTS OF THE PERMIT.
  - F. RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT PERMIT - THE OWNER HAS COMPLETED THE PERMIT APPLICATION FORM WITH THE WATERSHED DISTRICT, BUT THE CONTRACTOR IS RESPONSIBLE FOR MEETING THE CONSTRUCTION REQUIREMENTS OF THE PERMIT.

3. WITHIN AREAS WHERE PERMEABLE DITCH BLOCKS, FILTRATION BASINS AND INFILTRATION BASINS ARE CONSTRUCTED, ONLY TRACKED VEHICLES MAY BE USED. WHEELED VEHICLES ARE PROHIBITED FROM THESE AREAS IN ORDER TO LIMIT THE COMPACTION OF THE EXISTING AND INSTALLED ENGINEERED SOILS. EXTRA CARE SHOULD BE TAKEN TO AVOID DISCHARGE OF CONSTRUCTION SEDIMENT TO THESE AREAS. SOILS ON THE SURFACE OF ENGINEERED SOILS. THE DAMAGED AREAS WILL BE REPLACED WITH ENGINEERED SOILS. IF THESE AREAS BECOME COMPACTED, THE CONTRACTOR WILL SUBSOIL THE BASIN, IN ACCORDANCE WITH MNDOT SPECIFICATION 2105, INSTALL ADDITIONAL ENGINEERED SOILS, OR USE OTHER METHODS RECOMMENDED BY THE ENGINEER AT NO COST TO THE OWNER. THE CONTRACTOR WILL THEN VERIFY USING A DOUBLE RING INFILTROMETER THAT THE BASIN WILL FUNCTION AS DESIGNED.

4. SUBSOILING SHALL NOT BE APPLIED TO THIS PROJECT, EXCEPT IN THE CONDITION DESCRIBED IN NOTE 3 ABOVE.

**RILEY-PURGATORY-BLUFF CREEK WATERSHED REQUIREMENTS**

1. ACTIVITIES MUST BE CONDUCTED TO MINIMIZE THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (E.G., ZEBRA MUSSELS, EURASIAN WATERMILFOIL, ETC.) TO THE MAXIMUM EXTENT POSSIBLE.
2. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
3. 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.
4. 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.
5. SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.
6. 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 MAINTAIN 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.
7. RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT PERMIT SHALL BE OBTAINED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY.

**LOWER MINNESOTA RIVER WATERSHED REQUIREMENTS**

1. SEND THE DISTRICT A COPY OF THE PROJECT'S GENERAL PERMIT AND NOTIFY US 48 HOURS BEFORE THE START OF CONSTRUCTION.
2. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
3. SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.



No.	Date	Revisions	App.	DRAWING NAME
				TH101-SWPPP NOTES
				DESIGNED BY: R/G
				DRAWN BY: R/G
				CHECKED BY: CBL
				DATE: 10/14/19
				PROJECT NO. 16051044

**Kimley»Horn**  
 767 EUSTA STREET, SUITE 100, ST. PAUL, MN 55114  
 WWW.KIMLEY-HORN.COM

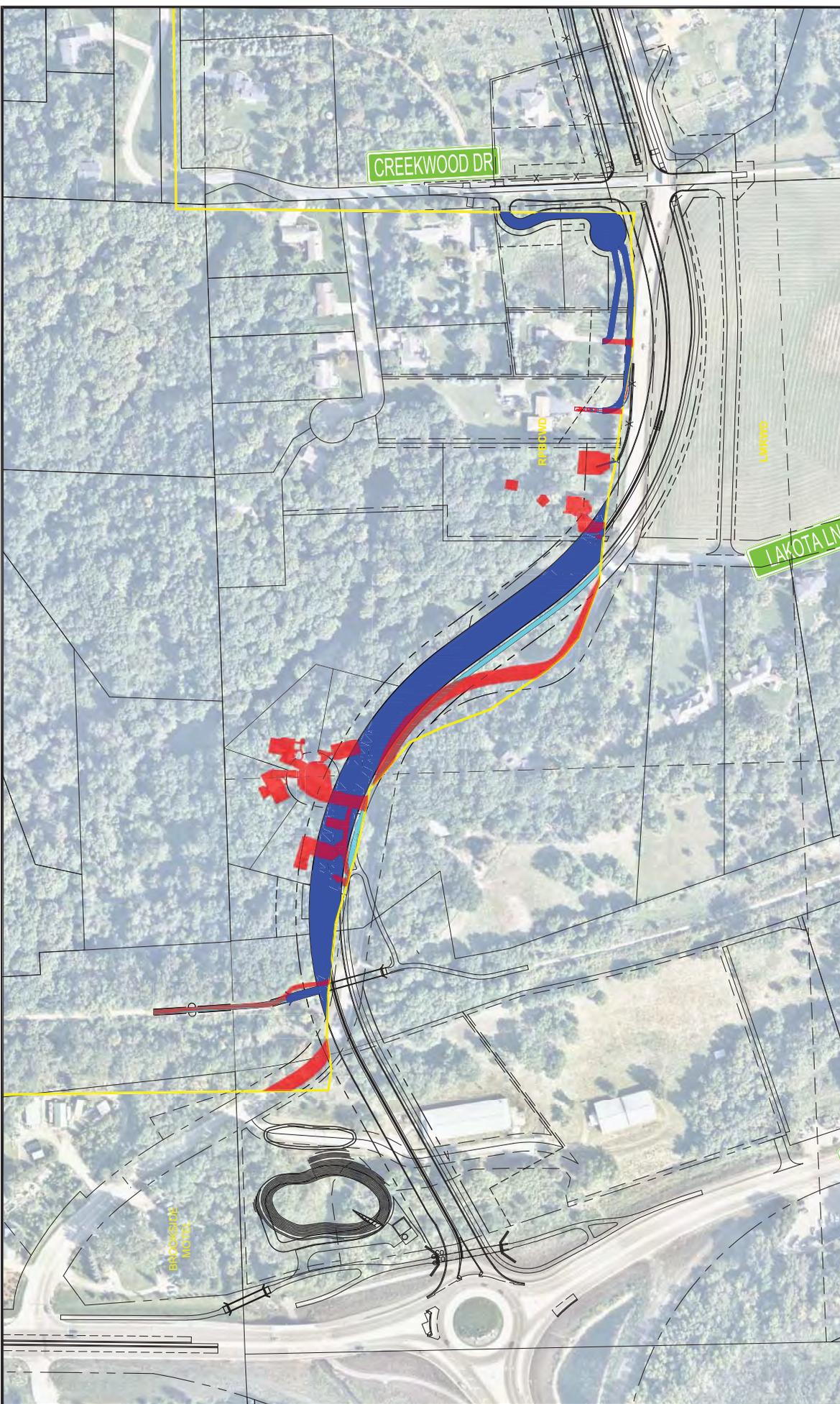
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR CONTRACT DOCUMENTS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
  
 CHAD B. LANE  
 PE  
 DATE: 10/14/19 MN LIC. NO. 41884



**CITY OF CHANHASSEN**  
 CSAH-101 IMPROVEMENTS  
 PIONEER TR TO FLYING CLOUD DR

**CARVER COUNTY**  
 STORM WATER  
 POLLUTION PREVENTION PLANS

CITY PROJECT	14-08	SHEET NO.	126
COUNTY PROJECT			
S.A.P.	194-020-014		
S.A.P.	010-701-004		429



<p>CS&amp;H 14-61 IMPROVEMENTS          PIONEER TRAIL TO RYAN CLOUD DRIVE          S.A.P. 194-020-014 / S.A.P. 010-701-004          C.P. 14-08          RPBOWD IMPERVIOUS AREAS SUMMARY          NOVEMBER 2019</p>	<p>EXISTING IMPERVIOUS          PROPOSED IMPERVIOUS          PROPOSED IMPERVIOUS EXEMPT</p>
	<p>SCALE IN FEET          0 50 100</p>
<p><b>Kimley»Horn</b>          767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114          PHONE: 651-625-4197          WWW.KIMLEY-HORN.COM</p>	



PIONEER TR

GREENS DRIVE

CSAH 191 IMPROVEMENTS  
 PIONEER TRAIL TO FLYING CLOUD DRIVE  
 S.A.P. 194-020-014 / S.A.P. 010-701-004  
 C.P. 14-08  
 RPB/CWD IMPERVIOUS AREAS SUMMARY  
 NOVEMBER 2019

EXISTING IMPERVIOUS  
 PROPOSED IMPERVIOUS  
 PROPOSED IMPERVIOUS EXEMPT



**Kimley»Horn**  
 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114  
 PHONE: 651-625-4197  
 WWW.KIMLEY-HORN.COM



## MEMORANDUM

To: Terry Jeffrey  
Riley Purgatory Bluff Creek Watershed District (RPBCWD)

Scott Sobiech, PE  
Barr Engineering

From: Ron Leaf, PE  
Kimley-Horn and Associates, Inc.

Date: 10/25/2019

Subject: CSAH 101 – RPBCWD Rule Variance Request

---

Kimley-Horn and Associates, Inc. has prepared this memorandum to document the justification for requesting variances to RPBCWD rules. Variances are requested for four items within three rule sections as described further in the following sections.

### Rule B - Floodplain Management and Drainage Alterations

**3.2 Criteria for floodplain and drainage alterations.** Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory flood storage is provided within the same floodplain and: a at the same elevation +/- 1 foot for fill in the floodplain of a watercourse; b at or below the same elevation for fill in the floodplain of a water basin.

**Variance Request: Allow net floodplain fill in the flood storage area of Wetland 2 that does not result in an increase in the modeled high-water levels to Wetland 2.**

See attached Exhibit A for a summary of the existing and proposed storage within the wetland area. As discussed with staff on October 22, 2019, the project will result in a net fill in the floodplain of the Niemela wetland area (Wetland 2) on the order of 10,000 CF resulting from the public road and cul-de-sac. That number is not an exact volume since the reduction in drainage area to the wetland will also reduce the magnitude of runoff to the basin, resulting in a lower high-water level for 2-year, 10-year and 100-year events. As stated in the response to preliminary comments, the overall hydrologic response of the wetland remains consistent with existing conditions.

The impacts have been minimized since the preliminary design process as described in the following language from the Wetland Permit Application.

*All unavoidable impacts to wetlands and aquatic resources have been minimized to the greatest extent possible. A cul-de-sac is proposed for construction near the intersection of TH 101 and Creekwood Drive. Originally, the cul-de-sac was designed to be placed through the entirety of Wetland 2. This would have resulted in filling a significant portion of Wetland 2 and approximately 0.38 acres of additional impact. This design was minimized because of these additional wetland impacts. Instead, the cul-de-sac was reduced in size and relocated to the upland area adjacent to Wetland 2 at the intersection of TH 101 and Creekwood Drive. This minimization only resulted in 0.03 acres of wetland impacts.*

1. The variance from the rule is not significant since the intent of the rule is to have no net loss of floodplain storage that would result in an impact to the flood elevation and as a result create an increased flooding risk for adjacent structures and/or infrastructure. Since there is an actual reduction in the high-water level, the risk is lower in the proposed conditions compared to the existing conditions.
2. The request has no negative effect on government services. In fact, the need for the fill relates directly to need to maintain access to two properties and have a cul-de-sac that can be maintained (e.g., snow removal) in a safe and efficient manner. Several other access alignments for these two residential properties were considered to reduce the direct and indirect impacts to the wetland and to provide safe and reasonable access to both properties.
3. The variance will not substantially change the character or function condition of the drainage system since the graded slope will remain natural buffer area and as stated above, will result in a lower flood risk to neighboring properties.
4. Several other technically feasible access options for the residential properties were discuss including longer individual driveways, a longer shared driveway and variations on the alignment and layout of the cul-de-sac or turn around area. These options were discarded due to allow the two residential properties to maintain separate access to the public roadway as close to their current condition as possible, while also minimizing the impacts to the adjacent wetland.

**Rule D – Wetland and Creek Buffers**

**3.2 Buffer width.** Buffer must be created or maintained upgradient of regulated features in accordance with the following criteria:

- iii. an average 40 feet from the delineated edge of a medium value wetland, minimum 20 feet;
- iv. an average 20 feet from the delineated edge of a low value wetland, minimum 10 feet;

**Variance Request: Allow buffer widths adjacent to Wetland 2 to be less than the minimum and average widths.**

For the Niemela wetland area (Wetland 2), refer to Sheets 370 and 382 showing the native buffer adjacent to the cul-de-sac and driveway. See exhibit A for notations on the wetland buffer distances and average buffer widths adjacent to the project. Based on discussions with City staff, there is currently not a MNRAM completed for this wetland. As of this submittal date, we are working to complete a MNRAM to define the wetland value for the Niemela wetland.

Based on our review of the findings in the environmental review phase of this project, the Niemela Wetland is either a low or medium value category according to RPBCWD Rules. These wetlands require an average buffer of 20 feet (low) and 40 feet (medium) and minimum of 10 feet (low) and 20 feet (medium). Buffer provided and shown in Exhibit A is between 10 feet and 50 feet or more adjacent to the project limits and the average buffer width is an estimated 28-30 feet.

1. The variance from the rule is not significant since the intent of the rule is to maintain a native buffer adjacent to the wetland area based on the quality of the wetland and the change in the buffer area from current to proposed conditions will not alter the character of the remaining wetland area. The total length of buffer less than 20 feet in width is roughly 50 feet immediately adjacent to the cul-de-sac.

- a. As described in the Wetland Permit Application, the impacts have been minimized to the maximum extent practicable:

*All unavoidable impacts to wetlands and aquatic resources have been minimized to the greatest extent possible. A cul-de-sac is proposed for construction near the intersection of TH 101 and Creekwood Drive. Originally, the cul-de-sac was designed to be placed through the entirety of Wetland 2. This would have resulted in filling a significant portion of Wetland 2 and approximately 0.38 acres of additional impact. This design was minimized because of these additional wetland impacts. Instead, the cul-de-sac was reduced in size and relocated to the upland area adjacent to Wetland 2 at the intersection of TH 101 and Creekwood Drive. This minimization only resulted in 0.03 acres of wetland impacts.*

- b. The current quality of the wetland (Wetland 2) was described in Section 8.2 of the July 2015 Wetland Delineation Report as dominated by reed canary grass. While only one of the factors that define the MNRAM value and subsequent buffer requirements, it is the most applicable in this case because the impacts are small enough that the overall character and function of the wetland will not significantly change in terms of wildlife habitat, groundwater conditions, etc.

## 8.2 WETLAND 2

Wetland 2 was a depression area located in the southwest quadrant of TH101 and Creekwood Drive. A small drainage channel connected the wetland to a culvert under TH 101 to the east side of the roadway.

The preliminary investigation shows this area as a Freshwater Emergent Wetland (PEM1A) according to NWI mapping and had hydric soil (Cordova-Webster complex), as noted in the County Soil Survey. Two sample points were completed for the area; sample point A-1 was located along the eastern edge of the wetland and sample point A-2 was taken approximately 20 feet northeast and 2-feet upslope from Sample Point A-1.

Wetland 2 was delineated as a Type 2—Fresh Wet Meadow. Twenty-two (22) points were surveyed along the boundary of the wetland. The wetland boundary was based on the change in topography and vegetation transition from reed canary grass and giant goldenrod (*Solidago gigantea*) to a more dominant presence of Kentucky bluegrass (*Poa pratensis*) and Canada goldenrod (*Solidago canadensis*).

The dominant vegetation at sample point A-1 was Kentucky bluegrass in the herbaceous stratum. Vegetation met the dominance test; therefore, met hydrophytic vegetation criteria. The dominant vegetation at sample point A-2 was also Kentucky bluegrass in the herbaceous stratum. Sample point A-2 also had hydrophytic vegetation.

The sample points at A-1 and A-2 both met hydric soil indicator A12 (thick dark surface).

Sample point A-1 met hydrology indicator D2 (geomorphic position) and D5 (FAC-Neutral Test). Sample point A-2 only met one secondary indicator, D5 (FAC-Neutral Test); therefore did not meet wetland hydrology criteria.

- 2. The request has no negative effect on government services. The established formal buffer will include signage to not mow the area within the acquired easement, which will provide greater protection of the area than current conditions. Maintenance of the buffer will be covered under a maintenance agreement to be executed with the RPBCWD.
- 3. The variance will not substantially change the character or function condition of the area since the current buffer area, except that the created buffer vegetation will be higher quality and greater diversity than the current vegetation. The current area is largely reed canary

grass that transitions to Kentucky bluegrass compared to the proposed buffer of native seed mix.

## Rule J – Stormwater Management

**3.1.a. Rate.** 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.

### Variance Request: Allow the peak discharge rate for the snowmelt condition to increase for the proposed condition at the Bluff Creek rate comparison location.

As a direct result of the diversion of the flows up to the 25-year event to the south and into PCH Pond instead of to the east ravine as described in the Drainage Report (text copied below), the peak discharge to the Bluff Creek discharge point is increased from the existing to proposed snowmelt conditions. The discharge to the east ravine is reduced by the same order of magnitude as the increase to Bluff Creek. The benefits of reduced erosion potential in the east ravine far outweigh the relatively small increase at a single discharge point in the overall system. The peak snowmelt event discharge rate at this location of 35.7 cfs is substantially lower than the 100-year (rainfall) event peak discharge at the same location of 98 cfs. The

*From Section 4.1.1 of the Drainage Report. Early in the watershed coordination stages, and specifically during Watershed Coordination Meeting 2 (February 28, 2019), rate control criteria were discussed in detail considering the need and desire to reduce the extent of flow routed to the east ravine. The preliminary design approach was to route the majority of flows into the trunk storm sewer line that routes down the bluff on the alignment of the proposed roadway and into proposed PCH Pond. Considering that the trunk line is on the order of 3,500 lineal feet from Bramble Pond to PCH Pond, the costs of increasing pipe sizes to manage the 100-year event were significant. Therefore, the preliminary design approach routed the tile underdrain flow and any flow that exceeded the 50-year to 100-year high water level to the east ravine. During the initial stages of final design, we also evaluated routing flows exceeding the 10-year event high water level to the east ravine to reduce the pipe costs of the trunk system to the south.*

*Using the approach to route only flows from Bramble Pond exceeding the 50-year to 100-year event to the east ravine, the project was shown to easily meet rate control in the east ravine and at the same time meet rate control at the final discharge point to the south, the Minnesota River floodplain. However, the flows to Bluff Creek immediately upstream of the existing CSAH 61 bridge and at the outlet of the proposed PCH Pond, would show an increase of 20-30 percent. The watershed representatives from both LMRWD and RPBCWD understood the potential challenges of this diversion approach and the likely outcome of having a small increase to the Bluff Creek discharge point due to diverting flows away from the east ravine. During Watershed Coordination Meeting 2, the LMRWD requested that flows up to the 25-year event be routed to the south and flows exceeding the 25-year event high water level be routed with the tile outlet to the east.*

*Two additional smaller offsite areas originating from west of CSAH 101, and that currently route to the east ravine, are also being captured and routed into the trunk and into PCH Pond. Those areas include HydroCAD model node 9P at approximate roadway stationing location 89+00 and the combined flows from the west at Creekwood Drive that route into HydroCAD model node/link 11L.*

Peak discharge rates for four of the five key discharge points are reduced from existing to proposed conditions. However, as a direct result of the diversion of the flows up to the 25-year event to the south and into PCH Pond instead of to the east ravine, the peak discharge to the Bluff Creek discharge point is increased. The discharge to the east ravine is reduced by the same order of magnitude as the increase to Bluff Creek. When summing the peak discharges at all five discharge locations, the proposed conditions peak discharge rate is reduced from the existing conditions.

Table 4. Snowmelt Event Rate Control Summary

Discharge Point (HydroCAD Node)	Existing Peak Discharge (cfs)	Proposed Peak Discharge (cfs)
Wetland D Outfall (43P)	2.7	2.7
Halla Greens Golf (9L)	2.6	2.0
East Ravine (6L - Combined)	34.3	5.9
Bluff Creek (3L - north of CSAH 61)	12.8	35.7
Minnesota River (4L - southeast of roundabout)	11.7	11.3
<b>Totals</b>	<b>64.0</b>	<b>57.6</b>

1. The snowmelt event is the 100-year, 10-day runoff event with AMC-4, representing frozen soil.

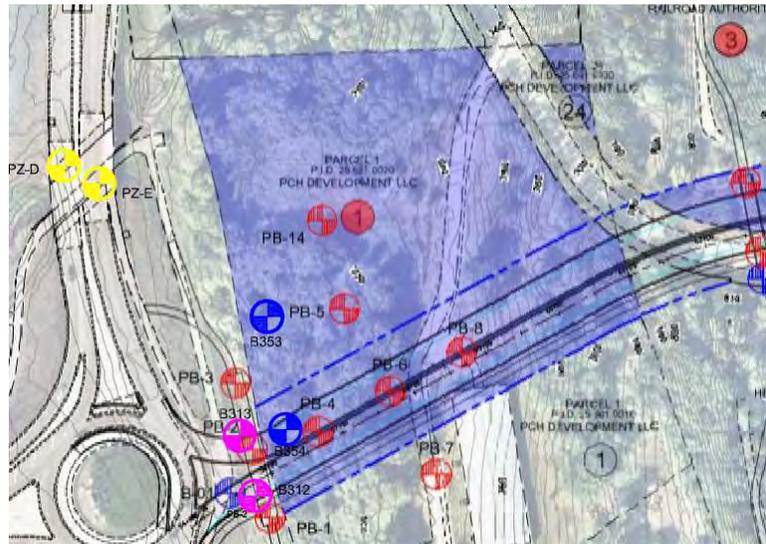
**3.2 Criteria for Linear Projects (Abstraction).** For projects creating more than 1 acre of new and/or fully reconstructed impervious surface, provide for the abstraction onsite of the larger of the following:  
 i 0.55 inches of runoff from the new and fully reconstructed impervious surfaces; or  
 ii 1.1 inches of runoff from the net increase in impervious area.

**Variance Request: Allow the project to use an elevated underdrain in PCH Pond (in variable soil conditions) to meet an estimated 50 to 99 percent of the required abstraction volume.**

The abstraction requirement applies only to the portion of the project with RPBCWD. The water quality volume requirement (infiltration and/or filtration) applies to the entire project as summarized in Table 5A of the Drainage Report. Because RPBCWD requires abstraction, we have modified the design of the PCH Treatment basin to raise the underdrain tile system 6 inches above the bottom of the filter media and have added Table 5B to the Drainage Report to show the extent of abstraction obtained by this modification. This allows the project to achieve 99 percent of the required 5,770 cubic foot abstraction requirement for the portion of the project within RPBCWD. Given the highly variable soils and groundwater conditions, the actual benefit may be closer to half of that volume.

As we have discussed with RPBCWD staff, the soils in the area of the PCH basin are hydrologic group D soils (see Borings PB-5 and PB-14) and are not ideal for infiltration. However, we believe that this approach provides the greatest opportunity for achieving abstraction within the constraints of the project limits. Boring logs are provided in the appendix of the Drainage Report. A screen clip below from the report shows the location of Borings PB-5 and PB-14.

PCH Pond has a bottom elevation of the filtration surface at 725.0 and a filter tile elevation of 724 after raising the elevation by 6 inches to allow for some infiltration and the bottom of the filtration media at elevation 723.5. Boring PB-5 shows silty clay loam at this elevation and at the time of boring, water was observed in the boring. Boring PB-14 shows the same silty clay loam near the bottom of the basin and a layer of loamy sand at elevation 723.4. This variation in soils ranging from hydrologic soil group A to D soils indicates the potential for some infiltration to occur during times when and locations where the water table is lower. The water table elevation generally follows the slope from north to south getting deeper to the south. Therefore, we expect the southern portions of the basin to have the best chance at achieving abstraction/infiltration.



Screen Clip of Borings in the PCH Pond Area

During the preliminary and final design process, a wide range of alternatives were evaluated and considered to obtain abstraction for the project as a whole and for the portion directly within RPBCWD. The follow list summarizes the main practices/approaches considered and why they were determined to not be feasible or practical for infiltration or abstraction.

For this project area in general there are several factors that prohibit infiltration or that make infiltration not feasible or practical. Those factors are:

- In the northern portion of the project limits the areas adjacent to the roadway are not suitable for infiltration dues to presence of wetlands and low permeability soils. The approach taken in the norther most section is to route runoff to an existing wet pond (Pond 3) located north of Pioneer Trail that has a filtration bench. This pond has hydraulic and water quality capacity to accept the additional impervious surfaces and infrastructure is already in place to route that portion of the roadway to the existing wet pond-filtration system.
- In the middle portion of the project near Bramble Drive, a filtration basin will be constructed with a composite liner. This location is within the LMRWD’s Steep Slope overlay district that prohibits infiltration with the intent to reduce the extent of erosion to the steep slopes and

bluff areas that are highly susceptible to erosion. Soils in this area consist of native material and a deep section of granular fill under apportion of the basin. The filtration system and liner are intended to restrict the amount of seepage to the underlying soils to preserve stability in the fill section and limit the volume of water that would otherwise seep to the fill slope into the east ravine. Boring PB-15 and PB-15A were taken near the location of Bramble Pond, with PB-15A best representing the soil conditions at the pond location.

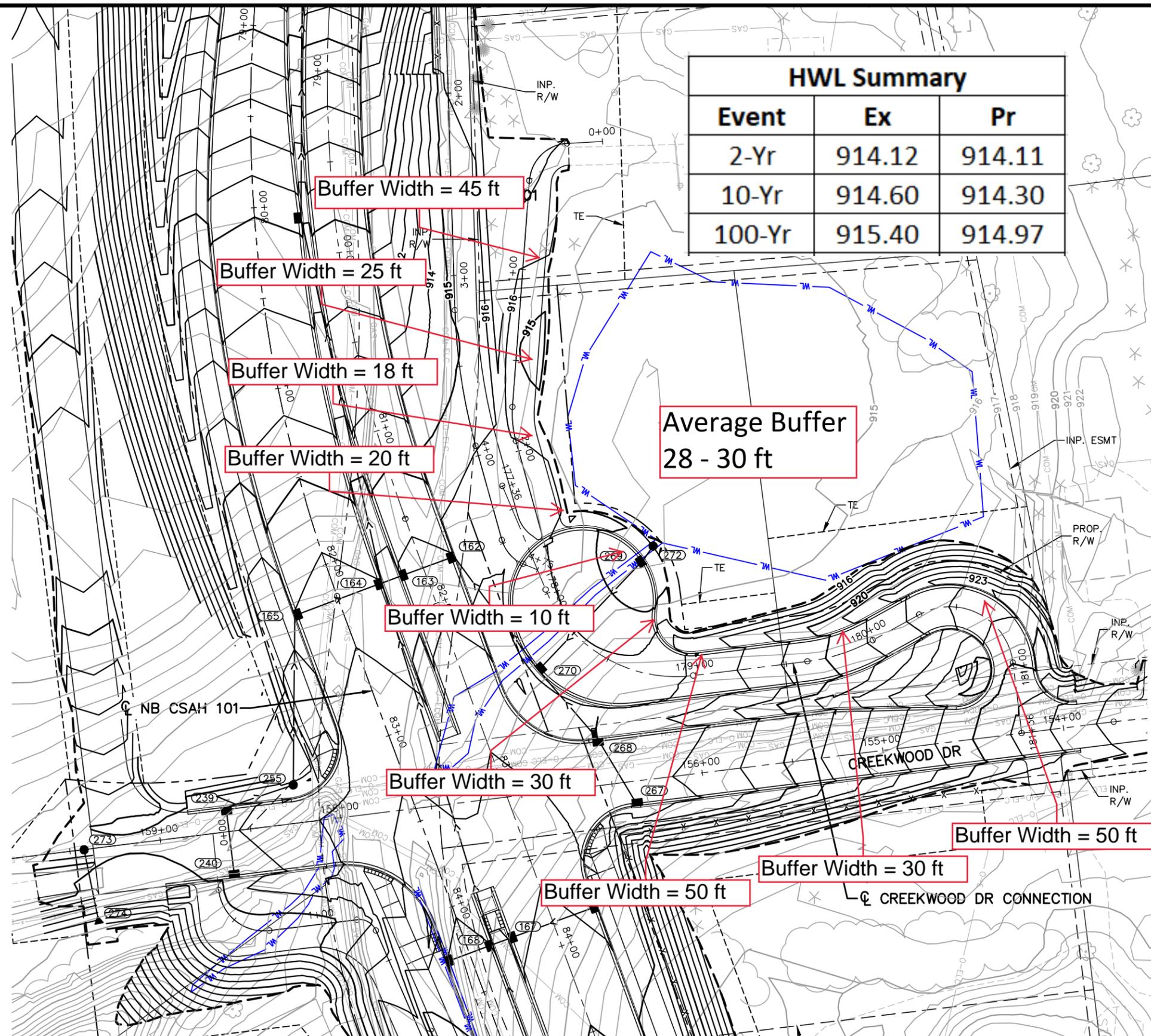
- At the southern end of the project, PCH Pond, a filtration basin, is proposed. Existing soils in this area are generally clays, silts and organic soils and much of the area was delineated wetland. Borings PB-5 and PB-14 were taken in the location of PCH Pond and PB-5 best represents the conditions at the existing grades for the proposed basin as discussed above. These soils, while highly variable, are not ideal for true infiltration.
- Throughout the slopes and roadside ditches on the southern portion of the project, significant cuts will take place to allow the road grades to be a maximum of 8 percent. These cut areas and the ditches that will capture the slope runoff in these areas are coarser textured soils that have the potential for infiltration. However, these same soils have the potential for groundwater seepage and the project will have trench drains at selected locations to reduce the extent of seepage and subsequent slope failures in these cut areas. Therefore, while underground or surface infiltration areas were considered in the ditches, they were discarded to not increase the risks associated with focused infiltration that would jeopardize slope stability along the ditches, cut slopes and fill slopes.

Other potential infiltration areas and systems were evaluated throughout the course of the design process including:

- Roadside ditches that collect offsite drainage from the cut slope areas and other offsite drainage areas. The preliminary design did not include roadside ditches in the steep grade area south of Creekwood Drive. During discussions with the Project Management Team, the decision was made to explore the benefits of the roadside ditches to reduce the extent of runoff and snowmelt from these long slopes flowing across the trails and entering the roadway. The discussion also considered the benefits of enhancing the ditched to maximize treatment. Upon further analysis the potential for concentrated infiltration below the ditch bottom would again create risks associated with stability of the cut slope as well as for the adjacent bluff areas. The final design includes roadside ditches with combination earth/rock ditch checks to collect runoff into catch basins at selected locations along the slope. These vegetated ditches will provide some degree of infiltration and volume reduction of offsite drainage areas, but the extent of this reduce has not been specifically quantified.
- Other parcels that are being acquired as part of the project including the properties shown in the geotechnical boring exhibits labeled Parcels 4, 5, 6, 7 and 9. These parcels all fall within RPBCWD boundaries and do not specifically restrict or prohibit infiltration. However, during discussions with watershed staff, these areas are very similar to the prohibited infiltration zones in LMRWD steep slope overlay district and would create an increase in slope stability risks with concentrated infiltration features.
- Capture and reuse was considered at both pond locations but quick discarded due to the risks associated with longer-term ponding of water at the Bramble Pond location and the lack of area to irrigate or provide other beneficial use for the captured runoff.

- Pervious pavement was considered for the trail segments along the bluff section of roadway to serve as abstraction and to improve the safety of the trail surface during snowmelt and/or icy conditions. This approach was discarded in favor of tipping the trail out to the ditches to disconnect it from the roadway drainage system and to get some smaller event abstraction in the vegetated ditches (not specifically quantified since the trail segments are exempt).
- Tree trenches with and without an underground infiltration component were considered in the ditch sections at the locations of the ditch checks, however these were discarded due to the risks mentioned above for increasing the potential for seepage and resulting slope stability concerns.

K:\TWC\_Civil\City CHANHASSEN\TH 101\_CSAH 14--61 FINAL DESIGN\CAD\Plan Sheets\Exhibits\TH101\_Creekwood Connection Wetland.dwg, LAYOUT: 10/17/2019 8:12 AM



HWL Summary		
Event	Ex	Pr
2-Yr	914.12	914.11
10-Yr	914.60	914.30
100-Yr	915.40	914.97

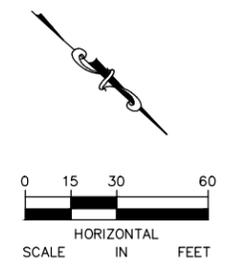
Niemela Wetland			
Existing		Proposed	
Stage	Storage	Stage	Storage
912	17		
913	887		
914	6,168	914	2,024
915	36,021	915	28,616
916	65,169	916	54,649
917	100,647	917	86,808

Existing at Elev. 915 = 25,091 CF

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
910.53	5	0	0
911.00	10	4	4
912.00	17	14	17
913.00	887	452	469
914.00	6,168	3,528	3,997
915.00	36,021	21,095	25,091
916.00	65,169	50,595	75,686
917.00	100,647	82,908	158,594

Proposed at Elev. 915 = 15,320 CF

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
914.00	2,024	0	0
915.00	28,616	15,320	15,320
916.00	54,649	41,633	56,953
917.00	86,808	70,729	127,681



No.	Date	Revisions	App.	DRAWING NAME
				TH101_Creekwood Connection Wetland
				DESIGNED BY: ART
				DRAWN BY: ART
				CHECKED BY: RBL
				DATE: 08/30/2019
				PROJECT NO. 160511044

**Kimley»Horn**  
 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114  
 PHONE: 651-645-4197  
 WWW.KIMLEY-HORN.COM

EXHIBIT A  
 NIEMELA WETLAND  
 SUMMARY



CITY OF CHANHASSEN  
 CSAH 101 IMPROVEMENTS  
 PIONEER TR TO FLYING CLOUD DR  
 CREEKWOOD DR CONNECTION  
 STORM SEWER  
 PLAN AND PROFILES  
 STA. 177+36 TO STA. 181+36

CITY PROJECT	14-08	SHEET NO.	1
COUNTY PROJECT			
S.A.P.	194-020-014		
S.A.P.	010-701-004		

1

**From:** [Leaf, Ron](#)  
**To:** [Scott Sobiech](#)  
**Cc:** [Terry Jeffery](#); [Larson, Chadd](#)  
**Subject:** RE: RPBCWD Permit 2019-024 CSAH 101 - Completeness review and initial comments  
**Date:** Wednesday, November 27, 2019 8:37:46 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)

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**CAUTION:** This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Scott,

I've been evaluating additional options (conceptually) with the model to see what types of things might have the greatest effect on reducing the snowmelt rate at the PCH Pond outlet into Bluff Creek. Here is a summary of those options thus far:

- A. Operational action to plug the primary outlet from the Bramble Pond going south prior to anticipated (100-yr 10-day) snowmelt. Still result sin an increase at the discharge point from 12.8 cfs to 15.6 cfs. The other off site areas that get captured in the trunk line still contribute to the system such that the rate cannot meet existing. This approach would route the entire snowmelt flow to the east ravine, so not ideal. This would also clearly be a challenge operationally to manually plug the outlet then have to remove the plug to be ready for spring rain events.
- B. Modify PCH Pretreatment cell outlet structure (multi-stage options) to take advantage of available storage. This has minimal effect.
- C. Modify PCH outlet structure (several multi-stage options) to better manage flows and store additional volume during the snowmelt. Again, this has relatively little effect on the peak discharge due to the volume of snowmelt.
- D. Add 5,000- 10,000 SF surface area at the bottom of the basin (and modify the outlet to take advantage of the additional storage). This has little effect, just not enough storage to shave the peak much. At this point grading an additional 5,000 - 10,000 SF of bottom surface area maybe feasible, and we are working on maximizing the amount we can get to bump the TSS removal up. I'm guessing we'll get somewhere on the lower end of that range.
- E. What storage will work? Using the existing basin stage-storage and modifying the storage multiplier and modifying the outlet structure in various configurations (including 8-9 inch primary outlets and v-notch options) results in needing somewhere in the 2.3 to 2.8 times the current storage volume in order the meet the snowmelt rate control at this discharge point. That's clearly beyond what we could grade in this area. In terms of underground storage or oversized pipes, the additional volume is on the order of 200,000 – 300,000 CF. Using a cost range for underground detention of \$5-\$10/CF, that somewhere in the \$1M plus range. Regarding retaining walls, they could easily be that same cost or higher and still not get the volume we would need.

I offer these to get your feedback on how much analysis you feel is necessary to demonstrate we've looked at options and frame the magnitude of additional infrastructure that would be needed to meet the snowmelt rate. In addition, I've done a little research on when snowmelt rates should be

evaluated. What I've found suggests in some stream/river systems the snowmelt rates can be the highest rates every year, which makes sense in the mountain/western regions. That's not the case here. I'm curious what you may have seen and if there was any additional background/research that went into this portion of the rules when they were developed.

Thanks

Ron

**Ron Leaf, PE** | Senior Project Manager

**Kimley-Horn** | 767 Eustis Street, Suite 100, St. Paul, MN 55114

Direct: 612 294 9742 | Mobile: 651 443 2604

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**From:** Scott Sobiech <SSobiech@barr.com>

**Sent:** Tuesday, November 26, 2019 2:30 PM

**To:** Leaf, Ron <Ron.Leaf@kimley-horn.com>

**Cc:** Terry Jeffery <tjeffery@rpbcwd.org>; Larson, Chadd <Chadd.Larson@kimley-horn.com>; Scott Sobiech <SSobiech@barr.com>

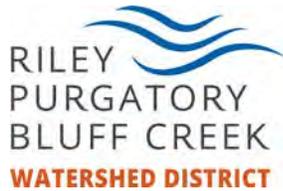
**Subject:** RE: RPBCWD Permit 2019-024 CSAH 101 - Completeness review and initial comments

Ron

Thank you for submitting the updated information. I have just started working through the submittal and noticed that the project does not meet the 90% TSS removal. Because of the high groundwater it is not possible for the District to credit the infiltration approach. I believe the P8 modeling could be adjusted to account for treatment in the vegetated swales within RPBCWD to potentially demonstrate compliance with the 90% requirement. If modeling adjustments do not demonstrate compliance with the 90%, the design needs to be revised to achieve 90% TSS removal. It appears that additional dead storage volume in PCH would allow the project to achieve the 90% removal. It seems like outlet modifications and raising the berm could achieve additional treatment. This might even help reduce the magnitude of the snowmelt rate control variance request. Additional modeling revisions and/or design changes need to be provided.

A variance could be requested but additional technical information (alternatives assessment) would be need to support the request. Also, RPBCWD has not had a WQ variance and the ultimate discharge is to an impaired water. The alternatives associated with a variance request need to show how you attempted alternative designs in order to minimize the size of the variance.

Related to the snowmelt rate control variance request, a summary of the alternatives evaluated and how the proposed design minimizes the variance request (ie modeling results and how it impacts the flow) needs to be provided. Also, the narrative provided dismisses the use of retaining walls to increase storage but no cost or potential benefit to reduce flow are provided. The narrative does not address the use of underground storage chambers or pipe sections to help minimize the variance. These design changes need to be pursued and the detailed technical information must be provided to support the requested variance.



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

## Riley Purgatory Bluff Creek Watershed District Permit Application Review

**Permit No:** 2019-043

**Considered at Board of Managers Meeting:** December 11, 2019

**Received complete:** October 18, 2019

**Applicant:** West Bay Homes

**Consultant:** Westwood Professional Services, John Bender

**Project:** Cedarcrest Stables – Construction of a 17-lot single-family home subdivision and associated site infrastructure. Two infiltration basins and a wet sedimentation basin will provide storm water quantity, volume and quality control.

**Location:** 16870 Cedarcrest Drive, Eden Prairie, MN

**Reviewer:** Scott Sobiech, PE, Barr Engineering

**Rules: Applicable rules checked**

### **Potential Board Variance Action**

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolution based on the permit report that follows, the presentation of the matter at the December 11, 2019, meeting of the managers and the managers' findings, as well as the factual findings in the permit report that follows:

Resolved that variances 1 and 2, for Permit 2019-043 are approved, subject to the following conditions:

1. [CONDITION(S)]

### **Proposed Board Action**

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolution based on the permit report that follows and the presentation of the matter at the December 11, 2019 meeting of the managers:

Resolved that on determination by the RPBCWD administrator that the conditions of approval of the variances and permit have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver to the applicant, Permit 2019-043 on behalf of RPBCWD.

**Upon vote, the resolution were adopted, [VOTE TALLY].**

**Rule Conformance Summary**

Rule	Issue	Conforms to RBPCWD Rules?	Comments
<b>C</b>	<b>Erosion Control Plan</b>	See Comment	See Rule Specific Permit Conditions C1
<b>J</b>	<b>Stormwater Management</b>	Rate	See Comment
		Volume	See Comment
		Water Quality	Yes
		Low Floor Elev.	Yes
		Maintenance	See Comment
		Chloride Management	Yes
		Wetland Protection	NA
<b>K</b>	<b>Variances and Exceptions</b>	Yes	
<b>L</b>	<b>Permit Fee</b>	See Comment	\$3,000 was received October 18, 2019. Additional \$2,000 for variance analysis permit fee
<b>M</b>	<b>Financial Assurance</b>	See Comment	The financial assurance has been calculated at \$144,460.

**Background**

The project proposes the construction of a 17-lot single-family home subdivision, 600 feet of new roadway, conversion of 300 feet of 12-foot wide private road to a 28-foot wide public roadway, and associated site infrastructure on a site that currently includes one single-family home and commercial business. The existing open space is a combination of open grassland and wooded areas. The project includes two infiltration basins and a wet sedimentation basin to provide storm water quantity, volume and quality control.

Permit application 2017-007 and associated variance requests were conditionally approved by the board of managers at the June 7, 2017 regular meeting for nearly the identical project on the same property. The conditions of the 2017 approval were not fulfilled and the conditional approval expired in June 2019. The primary changes between the project proposed as part of permit 2017-007 and the current application (permit 2019-043) include the elimination of two infiltration basins in favor of runoff to the existing onsite depression for stormwater management.

The project site information is summarized below:

	Project Total
Existing Site Impervious (acres)	1.3
Existing Impervious Area Disturbed (acres)	1.3
New (Increase) in Site Impervious Area (acres)	0.8 (62% increase)
Proposed Impervious Area (acres)	2.1
Reconstructed/Disturbed Impervious Area (acres)	1.3 (100% disturbance)
Exempt Trail and Sidewalk Area (acres)	0.3
Total Disturbed Area (acres)	8.0
Total Site Area (acres)	10.7

Exhibits:

1. Permit Application dated October 18, 2019.
2. Design Plan Sheets (Sheets 1-11) dated October 18, 2019 (revised November 13, 2019).
3. Stormwater Management Plan dated October 17, 2019 (revised November 12, 2019).
4. P8 Model received October 18, 2019 (revised November 14, 2019).
5. HydroCAD Model received October 18, 2019 (revised November 14, 2019).
6. Geotechnical Evaluation Report by Braun Intertec dated October 28, 2014.
7. DWSMA Analysis dated January 9, 2017.
8. Green Infrastructure Narrative dated December 9, 2016.
9. Stormwater Pollution Prevention Plan dated October 18, 2019.
10. Response to Comments received November 14, 2019.
11. Variance Request Narrative dated October 17, 2019 (revised November 12, 2019).
12. Stormwater Supplemental Memorandum dated November 12, 2019
13. Engineer's opinion of probable construction cost dated November 13, 2019
14. Infiltration Testing results dated November 7, 2019.

## **Rule Specific Permit Conditions**

### **Rule C: Erosion and Sediment Control**

Because the project will involve 8.0 acres of land-disturbing activity, 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 Westwood Professional Services includes installation of silt fence, inlet protection, a rock construction entrance, restoration with six inches of topsoil, decompaction of areas compacted during construction, and retention of native topsoil onsite. To conform to the RPBCWD Rule C the following revisions are needed:

- C1. The name and contact information of the general contractor responsible for the site must be provided. RPBCWD must be notified if the responsible individual changes during the permit term.

### **Rule J: Stormwater Management**

Because the project will disturb 8.0 acres of surface area, the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1). The criteria listed in Subsection 3.1 will apply to the entire site because the project will disturb more than 50% of the existing impervious surface on the parcel (Rule J, Subsection 2.3).

The developer is proposing two infiltration basins and a wet sedimentation basin to provide the required rate control, volume abstraction and water quality treatment on the site. Pretreatment for the infiltration basin 1PIP is provided by sump manholes and pretreatment for infiltration basin 3PPis provided by vegetated filter strips.

### ***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. 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 table below.

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
1EP/1PSP	9.0	2.5	18.8	7.3	38.7	24.2	3.4	3.0
3EP/3PP	0.0	0.0	1.5	0.7	17.9	14.2	1.1	1.1
4ES/4PP	0.1	0.3	0.3	0.5	0.9	1.2	<0.1	<0.1
5ES/5PP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6ES/6PP	1.1	1.5	2.3	2.7	4.7	5.1	0.1	0.1

The proposed stormwater management plan will provide rate control in compliance with the RPBCWD requirements for the 2-, 10-, and 100-year events at the eastern and western discharge points (1EP/1PSP, 3EP/3PP, & 5ES/5PP in the table above). The conversion of Cedarcrest Drive from a private road approximately 12 feet wide to a 28-foot wide public roadway and the construction of additional driveways causes an increase to the discharge to the east and west at the southern parcel boundary by between 0.2 to 0.4 cubic feet per second. The overall site discharge in proposed conditions is lower than that in existing conditions. Because the Applicant cannot meet rate control requirements at the southern discharge points, a variance is requested. See variance discussion under Rule K below for additional detail. Otherwise, the proposed project meets the rate control requirements in Rule J, Subsection 3.1a.

**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 7,187 cubic feet is required from the 1.8 acres (78,408 square feet) of impervious area on the project for volume retention. The Applicant proposes two infiltration basins with pretreatment for the infiltration basin 1PIP provided by sump manholes and pretreatment for infiltration basin 3PP provided by vegetated filter strips.

Soil borings performed by Braun Intertec show that soils in the project area are clayey sand with underlying poorly graded sand; the MN Stormwater Manual indicates an infiltration rate of 0.45 inches per hour for the poorly graded sand is appropriate. The proposed BMPs will include over-excavation to reach the poorly graded sand layer. Soil borings performed by Braun Intertec show no groundwater to a boring elevation of 833.9 feet. This indicates that groundwater is at least 3 feet below the bottom of the proposed infiltration basins (Rule J, Subsection 3.1.b.ii). An abstraction volume of 16,045 cubic feet is provided by the proposed infiltration basins. The table below summarizes the volume abstraction on the

site. The proposed design does not provide abstraction of runoff from about 12% of the proposed impervious area of the parcel. The applicant proposes to compensate for the shortfall by enlarging the proposed infiltration basins to abstract runoff from some of the offsite impervious areas that flow to the site from the surrounding developed residential neighborhood. The applicant has requested a variance from the abstraction criterion, relying on abstraction of runoff from offsite offset the shortfall from the abstraction standard (see variance discussion below).

Site Location	Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)
Main Infiltration Basin and Back-yard Infiltration Area	1.1	6,349	16,045
Custom Lot Drives & Cedarcrest Drive	1.1	838	0
Total Site	1.1	7,187	16,045

**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, and no net increase in TSS or TP loading leaving the site from existing conditions. The Applicant is proposing a subsurface infiltration system to achieve the required TP and TSS removals and submitted a P8 model to estimate the TP and TSS removals. The results of this modeling are summarized in Tables below showing the annual TSS and TP removal requirements are achieved and that there is no net increase in TSS and TP leaving the site. The engineer concurs with the modeling, and finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

**Annual TSS and TP removal summary:**

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	2,006	1,805 (90%)	1,813 (90.4%)
Total Phosphorus (TP)	6.5	3.9 (60%)	4.4 (67%)

**Summary of net change in TSS and TP leaving the site**

<b>Pollutant of Interest</b>	<b>Existing Site Loading (lbs/yr)</b>	<b>Proposed Site Load after Treatment (lbs/yr)</b>	<b>Change (lbs/yr)</b>
Total Suspended Solids (TSS)	1,090	192.6	-897
Total Phosphorus (TP)	3.9	2.1	-1.7

***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.

<b>Location Riparian to Stormwater Facility</b>	<b>Low Floor Elevation of Building (feet)</b>	<b>100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)</b>	<b>Freeboard (feet)</b>	<b>Provided Distance Between Building and Adjacent Stormwater Feature (feet)</b>	<b>Required Separation to Groundwater based on Appendix J, Plot 1 (feet)</b>	<b>Provided Separation to Groundwater based on Appendix J, Plot 1 (feet)</b>
Lot 1	853.4	849.02 (Wet Sedimentation Basin)	4.38			
Lot 2	852.2	849.02 (Wet Sedimentation Basin)	3.18			
Lot 3	852.1	849.02 (Wet Sedimentation Basin)	3.08			
Lot 4	855.9	849.02 (North Infiltration Basin-1P1S)	6.88			

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 Groundwater based on Appendix J, Plot 1 (feet)	Provided Separation to Groundwater based on Appendix J, Plot 1 (feet)
Lot 5	857.2	849.02 (North Infiltration Basin-1P1S)	8.18			
Lot 6	855.5	849.02 (Wet Sedimentation Basin)	6.48			
Lot 7	855	849.02 (Wet Sedimentation Basin)	5.98			
Lot 8	855.3	841.66 (Southern Infiltration Basin-3PP)	13.64			
Lot 9	855.3	841.66 (Southern Infiltration Basin-3PP)	13.64			
Lot 10	857.1	841.66 (Southern Infiltration Basin-3PP)	15.44			
Lot 11	850	841.66 (Southern Infiltration Basin-3PP)	8.34			
Lot 12	849	841.66 (Southern Infiltration Basin-3PP)	7.34			

Lot 13	848	841.66 (Southern Infiltration Basin-3PP)	6.34			
RCR Lot 1	855.9	849.02 (Wet Sedimentation Basin)	6.88			
RCR Lot 6	851.7	849.02 (Wet Sedimentation Basin)	2.68			
9360 Shetland Rd.	845.2	841.66 (Southern Infiltration Basin-3PP)	3.54			
9374 Shetland Rd.	839.08	841.66 (Southern Infiltration Basin-3PP)	-2.58	66	5.25	7.1
9388 Shetland Rd.	845	841.66 (Southern Infiltration Basin-3PP)	3.34			
16974 Cedarcrest Dr.	838.9	841.66 (Southern Infiltration Basin-3PP)	-2.76	137	1.25	6.9
16922 Cedarcrest Dr.	838.6	841.66 (Southern Infiltration Basin-3PP)	-3.06	130	1.5	6.6

An analysis in accordance with Appendix J1 was completed for the proposed homes and adjacent stormwater feature when the low floor elevation of the proposed home was less than the required 2 feet above the 100-year event flood elevation of the adjacent stormwater feature. There are two borings in the area of the proposed basins and houses in question. Neither of the borings showed water in the first 19.5 feet (817.6 and 835.6), so RPBCWD engineer concurs with the applicant’s assumed groundwater level at elevation 832 based on the normal water level in a nearby downstream wet pond.

The low floor elevations of the existing off-site homes at 9374 Shetland Rd., 16974 Cedarcrest Dr., and 16922 Cedarcrest Dr. are less than the required 2 feet above 100-year event flood elevation of west infiltration basin and east existing low area. The applicant completed an analysis in accordance with Appendix J1 for these homes as summarized in the above table. Based on the analysis provided the engineer concurs that the low floors of the existing structures will be in compliance with Plot 1 in Appendix J1.

The RPBCWD Engineer concurs that the proposed project is in conformance with Rule J, Subsection 3.6.

### ***Maintenance***

Subsection 3.7 of Rule J requires the submission of a 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. The stormwater management facilities include the wet pond and infiltration basins on the north side of the road between Valley Road and Stirrup Lane, sump manhole structures, and the existing low area between Lots 8-10 and Lots 11-13 because the area is relied on for rate control, volume abstraction, and water quality treatment.

- J1. Permit applicant must provide a maintenance and inspection declaration. A maintenance declaration template is available on the permits page of the RPBCWD website. (<http://www.rpbcwd.org/permits/>). A draft declaration must be provided for District review prior to recording.

### ***Chloride Management***

Subsection 3.8 of Rule J requires the submission of chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan. Under the policy in adopted resolution 2019-009, the RPBCWD chloride-management plan requirement applies to the streets and common areas of the project site, but not the individual single-family homes. Because the streets within the proposed residential development will be within public right of way that will be maintained by the city of Eden Prairie and the City has provided its chloride management plan and its designated state-certified chloride applicator is Eden Prairie's Streets Division Manager Larry Doig, the proposed development conforms with Rule J, subsection 3.8.

### **Rule K: Variances and Exceptions**

The Applicant has requested two variances from the RPBCWD stormwater management requirements.

Rule K requires the Board of Managers to find that because of unique conditions inherent to the subject property the application of rule provisions will impose a practical difficulty on the Applicant. Assessment of practical difficulty is conducted against the following criteria:

1. how substantial the variation is from the rule provision;

2. the effect of the variance on government services;
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;
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;
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
6. in light of all of the above factors, whether allowing the variance will serve the interests of justice.

It is the applicant's obligation to address these criteria to support a variance request. The applicant's variance requests cite several facts related to the development in support of each request, taken from their November 14, 2019 submittal, are attached to this review. Following is the RPBCWD engineer's assessment of information received relevant to the applicant's variance requests

### ***Variance Request #1***

The first variance request is from the requirements of Rule J, Subsection 3.1a of the stormwater management rule which states that peak runoff flow rates for proposed condition must be limited 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 (Rule J, subsection 3.1a). The applicant is proposing to increase the discharge to the east and west at the southern parcel boundary along the proposed Cedarcrest Drive by between 0.2 to 0.4 cubic feet per second for the southeast and southwest areas respectively.

- Related to variance criterion 1 – the increased rates from both the southeast area (approximately 0.3 cfs for the 100-year storm) and the southwest (approximately 0.4 cfs for the 100-year storm) represent a 35.6% and 8.5% increase respectively over existing conditions.
- More important and related to variance criterion 3 – The southeast area consists of 0.19 acres with 0.06 acres of proposed impervious surface. The proposed 8-foot trail (0.02 acres of impervious surface) will be treated by the 4-foot vegetated boulevard between the trail and Cedarcrest Drive, and the remaining 0.04 acres of impervious will either overland flow through woods or be conveyed to existing storm sewer system via street curb and gutter to an existing stormwater basin for treatment before entering Riley Creek. The southwest area contains 0.54 acres with 0.21 acres of impervious surface. The proposed trail (0.04 acres) within the southwest area will be treated by the pervious boulevard between the trail and Cedarcrest Drive, and the remaining 0.17 acres of impervious will either flow overland through the woods or be conveyed to the existing storm sewer system via street curb and gutter to an existing stormwater basin for treatment before entering Riley Creek. Also, the overall site discharge in proposed conditions is lower than that in existing conditions by 19.8 cfs.

The applicant provided a supplemental stormwater analysis on November 14, 2019 to assess the capacity of two downstream stormwater ponds owned by the city that receive runoff from the site. The discharge from each of these ponds is directly tributary to Riley Creek. The tables

below compare the flood elevations, peak discharge rate, and discharge volume for the existing ponds. The results of the modeling provided by the applicant are summarized in the below table and demonstrate that the post project discharge from the southeast pond reaching Riley Creek will be less than existing 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. Also, the 100-year flood elevation for the Southwest Pond under proposed conditions results in a 0.6 cfs increase in the discharge rate to Riley Creek, representing a small increase relative to the 100-year flow in Riley Creek.

Paramter	Design Event	Southwest Pond		Southeast Pond	
		Existing	Proposed	Existing	Proposed
Discharge Rate (cfs)	2-year	11.7	11.8	19.0	14.5
	10-year	16.3	16.4	40.3	31.3
	100-year	103.9	104.5	105.2	85.3
	100-year Snowmelt	4.6	4.6	7.6	7.2
Flood Elevation (feet)	2-year	834.8	834.82	776.41	776.29
	10-year	836.58	836.60	776.89	776.70
	100-year	837.83	837.84	778.03	777.70
	100-year Snowmelt	833.20	833.20	776.10	776.06
Discharge volume (acre-feet)	2-year	2.5	2.5	4.0	3.7
	10-year	4.4	4.4	7.6	7.2
	100-year	9.5	9.5	17.9	17.2
	100-year Snowmelt	14.3	14.3	24.7	22.6

- Technical measures incorporated into the project plan to alleviate the practical difficulty (variance criterion 4) include directing downspouts to rear yard infiltration/treatment areas rather than toward the street, and the vegetated boulevard between the road and proposed trail to reduce the runoff rates leaving the site. The applicant also considered using pervious pavement for the street section but the city would not allow the material for a public roadway. The applicant indicated that given the close proximity of the two existing ends of Cedarcrest Drive that the project connects to (300' apart), it isn't feasible to neck the road down to a reduced width to less than 28 feet.
- With regard to variance criterion 5, the applicant created the need for the variance. The existing steep topography, existing woods and heritage trees (deciduous trees with a diameter of at

least 32 inches), and the existing gas pipeline easement restrictions – site conditions that the applicant did not create or exacerbate – limit the applicant’s ability to route flows to the propose BMP on this site and restrict the applicant’s ability to provided BMPs on the southeast and southwest portion of the site. .

- In summary, the increase in peak runoff rate from the southeast and southwest portion of the site does not present a material risk to downstream properties or Riley Creek.

The engineer finds there is an adequate technical basis for the managers to rely on to grant the requested variance #1.

### ***Variance Request #2***

The second variance request is from the requirement of Rule J, Subsection 3.1b of the stormwater management rule which states the proposed project must provide for the abstraction onsite of 1.1 inches of runoff from impervious surface of the parcel. The proposed design does not provide abstraction of runoff from roughly 12% of the proposed impervious area on the parcel. The applicant proposes to compensate for the shortfall by enlarging the proposed infiltration basin to abstract runoff from some of the offsite impervious areas that flow to the site from the surrounding developed residential neighborhood.

- Related to variance criterion 1 – the proposed design does not provide abstraction of runoff from roughly 12% of the proposed disturbed impervious area on the parcel.
- To help demonstrate that the project will not 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 (variance criterion 3), the applicant provided computations showing a net reduction of 0.67 acre-feet in runoff volume from the existing to proposed conditions for the 100-year, 24-hour event.
- The applicant has taken measures relevant to variance criterion 4 to offset the shortfall from the abstraction requirement: The proposed site requires an abstraction volume of 7,187cubic feet and the proposed basins have an abstraction volume of 16,045 cubic feet. Runoff from offsite impervious areas from the surrounding developed residential neighborhood will flow to the site and the basins, and runoff from the impervious areas of the site that do not run to onsite treatment facility will enter downstream treatment basins maintained by the city of Eden Prairie before entering Riley Creek. The applicant has also directed downspouts to rear yard infiltration/treatment areas rather than toward the street, and included a vegetated buffer strip between the road and proposed trail to improve treatment of the trail runoff. At the same time, treatment of runoff from off site is subject to changes in the area draining to the site, over which the applicant and subsequent property owners have no control.
- With regard to variance criterion 5, the existing steep topography, existing woods and heritage trees, and the existing gas pipeline easement restrictions – site conditions that the applicant did not create or exacerbate – cause to a substantial degree the need for the variance.

- In summary, although the proposed design does not provide a way for all the regulated impervious surface runoff to get to the proposed treatment areas, it does provide enough capacity to abstract 16,045 cubic feet of impervious surface runoff from the site and surrounding neighborhood which currently receives no abstraction, thus not presenting a material risk to downstream properties or infrastructure.

The engineer finds there is an adequate technical basis for the managers to rely on to grant the requested variance #2.

**Rule L: Permit Fee:**

Fees for the project are:

Rule C, J , and K .....\$5,000

The RPBCWD permit fee schedule adopted in January 10, 2019 indicates a total permit fee of \$5,000 is required (\$1,500 for triggering rule C, \$1,500 for triggering Rule J and \$2000 for the variance request). On October 18, 2019 the applicant provided a check for \$3,000 for the Rule C and J analysis. Therefore, an outstanding permit fee of \$2,000 remains for the variance analysis.

In addition, the permit review conducted for permit 2017-007, which was conditionally approved in June 2017, included an excess cost of recovery of \$4,417.30, which remains unpaid.

**Rule M: Financial Assurance:**

Rules C: Silt fence and bio-logs: 4,700 L.F. x \$2.50/L.F. = .....\$11,750  
 Inlet protection: 8 x \$100 =.....\$800  
 Rock Entrance: 17 x \$900 =.....\$15,300  
 Restoration: 8 acres x \$2,500/acre = .....\$20,000  
 Rules J: Stormwater Facilities: \$66,782 x 125% of engineer’s opinion of cost= .....\$83,478  
 Contingency (10%) .....\$13,133  
 Total Financial Assurance.....\$144,460

**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 financial assurance 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 Applicant has requested a variance from compliance with the Rule J criteria related to not increasing the discharge rate at all points where stormwater runoff leaves the site.
3. The Applicant has requested a variance from compliance with the Rule J criteria related to providing 1.1 inches of volume abstraction from all impervious areas on the parcel.
4. The proposed project will conform to Rule C if the Rule Specific Permit Conditions listed above are met; the applicant is requesting a variance from the rate-control and abstraction requirements of Rule J.
5. The applicant indicated on the application form the estimated completion date for the project to be December 31, 2024.

## **Recommendation:**

1. On confirmation from the applicant that the December 31, 2024 completion date represents a request for the permit to extend through that time, a two-year permit term is recommended.
2. Approval of the permit contingent upon:
  - a. Continued compliance with General Requirements.
  - b. Financial Assurance in the amount of \$144,460.
  - c. Applicant providing the name and contact information of the individual responsible for erosion and sediment control at the site.
  - d. Permit Applicant must provide for maintenance and inspection of the stormwater facilities in perpetuity. The City of Eden Prairie has agreed to assume maintenance and inspection responsibilities for the detention and infiltration basins on the north side of the road between Valley Road and Stirrup Lane on behalf of the Applicant. For RPBCWD to approve the permit with this arrangement, the applicant must provide for review and approval documentation showing:
    - i. a binding commitment from the city to RPBCWD and the applicant, by which the city assumes the maintenance responsibility on behalf of the applicant;
    - ii. commitment from the applicant as property owner to the city providing the necessary property rights to enter the property/ies on which the facility/ies are located and conduct the necessary maintenance activities.

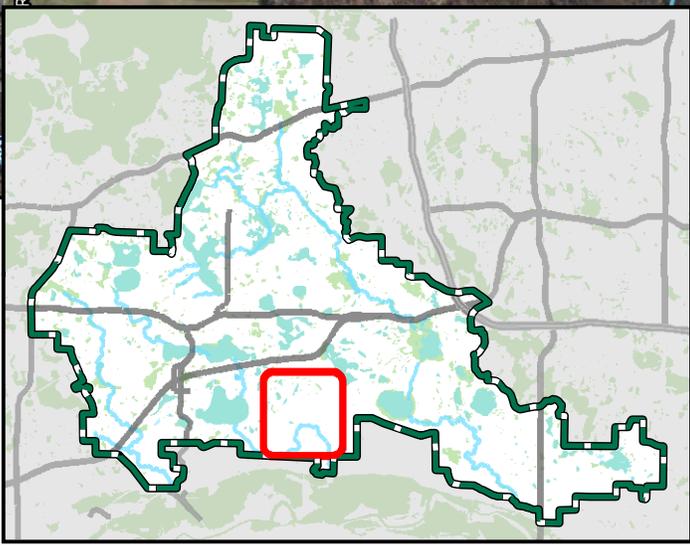
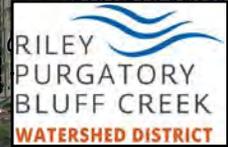
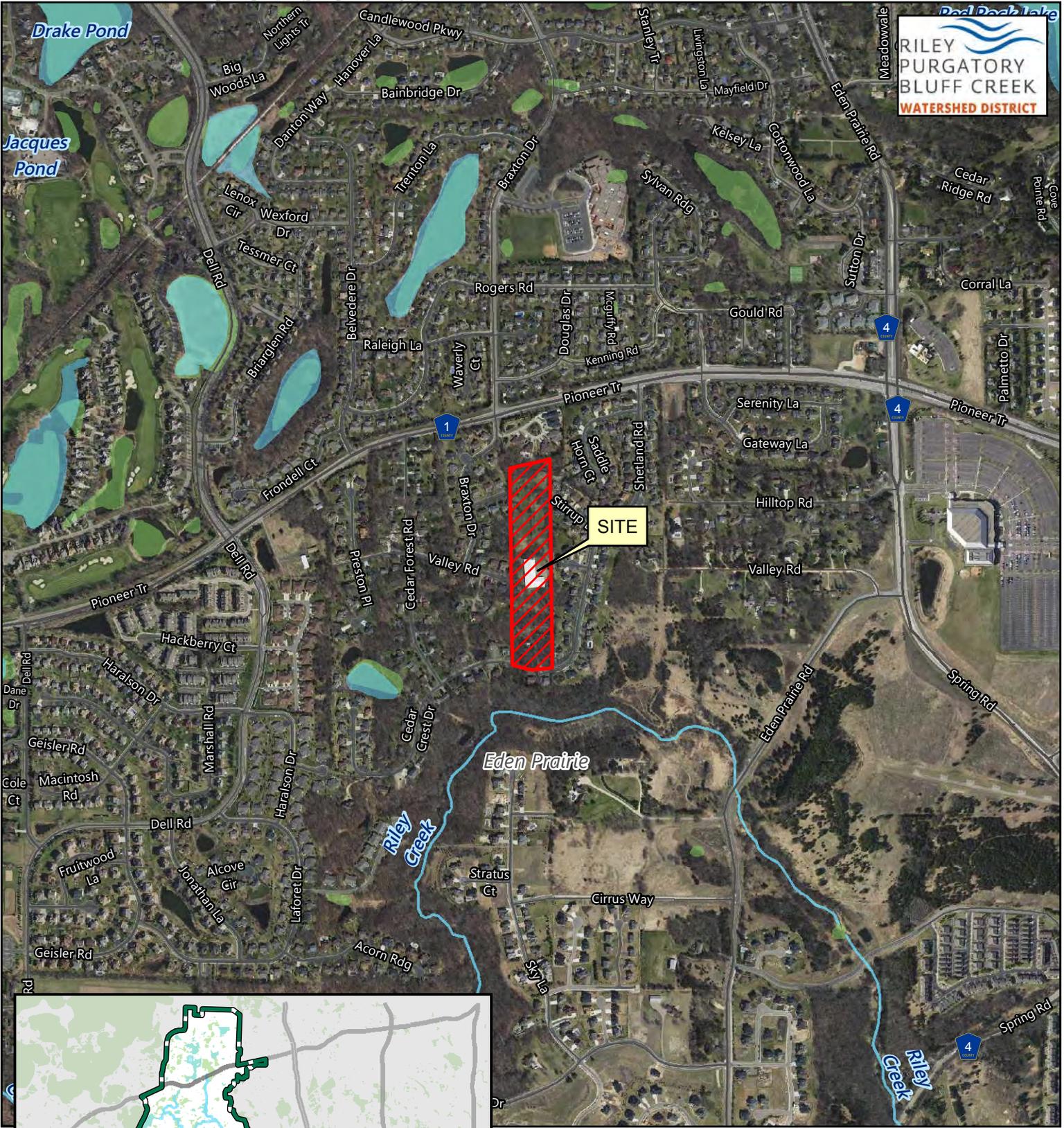
Because the existing low area between Lots 8-10 and Lots 11-13 is relied on for rate control, volume abstraction, and water quality treatment, the permit applicant must also provide a draft maintenance and inspection plan for the this feature in the form of a draft declaration or agreement with the city of Eden Prairie for maintenance into perpetuity. Once approved by RPBCWD, the plan must be recorded in the county

property records in a form acceptable to the District. The maintenance requirements must be enforceable by RPBCWD.

- e. Indemnification of RPBCWD against any claims related to offsite stormwater flow.
- f. Receipt of an additional permit fee of \$2,000 for the Rule K variance analysis.

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.
2. Single-family homes to be constructed on lots in the subdivision created under the terms of permit 2019-043, if issued, must have an impervious surface area and configuration materially consistent with the approved plans to be exempt from additional stormwater permitting requirements. Home design proposed that differs materially from the approved plans in terms of the effect on stormwater flow will be subject to re-review for compliance with all applicable stormwater-management (and other regulatory) requirements.
3. The downspouts for custom lots 11 – 13 must be directed to the north to the existing low area being relied upon for stormwater management.



Feet



Permit Location Map

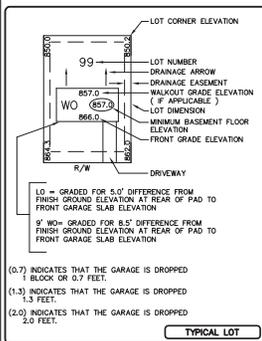
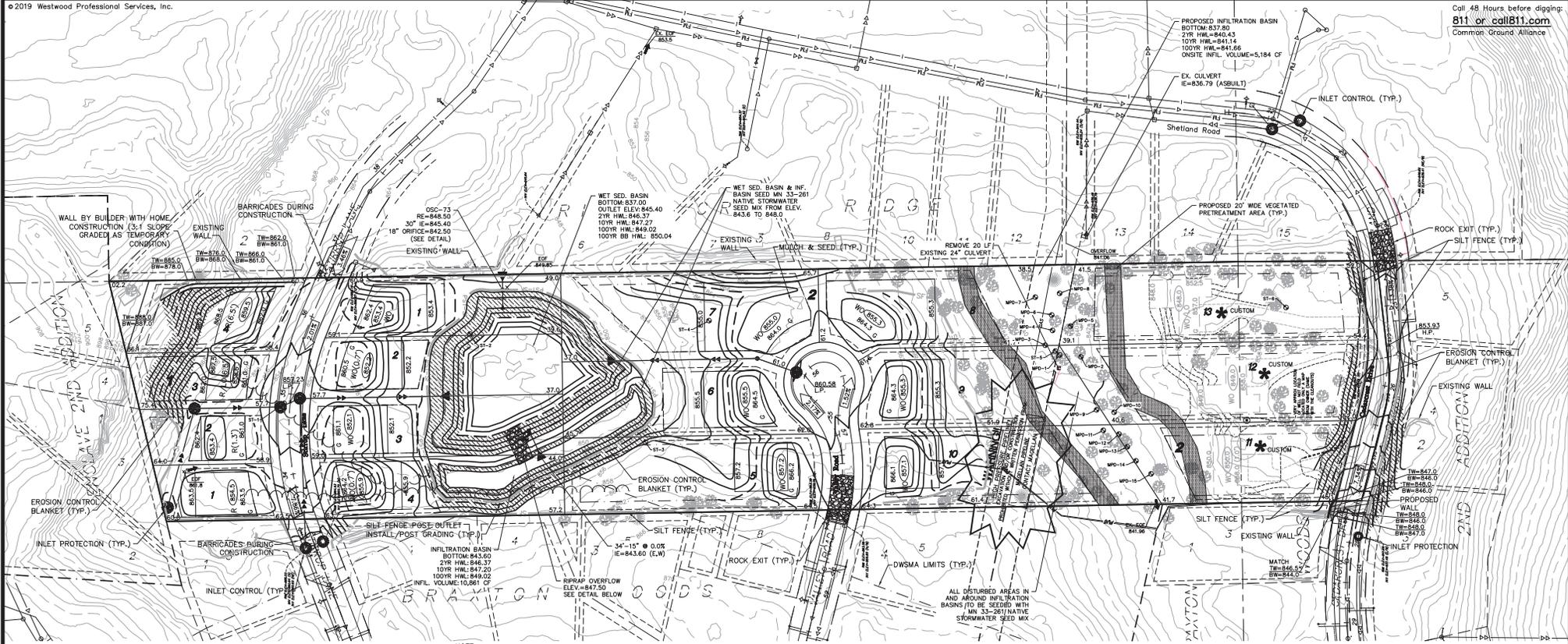
CEDARCREST STABLES

EDEN PRAIRIE

**Permit 2019-043**

Riley Purgatory Bluff Creek

Watershed District



**LEGEND:**

- DENOTES SOIL BORING
- DENOTES SILT FENCE
- DENOTES HEAVY DUTY SILT FENCE
- DENOTES POST GRADING SILT FENCE
- DENOTES EXISTING CONTOURS
- DENOTES PROPOSED CONTOURS
- DENOTES EXISTING STORM SEWER
- DENOTES PROPOSED STORM SEWER
- DENOTES EXISTING TREE LINE
- DENOTES APPROXIMATE TREE REMOVAL LIMITS
- DENOTES EXISTING SPOT ELEVATION
- DENOTES PROPOSED SPOT ELEVATION
- DENOTES FIBER LOGS
- DENOTES EMERGENCY OVERFLOW ELEVATION
- DENOTES BOULDER RETAINING WALL
- DENOTES EROSION CONTROL BLANKET
- DENOTES INLET CONTROL DEVICE
- DENOTES AREAS NOT TO BE DISTURBED

- NOTE:**
- NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED INCLUDING RETENTION ON SITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
  - FINAL SITE STABILIZATION MEASURES MUST INCLUDE PERMANENT STABILIZATION OF ALL AREAS SUSCEPTIBLE 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. NOTE 15 ON SHEET 8 MUST BE REVISED.
  - CONSTRUCTION SITE WASTE MUST BE PROPERLY MANAGED, SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE AT THE CONSTRUCTION SITE.
  - ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.
  - SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.
  - ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED.
  - 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.
  - ALL STREET ACCESS POINTS WITHOUT ROCK CONSTRUCTION ENTRANCES SHALL BE BARRICADED DURING CONSTRUCTION TO PREVENT UNAUTHORIZED ACCESS.
  - ALL DISTURBED AREAS TO BE SEEDDED UNLESS NOTED OTHERWISE: LOTS TO BE SEEDDED WITH MN STATE SEED MIX 25-141 MESC GENERAL ROADSIDE. ALL STORMWATER AREAS TO BE SEEDDED WITH MN STATE NATIVE SEED MIX 33-261 STORMWATER SOUTH AND WEST. SEE PLANS FOR SPECIFIC AREAS TO BE SEEDDED. SEE (SHEET 4) FOR EXACT SEED MIX AND SEEDING RATES.
  - TWO ROWS OF SOD TO BE PLACED ALONG BACK OF CURB. SOD TO BE STANDARD MINNESOTA GROWN AND HARDY BLUEGRASS MIX, FREE OF LAWN WEEDS. ALL TOPSOIL AREAS TO BE RAKED TO REMOVE DEBRIS AND ENSURE DRAINAGE.
  - DO NOT EXCAVATE INFILTRATION SYSTEMS TO FINAL GRADE, OR WITHIN THREE (3) FEET OF FINAL GRADE, UNTIL THE CONTRIBUTING DRAINAGE ARE HAS BEEN CONSTRUCTED AND FULLY STABILIZED UNLESS RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA ARE PROVIDED.
  - WHEN EXCAVATING AN INFILTRATION SYSTEM TO WITHIN THREE (3) FEET OF FINAL GRADE, STAKE OFF AND MARK THE AREA SO HEAVY CONSTRUCTION VEHICLES OR EQUIPMENT DO NOT COMPACT THE SOIL IN THE INFILTRATION SYSTEM.

**NOTE:**

- LOTS 11, 12 & 13 TO ROUTE ROOF DRAINAGE TO REAR YARDS.
  - DRIVEWAYS SHALL HAVE A SLOPE OF 2% MINIMUM TO 10% MAXIMUM.
- \* LOTS 11, 12, 13 TO BE CUSTOM GRADED. HOUSE PADS, CONTOURS, RETAINING WALLS AND ELEVATIONS SHOWN ARE CONCEPTUAL AND SHALL BE VERIFIED WITH BUILDER LOT CERTIFICATES.
- 

- STORMWATER BASIN CONSTRUCTION SEQUENCING:**
- GRADE WET BASIN AND INFILTRATION BASIN WITH MASS GRADING, SEED AND MULCH AS DIRECTED.
  - INFILTRATION BASIN TO REMAIN OFF-LINE THROUGHOUT CONSTRUCTION UNTIL VEGETATION IS ESTABLISHED. THIS IS ACHIEVED BY PLUGGING THE EQUALIZATION PIPE BETWEEN THE WET BASIN AND THE INFILTRATION BASIN.
  - ONCE SITE IS STABILIZED WITH VEGETATION, INFORM THE ENGINEER. ENGINEER WILL DO SITE INSPECTION AND IF SITE IS ADEQUATELY VEGETATED, PROVIDE WRITTEN APPROVAL TO BRING THE INFILTRATION BASIN ON-LINE AT WHICH TIME THE PIPE PLUG CAN BE REMOVED.

**Westwood**  
 Phone (852) 837-5150 12701 Whitewater Drive, Suite 1500  
 Fax (852) 837-5152  
 Web www.westwoodps.com  
 Westwood Professional Services, Inc.

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer.  
  
 John Bender, PE  
 Date 11/13/19 License No. 43338

Revisions	Drawn	Check	Scale
11/23/19 Retained Comments			

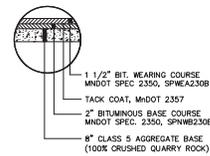
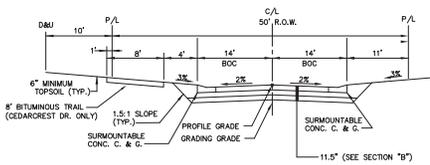
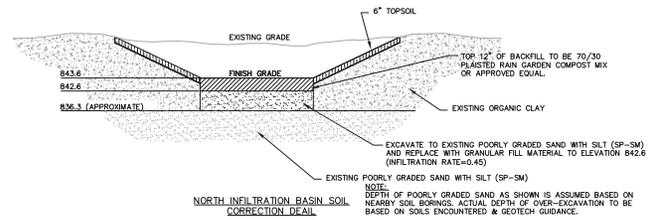
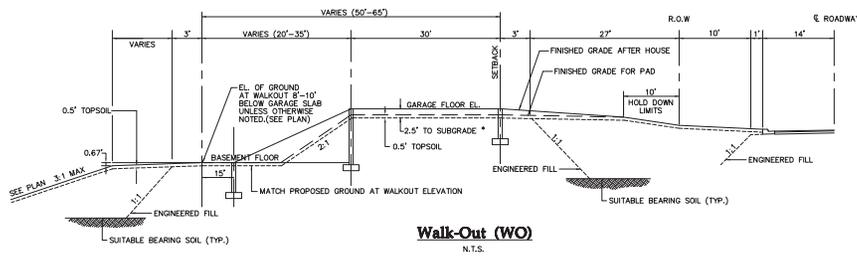
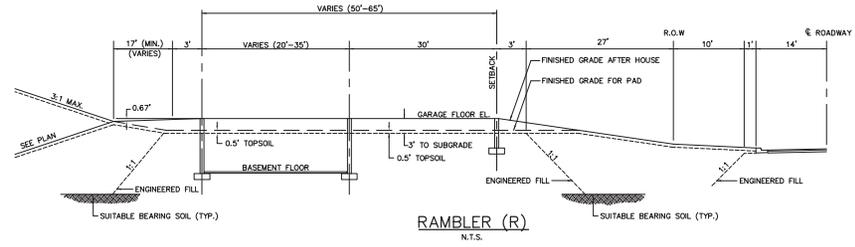
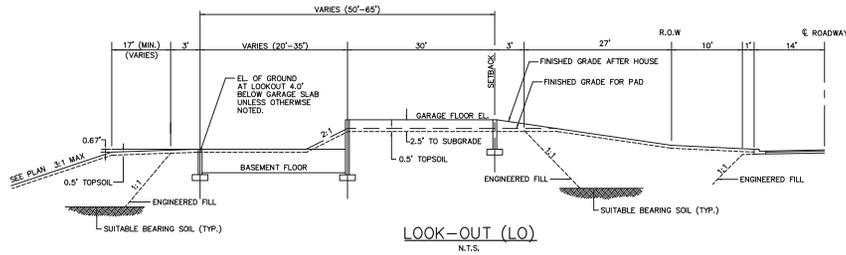
Client	Prepared by
West Bay Homes Corp.	
10425 Bluff Road	
Eden Prairie, Minnesota 55347	

Prepared for:  
**West Bay Homes Corp.**  
 10425 Bluff Road  
 Eden Prairie, Minnesota 55347

**Cedarcrest Stables**  
 Grading & Erosion Control Plan  
 Eden Prairie, Minnesota

Date: 10/18/19 Sheet 3 OF 11





**TYPICAL SECTION PUBLIC STREET**

**TYPICAL PAVEMENT SECTION "B"**

**Westwood**

Phone (852) 837-5150 12701 Whitewater Drive, Suite #500  
 Fax (852) 837-5822 Minneapolis, MN 55434  
 Web (888) 837-5150 [www.westwoodps.com](http://www.westwoodps.com)  
 Westwood Professional Services, Inc.

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly licensed professional engineer.  
  
**John Bender, PE**  
 Date: 11/15/19 License No. 43338

Revisions
11/13/19 Retained Comments

Checked:	JFB
Drawn:	JFB
Design:	CVT
Special Circumstances Applied:	

Prepared for:

**West Bay Homes Corp.**

10425 Bluff Road  
 Eden Prairie, Minnesota 55347

**Cedarcrest  
 Stables**

Eden Prairie, Minnesota

November 12, 2019

Board Members  
Riley Purgatory Bluff Creek Watershed District  
14500 Martin Drive, Suite 1500  
Eden Prairie, MN 55344

**Re: Variance Request for the Proposed Cedarcrest Stables Development**  
File 0024587.00

Dear Members of the Board:

The proposed Cedarcrest Stables development in Eden Prairie has unique site constraints that will require a variance from the Riley Purgatory Bluff Creek Watershed District (RPBCWD) standard rules. This narrative will summarize the variance requests being made by the Applicant that are explored in detail in the stormwater runoff report and construction plans submitted to RPBCWD for review. We appreciate the Board's consideration of our variance requests when reviewing our application.

The proposed development will subdivide approximately 10.65 acres into 17 single-family lots. The existing drainage for the north and east central areas flows to landlocked low areas with culvert outlets. The west central area discharges through a culvert to the east with an overflow to the west and the south portion of the site discharges both to the east and west down the existing Cedarcrest Drive, splitting in the middle of the property.

The proposed stormwater management was designed to meet the rate control, volume abstraction and high water level structure protection of requirements of the city and watershed. This management will include the construction of stormwater basins within the north and central portions of the site. The only areas where these requirements are not met are the south drainages of the site, which drains directly to Cedarcrest Drive which do not meet district requirements for rate control or volume abstraction from new impervious surfaces. These are small areas of the overall development.

Under existing conditions, the southwest area contains 0.10 acres of impervious surface with 4.68 cfs leaving the site. The proposed area is 0.54 acres with 0.21 acres of impervious surface with 5.08 cfs leaving the site. The proposed impervious surface consists of Cedarcrest Drive, a proposed trail, and the residential driveway. The proposed condition increases the impervious area by 0.11 acres and runoff rate by 0.4 cfs. The proposed trail (0.04 acres) will be treated by a swale between the trail and Cedarcrest Drive. The remaining 0.17 acres of impervious will either overland flow through woods or enter the existing storm sewer system and drain to an existing stormwater basin for treatment before entering Riley Creek.

Under existing conditions, the southeast area contains 0.02 acres of impervious surface with 0.87 cfs leaving the site. The proposed area is 0.19 acres with 0.06 acres of impervious surface and 1.18 cfs leaving the site. The proposed impervious surface consists of Cedarcrest Drive, a proposed trail, and the residential driveway. The proposed condition increases the impervious area by 0.04 acres and runoff rate by 0.31 cfs. The proposed trail (0.02 acres) will be treated by a swale between the trail and Cedarcrest Drive. The remaining 0.04 acres of impervious will either overland flow through woods or enter the existing storm sewer system and drain to an existing stormwater basin for treatment before entering Riley Creek.

Variance Request

A rate control and volume abstraction variance is requested for both the southeast and southwest drainage areas of the site. These areas make up a small portion of the total proposed site area, see table below.

Total Site Area (Ac)	Southwest Area (Ac)	Southeast Area (Ac)
10.65	0.54	0.19

The requested areas have the following increase in runoff rate values over existing conditions.

Storm Event	SW Increase in Peak Runoff (cfs)	SE Increase in Peak Runoff (cfs)
2 year	0.40	0.20
10 year	0.44	0.27
100 year	0.40	0.31
10 day SM	0.00	0.00

The whole site has a total runoff rate of 36.35 cfs with 6.26 cfs leaving from the south two basins in the 100-year storm event.

The proposed site requires an abstraction volume of 8,385 cf and the proposed basins have an abstraction volume of 16,045 cf, treating some of the offsite impervious areas that flow to the site. The proposed impervious area that will not have abstraction provided for is 0.2 acres of impervious surface with an abstraction volume of 799 cf for the southwest and 0.06 acres of impervious with an abstraction volume of 240 cf for the southeast. The volume not being treated from these areas is less than the existing impervious that is getting treated by the various basins on site.

During the design the following items were found to limit the effectiveness of the stormwater management bmps in these areas:

- Tree protection of City significant trees and other wooded areas, Appendix A
- City Green Infrastructure Ordinance, Appendix B
- Grade difference between available area for treatment and the proposed road
- Steep grades
- Existing gas pipeline easement
- The property is a small elongated parcel that was previously developed on all sides. This shape, the existing drainage characteristics and proximity to neighboring properties left limited options to stormwater management for the site.

The following design considerations were evaluated and found to be infeasible:

- An underground infiltration trench in southwest was reviewed. This option was found to be infeasible because the slopes would cause the removal of many large trees. In addition it would involve difficult long term maintenance, and the city feels that BMPs in the right of way will likely cause conflicts with the private utilities they typically locate in the right of way. Additionally, the soils in the area are Type D soils that are not conducive to infiltration.
- Proposed vegetated swale/depressions and small infiltration basins for both the southeast and southwest were reviewed. With the reluctance of the city to have small treatment BMPs within the city right of way, the only option would be to push the BMPs north where slopes would cause excessive grading that would disturb existing large trees.
- Reducing the width of the street section was reviewed. The city already has a typical section for residential streets of 28 feet and will not allow them to be any narrower.
- Installation of pervious pavers in the driveways was reviewed. This option was found to be infeasible because the soils in the area are Type D soils, thus the stormwater management benefit would be minimal.

To minimize these areas and their impacts the following additional measures were taken during the design:

- The use of downspouts to redirect the runoff from the roofs to rear yard treatment areas.
- The inclusion of a vegetated buffer strip between the road and proposed trail to provide treatment of the trail.
- Oversizing of infiltration areas to provide additional volume abstraction potential
- Overall the site provides rate control for all events over existing conditions

The proposed design was reviewed and it was determined to cause minimal effects on the following:

- Water Resources – the requested variance will discharge to existing infrastructure designed to convey, control and treat the stormwater, see supplemental narrative
- Flood levels – the variance follows existing drainage patterns with minimal impacts that do not affect flood levels
- Drainage and general welfare – the proposed design follows existing drainage patterns and maintains the existing flood levels
- Substantial detriment to neighboring properties – the majority of the variance flows will be directed to existing or proposed public infrastructure designed to convey the runoff.

### Conclusion

We believe the proposed stormwater management for the Cedarcrest Stables development is the most effective option available. By utilizing the proposed basins and maintaining existing drainage patterns for the site, we are able to protect many of the existing trees. Even though the design does not provide rate control for each discharge point it does reduce the overall runoff rate for the entire site by 19.8 cfs over the existing conditions for a 100 year storm event. In addition, although the proposed design does not provide a way for all the impervious surface runoff to get to the proposed treatment areas it does provide enough abstraction for 4.0 acres of impervious while the proposed site is only adding 2.1 acres of impervious surface. The proposed basins will also provide treatment for existing impervious areas that are not currently being treated.

November 12, 2019  
Page 4

It is our opinion that our variance requests are in the best interests of RPBCWD, the City of Eden Prairie, the neighboring properties, and the Applicant.

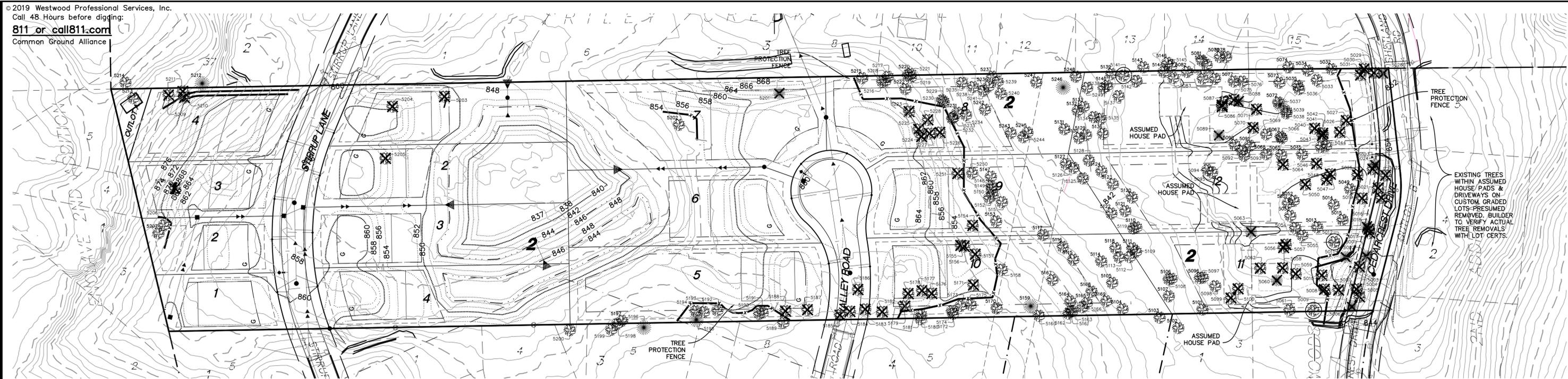
Please contact me if you have any questions.

Sincerely,

WESTWOOD PROFESSIONAL SERVICES

Andrew Nelson, P.E.  
Senior Water Resources Engineer

APPENDIX A  
TREE INVENTORY



**Tree Inventory**

TREE TAG	SPECIES	CAL. IN.	CONDITION	HERITAGE	STATUS
5001	Eastern Red Cedar	18			REMOVE
5002	Red Oak	12			REMOVE
5003	Red Oak	13			REMOVE
5004	Red Oak	15			REMOVE
5005	Red Oak	19			REMOVE
5006	Eastern Red Cedar	14			REMOVE
5007	Basswood	16			REMOVE
5008	Basswood	12			REMOVE
5009	Red Oak	42		Yes	SAVE
5010	Ironwood	12	BD		REMOVE
5011	Eastern Red Cedar	12			REMOVE
5012	Red Oak	34		Yes	SAVE
5013	Red Oak	24	PD		SAVE
5014	Bur Oak	18			SAVE
5015	Red Oak	24			SAVE
5016	Red Oak	13			REMOVE
5017	Red Oak	17			REMOVE
5018	Eastern Red Cedar	10	Multi-Stem		REMOVE
5019	Ash	14			REMOVE
5020	Ash	14			REMOVE
5021	Ash	12			REMOVE
5022	Red Oak	12			REMOVE
5023	Eastern Red Cedar	16			REMOVE
5024	Basswood	12			REMOVE
5025	Ash	14			REMOVE
5026	Bur Oak	35	BD / PD		REMOVE
5027	Hackberry	12			REMOVE
5028	Eastern Red Cedar	8			REMOVE
5029	Hackberry	12			REMOVE
5030	Hackberry	18			REMOVE
5031	Ash	18			REMOVE
5032	Bur Oak	28			SAVE
5033	Ash	14			SAVE
5034	Ash	16			SAVE
5035	Ash	15			SAVE
5036	Ash	12			SAVE
5037	Eastern Red Cedar	16			SAVE
5038	Ash	16			SAVE
5039	Ash	14			SAVE
5040	Ash	15			REMOVE
5041	Ash	15			REMOVE
5042	Ash	15			REMOVE
5043	Ash	12			SAVE
5044	Ash	18			SAVE
5045	Ash	16			SAVE
5046	Ash	14			REMOVE
5047	Ash	14			REMOVE
5048	Ash	15			REMOVE
5049	Ash	13			SAVE
5050	Red Oak	34	BD		REMOVE
5051	Ash	13			SAVE
5052	Ash	15			SAVE
5053	Bitternut Hickory	12			SAVE
5054	Ash	18			SAVE
5055	Ash	15			SAVE

TREE TAG	SPECIES	CAL. IN.	CONDITION	HERITAGE	STATUS
5056	Ash	17			REMOVE
5057	Basswood	20			REMOVE
5058	Basswood	12			REMOVE
5059	Basswood	13			REMOVE
5060	Eastern Red Cedar	12			REMOVE
5061	Ash	16			SAVE
5062	Red Oak	38	BD		REMOVE
5063	Eastern Red Cedar	20			REMOVE
5064	Ash	18			REMOVE
5065	Ash	14			SAVE
5066	Ash	14			REMOVE
5067	Ash	19			SAVE
5068	Ash	18			SAVE
5069	Basswood	13			SAVE
5070	Red Oak	14			REMOVE
5071	Cottonwood	16			REMOVE
5072	Basswood	13			SAVE
5073	Ash	14			SAVE
5074	Bur Oak	28			OFFSITE
5075	Bitternut Hickory	12			REMOVE
5076	Black Cherry	12			SAVE
5077	Hackberry	15			SAVE
5078	Ash	14			OFFSITE
5079	Ash	13			OFFSITE
5080	Black Cherry	13			OFFSITE
5081	Ash	12			OFFSITE
5082	Ash	26			SAVE
5083	Red Oak	14			SAVE
5084	Basswood	18			SAVE
5085	Red Oak	16			SAVE
5086	Basswood	17			REMOVE
5087	Black Cherry	13			REMOVE
5088	Eastern Red Cedar	20			REMOVE
5089	Eastern Red Cedar	9			REMOVE
5090	Ash	18			SAVE
5091	Ash	12			SAVE
5092	Red Oak	14	PD		SAVE
5093	Bitternut Hickory	13			SAVE
5094	Red Oak	20			SAVE
5095	Ash	15			SAVE
5096	Bitternut Hickory	14			SAVE
5097	Sugar Maple	14			SAVE
5098	Bitternut Hickory	16			SAVE
5099	Sugar Maple	12	Multi-Stem		REMOVE
5100	Basswood	21			REMOVE
5101	Ash	20			SAVE
5102	Sugar Maple	16	BD		OFFSITE
5103	Hackberry	15			OFFSITE
5104	Basswood	26	Multi-Stem		SAVE
5105	Bitternut Hickory	16			SAVE
5106	Hackberry	12			SAVE
5107	Ash	14			SAVE
5108	Basswood	12			SAVE
5109	Basswood	12			SAVE
5110	Cottonwood	38			SAVE

TREE TAG	SPECIES	CAL. IN.	CONDITION	HERITAGE	STATUS
5111	Bitternut Hickory	13			SAVE
5112	Basswood	16			SAVE
5113	Basswood	12			SAVE
5114	Hackberry	19			SAVE
5115	Bitternut Hickory	15			SAVE
5116	Basswood	14			SAVE
5117	Ash	26	BD		SAVE
5118	Basswood	14			SAVE
5119	Basswood	16	Multi-Stem		SAVE
5120	Sugar Maple	14			SAVE
5121	Ash	16			SAVE
5122	Basswood	13			SAVE
5123	Red Oak	16			SAVE
5124	Hackberry	18			SAVE
5125	Ash	14			SAVE
5126	Basswood	15			SAVE
5127	Ash	22			SAVE
5128	Ash	12			SAVE
5129	Basswood	16			SAVE
5130	Ash	12			SAVE
5131	Ash	16			SAVE
5132	Bitternut Hickory	15			SAVE
5133	Bitternut Hickory	12			SAVE
5134	Ash	16			OFFSITE
5135	Ash	22			SAVE
5136	Red Oak	15			SAVE
5137	Red Oak	17			SAVE
5138	Ash	14			SAVE
5139	Ash	15	BD		SAVE
5140	Ash	15			SAVE
5141	Ash	33		Yes	SAVE
5142	Ash	16			SAVE
5143	Black Cherry	12			OFFSITE
5144	Ash	12			SAVE
5145	Red Oak	20			OFFSITE
5146	Red Oak	16			OFFSITE
5147	Ash	12			SAVE
5148	Ash	14			SAVE
5149	Ash	14			SAVE
5150	Ash	12			SAVE
5151	Ash	14			SAVE
5152	Ash	12			SAVE
5153	Ash	14			SAVE
5154	Ash	14			REMOVE
5155	Ash	15			REMOVE
5156	Ash	16			REMOVE
5157	Ash	13			REMOVE
5158	Basswood	14			SAVE
5159	White Pine	9			SAVE
5160	Red Oak	20			SAVE
5161	Red Oak	24			SAVE
5162	Black Walnut	12			SAVE
5163	Ash	12			SAVE
5164	Bitternut Hickory	12			SAVE
5165	Ash	18			SAVE

TREE TAG	SPECIES	CAL. IN.	CONDITION	HERITAGE	STATUS
5166	Red Oak	18			SAVE
5167	Red Oak	36	PD		SAVE
5168	Ash	14			SAVE
5169	Red Oak	12			SAVE
5170	Red Oak	15			SAVE
5171	Ash	19			REMOVE
5172	Red Oak	17			SAVE
5173	Black Cherry	15			SAVE
5174	Black Cherry	12			SAVE
5175	Ash	29			SAVE
5176	Cottonwood	22			REMOVE
5177	Red Oak	14			REMOVE
5178	Cottonwood	24			REMOVE
5179	Ash	19			REMOVE
5180	Ash	16			SAVE
5181	Red Oak	20			OFFSITE
5182	Ash	15			REMOVE
5183	Ash	14			REMOVE
5184	Ash	16			REMOVE
5185	Ash	15			REMOVE
5186	Black Cherry	14	PD		REMOVE
5187	Black Cherry	14			REMOVE
5188	Ash	12	PD		REMOVE
5189	Ash	14			OFFSITE
5190	Ash	24			SAVE
5191	Ash	30			SAVE
5192	Ash	13			SAVE
5193	Ash	15			SAVE
5194	Ash	14			SAVE
5195	Eastern Red Cedar	12	PD		SAVE
5196	Eastern Red Cedar	10			OFFSITE
5197	Ash	22			SAVE
5198	Ash	13			OFFSITE
5199	Ash	12			OFFSITE
5200	Ash	13			OFFSITE
5201	Eastern Red Cedar	10			REMOVE
5202	Cottonwood	19			SAVE
5203	Cottonwood	13			REMOVE
5204	Cottonwood	14			REMOVE
5205	Cottonwood	16			REMOVE
5206	Ash	14			SAVE
5207	Ash	13			SAVE
5208	Black Cherry	12			REMOVE
5209	Ash	14	BD / PD		REMOVE
5210	Hackberry	12			REMOVE
5211	Hackberry	12			REMOVE
5212	Eastern Red Cedar	16			OFFSITE
5213	Ash	13			SAVE
5214	Ash	26			OFFSITE
5215	Ash	18	PD		SAVE
5216	Ash	13			SAVE
5217	Hackberry	12			SAVE
5218	Ash	14			SAVE
5219	Ash	14			OFFSITE
5220	Ash	13			OFFSITE

TREE TAG	SPECIES	CAL. IN.	CONDITION	HERITAGE	STATUS
5221	Ash	17			SAVE
5222	Ash	22			SAVE
5223	Ash	13			REMOVE
5224	Ash	18			REMOVE
5225	Ash	12			REMOVE
5226	Ash	12			REMOVE
5227	Red Oak	14			REMOVE
5228	Ash	13			REMOVE
5229	Ash	16			SAVE
5230	Ash	12			SAVE
5231	Ash	12			SAVE
5232	Ash	13			SAVE
5233	Ash	12			SAVE
5234	Ash	14	BD		SAVE
5235	Ash	16			SAVE
5236	Ash	16			SAVE
5237	Ash	15	BD		SAVE
5238	Ash	16			SAVE
5239	Ash	13			SAVE
5240	Ash	16			SAVE
5241	Ash	14			SAVE
5242	Ash	20			SAVE
5243	Hackberry	22			SAVE
5244	Ash	48	BD / PD		SAVE
5245	Hackberry	12			SAVE
5246	White Pine	8			SAVE
5247	Ash	14			SAVE
5248	Ash	12			SAVE
5249	Ash	12			SAVE
5250	Ash	12	Multi-Stem		SAVE
5251	Ash	20	Multi-Stem		REMOVE

**Tree Preservation Calculations**

**SIGNIFICANT TREE REPLACEMENT FORMULA:**  
 A = TOTAL DIAMETER INCHES OF HEALTHY SIGNIFICANT TREES LOST AS A RESULT OF THE LAND ALTERATION.  
 B = TOTAL DIAMETER INCHES OF SIGNIFICANT SITUATED ON THE LAND.  
 C = TREE REPLACEMENT CONSTANT (0.5)  
 D = CALIPER INCHES REQUIRED OF REPLACEMENT TREES.

$((A/B) \times C) \times A = D$   
 A = 1088 CAL. IN. (EXCLUDES DAMAGED TREES)  
 B = 3337 CAL. IN. (EXCLUDES DAMAGED TREES)  
 C = 0.5

$((1088/3337) \times 0.5) \times 1088 = 178 \text{ CAL. IN.}$

TOTAL CALIPER INCHES REPLACEMENT REQUIRED = 178 CAL. IN.

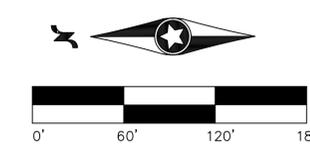
**SAVED HERITAGE TREE CREDIT:**  
 TOTAL CALIPER INCHES OF HERITAGE TREES SAVED = 109 CAL. IN.

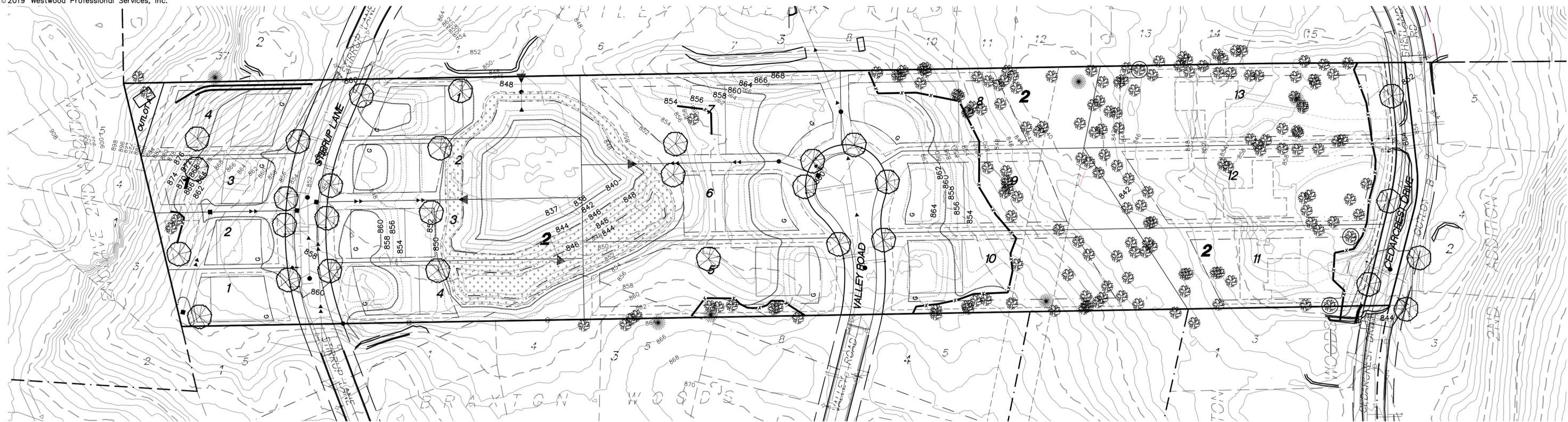
178 CAL. IN. - 109 CAL. IN. = 69 CAL. IN.

**TOTAL TREE REPLACEMENT REQUIRED: 28 TREES**  
 (TREE REPLACEMENT BASED UPON 2.5" REPLACEMENT TREES)

**Legend**

- DENOTES EXISTING CONIFEROUS TREE TO REMAIN
- DENOTES EXISTING DECIDUOUS TREE TO REMAIN
- DENOTES HERITAGE TREE TO REMAIN
- DENOTES EXISTING CONIFEROUS TREE TO BE REMOVED
- DENOTES EXISTING DECIDUOUS TREE TO BE REMOVED
- DENOTES TREE PROTECTION FENCE





**Final Plant Schedule**

COMMON/BOTANICAL NAME	SIZE	SPACING O.C.	MATURE SIZE
Discovery Elm / <i>Ulmus davidiana</i> var. <i>japonica</i> 'Discovery'	2.5" BB	AS SHOWN	H 35'-45' W 35'-45'
Boulevard Linden / <i>Tilia americana</i> 'Boulevard'	2.5" BB	AS SHOWN	H 50'-60' W 30'
Red Oak / <i>Quercus rubra</i>	2.5" BB	AS SHOWN	H 60'-80' W 40'-50'
Red Sunset Maple / <i>Acer rubrum</i> 'Franksred'	2.5" BB	AS SHOWN	H 45' W 35'
Skyline Honeylocust / <i>Gleditsia tricanthos</i> var. <i>inermis</i> 'Skycole'	2.5" BB	AS SHOWN	H 40'-50' W 30'-35'
Swamp White Oak / <i>Quercus bicolor</i>	2.5" BB	AS SHOWN	H 50'-60' W 40'-50'

NOTE: 30% MAXIMUM OF SINGLE SPECIES.

**Landscape Requirements**

TOTAL TREE REPLACEMENT REQUIRED: SEE TREE INVENTORY FOR REPLACEMENT CALCULATIONS	<b>28 TREES</b>
TOTAL TREES PROVIDED:	<b>30 TREES</b>

**NOTES:**

- MINIMUM OF 2 TREES PER LOT TO BE PROVIDED ON NON-WOODED SINGLE FAMILY LOTS BY BUILDER AFTER HOME CONSTRUCTION (SPECIFIC LOTS INCLUDE LOTS 1-4, BLOCK 1 & LOTS 1-7, BLOCK 2). MINIMUM OF 1 TREE PER LOT TO BE PROVIDED ON WOODED SINGLE FAMILY LOTS BY BUILDER AFTER HOME CONSTRUCTION (SPECIFIC LOTS INCLUDE LOTS 8-13, BLOCK 2). AT LEAST ONE TREE TO BE LOCATED IN THE FRONT YARD OF ALL SINGLE FAMILY LOTS. TREE LOCATIONS ARE DETERMINED BY BUILDER.
- TREES INSTALLED IN FRONT OF INDIVIDUAL LOTS SHALL BE PLANTED IN A LOCATION THAT DOES NOT INTERFERE WITH CURBSTOPS OR INDIVIDUAL SEWER & WATER CONNECTIONS. STREET TREES TO BE INSTALLED MIN. 12' BEHIND CURB.
- NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- YARD TREE SPECIES WILL BE SELECTED FROM APPROVED SPECIES LIST (SEE FINAL PLANT SCHEDULE).
- ALL DISTURBED AREAS TO BE SEEDDED WITH TURF GRASS, UNLESS NOTED OTHERWISE. TWO ROWS OF SOD INSTALLED AT BACK OF CURB.

**Legend**

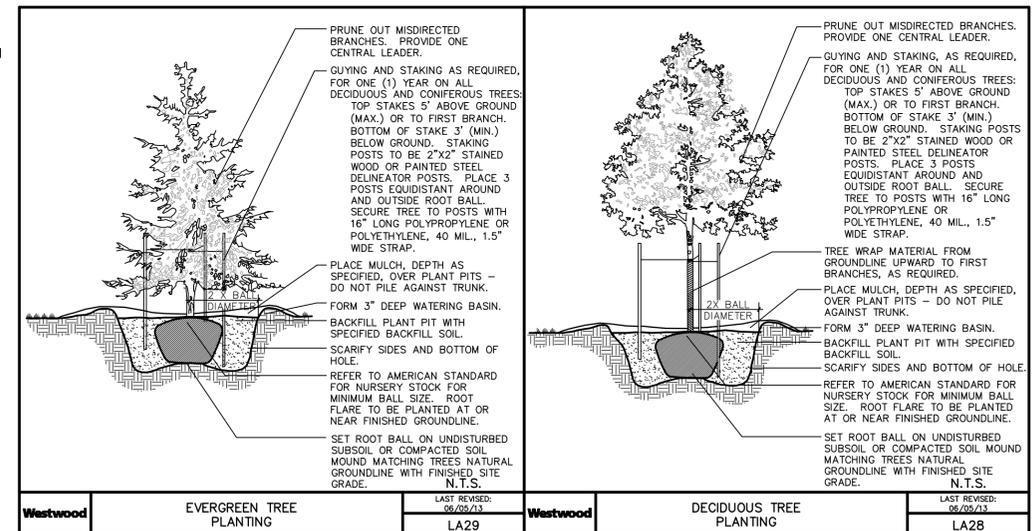
- DENOTES YARD TREE (BY BUILDER)
- DENOTES EXISTING CONIFEROUS TREE TO REMAIN
- DENOTES EXISTING DECIDUOUS TREE TO REMAIN
- DENOTES HERITAGE TREE TO REMAIN

**Native Seeding Legend**

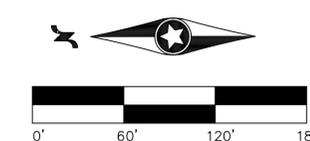
- DENOTES STORMWATER NATIVE SEED MIX (33-261) TOTAL AREA (0.6 AC)

**Planting Notes**

- CONTRACTOR SHALL CONTACT COMMON GROUND ALLIANCE AT 811 OR CALL811.COM TO VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY PLANTS OR LANDSCAPE MATERIAL.
- ACTUAL LOCATION OF PLANT MATERIAL IS SUBJECT TO FIELD AND SITE CONDITIONS.
- NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- ALL SUBSTITUTIONS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO SUBMISSION OF ANY BID AND/OR QUOTE BY THE LANDSCAPE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE OF ALL PLANT MATERIALS. THE GUARANTEE BEGINS ON THE DATE OF THE LANDSCAPE ARCHITECT'S OR OWNER'S WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
- ALL PLANTS TO BE SPECIMEN GRADE, MINNESOTA-GROWN AND/OR HARDY. SPECIMEN GRADE SHALL ADHERE TO, BUT IS NOT LIMITED BY, THE FOLLOWING STANDARDS:  
ALL PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, SCARS, ETC.  
ALL PLANTS SHALL BE FREE FROM NOTICEABLE GAPS, HOLES, OR DEFORMITIES.  
ALL PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES.  
ALL PLANTS SHALL HAVE HEAVY, HEALTHY BRANCHING AND LEAFING.  
CONIFEROUS TREES SHALL HAVE AN ESTABLISHED MAIN LEADER AND A HEIGHT TO WIDTH RATIO OF NO LESS THAN 5:3.
- PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
- PLANTS TO BE INSTALLED AS PER MNLA & ANSI STANDARD PLANTING PRACTICES.
- PLANTS SHALL BE IMMEDIATELY PLANTED UPON ARRIVAL AT SITE. PROPERLY HEEL-IN MATERIALS IF NECESSARY; TEMPORARY ONLY.
- PRIOR TO PLANTING, FIELD VERIFY THAT THE ROOT COLLAR/ROOT FLAIR IS LOCATED AT THE TOP OF THE BALLED & BURLAP TREE. IF THIS IS NOT THE CASE, SOIL SHALL BE REMOVED DOWN TO THE ROOT COLLAR/ROOT FLAIR. WHEN THE BALLED & BURLAP TREE IS PLANTED, THE ROOT COLLAR/ROOT FLAIR SHALL BE EVEN OR SLIGHTLY ABOVE FINISHED GRADE.
- OPEN TOP OF BURLAP ON BB MATERIALS; REMOVE POT ON POTTED PLANTS; SPLIT AND BREAK APART PEAT POTS.
- PRUNE PLANTS AS NECESSARY - PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING AND PROPOSED TREES.
- WRAP ALL SMOOTH-BARKED TREES - FASTEN TOP AND BOTTOM. REMOVE BY APRIL 1ST.
- THE NEED FOR SOIL AMENDMENTS SHALL BE DETERMINED UPON SITE SOIL CONDITIONS PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR THE NEED OF ANY SOIL AMENDMENTS.
- BACKFILL SOIL TO ADHERE TO MN/DOT STANDARD SPECIFICATION 3877 (COMMON TOPSOIL BORROW) AND SHALL BE NATIVE TOP SOIL FROM SITE FREE OF ROOTS, ROCKS LARGER THAN ONE INCH, SUBSOIL DEBRIS, AND LARGE WEEDS UNLESS SPECIFIED OTHERWISE. MINIMUM 4" DEPTH OF NATIVE TOPSOIL SHALL BE PROVIDED FOR ALL LAWN GRASS AREAS AND 12" DEPTH TOPSOIL FOR ALL TREES.
- SHREDDED HARDWOOD MULCH TO BE PROVIDED FOR ALL TREES. MULCH TO BE FREE OF DELETERIOUS MATERIAL.
- EDGING TO BE SPADED EDGE, UNLESS OTHERWISE INDICATED. SPADED EDGE TO PROVIDE V-SHAPED DEPTH AND WIDTH TO CREATE SEPARATION BETWEEN MULCH AND GRASS. INDIVIDUAL TREES TO BE SPADED EDGE, UNLESS NOTED OTHERWISE.
- ALL AREAS WITHIN INDIVIDUAL LOTS TO BE SODDED WITH STANDARD MINNESOTA GROWN AND HARDY BLUEGRASS MIX, FREE OF LAWN WEEDS. ALL TOPSOIL AREAS TO BE RAKED TO REMOVE DEBRIS AND ENSURE DRAINAGE.
- ALL PLANTINGS & SOD AREAS TO BE IRRIGATED BY RESPECTIVE LOT/HOMEOWNERS.
- CONTRACTOR SHALL PROVIDE NECESSARY WATERING OF PLANT MATERIALS UNTIL THE PLANT IS FULLY ESTABLISHED OR IRRIGATION SYSTEMS ARE OPERATIONAL. OWNER WILL NOT PROVIDE WATER FOR CONTRACTOR.
- REPAIR & REPLACE EXISTING TURF AREAS AS REQUIRED FOR ANY ROADWAY BOULEVARD AREAS ADJACENT TO THE SITE DISTURBED DURING CONSTRUCTION.
- REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.



Westwood	EVERGREEN TREE PLANTING	LA29	Westwood	DECIDUOUS TREE PLANTING	LA28
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Call 48 Hours before digging:  
**811 or call811.com**  
Common Ground Alliance

**Cedarcrest  
Stables**  
Eden Prairie, Minnesota

Date: **11/12/19** Sheet: **2 OF 2**

**Westwood**  
Phone (952) 937-5150 12701 Whitewater Drive, Suite #300  
Fax (952) 937-5822 Minnetonka, MN 55343  
Toll Free (888) 937-5150 westwoods.com  
Westwood Professional Services, Inc.

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.  
**Nicholas Meyer**  
Date: **11/12/19** License No. **53774**

**Revisions:**


**Designed:** JHB  
**Checked:** JHB  
**Drawn:** CTY  
**Record Drawing by/date:**

Prepared for:  
**West Bay Homes Corp.**  
10425 Bluff Road  
Eden Prairie, Minnesota 55347

APPENDIX B

GREEN INFRASTRUCTURE ANALYSIS

December 9, 2016

City of Eden Prairie  
8080 Mitchell Rd  
Eden Prairie, MN 55344

Re: Green Infrastructure Analysis – Cedarcrest Stables

The following itemized list describes how the proposed Cedarcrest Stables development addresses the City of Eden Prairie Green Infrastructure Analysis.

- 1) Preserving natural vegetation. **To the extent practicable, the clearing of existing vegetation has been minimized, including the placement of the proposed stormwater management best management practices (BMP) in areas with no significant trees. The majority of the mature trees south of Valley Road will be preserved.**
- 2) Preserving and utilizing natural upland swales, depressions and upland storage areas in the post-development condition to the degree that they can convey, store, infiltrate, filter or retain stormwater runoff before discharge. Preservation requires that no grading or other construction activity occurs in these areas. **The natural depression between Valley Road and Cedarcrest Drive will remain undisturbed to preserve its stormwater function as well as preserve trees.**
- 3) Minimizing impervious surface. **Impervious area will be limited to the necessary public infrastructure and homes. Large lots, including significant rear yard areas that will remain undisturbed, will provide ample pervious green space.**
- 4) Installing permeable pavement to allow stormwater runoff to filter through surface voids into an underlying reservoir for temporary storage and/or Infiltration. **Infiltration will be provided via an infiltration bench BMP. Permeable pavers are not cost effective in this application.**
- 5) Utilizing vegetated areas to filter sheet flow, remove sediment and other pollutants and increase time of concentration to slow discharge or reduce runoff of stormwater. **To the extent practicable, the existing vegetation will be preserved, which will provide stormwater water quality benefits.**
- 6) Disconnecting impervious areas by allowing runoff from small impervious areas to be directed to pervious areas where it can be infiltrated or filtered. **Rural street sections with ditches are not practical in this application and would not be consistent with the adjacent neighborhoods. However, most of the roof runoff from the homes will be disconnected and drain over green areas.**
- 7) Installing a green roof to provide an environment for plant growth for treatment of stormwater through filtering of suspended solids and pollutants and/or for volume and

rate control as part of the roof system for the building. **Green roofs on individual single family homes are not practical.**

- 8) Using irrigation ponds or systems, cisterns, rain barrels and related BMPs to reuse stormwater runoff. **Irrigation ponds are not practical in this application because the area draining to the pond would not be adequate to provide the volume of water needed during dry periods. The use of cisterns or rain barrels will be the choice of each individual home owner.**
- 9) Planting of trees for retention and detention of stormwater runoff as defined in the Minnesota Stormwater Manual or State of Minnesota Minimal Impact Design Standards (MIDS). **Tree preservation consistent with the City of Eden Prairie's requirements will be provided and stormwater management consistent with the City's and the RPBC Watershed's requirements will be provided. These requirements are consistent with MIDS.**
- 10) Utilizing a soil amendment or decompaction process after site disturbance. **Topsoil will be respread over disturbed areas with low compaction methods. Additional topsoil will be stockpiled for use by the home builders after home construction.**
- 11) Minimizing parking facility size. **No parking is proposed.**
- 12) Increasing buffers around streams, steep slopes and wetlands to protect from flood damage and/or provide additional water quality treatment. **No streams or wetlands are on-site. The project site will be graded to limit the area of disturbance, and incorporates the use of retaining walls where necessary to allow for adequate house pads & rear yard spaces**

In addition to the Green Infrastructure Analysis, another consideration for this site is the nearby Drinking Water Supply Management Area (DWSMA) as defined by the Minnesota Department of Health. This area is west of the proposed project and extends approximately 55 feet into the site in a small area between Valley Road and Stirrup Lane. The DWSMA boundary is shown on the project plans. No disturbance or stormwater management is proposed within the DWSMA.

Sincerely,



John Bender, P.E.

Westwood Professional Services  
7699 Anagram Drive  
Eden Prairie, MN 55344

Stormwater Supplemental Memorandum

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*Cedarcrest Stables*  
*Eden Prairie, MN*

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Prepared for:

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**Pentom Land Company**  
7697 Anagram Drive  
Eden Prairie, MN 55344

Prepared by:

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**Westwood** Professional Services, Inc.  
12701 Whitewater Drive, Suite 300  
Minnetonka, MN 55343  
Phone 952-937-5150

Revised: November 12, 2019  
Project # 0024587.00

**SUPPLEMENTAL MEMORANDUM**

As directed by the Managing Board of the Riley Purgatory Bluff Creek Watershed District (RPBCWD), Westwood has prepared this supplement to the Stormwater Runoff Narrative dated November 12, 2019. The purpose of this report is to analyze the capacity of the existing stormwater ponds that are downstream of the proposed Cedarcrest Stables development in Eden Prairie, MN.

There are two existing ponds, one to the southwest and one to the southeast of the development. Both ponds drain directly to Riley Creek. These ponds have been modeled in HydroCAD for both the existing and proposed conditions and the results are summarized in the following tables. Please refer to the drainage maps and HydroCAD output in the Appendix for more information.

**Southwest Pond Conditions**

Pond HWLs (MSL)		
	Existing Condition	Proposed Condition
2-Year	834.80	834.82
10-Year	836.58	836.60
100-Year	837.84	837.84
Pond Peak Discharge (CFS)		
	Existing Condition	Proposed Condition
2-Year	11.73	11.79
10-Year	16.33	16.37
100-Year	103.92	104.46
Pond Discharge Volume (AF)		
	Existing Condition	Proposed Condition
2-Year	2.47	2.49
10-Year	4.39	4.42
100-Year	9.49	9.52

**Southeast Pond Conditions**

Pond HWLs (MSL)		
	Existing Condition	Proposed Condition
2-Year	776.41	776.29
10-Year	776.89	776.70
100-Year	778.03	777.70
Pond Peak Discharge (CFS)		
	Existing Condition	Proposed Condition
2-Year	18.95	14.53
10-Year	40.33	31.34
100-Year	105.15	85.29
Pond Discharge Volume (AF)		
	Existing Condition	Proposed Condition
2-Year	4.01	3.73
10-Year	7.63	7.21
100-Year	17.91	17.21

**Southwest Pond 100-yr 10-day Snow Melt Conditions**

	Existing Condition	Proposed Condition
HWL (MSL)	833.20	833.20
Peak Flow (CFS)	4.63	4.63
Volume (AF)	14.33	14.33

**Southeast Pond 100-yr 10-day Snow Melt Conditions**

	Existing Condition	Proposed Condition
HWL (MSL)	776.10	776.06
Peak Flow (CFS)	8.27	7.02
Volume (AF)	24.66	22.60

As shown in the tables above and the appendices, the high water levels, peak discharge rates and discharge volumes for the southwest pond increase slightly while the values for the southeast pond decrease. Since both ponds ultimately outlet to the Riley Creek, a review of the total runoff rates and volumes for the site has been completed, results below.

## SUPPLEMENTAL MEMORANDUM

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### Total Site to Riley Creek

Pond Peak Discharge (CFS)		
	Existing Condition	Proposed Condition
2-Year	30.68	26.28
10-Year	56.55	47.50
100-Year	195.61	180.85
Pond Discharge Volume (AF)		
	Existing Condition	Proposed Condition
2-Year	6.48	6.22
10-Year	12.02	11.63
100-Year	27.40	26.73

An additional review was completed to show how much longer the increase in runoff rates from the southwest pond is present. It was found that for the 100-year storm event, there will be a slight increase in runoff for approximately 6.4 hours.

Based on the above provided information, the proposed Cedarcrest Stables development may cause slight differences downstream but will not have major adverse effects.

## SUPPLEMENTAL MEMORANDUM

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### **Appendix**

Appendix A

Drainage Maps

Appendix B

HydroCAD Calculations

APPENDIX A  
DRAINAGE MAPS





APPENDIX B  
HYDROCAD CALCULATIONS

## Memorandum

**To:** RPBCWD Board of Managers  
**From:** Jeff Weiss and Scott Sobiech  
**Subject:** Lower Riley Creek Project – Request for additional engineering services budget  
**Date:** November 27, 2019  
**Project:** 23/27-0053.14 014

### Requested Board Action

Assuming construction, construction administration, and field observation goes smoothly, Barr requests that the RPBCWD Board of Managers consider authorizing Barr Engineering to spend an additional budget of \$38,000 for construction administration and observation services related to the Lower Riley Creek Stabilization Project.

## 1.0 Background

RPBCWD has documented erosion along Lower Riley Creek within the Riley Creek Conservation Area in Eden Prairie. Severe erosion was first identified in the Lake Riley Outlet Improvements and Riley Creek Lower Valley Stabilization Feasibility Study in 2007 in which the entire Lower Valley of Riley Creek was assessed. The Creek Restoration Action Strategy (CRAS) was a tool developed by RPBCWD to compare erosion and potential benefits of doing a project along a given reach. The CRAS score for this reach of Riley Creek was tied for the second highest overall score of all reaches within the District. In October 2016, the RPBCWD completed a feasibility study to identify cost effective stabilization options and recommendations. The feasibility study recommended a set of alternatives to raise the channel bed and create a reconnection to the floodplain.

At the January 2017 Board meeting, the RPBCWD Board of Managers authorized final design and preparation of construction documents for the reach based on findings in the feasibility study, with the assumption that final design would be completed in 2017 and construction would take place over the winter of 2017/2018. Because the project is entirely on city of Eden Prairie property, the design process was completed in partnership with city.

The project was bid in June 2019, and Rachel Contracting, Inc. was awarded the construction contract in July 2019. Per the contract documents, construction on the project began in early November 2019. Substantial completion is anticipated in February/March 2020 with final plantings installed in the spring of 2020.

## 2.0 Changes in Scope of Services

The original design and construction observation task order for \$195,400 plus expenses for permit fees was authorized by the Board on January 4, 2017 with an anticipated construction being complete and the project closed out by mid-2018. Several factors impacted the schedule that have resulted in construction beginning two years later than the original anticipated timeline. Early on we had hoped to absorb these project delay costs and other items summarized below into the project without requesting additional budget but to no avail.

In addition to the project delays, tasks and extra work have been provided that were not included in the original budget, including:

- There were several stops and starts during the project design phase due to the need to coordinate with the city of Eden Prairie about financial contribution negotiations. City of Eden Prairie also experienced water resources engineer staff turnover slowing the project and requiring additional guidance when new staff were brought into the project. That coordination was necessary to help lead to a successful project; however, it took more time than anticipated and contributed to design inefficiencies through no fault of Barr or RPBCWD.
- The project required the development of an ecological enhancement plan and maintenance mapbook prior to finalizing design and bidding the project. Because the ecological enhancement plan was a new concept requested by Administrator Bleser in response to information gathered at a conference on the west coast, the cost associated with the development of the plan were not including in the original task order. The approach to project development successfully helped foster trust among partners, improved collaboration, and memorialized commitments. The ecological enhancement plan was written to guide enhancement and stewardship efforts of ecological resources within Reach E and Site D3 of Lower Riley Creek and be a significant component of the cooperative agreement between project partners, RPBCWD, LMRWD and city of Eden Prairie. The ecological enhancement plan documents the goals of the partnership between for the Lower Riley Creek Stabilization Project and establishes roles and responsibilities of Project partners for the 20-year life of the agreement. This effort required several rounds of meetings and review comments during the coordination efforts with the City.
- During the design process the City placed significant value in the Big Woods within the Riley Creek Conservation Area and expressed concerns about the transfer of buckthorn for the lower portion of the site to the upper portion. As part of the design process, the City required a detailed field survey/inventory of trees within the project limits and provided several rounds of review comments about anticipated trees to be removed. The detailing of cleared/saved trees on plan sheets and coordination with the city has been a significant effort beyond just the field survey portion. The tree survey was not included in the original Task Order.
- The final project layout and grading took more effort than anticipated to try to balance the cut versus fill for the entire project to ultimately minimize the contractor's construction cost for the

import/export of materials. Furthermore, the City required plans to be revised to avoid removing specific trees in the project area. The resulted in multiple, unanticipated revisions to the grading plan.

- In addition to the tree survey and the revisions to the grading plan, RPBCWD and Barr staff held several additional, unanticipated meetings with the City to review access routes and staging areas to review how they would impact the project area and anticipated clearing.
- Barr staff assisted in the development of information boards and participated in an open house regarding the project on April 11, 2018. These services were request by Administrator Bleser because they were not included in the authorized Task Order.
- The City requested the addition of a walking bridge to be included with the project plans. The addition of the bridge design was previously authorized by Administrator Bleser; however, the coordination with the City to complete the design impacted the project schedule. To date there has been roughly \$3,400 relate to the bridge design effort which has been added to the project budget accordingly based on the Administrators direction. As the project moves to construction there will likely be time with coordinating reviews of submittals and construction oversight of the bridge.
- Due to the need to minimize tree removals, the final design depends on using the main channel as an access route throughout the project area. While this will be effective in reducing the number of trees cleared to just provide access to the project area, it also requires pumping water around the work areas to minimize the sediment being transported downstream. The strict limits on tree clearing and the need to pump water around the work areas resulted in the contractors asking a lot of questions during the bidding process. Answering these questions and providing guidance required more than the typical effort during the bidding period.
- The final project layout and grading took more effort than anticipated to try to balance the cut versus fill for the entire project to help ultimately minimize the contractor's construction cost for import/export of materials
- Review comments and incorporation of required construction drawing revision by the City took more effort than anticipated (e.g., more detailing of storm sewer repairs on the plan sheets than anticipated) including multiple rounds of unanticipated comments as the new city water resources engineer reviewed the project.
- The original Task Order did not include surveying to establish construction limits and elevation control in the project area. Due to the sensitive nature of the tree clearing, Administrator Bleser directed that the construction limits should be staked by Barr surveyors to avoid impacts outside of the project area.
- The expenses for advertising for three weeks in the local paper for bidding was significantly more than originally budgeted (budgeted expenses ~\$350, actual expense \$1700).

### 3.0 Budget Adjustment Request

As of the October engineering services invoice there was only \$4600 left in Barr’s total authorized budget for this project (\$195,400+\$3,416+\$400= \$199,216, which is comprised of the original task order, Administrator authorized bridge work to date, and NPDES permit fees, respectively). It is anticipated that most, if not all, of the remaining budget will be exhausted in November as construction activities fully start and it is critical to work closely with the contractor at the beginning to establish performance expectations. Construction on the project has just begun, so additional budget will be needed to bring the project through completion and complete construction administration and oversight. The following table summarizes the original approved budget, the amount spent, and anticipated additional budget to complete the engineering work associated with the Lower Riley Creek Stabilization Project design and construction administration (Task Order 14B). We are anticipating the total construction administration budget at project completion, assuming construction goes smoothly, to be roughly \$35,000-\$40,000 (less than 3% of the total construction cost, \$1,651,274):

Task Order 14B	Approved Budget	Amount Spent Through 10/31/19	Estimated Additional Work	Comment
<ul style="list-style-type: none"> <li><b>Design of Restoration Project (Design, Permitting, EAW, Maintenance Plan, Plans and Specifications)</b></li> <li><b>Construction Services (Bidding, Construction Oversight and Administration)</b></li> </ul>	\$199,216 <sup>1</sup>	\$194,614	\$38,000	Construction oversight and administration is just beginning; Out-of-scope items include the Ecological Enhancement Plan, tree survey, project delays, construction staking, additional meetings with the City, and additional plan revisions.
<b>Budget Remaining</b>		<b>\$4,602</b>		As of 10/31/19
<b>Budget Increase Request</b>			<b>\$38,000</b>	
1-Barr’s total authorized budget for this project (\$195,400+\$3,416+\$400= \$199,216, which is comprised of the original task order, Administrator authorized bridge work to date, and NPDES permit fees, respectively)				

## 2019 RPBCWD Proposed Rule Revision Comment Tracking Form

**TABLE 1 - Document Information**

Document #	"Document" Information			
	Document Name	Commenter	Type	Date
1	RPBCWD Proposed Rule Revisions	Jeff Berg, MN DoA	Email	10/21/2019
2	Memorandum: Draft Rule Revisions - 45-Day Review Comments	Patrick Sejkora, Eden Prairie	Memorandum	10/21/2019
3	RE: RPBCWD Agency Review Rules Distribution	Beth Nuendorf, MNDOT	Email	10/11/2019
4	RE: RPBCWD Agency Review Rules Distribution	Steve Christopher, BWSR	Email	10/21/2019
5	Chaska Informal Review Comments on RPBCWD Rules	Matt Clark, Chaska	Letter	8/7/2019

**TABLE 2 - Comments**

Comment #	Commenter	Document # [see TABLE 1]	Document Element [Report, Figure, Appendix, etc.]	Reference [Section #]	Comment	Response to comment
1	Jeff Berg, MN Dept. of Ag	1	Memorandum Supporting and Providing Explanation		The Minnesota Department of Agriculture has no comments on RPBCWD's proposed rule revisions.	RPBCWD appreciates your having taken the time to review the proposed changes.
2	Patrick Sejkora, Eden Prairie	2	Memorandum Supporting and Providing Explanation	J 2.4	Page 1 - For third bullet down, clarify if it 10,000 square feet of new impervious AND 0.5 acres of disturbed impervious.	The comment references the thresholds for linear projects to trigger stormwater-management requirements. The thresholds have been increased, but for both policy and functional reasons the proper conjunction is "or" - so that either 10,000 square feet of <u>new</u> (added) impervious OR reconstruction of 25,000 square or more of imperviousness with the project site triggers the stormwater requirements. Each of these triggers is a significant increase from the current rule provisions - i.e., it takes significantly more creation or reconstruction of impervious area to trigger the rule. Given the significant portion of imperviousness in the watershed within linear corridors, RPBCWD does not wish to miss reasonable opportunities to manage pollutants in stormwater. The flexibility built into the criteria in section 3.2 and the off ramps in the restricted-site framework in section 3.3 will help ensure that the requirements are responsive to site conditions.
3	Patrick Sejkora, Eden Prairie	2	Memorandum Supporting and Providing Explanation	J 2.4	Page 1 - Also, be consistent between 25,000 square feet of disturbed impervious versus 0.5 acres.	The supporting memo refers to 1/2 acre just to provide a comparative sense of 25,000 square feet. The rules refer only to the more precise "25,000 square feet."
4	Patrick Sejkora, Eden Prairie	2	Memorandum Supporting and Providing Explanation		Page 4 - Additional clarification on the definition of reconstruction and how the Rules apply within the guidance would be appreciated	RPBCWD is preparing guidance on what constitutes "reconstruction" for purposes of the rules, and continues to conclude that defining "reconstruction" would create more potential for confusion and delay in assessing specific proposed projects. Otherwise, RPBCWD will continue to rely on commonsense application of the term to refer to work involving the disturbance of underlying soils. RPBCWD does not wish to create confusion or ambiguity by defining "reconstruction" when "rehabilitation" is defined for purposes of linear projects (and explicitly exempted from the stormwater-rule requirements).
5	Patrick Sejkora, Eden Prairie	2	Memorandum Supporting and Providing Explanation		Page 5 - The Memo states that guidance will underscore the need to provide technical and not fiscal barriers for stormwater management. However, the District had previously mentioned that they were considering factoring in cost considerations (setting a percentage of total project cost, a price per acre of impervious). The City is concerned that lack of such a provision, especially for sites that lack suitability for allowing typical stormwater techniques, could allow the cost of stormwater management to significantly increase project costs to where they may become infeasible. This could be of great concern for projects aimed at improving safety or traffic flow. We do agree that guidance will be helpful in interpretation of the proposed standards.	RPBCWD did review the viability of including cap on the costs of stormwater management, but determined that a cost cap was contrary to the principle that the RPBCWD rules set performance standards necessary to protect water resources, allowing the applicant/property owner to determine how to design and specify projects and associated stormwater-management to meet the requirements. RPBCWD instead has focused on setting the proper balance between the burden of compliance on property owners and effectively protecting water resources. A cost cap would necessarily - and unadvisedly - draw RPBCWD staff and engineers into discussions of the methods applicants choose to meet the rules. In addition, other changes RPBCWD is incorporating into the rules - such as allowing abstraction and water quality performance standards to be met offsite in the same subwatershed as the land-disturbing activity - will provide similar flexibility without the downsides noted here.

Comment #	Commenter	Document # [see TABLE 1]	Document Element [Report, Figure, Appendix, etc.]	Reference [Section #]	Comment	Response to comment
6	Patrick Sejkora, Eden Prairie	2	Memorandum Supporting and Providing Explanation		Page 6 – For the floodplain rule, please clarify that the “no decrease in floodplain storage” pertains to from design plans. In cases where a flared end is undermined or a bank is eroded, repair to plan design necessitates some fill in order to restore the infrastructure to its intended design	The floodplain modeling developed by RPBCWD is based on the best data available at the time of the modeling, including 2011 LiDAR information. As a result, filling within the floodplain that varies from the LiDAR information could potentially result in increase in the flood elevations. In addition, existing-conditions modeling developed by applicants is typically based on topographic conditions present at the time of application or when RPBCWD's regulatory program was reinstated in 2015. RPBCWD recognizes the challenges faced by applicants intending to restore erosion problems and maintain infrastructure. The evaluation of the floodplain relative to a prior constructed condition will be considered case by case, utilizing best-available data to ensure no loss of flood storage. For public entities, RPBCWD need not make a determination of qualification for the exemption under 2.1b, but rather will rely on cities' interest in preserving flood-storage capacity and operate under the assumption that proponents of such projects have properly calculated flood elevations.
7	Patrick Sejkora, Eden Prairie	2	Memorandum Supporting and Providing Explanation		Page 9 – Provide guidance documents on techniques, methods or alternatives that should be considered for site design and retaining volume from the 95th percentile storm.	RPBCWD is preparing guidance that will address this suggestion and will support applicants' efforts to design facilities to retain volume from the 95th percentile storm.
8	Patrick Sejkora, Eden Prairie	2	Definitions	Pervious	Include English units for density in definition of pervious	Soil density is typically measured in grams per cubic centimeter. The definition was updated to include the English unit conversion to reflect this comment.
9	Patrick Sejkora, Eden Prairie	2	Definitions	Right of way	Definition of right-of-way as legally defined linear property could be problematic in areas that are unplatted or otherwise loosely defined. Would the City also be required to provide paper work (plat diagrams, etc.) as part of the permitting process? This could represent a significant effort in larger linear projects.	RPBCWD is unaware of any land within its jurisdiction that is not legally defined in county land records. The definition requires the existence of legal records supporting the application of standards that recognize the unique constraints that make compliance with regulatory provisions challenging for linear projects. If those constraints do not exist, there is no basis to apply the standards in the rule that are unique to linear projects. Under most circumstances (e.g., work on a county or city road), readily available county land-use data will support the "linear project" designation.
10	Patrick Sejkora, Eden Prairie	2	Definitions	100-year flood elevation	Does the District require that the 100-year flood elevation be evaluated using both Atlas 14 and TR-60 for all projects?	Note, please, that the definition of "100-year floodplain" is existing rule language to which no change is proposed. But to answer the question: In a specific circumstance, RPBCWD may requires an applicant to demonstrate that the chosen reference data (either National Weather Service Atlas-14 or Natural Resources Conservation Service Technical Release 60) produces the higher flood elevation. But absent a cognizable reason to require documentation of the result, RPBCWD will assume the applicant used the correct data set, given that responsibility for this determination lies with the applicant (and most applicants rely on their technical experts.)
11	Patrick Sejkora, Eden Prairie	2	Definitions	Pervious	While we understand the need for a definition of pervious (Non-saturated soil with tested soil compaction pressure of less than 1,400 kilopascals/200 pounds per square inch in the upper 12 inches of soil or bulk density of less than 1.4 grams per cubic centimeter in the upper 12 inches of soil), would there be a scenario wherein a permit applicant would have to demonstrate/test that an existing or vegetated grassed area is pervious/impervious?	The principal function of the definition of "pervious" is to provide a stated technical basis for a determination of whether a particular area is in fact pervious. While it strikes RPBCWD staff and engineers as unlikely to be a point of contention or uncertainty at a particular site, in such event RPBCWD will have established a definitive applicable standard. The applicant may need to demonstrate the compactive characteristics of the existing site. Research has shown that the degree to which the soils is compacted is a key factor in the amount of water that either infiltrates through the soils or runs off, thus impacting runoff volumes, rates and water quality. The definition is important to aid in an applicant's determination of the appropriate hydrologic modeling parameters (e.g., pervious curve numbers). This will also provide an applicant greater flexibility when considering stormwater management practices on a developed site. RPBCWD will provide clarifying information on establishing pervious conditions in guidance materials.
12	Patrick Sejkora, Eden Prairie	2	Definitions	Reconstruction	A definition for reconstruction should be added here.	Please see the response to comment 4.
13	Patrick Sejkora, Eden Prairie	2	Definitions	Subwatershed	Definition as a level nine DNR catchment could be very small in some cases and may not provide for any practical or realistic offsite treatment opportunities. The watershed and City have developed a number of stormwater treatment system plans, the ability to look at and use project needs already identified should be included.	RPBCWD's analysis of the issue shows that the HUC 9 level provides flexibility without sacrificing protection of significant water resources in the watershed.
14	Patrick Sejkora, Eden Prairie	2	Rule B	2.1.b	The [c]ity requests that the “for maintenance or in-kind replacement of existing public infrastructure that does not decrease floodplain storage volume,” that this be in comparison to the design plans for a basin so that issues such as erosion or undermined flared end sections may be prepared without a permit.	Please see response to comment 6.

Comment #	Commenter	Document # [see TABLE 1]	Document Element [Report, Figure, Appendix, etc.]	Reference [Section #]	Comment	Response to comment
15	Patrick Sejkora, Eden Prairie	2	Rule C	3.1.h	Loosening soils to a depth of 3 feet within infiltration practices is not practicable in some scenarios due to the size of the BMP, equipment availability, cost, or utility conflicts. For example, small rain gardens that are only a few inches deep; large basins that are beyond the reach of an excavator arm; or boulevard swales, tree boxes or rain gardens where utilities may be in conflict, etc. Moreover, how is this loosening done in the field, and is there literature to support a depth of 3 feet versus the more typical 18 inches? Consider revising to "a minimum depth of 18 inches or to a depth practical considering utility or BMP size constraints."	The language referred to has been revised to: "To provide a well-aerated, highly porous surface, the soils of an infiltration feature must be loosened to a minimum depth 18 inches prior to installation or planting."
16	Patrick Sejkora, Eden Prairie	2	Rule C	3.2.c	Is it the district's intention that soil density be tested for projects to demonstrate perviousness? If so where/how frequent does this testing take place?	Applicants need to demonstrate the compactive characteristics of the existing site and post-construction conditions. Research has shown that the degree to which the soils are compacted is a key factor in infiltration through the soils or runs off, thus impacting runoff volumes, rates and water quality. The intent is to provide representative random sampling to confirm the decompaction criteria are achieved. RPBCWD intends to provide clarifying information on this topic in guidance materials.
17	Patrick Sejkora, Eden Prairie	2	Rule C	3.3	Repairing or replacing nonfunctional BMPs by the end of the next business day is not always possible or practical. In many cases the materials or contractor are not immediately available (materials on back order, etc.). Suggest revising to "as soon as conditions allow".	The requirement has been revised to allow 48 hours for repair as long as there is no impending precipitation event. RPBCWD finds that it is critical to maintain a clear standard that requires maintenance of compliant conditions and finds that the flexibility suggested would create ambiguity that would be a disservice to permittees and RPBCWD staff. RPBCWD always works with permittees to ensure repair and restoration of practices is completed in a manner and within a timeframe commensurate to the risk presented by the maintenance failure.
18	Patrick Sejkora, Eden Prairie	2	Rule D	3.1.a	Consider removing 3.1a – Conflicts with b.	No change to rule language was made. Paragraph 3.1.a specifies the requirement when work occurs within the delineated boundaries of a wetland, while 3.1.b specifies the buffer when work takes place outside, but in an area tributary to a wetland.
19	Patrick Sejkora, Eden Prairie	2	Rule J	General -and- 2.4	Generally, while the City recognizes that the 25,000 square feet of reconstructed linear impervious surface represents a significant increase over existing standards, it still limits the reconstruction of streets without needing stormwater management to cul-de-sacs and shorter segments. We hope the District remains open to future reevaluation of its stormwater management rules if the proposed rules continue to be burdensome for both applicants and the District review staff.	As the rule revisions demonstrate, RPBCWD is open to changes where they are practical and achieve the goals established in RPBCWD's plan to protect and restore resources.
20	Patrick Sejkora, Eden Prairie	2	Rule J	General	Furthermore, the District mentioned that it was considering cost implications (either a cost cap as a function of project cost or cost per acre of impervious). However, the draft rule revisions do not seem to address this. The City is concerned that the lack of such a provision will continue to allow stormwater management to significantly increase project costs.	Please see response to comment 5.
21	Patrick Sejkora, Eden Prairie	2	Rule J	1	For the bullet, "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." Consider listing additional green practices other than infiltration or not specifying infiltration	Please note that no change to the language referred to is proposed. Further, the language is simply illustrative, helping applicants understand what "volume-control practices" refers to. While RPBCWD does not understand the city's objection, given that the policy statement of support for volume-control practices is the principal tenet, the reference to infiltration will be removed.
22	Patrick Sejkora, Eden Prairie	2	Rule J	2.6	For 2.6, the District's rule where it may impose monitoring and performance evaluation is still very problematic. The terms and conditions of any monitoring and performance evaluations are not specified and could be costly and burdensome, especially as proprietary BMPs are likely to be more prevalent under the MPCA's rules prohibiting infiltration in contaminated and D soils. It also could make vendors of such systems hesitant to promote their products. Additionally, the way the rule is written, it is unclear if the District could impose monitoring after issuing or even closing a permit.	Thank you for your comment. RPBCWD is developing monitoring guidance to be incorporated into the guidance. At the same time, RPBCWD will be specific in tailoring monitoring and performance-evaluation requirements to the practices proposed. It is critical, though, that RPBCWD advise applicants of the importance of designing stormwater-management systems that will in fact meet RPBCWD requirements and retain the ability to require changes when unproven methods prove ineffective.
23	Patrick Sejkora, Eden Prairie	2	Rule J	3.1.a	The District's requirement that rate control be met at all discharge points is still cumbersome and inefficient, particularly for infill site developments. It frequently results in small backyard drainage BMPs that, even when privately owned, are difficult to inventory and maintain.	No change to the rules is incorporated in response to this comment because rate control at individual discharge locations is essential to reasonably protect offsite properties <u>and resources</u> from adverse impacts such as increased flood risk and basin or channel erosion. In addition, offsite public infrastructure was likely designed based on a predetermined condition and likely has inadequate capacity to accommodate additional flows.
24	Patrick Sejkora, Eden Prairie	2	Rule J	3.1.b	The 9-digit subwatersheds can be very small and a site could span multiple subwatersheds, thus making this new rule difficult to apply in all projects.	Please see response to comment 13.

Comment #	Commenter	Document # [see TABLE 1]	Document Element [Report, Figure, Appendix, etc.]	Reference [Section #]	Comment	Response to comment
25	Patrick Sejkora, Eden Prairie	2	Rule J	3.1.b.ii	It is unclear what advantages exist for applicants or the District by providing volume retention for the 95th percentile storm.	The Minimal Impact Design Standards working group discovered that providing retention for the 95th percentile provides similar protection of downgradient resources to abstracting 1.1 inches from the impervious surface. Providing retention of runoff from the 95th percentile storm allows applicants to consider stormwater management strategies that address runoff from pervious and impervious surface.
26	Patrick Sejkora, Eden Prairie	2	Rule J	3.1.b.ii	Also, will all permit applications be required to evaluate both the 1.1-inch and 95th percentile storm for volume retention, or just the one of their choosing?	Applicants can elect to show compliance with either abstraction criteria. However, for an applicant to be considered a restricted site they must demonstrate that they cannot achieve either of the two criteria.
27	Patrick Sejkora, Eden Prairie	2	Rule J	3.1.b.iii.1	This change is REQUIRING pretreatment, not allowing it.	This requirement was not changed. Pretreatment was required in previous iterations of the rule for infiltration and filtration practices.
28	Patrick Sejkora, Eden Prairie	2	Rule J	3.1.b.iii.1	Is there a quality benefit to some of the pretreatment options? What is the reasoning that these devices could not be credited towards the Quality requirements?	Typical stormwater BMP removal efficiencies published in the Minnesota Stormwater Manual assume pretreatment is provided separately for the information published, especially filtration and infiltration BMPs. Because the Minimal Impact Design Standards calculator relies heavily on typical removal efficiencies, crediting pretreatment separately is akin to double dipping. In addition, many pretreatment structures are intended to provide removal of floatables and very coarse materials. As a result, vendor-published removal estimates may not reflect removal of fine suspended solids associated with water-quality concerns. When supporting data are provided to demonstrate appropriate removal of fine particulate matter (e.g., using the SHSAM model or adequate independent third-party testing) proprietary BMPs can be credited toward the total-suspended-solids and total-phosphorus criteria.
29	Patrick Sejkora, Eden Prairie	2	Rule J	3.2	It appears there may be a missing reference to Section 2.4 and the 25,000 square feet new/reconstructed impervious.	Thank you. The criteria in subsection 3.2 are consistent with RPBCWD intent. Subsection 2.4 defines when the stormwater rule is triggered by linear projects, while subsection 3.2 lists the criteria that must be met by such projects.
30	Patrick Sejkora, Eden Prairie	2	Rule J	3.3	For restricted sites, there is still no criteria for D soils, high vulnerability DWSMAs, and contaminated soils. This represents a conflict with the MPCA's rules which prohibit infiltration in these situations. Additionally, for projects that trigger District rules (and possibly City rules) but do not require an MPCA permit, it is unclear how this disconnect would be worked out, especially if the City were to implement rules prohibiting infiltration in D soils, high vulnerability DWSMAS, and contaminated soils.	There is no conflict with the state construction-stormwater program. The RPBCWD framework allows for categorization of a particular property as a so-called restricted site - with associated criteria that can be met without reliance on infiltration facilities - because of soils that are incompatible with infiltration. The RPBCWD regulatory framework provides for a more site-specific assessment than the state construction stormwater program, and does not conflict with it.
31	Patrick Sejkora, Eden Prairie	2	Rule J	3.4	There appears to be a typo referencing Section 4. It would seem to be Section 5. As such, it is unclear if single family homes have to submit plans to the District.	Thank you for catching the wayward cross-reference.
32	Patrick Sejkora, Eden Prairie	2	Rule J	3.6.a	We feel that reconstruction of buildings should be defined. Does it mean a complete reconstruction of a building, or does it also include things such as additions or modifications? Example situations in the guidance documents would be beneficial.	Please see response to comment 4. In addition, RPBCWD continues to find that it is necessary for new construction and rebuilding activities be brought into conformance with the low-floor criteria to mitigate flood risk.
33	Patrick Sejkora, Eden Prairie	2	Rule J	3.6.c.vi (now 3.6.c.ix)	It says that landlocked basins outlets should be approved in a local water management plan. This is not something we include in our LWMP.	No revision was incorporated into the rules.
34	Patrick Sejkora, Eden Prairie	2	Rule J	3.7	It also includes monitoring. See our previous comment regarding the City's concerns regarding monitoring.	Thank you for your comment. We are developing monitoring guidance to be incorporated into the guidance being prepared.
35	Patrick Sejkora, Eden Prairie	2	Rule J	3.10	It is unclear how far downstream applicants must look for downstream high- or exceptional-value wetland.	RPBCWD has successfully administered regulatory requirements adopted to protect downgradient and downstream resources since its rules were reinstated in 2015. Rather than a strict numerical or other limit, analysis has focused on whether a particular project in fact has cognizable potential to impact a resource - that is, does the resource actually receive runoff from the site? RPBCWD will continue to apply such a commonsense case-by-case analysis in collaboration with applicants to ensure protection of resources potentially affected by land-disturbing activities.
36	Patrick Sejkora, Eden Prairie	2	Rule J	4	Does the catchment area for regional stormwater management also refer to the 9-digit DNR catchment? If not, please define how the District defines regions for regional treatment.	The catchment area (or region) to which the regional stormwater management feature applies will be defined in the plan prepared by the applicant for the regional stormwater feature.

Comment #	Commenter	Document # [see TABLE 1]	Document Element [Report, Figure, Appendix, etc.]	Reference [Section #]	Comment	Response to comment
37	Patrick Sejkora, Eden Prairie	2	Rule J	5	The new rules require: "If storm sewer systems are designed for an event less than a 100-year event, the plans and modeling analysis must include secondary overflows for events exceeding the storm sewer system's level-of-service up through the critical 100-year event." Does this requirement mean the whole sewer network going to a BMP or within a project site needs to be evaluated in a model? In many cases, this could include large storm networks that may not even be part of the project. Furthermore, most storm sewer in the City is designed for a 10-year storm, so surcharging and surface flow are highly likely in the 100-year event. Identifying secondary overflows for each surcharging storm inlet represents a significant level of effort in terms of surveying and model building. Most often, models for stormwater management utilize HydroCAD, which is not an ideal program for modeling storm sewer networks, especially those under pressure flow. Requiring storm sewer models for events exceeding the storm sewer design capacity would restrict City municipal models to other software such as XPSWMM, potentially requiring additional investment in staff training and software. Finally, in many cases, the addition of volume retention BMPs into projects represents less discharge over the existing storm sewer flow conditions, thus resulting in a decreased risk for flooding concerns from surcharging catchbasins. While the City recognizes that modeling the storm sewer and secondary overflows provides an opportunity for flood hardening, this proposed requirement represents a significant undertaking that exceeds the scope for most municipal public works projects. It is the City's opinion that this goal is better accomplished through prioritized model building partnerships between the City and District, not as a part of project permit applications.	RPBCWD agrees that flood-resiliency planning and retrofits can be a significant undertaking and looks forward to continuing to work in partnership watershed cities to pursue this goal. The intent is not to require the entire storm sewer system be modeled, but rather to ensure the model captures the runoff conveyed to the stormwater-management facilities. It is important account for the varying flow direction between what happens on the surface versus storm sewer conveyances to appropriately estimate the flood risk and discharge leaving the site. As you indicate, most storm sewers are typically sized to capture the 10-year storm, meaning that flows in excess of the 10-year event bypass the storm sewer. Such bypass flow are contained within the same subwatershed and conveyed to a BMP within the subwatershed or conveyed to a different subwatershed/BMP. The proposed new language in 5.2 was revised to address the comment to: "The stormwater modeling must contain sufficient detail to account for the 2-, 10-, and 100-year flows contributing to the flood elevations on the site and discharge leaving the site."
38	Patrick Sejkora, Eden Prairie	2	Rule J	General	The City sees and appreciates the great deal of effort that was put forth into listening to the TAC concerns related to the rules and permitting program. We appreciate the increase in new and reconstructed impervious needed to trigger stormwater management, not requiring the water quality calculations if the volume retention is fully met, not requiring a floodplain management permit for basin or discharge repair, and the approach to permitting regional facilities. I look forward to working with the District on future projects. Thank you again for the opportunity to provide input and official comments. Please let me know if you have any questions.	Thank you. RPBCWD appreciates the efforts and contributions that Eden Prairie and its staff have made to contribute to the present rule-revision process. RPBCWD sincerely hopes that these changes will continue to foster a strong working relationship between the city and watershed district.
39	Beth Nuendorf, MN DOT	3	General	General	Many of the proposed modifications to the RPBCWD Rules will be helpful.	
40	Beth Nuendorf, MN DOT	3	Definitions		Pervious could also be saturated to some extent. What is the purpose of defining it as stated. Prefer to have it stated in Section 3.2 c, instead of in the definitions.	Please see response to comment 11.
41	Beth Nuendorf, MN DOT	3	Definitions		Add definition of fully reconstructed to go along with Section 2.4 of the Stormwater Rule. Is this the same as the MID's definition?	Please see response to comment 12.
42	Beth Nuendorf, MN DOT	3	Rule J	3.1.b.iii.1	Pretreatment should be credited for partial compliance with the water quality requirements. It will be difficult to meet this otherwise and will result in applying for a variance.	Please see response to comment 28.
43	Beth Nuendorf, MN DOT	3	Rule J	3.2.b	The abstraction requirement should be the same as in Section 3.2b, allowing 0.55 inches of runoff from the new and/or fully reconstructed impervious surface. When we are adding less than 1 acre new impervious, the type of project is such that there is not much R/W to work with on the project.	Subsection 3.3 of the stormwater management rule provides a lower abstraction requirement for restricted sites. Limited right-of-way or property rights limitations are factors RPBCWD considers when determining whether a site is restricted. RPBCWD will provide additional information on restricted-site sequencing in guidance.
44	Beth Neuendorf, MN DOT	3	Rule J	3.8	Add clarification that this does not apply to public projects.	The chloride-management requirements do apply to public projects. The rule requires only that an applicant designate an individual the contact for chloride management, and that the applicant employ or contract with an individual who has successfully completed the Minnesota Pollution Control Agency's chloride-use training. It is RPBCWD's understanding that MnDOT crews are extensively trained in chloride management and that MnDOT is readily able to meet the requirements.

Comment #	Commenter	Document # [see TABLE 1]	Document Element [Report, Figure, Appendix, etc.]	Reference [Section #]	Comment	Response to comment
45	Beth Neuendorf, MN DOT	3	Rule J	3.10.b	It is not clear what "discharge from regulated disturbed areas" to a protected wetland encompasses. Please add "piped flow" to this section to clarify that this means that [it] refers to piped flow to wetlands.	The treatment requirement applies to all flows to wetlands from the area of a site that contains new or fully reconstructed impervious surfaces that trigger RPBCWD's stormwater-management requirements. The requirement does not solely apply to point discharges; nonpoint pollution sources must also be treated prior to discharge to the wetland.
46	Beth Neuendorf, MN DOT	3	Rule J	5.2	Replace "storm sewer systems" with "stormwater rate control systems." We design storm sewer systems for the 10 year event and rate control ponds for the 100 year event.	Please see response to comment 37.
47	Beth Neuendorf, MN DOT	3	Memorandum Supporting and Providing Explanation	II	[The memo] state[s] in the fifth bullet that treatment of run-on should be credited toward compliance with stormwater management requirements. Where is that part reflected in the Rules?	This statement captures some stakeholders' stated interest in "crediting" treatment of stormwater that runs onto a property. RPBCWD found that adding such a provision would mean compliance with RPBCWD stormwater-management requirements would be, to the degree offsite conditions were considered, subject to analysis of characteristics of property an applicant does not own at the time of the application. More important, changes to upgradient property that could divert flow and diminish the effectiveness of BMPs are not subject to an applicant's control. RPBCWD elected not to introduce this level of uncertainty into the analysis.
48	Steve Christopher, MN BWSR	4			BWSR does not have any comments on the proposed rule amendments. We commend the District for maintaining its rules to ensure resource protection.	RPBCWD appreciates your taking the time to participate in the rulemaking process and review the proposed changes.
49	Matt Clark, City of Chaska	5	Rule J	2.4	For linear projects, you are proposing to increase the trigger for a stormwater permit from 5,000 SF of new or fully reconstructed impervious area to 10,000 SF of new or 0.5 acres of fully reconstructed impervious area. Despite the increase, this is still a low trigger. Many other watersheds use 1 acre of new impervious area as the trigger for a stormwater permit.	RPBCWD reviewed the impervious-surface coverage throughout the watershed and discovered that one-third of the existing impervious surface is contained within right-of-way. There are many impaired water bodies within the watershed and significant improvement in water quality can be gained by treating these areas.
50	Matt Clark, City of Chaska	5	Rule J	3.1.c.ii and 3.9	You are proposing to allow offsite treatment (within the same subwatershed) in lieu of onsite treatment. The City supports this change, particularly for linear projects where it may be hard to find space for BMPs.	Thank you for your support of the proposed revision.
51	Matt Clark, City of Chaska	5	Rule J	3.3	For restricted sites (where infiltration is not feasible), you are proposing to incorporate extended detention into the BMP sequencing. Not much detail has been provided as to how this would look in the rules, so it is difficult to comment on this item. However, we anticipate reviewing this rule closely during the public review period.	RPBCWD has opted not to incorporate extended detention into rule at this time.
52	Matt Clark, City of Chaska	5	Rule J	2.6	Section 2.6 says "the District may impose monitoring" of installed BMPs. You explained in a technical advisory committee meeting that you seldom invoke this clause but you want to keep it as an option. The RPBCWD should provide some triggers to apply this rule, so it is not arbitrary and subjective. A time frame should be included, so the monitoring duration is not open-ended. This type of monitoring can be difficult and expensive, especially if the permittee does not have equipment for this purpose.	Please see response to comment 22.

RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT  
RULES

Proposed amendments

Adopted as revised ~~August 8, 2018~~ December 11, 2019

DRAFT

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

I, \_\_\_\_\_, 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.

\_\_\_\_\_  
\_\_\_\_\_, Secretary

Date: \_\_\_\_\_

[Notary block]

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## 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 stormwater-management 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 (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 ~~pareelsite~~ but no intervening use has been legally or practically established, "existing conditions" denotes the previously established developed use and condition of the ~~pareelsite~~.

**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](http://www.rpbcwd.org).

**Impervious surface:** Any ground surface that is or has 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 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 transportation improvements, or construction, repair or reconstruction of a utility or utilities in a linear corridor that is not a component of a larger development or redevelopment project.

**Low floor:** The lowest elevation of a structure.

**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.

**Pervious:** Non-saturated soil with tested soil compaction pressure of less than 1,400 kilopascals/200 pounds per square inch in the upper 12 inches of soil or bulk density of less than 1.4 grams per cubic centimeter/87 pounds per cubic foot in the upper 12 inches of soil.

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

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

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

**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 parcelsite, 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 Delineated, legally defined property on which a public 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 a water basin bodies other than watercourses, and the top of the bank of the channel of watercourses, and the area waterward there from of.

**Site:** One or more contiguous properties that are the location of activities that are the subject of a District permit and are under the control of the applicant.

**Stormwater-Management Facility:** a device feature, or practice constructed, or installed, or used to limit rate of flow, retain volume and/or provide water-quality treatment of stormwater. A device designed and used solely to convey stormwater flows (a conveyance) is not a stormwater-management facility.

**Stream Power Index:** As defined by the Minnesota Department of Agriculture, Stream Power Index is calculated:  $LN ((\text{Drainage Area} + 0.001) * ((\text{Slope}/100) + 0.0001))$ . 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.

**Streambank:** The lateral measurement along the top of the bank of the channel of a watercourse and area waterward therefrom.

**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.

**Subwatershed:** An area described by a level-nine Minnesota Department of Natural Resources catchment code.<sup>1</sup>

**Thalweg:** The line connecting the points of lowest elevation in a watercourse, channel, valley, ravine or gully.

**Topsoil:** The topmost soil horizon which is most favorable for, consisting of clay, silt and sand in proportions conducive to the promotion of root penetration and plant growth. It should be rich in - must have a minimum of 5 percent organic matter and must demonstrate the following characteristics:.

Requirement	Range	Test Method
Material Passing 3/4 sieve	100%	ASTM D 422

<sup>1</sup> See [ftp://ftp.gisdata.mn.gov/pub/gdrs/data/pub/us\\_mn\\_state\\_dnr/geos\\_dnr\\_watersheds/metadata/dnr\\_watersheds\\_auto\\_catchments.html](ftp://ftp.gisdata.mn.gov/pub/gdrs/data/pub/us_mn_state_dnr/geos_dnr_watersheds/metadata/dnr_watersheds_auto_catchments.html)

(19mm)		
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 C 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

**LGU** – Minnesota Wetland Conservation Act local government unit

**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~~ authorized 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](http://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 stormwater-management facility in the watershed, except that no permit under this rule is required ~~for removing accumulated sediment from a water basin;~~
- a for removing accumulated sediment from a water basin; or
  - b for maintenance or in-kind replacement of existing public infrastructure that does not decrease floodplain storage volume; or
  - c if all of the following conditions exist:
    - i. The 100-year flood elevation of a water basin is entirely within a municipality;
    - ii. the water basin is landlocked;
    - iii. the municipality has adopted an ordinance regulating floodplain encroachment; and
    - iv. the proposed project is entirely within the drainage area of the water basin.
- 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 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 flood storage is provided within the same floodplain and:
- a at the same elevation +/- 1 foot for fill in the floodplain of a watercourse;
  - b at or below the same elevation for fill in the floodplain of a 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 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 ~~willis~~ not reasonably likely to have an adverse offsite impact and ~~willis~~ not reasonably likely to adversely affect flood risk, basin or channel stability, groundwater hydrology, stream base flow, water quality or aquatic or riparian habitat.

- 3.4 **Creekside restrictions.** No enclosed structure may be placed, constructed or reconstructed within 100 feet of the centerline of a watercourse; and no impervious surface may be created or re-created within 50 feet of the centerline of a 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 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:

- 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).
- 4.3 Grading plan showing any proposed elevation changes.
- 4.4 Preliminary plat of any proposed land development.
- 4.5 Determination by a licensed civil engineer or registered qualified hydrologist of the 100-year flood elevation(s) for the parcelsite before and after the project.
- 4.6 Computation by a professional engineer of cut, fill and change in water storage capacity resulting from proposed grading.
- 4.7 Erosion-control plan.
- 4.8 Soil boring results, if requested by the District.
- 4.9 Documentation that drainage and flowage easements over all land below the 100-year flood elevation have been conveyed to the municipality with jurisdiction, where required.

#### ~~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:

- Improve water quality to fully support swimming in designated lakes and to fully support designated uses for waterbodies.
- Preserve vegetation and habitat important to fish, waterfowl and other wildlife while also minimizing negative impacts of erosion.
- Alleviate identified erosion problems.
- Minimize the duration and intensity of soil and cover disturbances.
- Require local governments and developers to manage runoff effectively to minimize water quality impacts from new development, redevelopment and other land-disturbing activities.
- Encourage low-impact development techniques and approaches.
- 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 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-management 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; and
- h staking off and marking of proposed infiltration facilities to prevent soil compaction by heavy equipment, stockpiling of materials, and traffic. If infiltration facilities are in place during construction activities, best practices must be deployed to prevent sediment and other material from entering the practice(s). Infiltration facilities must not be excavated to within 3 feet final grade until the contributing drainage area has been constructed and fully stabilized. Any accumulated sediment in an infiltration facility must be removed in manner that prevents compaction of the facility bottom. To provide a well aerated, highly porous surface, the soils of a vegetated basin must be loosened to a depth of at least 3 feet prior to planting. To provide a well-aerated, highly porous surface, the soils of below an infiltration practice basin must be loosened to a minimum depth of 18 inches prior to installation or planting.

### 3.2 Site stabilization and completion

- 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 to achieve:
  - i. a soil compaction testing pressure of less than 1,400 kilopascals or 200 pounds per square inch in the upper 12 inches of soil; or
  - ii a bulk density of less than 1.4 grams per cubic centimeter or 87 pounds per cubic foot in the upper 12 inches of soil.

In addition, utilities, tree roots and other existing vegetation must be protected until final revegetation or other stabilization of the site.

- d Stabilization of disturbed areas must begin immediately whenever land-disturbing activity has permanently or temporarily ceased on any portion of the site and will not resume within seven calendar days 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 everyto ensure integrity and effectiveness. The permittee must repair, replace or supplement all nonfunctional BMPs with functional BMPs as soon as conditions allow within 48 hours of day work is performed ~~and discovery and but repairs must be completed prior to the next precipitation event unless adverse conditions preclude access to the relevant area of the site, and at least weekly until,~~ in which case the repair must be completed as soon as conditions allow. ~~When active land-disturbing activity has ceased. Thereafter activities are not under way,~~ 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:

- 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.
- 4.3 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:

- 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.
- Preserve vegetation and habitat important to fish, waterfowl and other wildlife while also minimizing negative impacts of erosion.
- Require buffers around wetlands, water basins and watercourses affected by land-disturbing activities.
- Ensure the preservation of the natural resources, habitat, water treatment and water storage functions of wetlands, water basins and watercourses.
- Maintain wetland integrity and prevent fragmentation of wetlands.
- 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 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. 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:

- a incidental wetlands ~~or~~;
- b 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; or
- c to projects approved under the fast-track maintenance provisions of Rule F, paragraph 3.4.

### 3 Criteria

#### 3.1 Buffer area. Buffer must be created or maintained:

- a Around a wetland disturbed by land-disturbing activity regulated by the District;
- b on that portion of the edge of a wetland that is downgradient from land-disturbing activity regulated by the District; and
- c ~~On~~ streambank downgradient from the land-disturbing activity regulated by the District and 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 Wetland values will be determined in accordance with Appendix D1, which is incorporated into and made a part of this rule.
- b Subject to paragraphs 3.2 ~~cb~~ through ~~fg~~, buffers must extend:
  - i An average of 80 feet from the delineated edge of an exceptional value wetland,<sup>2</sup> 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,<sup>1</sup> minimum 20 feet;
  - iv an average 20 feet from the delineated edge of a low value wetland,<sup>1</sup> 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.
- ~~cb~~ **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 3.2a 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.
- ~~ed~~ **Existing single-family residential properties:** Paragraphs a ~~and through cb~~ 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.
- ~~ed~~ **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,

<sup>2</sup> ~~Wetland values will be determined in accordance with Appendix D1.~~

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.

**fe** 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.

**gf** Buffer required for linear projects will be limited in width to the extent of available right-of-way.

3.3 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~~constructed within a buffer area as long as the minimum and average buffer widths is-are maintained from the regulated feature ~~and average buffer width is maintained, except as allowed under paragraph 3.3e of this rule.~~ Stormwater-management facilities may be constructed within buffer area. Plans and specifications must be approved by the District prior to construction. Existing impervious surface that will not otherwise be disturbed need not be removed.

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 created or maintained to provide access to a regulated feature or within the required

buffer area outside the minimum buffer width. Access paths or boardwalks may not be located where or constructed such that concentrated runoff will flow to the regulated feature.

- 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;
  - c location(s) for markers, at a minimum along each lot line, with additional markers at an interval of no more than 200 feet 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.

- 3.5 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.
- 3.6 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.

## 5 Temporary alterations

Temporary alteration of buffer areas permitted under this rule or in writing by the District must comport with the requirements of this section.

- 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.
- 5.2 Buffer zones and the location and extent of vegetation disturbance will be delineated on the erosion control plan.
- 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.
- 5.4 Fill or excavated material may not be placed to create an unstable slope.

## 6 Roads and 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.

6.1 All work will be conducted in accordance with section 4 of this rule.

## 7 Shoreline or 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.

## 8 Required information and exhibits

The following exhibits must accompany the permit application:

- 8.1 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.
- 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;
- 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.

- 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.

<b>Function or Value</b>	<b>Rating</b>
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.

<b>Function or Value</b>	<b>Rating</b>
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.

<b>Function or Value</b>	<b>Rating</b>
Vegetative Diversity	Medium
Wildlife Habitat	Medium
Amphibian Habitat	Medium
AND Vegetative Diversity	Medium
Fish Habitat	Medium
Shoreline Habitat	Low
Aesthetics/education/recreation/cultural	Medium
AND Wildlife Habitat	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 re-deposition of the sediment to an adjacent waterbody, stormwater-management 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:

- 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.
- 4.5 A site plan showing the proposed location of floating silt curtain(s).
- 4.6 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**

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 paragraph 3.4 below. No District permit under this rule is required for:

- 2.1 No District permit under this rule is required for activities 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 activities in incidental wetlands or for utility improvements or repairs that are the subject of a no-loss determination from the relevant LGU;
- 2.3 removing accumulated sediment from a water basin; or
- 2.4 maintenance or in-kind replacement of existing public infrastructure on non-public waters that does not increase the length, width or depth of the existing infrastructure.

### 3 Criteria

- 3.1 An applicant for a permit under this rule must demonstrate a need to prevent erosion or restore an eroded shoreline,<sup>3</sup> unless the proposed improvement is designed to restore natural shoreline.
- 3.2 **Sequencing.** Stabilization practices must be consistent with the erosion intensity or shear stress rating calculated for the property proposed to be stabilized. The District will approve proposed stabilization practices in accordance with the applicable sequencing priority:
  - a **Shoreline erosion intensity calculation.** Applications for shoreline stabilization must include a completed RPBCWD Erosion Intensity Scoresheet<sup>4</sup> to determine the erosive energy ranking for the site (low,

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<sup>3</sup> 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.

<sup>4</sup> 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](http://www.RPBCWD.org). The website

medium, high). The proposed shoreline stabilization practice must be consistent with the shoreline erosion energy rating calculated.

- i Low-energy site means a site where the erosion intensity 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 for the site.<sup>5</sup> 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.
  - 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 .

### 3.3 Design criteria.

#### a Vegetative, bioengineered and hard-armored stabilization.

- i Live plantings must be native aquatic vegetation and/or native upland plants.

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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 .↻

<sup>5</sup> 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](http://www.rpbcwd.org) – provides guidance on how to calculate shear stress.

- 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.
  - ii Riprap ~~will~~must be placed to conform to the natural alignment of the shoreline.
  - 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.
  - iv Riprap must not cover emergent vegetation, unless authorized by a Department of Natural Resources permit.
  - v Riprap ~~will~~must not 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.
- c Retaining walls.** Retaining walls extending below the OHW of a waterbody

are prohibited, except where:

- i there is a demonstrable need for a retaining wall in a public improvement project, and
- ii the design of the retaining wall has been certified by a registered engineer.

d **Sand blankets.** The following standards apply to sand blanketing:

- i 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 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 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.

Exception-Public beaches. Beaches operated by public entities and available to the public 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.

- e In installing or maintaining 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 3.3, 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:

- 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, 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 landscape architect.

- 4.3 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 ~~OHW~~OHW.
  - d Description of the underlying soil materials.
  - e Material specifications for stone, filter material and geotextile fabric.
- 4.4 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.
- 4.5 An 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 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, 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. No District permit under this rule is required for:

2.1 ~~No District permit under this rule is required for activities~~ 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 activities in incidental wetlands or for utility improvements or repairs that are the subject of a no-loss determination from the relevant LGU; or

2.3 maintenance or in-kind replacement of existing public infrastructure on non-public waters.

### 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~~ Must not ~~adversely~~ be reasonably likely to affect water quality, change the existing flowline/gradient, or cause increased scour, erosion or sedimentation;
- d Will provide wildlife passage along each bank and riparian area and fish passage in the waterbody by means that account for wildlife that are native to the area or may be present.
- e Will represent the 'minimal impact' solution to a specific need with respect to 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 be reasonably likely to 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 subsection 3.3 of Rule F – Shoreline and Streambank Stabilization is required.

**4 Required information and exhibits.**

The following exhibits will accompany the permit application:

- 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.
- 4.3 An analysis prepared by a professional engineer showing the effect of the project on hydraulic capacity and water quality.
- 4.4 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's jurisdiction; or
- 2.2 A public watercourse within the 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

~~4.7 — 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:

- Limit the impact of runoff quality and rate on receiving waterbodies.
- Improve water quality to fully support swimming in designated lakes.
- Improve water quality to fully support designated uses for waterbodies, and remove waterbodies from the Minnesota Pollution Control Agency list of impaired waters.
- Alter stormwater hydrographs (stream flow) through infiltrative strategies that reduce peak discharge rates and overall flow volume.
- Require that onsite retention and regional water quality treatment systems operate together to provide complete and effective runoff management.
- Provide for nondegradation of surface waterbodies in the watershed.
- 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.
- Maximize opportunities to improve stormwater and snowmelt management presented by redevelopment of land.
- Require governmental entities and developers to manage runoff effectively to minimize water quality impacts from new development, redevelopment and other land-disturbing activities.
- 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;~~

~~ba~~ Alteration or removal of 5,000 square feet or more of land-surface area or vegetation; or

~~eb~~ Subdivision of a property or properties into three or more residential lots.

2.2 **Exemptions.** The requirements of this rule do not apply to:

a Construction or 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 the 100-year flood elevation of a water body.
  - b Construction or remodeling on a single-family home site consistent with a subdivision, development or redevelopment plan 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, sidewalks and retaining walls that do not exceed 10 feet in width and are bordered downgradient by a pervious 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 510,000 square feet of new and ~~for less than~~ 25,000 square feet of fully reconstructed impervious surface. For linear projects creating 510,000 square feet or more of new ~~and~~ or 25,000 square feet of 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.** Limit peak runoff flow rates to that from existing conditions for all points where stormwater discharge leaves the site for the

i ~~Limit peak runoff flow rates to that from existing conditions for the two~~ 2-, 10- and 100-year frequency storm events using a nested 24-hour rainfall distribution, and

ii ~~a 100-year frequency, 10-day snowmelt event, for all points where stormwater discharge leaves the site;~~

b **Volume.** Provide ~~for the~~ abstraction onsite or in the same subwatershed as the land-disturbing activity of:

i ~~1.1 inches of runoff~~ inch from regulated impervious surface ~~of the parcel;~~

or  
ii the volume for the 95th percentile storm-event runoff from the site.

~~Where~~ infiltration or filtration facilities, practices or systems are proposed,

1. pretreatment of runoff must be provided: in accordance with the guidance in the Minnesota Stormwater Manual<sup>6</sup> and will not be credited toward compliance with the criteria in subsection 3.1c.

2. ~~Where infiltration facilities, practices or systems are proposed,~~ data must be submitted showing:

a. no evidence of groundwater or redoximorphic soil conditions within 3 feet of the 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. the measured infiltration capacity of soils at the bottom of the facility, practice or system. ~~(For purposes of calculating volume control capacity, measured infiltration rates must be divided by 2 to provide a margin of safety.)~~

3. ~~iii~~ Drawdown of water levels in infiltration facilities must be within 48 hours.

4. ~~iv~~ Infiltration rates utilized to meet the 3.1b criterion may not exceed 8.3 inches per hour.

~~v~~  
c **Quality.** Provide ~~for:~~

<sup>6</sup> [https://stormwater.pca.state.mn.us/index.php?title=Main\\_Page](https://stormwater.pca.state.mn.us/index.php?title=Main_Page)

- i Volume abstraction in accordance with 3.1b, or
- ii treatment onsite or in the same subwatershed as the land-disturbing activity to the equivalent of:
  1. at least 60 percent annual removal efficiency for total phosphorus (TP) and from site runoff;
  - 1.2. at least 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.
  3. i no net increase in TSS or TP loading from the site compared to existing conditions.

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 510,000 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, meet the water-quality standard in 3.1c.ii for all new and fully reconstructed impervious surface and 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 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~~ is reasonably likely to cause or exacerbate migration of underground contaminants, the applicant must provide rate control and water quality in accordance with the ~~standard~~ standards in ~~paragraph~~ paragraphs 3.1a and 3.1c, and abstraction ~~and water quality protection~~ in accordance with the following priority sequence:
  - a Abstraction onsite of ~~at least~~ 0.55 inches of runoff from ~~site~~ the regulated impervious surface determined in accordance with ~~paragraphs~~ section 2.3, 3.1 or 3.2, as applicable of this rule, and treatment of ~~all~~ runoff from the regulated impervious surface to the standard in paragraph 3.1c; ~~or~~
  - b Abstraction of runoff onsite to the maximum extent practicable and treatment

- of ~~all~~ runoff from the regulated impervious surface to the standard in paragraph 3.1c; or
- c. Off-site abstraction and treatment in the ~~watershed~~ same subwatershed as the proposed land-disturbing activity to the standards in ~~paragraph and in accordance with paragraphs~~ 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 **54** 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:~~
- ~~a—~~ a. All new and reconstructed buildings must be constructed such that the lowest floor is:
- i. At least two feet above the 100-year high water elevation or one foot above the natural overflow of a waterbody;
  - ii. ~~b—~~ At least two feet above the 100-year high water elevation of any open stormwater conveyance; and
  - iii. ~~c—~~ At least two feet above the 100-year high water elevation or one foot above the emergency overflow of a stormwater-management facility.
  - iv. Alternatively, low floors of new and reconstructed buildings 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. If Appendix J1 is used, the **lowest** opening where surface water can enter the structure must be a minimum of two feet above the 100-year high water elevation or one foot above the emergency overflow.
- ~~b.~~ In addition, a stormwater-management facility must be:
- i. constructed at an elevation that ensures that no adjacent habitable building will be brought into noncompliance with a standard in this subsection 3.6.
  - ~~ii.~~ 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. If Appendix J1 is used, the **lowest** opening where surface water can enter the structure must be a minimum of two feet above the 100-year high water elevation or one foot above the emergency overflow.

- ~~b.c.~~ **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.
- e** 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:
- iv** A hydrologic regime is maintained that complies with all other rules;
  - vii** 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;
  - viii** The outlet does not create adverse downstream flooding or water quality conditions, or materially affect stability of downstream watercourses
  - viii** Proposed development draining to the landlocked basin has incorporated runoff volume and rate control practices to the extent practical
  - viii** There is a demonstrated need for an outlet to protect existing structures and infrastructure; and
  - ix** The outlet design is part of an approved comprehensive local water management plan.

### 3.7 Maintenance

- a.** 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.
- b.** 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.

c. The plan will be recorded on the deed in a form acceptable to the District.

~~a-d.~~ A public entity assuming the maintenance obligation may do so by entering an agreement with the District in lieu of a recorded document.

### 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.

The chloride-management plan for a residential subdivision need not encompass the single-family home properties within the subdivision.

3.9 **Rights to Utilize Offsite Facility.** An applicant relying on regional or offsite stormwater-management treatment facility or facilities for compliance with the standard in paragraph 3.1c or under an approved regional plan under section 4RPBCWD requirements must demonstrate that it holds the legal rights necessary to discharge to utilize the relevant offsite stormwater management 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 alters 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 in Table J.1, which is incorporated into and a part of this rule.

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 Discharge from regulated under District rules disturbed areas to a protected wetland must be treated to meet comply with the following criteria:

i Stormwater must be treated to meet the 3.1b1c criterion by before discharge to a low- or medium-value 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 a high- or exceptional-value 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:
- The use of a regional facility in place of onsite stormwater management is not reasonably 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
  - 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:

- 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.
- 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. The stormwater modeling must contain sufficient detail to account for the 2-, 10- and 100-year flows contributing to the flood elevations on the site and discharge leaving the site. If storm sewer systems are designed for an event less than a 100-year event, the plans and modeling analysis must include secondary overflows for events exceeding the storm sewer system's level of service up through the critical 100-year event.
- A site plan showing:
  - Property lines and delineation of lands under ownership of the applicant.
  - Existing and proposed elevation contours.
  - Identification of existing and proposed normal, and ordinary high and 100-year water elevations onsite.
- A stormwater-management plan certified by a registered engineer including, at a minimum:
  - Proposed and existing stormwater-management facilities' location, alignment and elevation.
  - 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.
  - 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 and completed by a state-licensed soil scientist, geologist, or engineer.

- 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 drainage and ponding/flowage easements over hydrologic features such as floodplains, storm sewers, ponds, ditches, swales, wetlands and waterways, where required by the relevant city.
  - 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.
  - 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.
- 5.6 Upon completion of site work, a permittee must submit as-built drawings demonstrating that at the time of final stabilization, stormwater-management facilities conform to design specifications as approved by the District.

Table J.1: Impacts on onsite wetlands<sup>7</sup>

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
<b>Exceptional</b>	Existing	Existing	Existing	No change
<b>High</b>	Existing plus/minus 0.5 feet	Existing plus 1 day	Existing plus 7 days	No change
<b>Medium</b>	Existing plus/minus 1.0 feet	Existing plus 2 days	Existing plus 14 days	0 to 1.0 ft above existing runout
<b>Low</b>	No limit	Existing plus 7 days	Existing plus 21 days	0 to 4.0 ft above existing runout

<sup>7</sup> Adopted from *Wetland Management Classification System*

[http://bwsr.state.mn.us/wetlands/mnram/MnRAM\\_Wetland\\_Mgmt\\_Classification\\_Guidance.pdf](http://bwsr.state.mn.us/wetlands/mnram/MnRAM_Wetland_Mgmt_Classification_Guidance.pdf)

**Appendix H.1 – Low-Floor Elevation 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 straightforward. 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 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  $7 \text{ ft}^2/\text{day}$  and specific yield values of 0.1); silt aquifers (transmissivity of  $70 \text{ ft}^2/\text{day}$  and specific yield values of 0.2) and sand and gravel aquifers (transmissivities of  $2000 \text{ ft}^2/\text{day}$  and specific yield values of 0.2).
4. Pond bottom sediment thickness of 1 foot and bottom sediment hydraulic conductivity of  $1 \text{ ft}/\text{day}$ .
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 representative soil borings must be installed at or near the perimeter of the lowest floor. At least one of these borings must be where the floor is closest to the nearest pond.
2. Soil borings must extend to a depth of at least 7 feet below the water table. The borings must be left open for a time sufficient to determine the stabilized water level in the borehole. The water level 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 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.<sup>8</sup>

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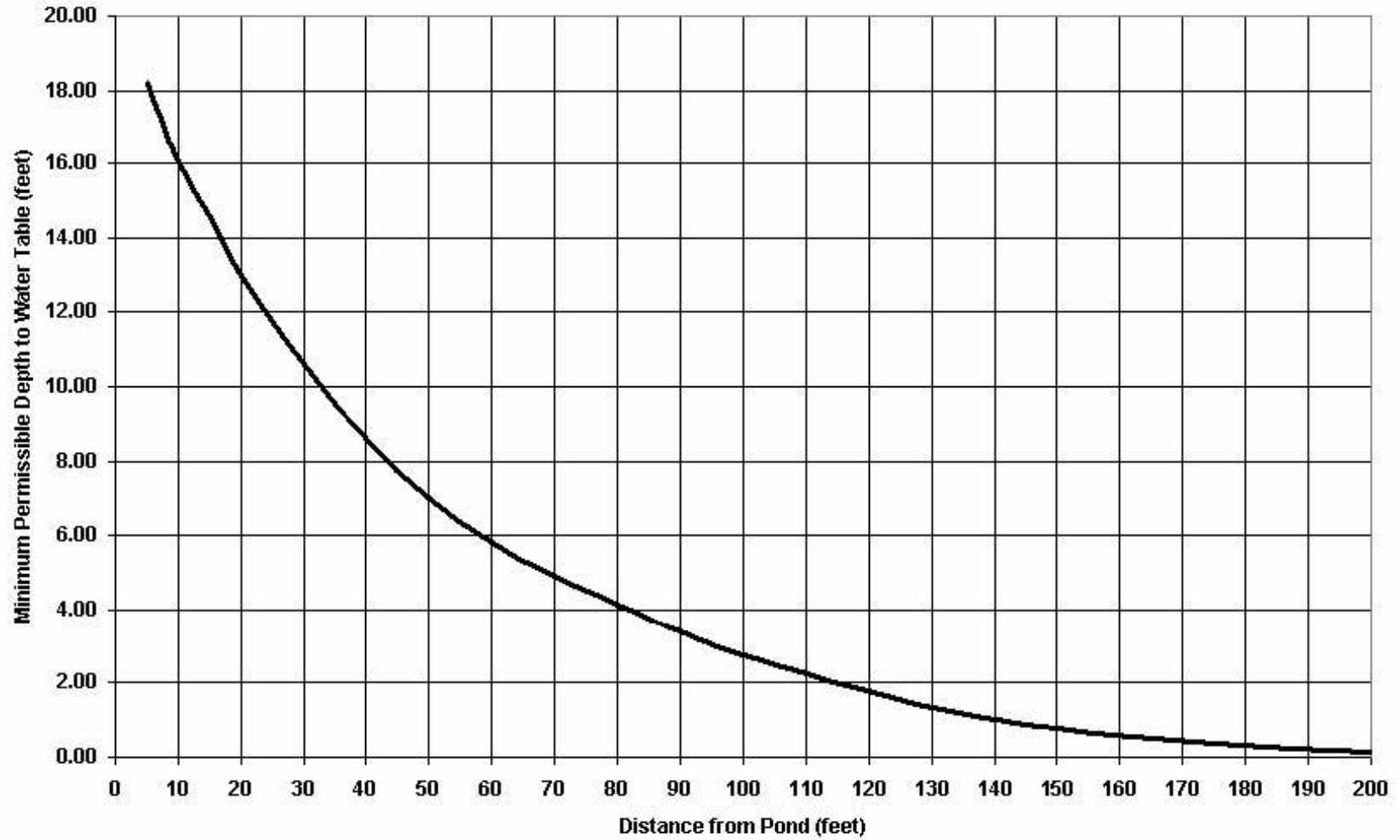
<sup>8</sup>        This assumes that the pond level begins to return to normal within about 30 days and the pond level's increase is not greater than 6 feet.

### **Determining Soil Type at the Water Table**

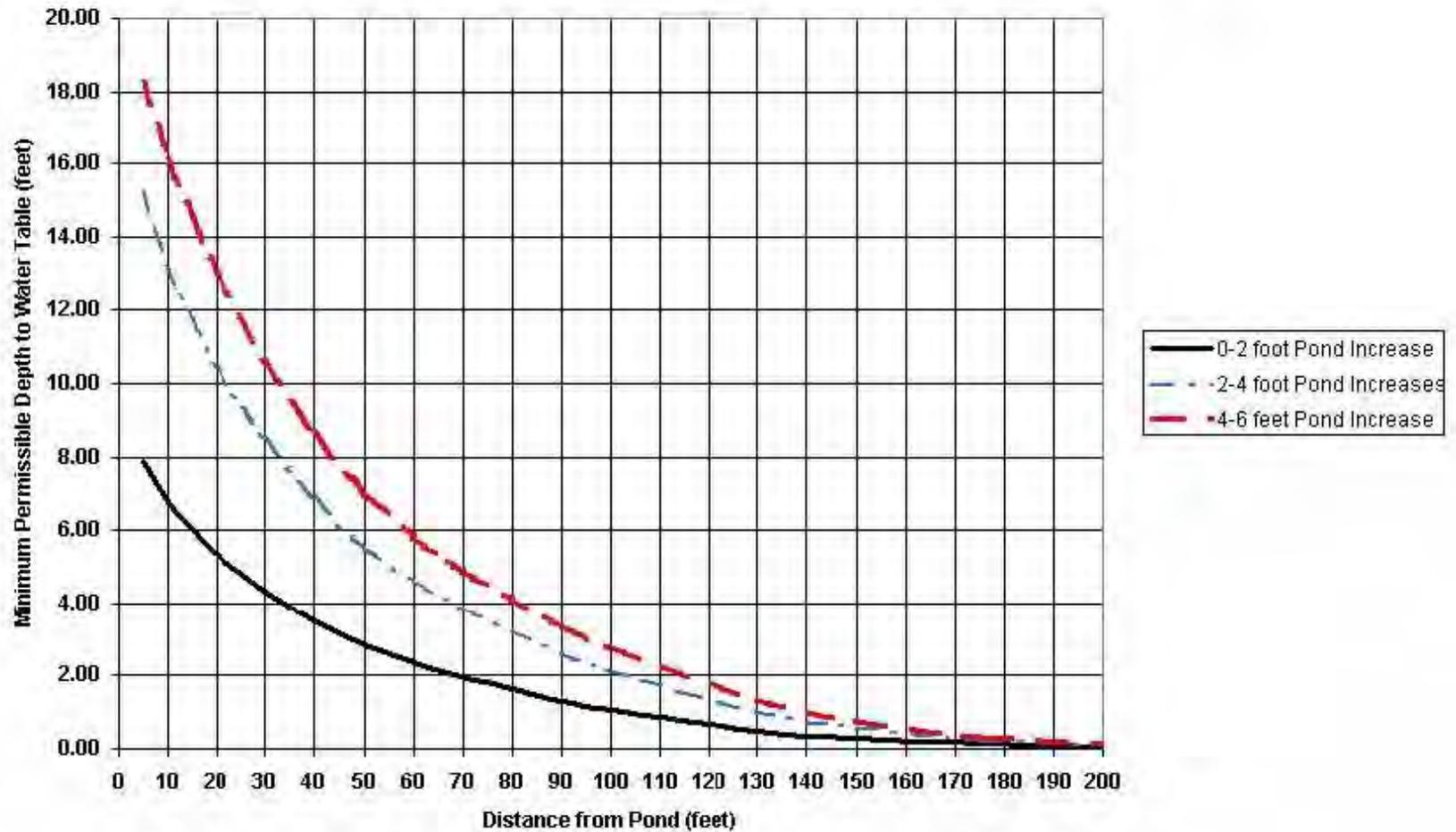
The textural classification from the soil borings will be necessary for determining the expected rise in the water table caused by an increase in pond elevation. At a minimum, the soil should be classified as one of the following:

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.

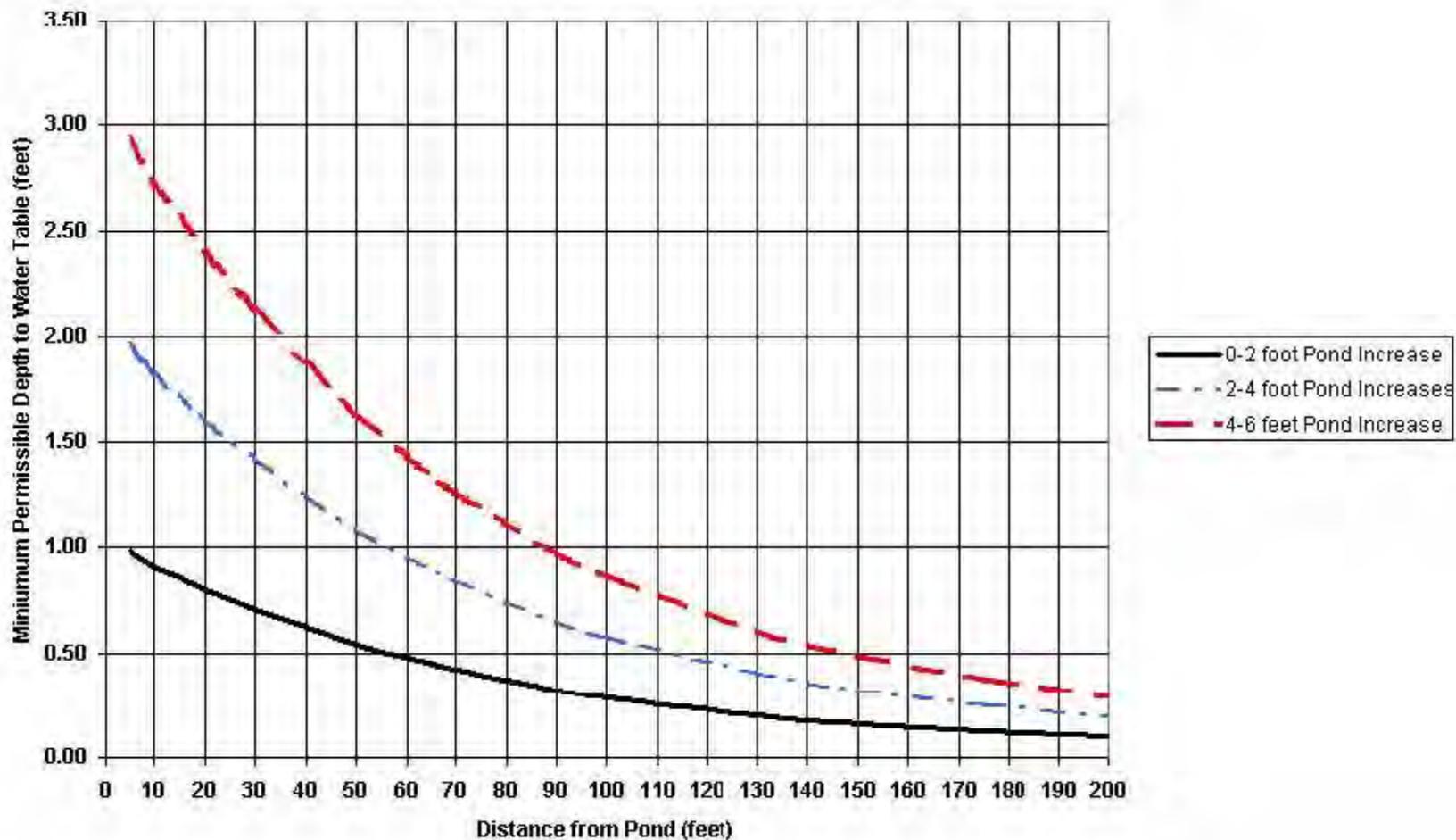
**PLOT 1: Minimum Depth to Water Table for No Further Evaluation**



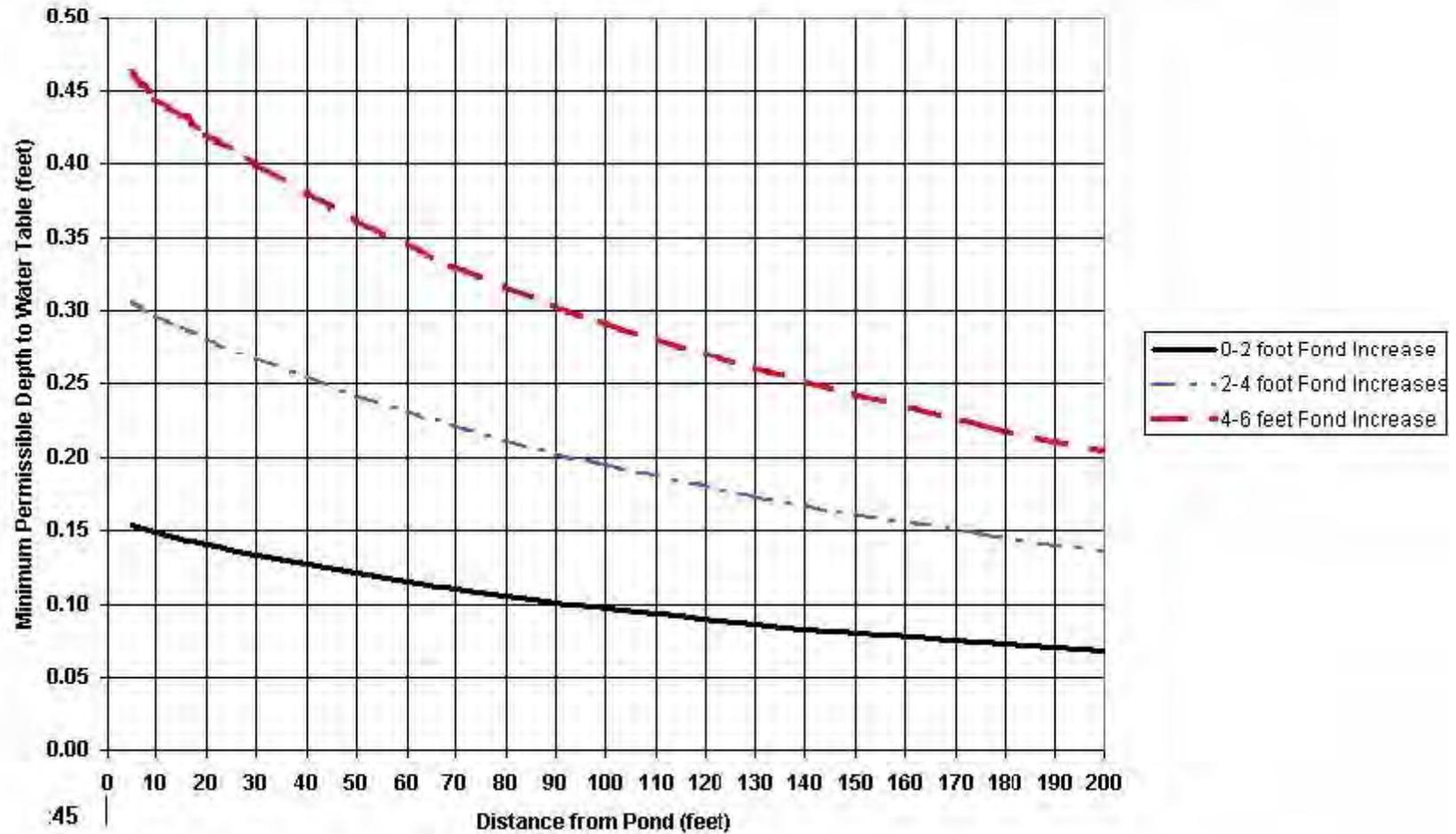
**PLOT 2: Minimum Permissible Depth to Water Table - Clay or Perched Conditions  
(Perched Conditions = Water Table <5 feet above a continuous clay layer)**



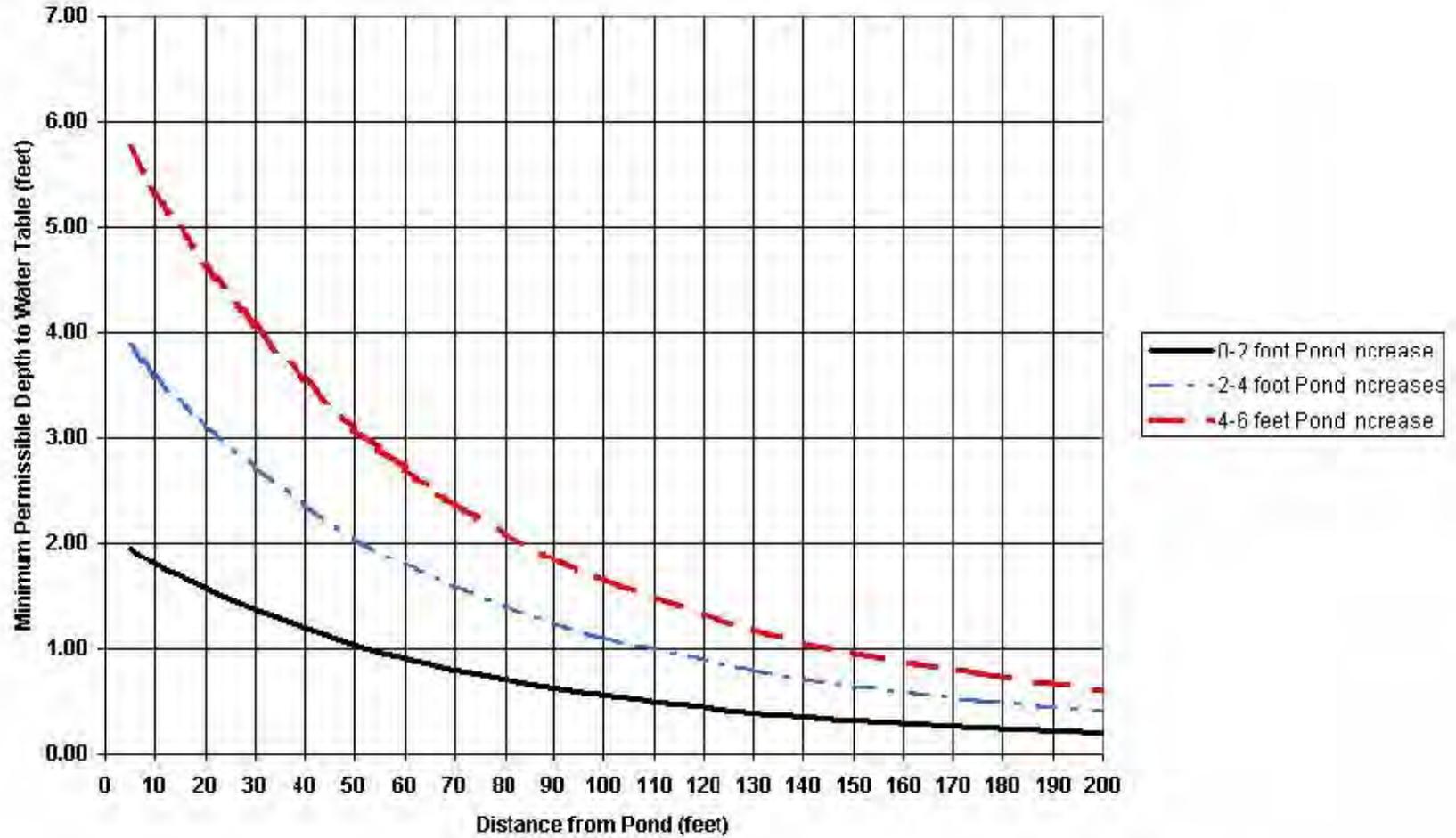
**PLOT 3: Minimum Permissible Depth to Water Table - Silt - Pond Bottom <3 feet above Ambient Water Table**



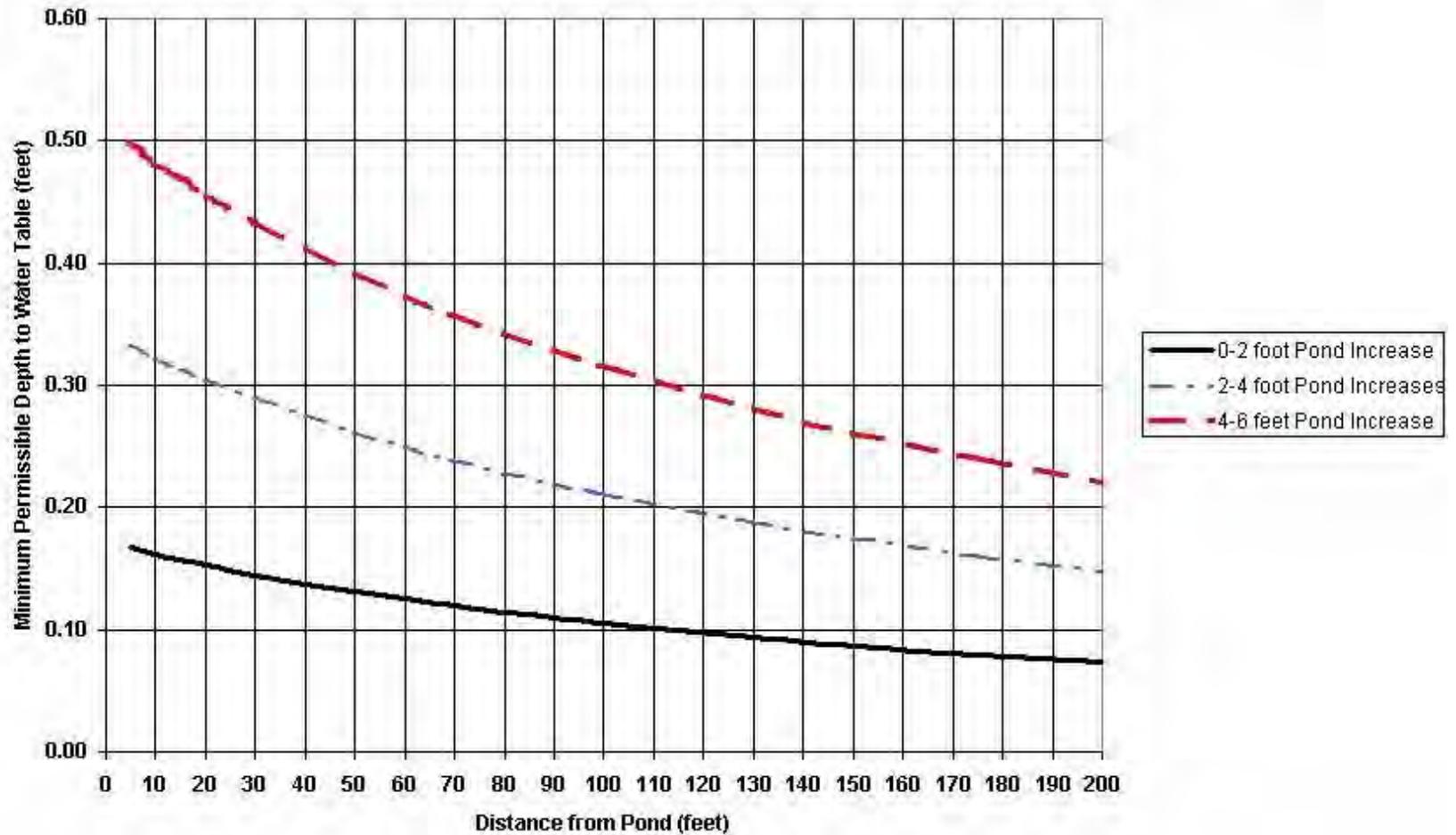
**PLOT 4: Minimum Permissible Depth to Water Table - Sand & Gravel - Pond Bottom <3 feet above Ambient Water Table**



**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 facilities have been constructed or installed and are functioning as designed and permitted; and
  - 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 sections 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.

## Riley-Purgatory-Bluff Creek Watershed District

### Memorandum Supporting and Providing Explanation of Proposed Revisions of the Riley-Purgatory-Bluff Creek Watershed District Rules

December 11, 2019

#### Summary

In ~~the past several months~~ spring 2019, Riley-Purgatory-Bluff Creek Watershed District ~~has~~ engaged property owners and developers, along with staff and council members from cities in the watershed, to understand concerns with RPBCWD's regulatory requirements. Informed by these discussions, RPBCWD ~~has~~ drafted revisions to its rules to address the concerns, while maintaining a rigorous program that provides a high level of resource protection and flood-risk mitigation. After issuing the draft revisions for comment in September, holding a public hearing on the revisions in November and reviewing and responding to the comments received, the RPBCWD Board of Managers adopted the revisions at its December 2019 regular meeting. The revisions are effective January 1, 2020.<sup>1</sup>

This memo is a revision of the one issued with the draft revisions in September. It has been revised to explain the relatively few changes that were made in response to comments received. Accompanying this document is a table of the comments received and RPBCWD's responses, which address comments that did not result in changes to the rules.

The ~~proposed~~ changes are not tweaks, but provide meaningful, responsive reduction in the scope and extent of RPBCWD's regulatory requirements. The changes underscore that RPBCWD staff and managers understand that the need to protect resources must be balanced against the burden on regulated parties of compliance, and wish to finalize the rules so the regulatory program can focus for the foreseeable future on efficient, effective operation in cooperation with RPBCWD's other programs and projects, and the development and redevelopment in the watershed.

Particularly notable changes:

- Exempt certain repair and replacement-in-kind projects from the Floodplain Management and Drainage Alterations Rule;
- Remove placement, alteration or removal of 50 cubic yards or more of earth as a trigger for the Stormwater Management Rule;
- Increase the linear-project threshold on the Stormwater Management Rule from 5,000 square feet or more of new and/or fully reconstructed impervious surface to 10,000 square feet of new impervious and 0.5 acre of disturbed impervious;

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<sup>1</sup> 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.

- Provide the option to manage stormwater offsite, on a property within the same subwatershed as the proposed land-disturbing activities, as long as rate control is maintained onsite;
- Revision, in several places, of the narrative standard requiring “no adverse effect” to the less rigid “not reasonably like to” cause an adverse effect;
- Rescind Rule I - Appropriation of Groundwater.

RPBCWD considered incorporating additional flexibility and exemptions into the rules – notably including an exemption for projects creating less than 10,000 square feet of impervious area, allowing an applicant to provide extended onsite detention of stormwater when abstraction is not feasible, providing a fee-in-lieu compliance option for the Stormwater Management Rule – but determined that those changes would have provided relief and flexibility at too high a cost in terms of lost resource protection and (moreso) program-management inefficiencies. RPBCWD also considered including a cost cap on stormwater-management infrastructure expenses needed to comply with RPBCWD requirements, as some other watershed organizations in the metro area have done. But a cap runs contrary to the principle that the RPBCWD rules set performance standards necessary to protect water resources, allowing the applicant/property owner to determine how to design and specify projects and associated stormwater-management to meet the requirements. A cost cap would necessarily – and unadvisedly – draw RPBCWD staff and engineers into discussions of the methods applicants choose to meet the rules.

RPBCWD instead has focused on setting the proper balance between the burden of compliance on property owners and effectively protecting water resources. Revisions RPBCWD did make to the rules – such as allowing abstraction and water quality performance standards to be met offsite in the same subwatershed as the land-disturbing activity – will provide similar flexibility without the downsides noted here.

## Introduction

This memorandum presents background on and explanation of ~~proposed~~ amendments of the Riley-Purgatory-Bluff Creek Watershed District rules. The memo supports the RPBCWD Board of Managers’ determination that the ~~proposed~~ changes to the rules will improve the efficiency and cost-effectiveness of its regulatory program’s efforts to protect water resources and mitigate the risk of flooding. It describes the basis for RPBCWD’s determination that the effectiveness of the rules, as revised, reasonably balances the burden incurred by property owners in complying with the rules.

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 F – Shoreline and Streambank Improvements
- Rule G – Waterbody Crossings and Structures
- Rule J – Stormwater Management

In addition, RPBCWD proposes to adopt accompanying changes to the rules definitions and vacate Rule I – Appropriation of Groundwater.

### Opportunities to comment

RPBCWD ~~solicited wishes to receive~~ written ~~or verbal~~ comments on its proposed revisions ~~during a 45-day comment period that ended October 21, 2019. Interested persons and organizations can submit written comments on the revisions on or before the close of business on October 21, 2019. RPBCWD prefers submission of comments by email to Terry Jeffery, watershed planning 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. 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~~ held a public hearing on the revisions ~~at 6:30 p.m., on October 2~~ November 6, 2019 ~~prior to the managers' regular monthly meeting at the RPBCWD offices at 18681 Lake Drive East, Chanhassen. At the hearing any interested person will have the opportunity to address the managers and staff concerning the proposed revisions.~~<sup>2</sup>

~~Several written comments on the proposed revisions were received, but the only comments at the public hearing were from staff from the City of Eden Prairie and effectively reiterated the city's written comments.~~

The ~~proposed final~~ changes ~~may be were~~ revised in response to comments. ~~Those final tweaks are highlight in the show-changes rules document provided for the December 11, 2019 adoption action by the managers. These changes are discussed in the rule-by-rule review below. The reasoning for RPBCWD's declining to make additional changes in response to comments is provided in the response-to-comments document accompanying this memo.~~

~~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 November 6. When adopting the revised rules, the managers will set a date on~~

<sup>2</sup> RPBCWD will administratively amend its watershed management plan to include the updated rules when they are adopted.

~~which the amended rules will be effective throughout the watershed. RPBCWD has tentatively identified January 1, 2020, 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.~~

## II. BACKGROUND

### Authority

Readers interested in understanding the statutory framework underpinning RPBCWD's regulatory program are directed to the memo supporting the November 2014 adoption of RPBCWD Rules or the August 2018 adoption of amendments.

### Development of the Proposed Changes

After adoption of the 2018 amendments to rules, RPBCWD received several permit applications that presented particularly difficult circumstances and challenging permitting questions, resulting in approvals fraught with variances. Staff and the engineer have also heard concerns from several managers about the level of detail in permit analyses presented to the board. Some of these were for city projects, and independent discussions with these applicants led RPBCWD to conduct a listening session in April 2019 to collect feedback on the regulatory program. Thirteen people (two consultants, two developers, nine city staff) attended. Most of the discussion concerned RPBCWD's stormwater rule and tracked results of a survey RPBCWD had sent before the session to all past permit applicants. The following summarizes concerns and challenges that were cited with some consistency and frequency:

- Minor street repair projects (e.g., pothole repairs) and utility repair trigger an RPBCWD permit;
- The permitting process involves excessive requests for information, especially if a variance is requested;
- Permit-review comments are too detailed;
- Too much focus on regulatory program, undermining collaborative approach to projects and other work by RPBCWD;
- Treatment of run-on should be credited toward compliance with stormwater-management requirements;
- Simple city projects result in engineering costs greater than cost of actual repair.
- RPBCWD's stormwater-management threshold/trigger for linear (street) projects is significantly lower than other watershed organizations' (i.e., it is overly inclusive);
- For 'restricted sites' (as defined in the stormwater rule) narrative standards ("at least" and "maximum extent practicable") necessarily require judgment of the engineer and involve unproductively lengthy dialogues between the applicant and engineer/staff;

- Compliance with other narrative standards – for example “no adverse impact” or “minimal impact solution” is very difficult to demonstrate, because the engineer needs extensive documentation to achieve the level of assurance necessary to represent to the board that there will be *no* adverse impact;
- RPBCWD staff and the engineer require data and demonstration of analytical methodologies rather than accepting applicants’ stated results.

Since the reinstatement of the program in 2014, RPBCWD staff have worked to improve the efficiency with which the rules are administered. The 2018 amendment of the rules clarified uncertainties and streamlined the rules, but, as noted, some regulated entities still encountered difficulties complying with the rules. The principal goal of these revision is to improve the balance between the burden on the regulated community and projects of compliance with the protection of water resources and mitigation of flood risk.

RPBCWD is eager to ensure that the efforts expended by project proponents to comply with the rules and the efforts of RPBCWD staff and the engineer to assess compliance result in meaningful and significant protection of water resources and mitigation of flood risk. Beyond the rule-text changes proposed, RPBCWD will provide additional guidance on its website to support efficient permitting. Staff and the engineer regularly receive applications that are supported by incomplete or incorrect designs and analysis. In addition to continuing to make themselves available for advance review of developing plans, RPBCWD staff and the engineer will update the flow charts on the website that provide a graphic guidance on how to determine application of rules and criteria to a particular project. RPBCWD also will produce ‘how to read the rules’ guidance document that explains the operation of the rules. In addition, RPBCWD is planning to provide:

- Rule-by-rule submissions checklist.
- Guidance on the application of the definition of “reconstruction” to various kinds of frequently undertaken work – e.g., mill & overlay of parking lots and roads, rehabilitation of impervious areas, for purposes of determining whether RPBCWD’s stormwater-management requirements apply.
- Guidance on how to determine the extent of the “site” for purposes of the rules.
- Clear deadlines, to provide clarity and manage expectations regarding when complete application-support materials must be submitted to ensure that the permitting decision can be made at the next meeting of that managers. The reality of the matter is late materials on a complicated or significant regulatory element serves no one’s best interests.
- Guidance on erosion- and sediment-control practices, and maintenance of stormwater facilities and buffer-maintenance guidance, supplementing only where necessary and

otherwise referencing state best-practice materials, principally the Minnesota Stormwater Manual.<sup>3</sup>

- Stormwater modeling support; for hydraulic and hydrologic modeling, with examples.
- A basic monitoring protocol and guidance on how to report the results of such monitoring.
- Guidance on how the RPBCWD engineer determines whether a site is suitable for infiltration of stormwater or not (i.e., ‘restricted’) for purposes of determining stormwater-management requirements and the submissions and steps necessary to support an assertion that an applicant is providing stormwater-runoff retention, when applicable, to the maximum extent practicable. Importantly, the guidance will underscore the need for applicants to demonstrate *technical* (not fiscal or political) barriers to stormwater management, rooted in conditions inherent to the site. The process of determining whether an applicant has demonstrated stormwater management to the maximum extent practicable is necessarily an iterative one, as RPBCWD staff and engineer need to ensure that the goals, purposes and policies of the rule are achieved to the greatest extent reasonably feasible.
- Guidance on submissions necessary to release a financial assurance and close out a permit.

As noted, RPBCWD will rely whenever possible on the Minnesota Stormwater Manual and draft supplemental materials only when necessary (e.g., to address RPBCWD-specific provisions or conditions or cover some topic the manual does not). In doing so, RPBCWD seeks to ensure that its regulatory program operates as consistently as possible with other watersheds and state-issued best practices.

It would be useful if commenters on the rules made note of whether the guidance described above would be substantially helpful to them in applying for RPBCWD permits. Also, if there is other guidance or support that would be helpful, RPBCWD would like to hear about it.

RPBCWD cannot revise the rules to account for some applicants’ engineers’ occasional unwillingness to submit properly prepared technical and analytical materials necessary to determine compliance nor for their philosophical disagreement with the appropriateness of rules. But the watershed district will do all it can to help applicants and their technical representatives readily understand how the rules operate.

### III. PROPOSED CHANGES

In many cases, the changes now proposed to the RPBCWD rules flow self-evidentially from the issues and drivers cited above. Some of the proposed changes are discussed further in the following sections.

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3 [https://stormwater.pca.state.mn.us/index.php?title=Main\\_Page](https://stormwater.pca.state.mn.us/index.php?title=Main_Page)

## DEFINITIONS

“Parcel” & “site” – the rules are revised to use “site” in virtually all instances, harmonizing and simplifying the property area to which rule requirements apply. A “site,” for RPBCWD rule-application purposes, is not just the portion of a legal parcel that is proposed to be disturbed, and can be more than just a single parcel when the application pertains to a scheme of development or redevelopment that will be implemented over two or more adjacent parcels. Very often the configuration of parcels will be in transition at the time of RPBCWD permit-review, and approval may be conditioned on recordation of, e.g., drainage and maintenance rights to ensure that the efficacy of a stormwater-management scheme applicable to a multi-parcel site will not be subverted by changes to the parcel configuration subsequent to RPBCWD’s permitting decision.

A definition of “pervious” is added for general specification and to clarify qualification of sidewalk and other linear pathways for the exemption from the RPBCWD stormwater requirements in 2.2d of Rule J.

“Subwatershed” is defined for purposes of the Stormwater Management Rule.

The definition of “topsoil” is significantly simplified from that adopted in 2018.

RPBCWD also has revised the definition of “stormwater-management facility” to clarify that it includes existing low areas that will be incorporated – either with alterations or not – into an applicant’s stormwater-management plan and will be relied on to provide runoff volume, treatment and/or rate control. Such areas will need to be maintained in accordance with subsection 3.7 of the Stormwater Management Rule.

## RULE A – PROCEDURAL REQUIREMENTS

In the procedural rule and elsewhere, paragraph numbering in the “Policy” section of the rules is replaced with bullets, to underscore that the policy statements support the rule and establish its purpose and the managers’ intent in adopting it. But these statements are not substantives requirements of the rules.

The revision of subsection 2.3 – replacing “signed” to “authorized” – allows applicants to proceed with reliable indication that the property owner has authorized the application. The application form itself need not necessarily be signed by the property owner(s). In keeping with this change, RPBCWD has removed the requirement that an application must “bear[] the original signature of the property owner(s)” from subsection 2.1. The owner need not sign the application, but must in fact authorize the application. RPBCWD will be flexible in administering the requirement, which remains critical to proper and efficient administration of the regulatory program.

## RULE B – FLOODPLAIN MANAGEMENT AND DRAINAGE ALTERATIONS

The rule triggers in section 2 are proposed to be amended to allow minor repairs to public infrastructure to proceed without a permit – as long as no decrease in flood-storage volume

results. The onus will be on city engineers, who pushed strongly for such a provision, to design and monitor such work to ensure no loss of floodplain capacity results.

In addition, subsection 3.3 is one of several places in the rules where an absolute narrative standard – “will not adversely affect” – is replaced with the more relative “is not reasonably likely to” standard, making life a little bit simpler for engineers throughout the watershed. (The other rule criteria where this change is made include 3.2c and 3.5d of the Waterbody Crossings & Structures Rule and 3.3 and 4.1a of the Stormwater Management Rule.)

#### **RULE C – EROSION PREVENTION AND SEDIMENT CONTROL**

In response to feedback from members of the Technical Advisory Committee, subsection 3.3 is revised to bring RPBCWD’s provisions for site inspection during construction into closer alignment with the terms covering the same topic in the 2018 state construction stormwater general permit.<sup>4</sup>

In addition, subsection 3.3h has been revised to clarify that loosening of soils beneath an infiltration practice – vegetated or constructed – is necessary to ensure best possible conditions for conduct of stormwater to the subsurface. But RPBCWD staff and engineer concurred with comments noting the difficulty of loosening soils to a depth of three feet, and reduced that number to 18 inches.

The change to subsection 3.2c has been revised to include both English and metric measurements.

In response to comments, RPBCWD has extended the time allowed for repair, replacement or amendment of a nonfunctional best management practice during construction to 48 hours or prior to the next rainfall event. While acceding to the comments requesting more flexibility on this point, RPBCWD determined that continuing to require performance in a specific, clearly articulated timeframe was critical (though assessment of and reaction to relevant weather conditions will remain an important responsibility of a permittee).

Finally, “with approved methods” has been removed from 3.3d as unproductively vague.

#### **RULE D – WETLAND AND CREEK BUFFERS**

Most of the changes to the buffer rule are small clarifications. More significant is the change to 3.3d, which clarifies that the prohibition on impervious surfaces in a buffer area pertain to newly constructed impervious, not existing impervious. An applicant still must meet the buffer-width average requirement, and if existing imperviousness prevents achieving that standard, a variance will be required. The allowance for stormwater facilities in buffer area also is clarified, though the RPBCWD engineer will still require a facility design that functions properly, and placing, say, a rain garden too close to a water resource may not be technically feasible.

The final changes to cross-references in subsection 3.2 are typographical corrections.

<sup>4</sup> See <https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf>.

## RULE F – SHORELINE AND STREAMBANK STABILIZATION

As with the floodplain rule, the triggers in the regulation section of the Shoreline and Streambank Stabilization Rule are modified to exempt minor repair of public and private utilities in certain instances. RPBCWD considered exempting maintenance and in-kind replacement of public infrastructure altogether, but since conducting work that affects the bed or bank of a public water triggers state requirements anyway, RPBCWD did not want to undermine the utility of General Permit 2015-1192, issued for work permitted by the watershed district, for property owners in the watershed. The upshot is that the new exemption in subsection 2.4 is limited to non-public waters.

The change to subsection 3.3b.v is a simple clarification.

## RULE G – WATERBODY CROSSINGS AND STRUCTURES

(Please see the explanation of the expanded exemptions to Rule F, which applies equally to Rule G, and the explanation of the change to paragraphs 3.2c and 3.5d under the section above on Rule B.)

## RULE I – APPROPRIATION OF GROUNDWATER

Rule I is proposed to be deleted. Unlike the other RPBCWD rules, Rule I requires affirmative outreach by staff to advise property owners of the potential applicability of the rule to their use of groundwater. Unlike the other RPBCWD rules, it also requires property owners to obtain a permit for ongoing activities – not a new proposed scope of land-disturbing activities to which permitting requirements would be expected to apply. Given these unique factors, it is not terribly surprising that RPBCWD has had very few applications under Rule I since it was implemented five years ago. The purpose of the rule was to gather data on small groundwater appropriations (i.e., less than is regulated by the Department of Natural Resources), and since that goal is not being fulfilled, RPBCWD does not wish to keep the rule on the books.

## RULE J – STORMWATER MANAGEMENT

As elsewhere in the rules, the changes to RPBCWD's stormwater-management requirements are proposed to streamline the permitting process – with a couple of exceptions:

- The citation to infiltration as an example of volume-control practices is removed from the policy statement support Better Site Design and Low-Impact Development in response to a comment from the City of Eden Prairie.
- The rule is clarified in paragraph 3.1b.iii to allow pretreatment facilities or practices only as consistent with the state stormwater best practices and to state RPBCWD policy that whatever pollutant-removal is achieved by pretreatment does not count toward compliance with the water-quality requirement in subsection 3.1c.
- Subsection 3.6 is clarified to ensure that low-floor requirements clearly apply to structures constructed adjacent to water resources, as well as construction of

stormwater-management facilities. (Although the rule is also clarified to allow siting of structures in accordance with Appendix J1 when subsurface conditions provide reasonable assurance that flood risk is minimal.)

- The wetland bounce and inundation requirements (3.10a) are amended to make them simpler and require that applicant ensure wetlands won't be starved of runoff needed to ensure wetland health. In addition, the requirement to treat runoff to wetlands in paragraph 3.10b is modified to require treatment to the RPBCWD standard in Rule J, subsection 3.1c before discharge to low- and medium-value wetlands and treatment to the higher standard stated in 3.10b when discharging to a high- or exceptional-value wetland. Since the RPBCWD rules require treatment of runoff discharged from a site already, the treatment-to-wetlands requirement will come into play as an additional criterion most often when there is discharge to a wetland wholly contained on a project site. The requirement is clearer and more specific than the provisions addressing the same topic in the state construction stormwater general permit and is badly needed to protect wetland resources. Note that the requirement does not apply to incidental wetlands.
- The exhibit list is amended with a requirement for onsite storm-sewer systems data (5.2) and clarified (5.4c) to require that infiltration data be submitted by a person with the appropriate professional credentials.

Otherwise the rule is amended to provide more options and quicker paths through the rule for applicants:

- Projects that excavate 50 cubic yards or more of soil or other site material do not necessarily need to comply with the RPBCWD stormwater requirements. It's only when 5,000 square feet of a site is disturbed that the rule is triggered. This change is to accommodate small maintenance and repair projects that do not present significant risk to receiving waters and do not necessarily create a ready opportunity to provide stormwater treatment facilities.
- At the urging of road authorities, the linear-project area triggers in paragraph 2.4 are increased, bringing them closer into line with those of other watershed organizations' while continuing to account for the very significant portion of the watershed that is paved for transportation. The increase to 10,000 square feet of new impervious surface means that a road authority can add a turn lane to a road without needing to construct stormwater treatment; larger projects (e.g., a new city street) will need to do so. The 10,000 square feet of new impervious represents the amount of new impervious that would tend to increase discharge from existing condition by between 1 and 2.5 cubic feet per second for the 2- and 100-year events, respectively. In addition, 10,000 square feet or more of new impervious is estimated to add more than a half pound of phosphorus annually to runoff. Left untreated this additional nutrient loading to receiving waters can exacerbate an existing or developing impairment. For reconstruction, the increased allowance before treatment is required is even greater: from 5,000 to 25,000 square feet of fully reconstructed impervious surface. Existing road surfaces account for one-third of

the impervious surface within the RPBCWD boundaries and represent a significant source of runoff and pollutant loading. It will be difficult to meet water-quality and water-quantity goals in the watershed plan without addressing this source. In addition, reconstructing more than 25,000 square feet (about half an acre) typically requires significant land-disturbing activities and presents an opportunity to reduce pollutants from existing conditions to help address the numerous waterbodies with nutrient impairments in the ~~district~~watershed. Final tweaks to this section were made to clarify the operation of the provision as described here: Either addition of 10,000 square feet of new impervious OR 25,000 square feet of fully reconstructed impervious in a road project will trigger the RPBCWD stormwater requirements.

- Changes to subsection 3.1b provide flexibility in meeting the RPBCWD runoff-retention requirement.
  - First, compliance with stormwater abstraction (and water-quality) requirements may be achieved not only onsite, but anywhere in the subwatershed – as long as runoff rates are maintained onsite. (“Subwatershed” is defined for the purpose in a manner that is designed to ensure that receiving waters are protected even while this flexibility is provided.) RPBCWD realizes there will be few applicants who own multiple dispersed (non-adjacent) properties within a subwatershed such as can take advantage of this option. But certain city projects have encountered particular difficulty in meeting onsite stormwater-management requirements, and cities and other public entities own property in quantities and configurations that may well allow them to take advantage of the subwatershed option.
  - Second, an applicant may comply with the volume-abstraction requirement by retaining the volume from the 95<sup>th</sup> percentile storm event from the site. Since RPBCWD reinstated its statutorily required regulatory program, one of the policies of the stormwater management rule – encouraging the use of better site design, low-impact development and other techniques – has rarely been embraced by applicants. To help incentivize increased use of better site design and green-infrastructure techniques, retaining the volume from the 95<sup>th</sup> percentile storm event from the site was incorporated as an alternative volume-compliance approach. Based on the extensive work conducted during the state’s development of the Minimal Impact Design Standards, retaining the runoff from the 95<sup>th</sup> percentile storm achieves very similar volume reduction to the abstraction of 1.1 inches from impervious surfaces. Because this alternative volume abstraction measure considers runoff from both pervious and imperious surfaces, it provides permit applicants with greater flexibility to design and implement green-infrastructure methods, protect forested areas, improve soil health and consider ecosystem interconnections.
- The water-quality criterion in 3.1c is amended to allow the stormwater-abstraction requirement in 3.1b to serve as a surrogate for compliance with the base water-quality requirement. (Wetland-runoff treatment requirements and the like still apply.) In other

words, an applicant demonstrating that its stormwater-management system will provide 1.1 inches of stormwater runoff abstraction need not submit additional data (e.g., modeling) demonstrating that the 60 percent phosphorus and 90 percent sediment standards are met.

- The policy adopted by the managers this spring with regard to application of the chloride-management requirement in subsection 3.8 to residential subdivisions is codified as part of this rulemaking.
- The changes to subsection 5.2 clarify that RPBCWD is not requiring an applicant to model the entire storm-sewer system downgradient from its site, but rather to ensure the model submitted by an applicant captures the runoff conveyed to the stormwater-management facilities from the site. (Please see further explanation in the responses-to-comment document.)
- Final changes in subsections 3.4, 3.6 and 3.10 and Table J.1 are typographical/cross-reference corrections.

DRAFT

Friday, August 2, 2019

Re: 8j – Purchase of iPads for Board of Managers

Dear Managers,

In an effort to reduce, paper cost and staff time in the development of board packets each month, I am proposing that each manager on the board receives a District iPad Pro (12.9”) or smaller (11”). The iPad will be linked to an official District email for each manager through a District Microsoft account. The iPad will also be linked to relevant information such as the District Governance Manual, Plan, Board Packets to name a few.

Cost of an iPad range around \$1,000 and \$1,200 and an additional \$200 for a pencil if you choose and \$100 for keyboard cases. Subscription to Microsoft account is \$12.50/month. The cost to the District for going virtual on this matter would be roughly \$1500 with \$62.50 each month going to support technology on the iPad. The iPad would work on District Wi-Fi but not cellular capable.

Overall, the cost of set-up would be \$7,500 plus staff time. Staff is requesting that \$8,500 of reserve funds be used to purchase iPads. Staff will work with legal to develop a technology policy to be incorporated into our Governance Manual to be reviewed by the board.

Sincerely,



Claire Bleser  
District Administrator.

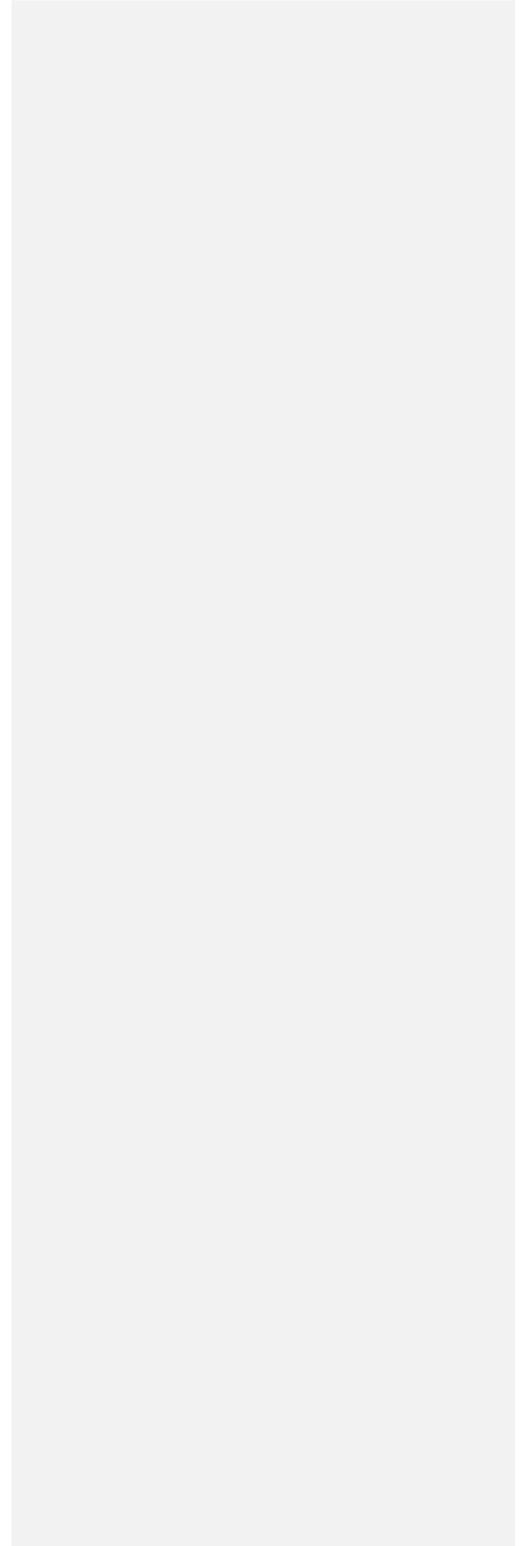
**STAFF RECOMMENDATION**

Authorize Administrator Bleser to purchase iPads not to exceed \$8,000 using Reserve funds, and to work with legal to develop a technology policy to be reviewed by the board.

**RILEY-PURGATORY-BLUFF  
CREEK WATERSHED DISTRICT**

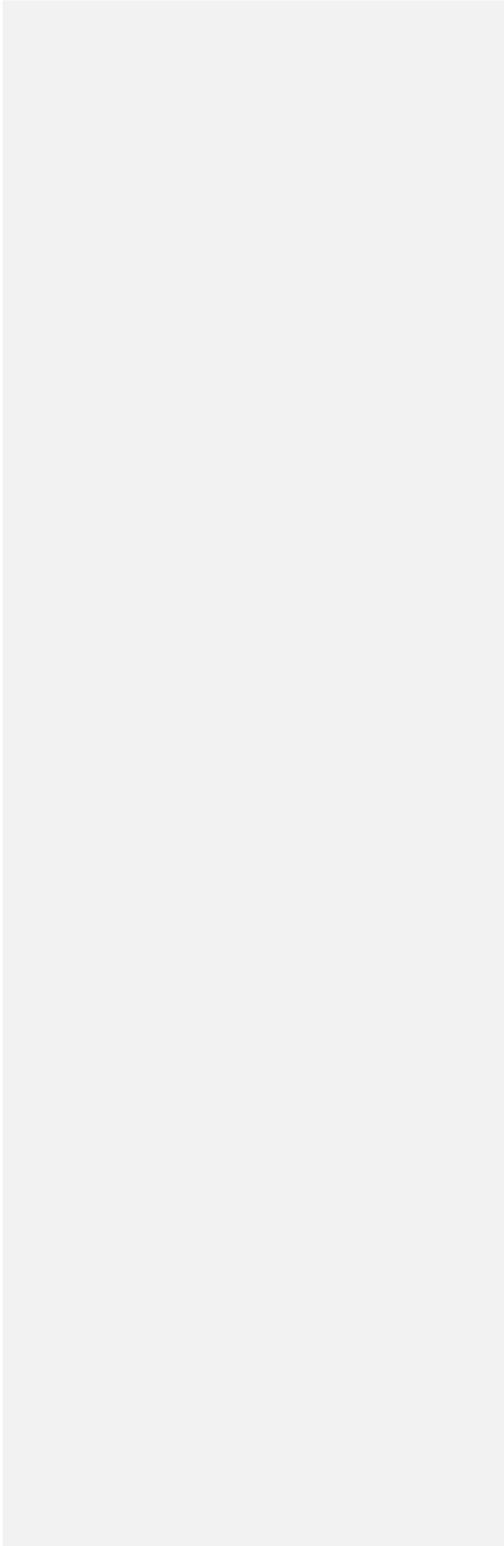
**GOVERNANCE MANUAL**

**Adopted as amended May 3, 2017**



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## **Riley-Purgatory-Bluff Creek Watershed District Governance Manual – Introduction**

The Riley-Purgatory-Bluff Creek Watershed District is a special purpose unit of government established under Minnesota Statutes chapters 103B and 103D. The Riley-Purgatory-Bluff Creek Watershed District, is governed by a five-member Board of Managers appointed to staggered terms by the Hennepin County and Carver County Boards of Commissioners. In 2012, the Riley-Purgatory-Bluff Creek Watershed District hired an administrator to oversee and direct day-to-day activities and to carry out the Water Management Plan.

This **Riley-Purgatory-Bluff Creek Watershed District Governance Manual** was adopted by the Board on July 2, 2014, and adopted as amended February 4, 2015. The manual establishes clear written policies, procedures and instructions for the management of District activities and accounts, complete recordkeeping and records management, and separation of duties among District staff and contractors. The manual will also help to ensure that: similar transactions are treated consistently; that accounting principles used are appropriate and proper; and that records and reports are produced in forms desired by the managers and state review entities, including: the Legislature, the Office of the State Auditor; and the Board of Water and Soil Resources.

The manual consists of this document, along with the following policies and protocols adopted by the District:

- **General Governance Policies.**
- **Bylaws**, including the District Conflict of Interest Policy and fulfilling the requirement of Minnesota Statutes section 103D.315, subdivision 11.
- **Policies and Procedures for Public Access to Documents** fulfills requirements of the state Data Practices Act applicable to the District. The following auxiliary documents fulfill specific requirements of the Data Practices Act, as noted:
  - Security of Not-Public Data and procedures to ensure accuracy and security of data on individuals and to notify data subjects of their rights under the DPA, along with the accompanying Inventory of Not-Public Data on Individuals.
  - Procedures to ensure accuracy and security of data on individuals (Minn. Stat. § 13.05, subd. 5) and to notify data subjects of their rights under the DPA (Minn. Stat. § 13.025, subd. 3).
  - Tennessee notices and consent forms, created when needed and tailored for specific circumstances where private or confidential data is collected from individuals, such as new employees, or distributed (Minn. Stat. § 13.04, subd. 2). (The manual includes the District’s basic templates.)
- **Records Retention Schedule** allows the District to efficiently manage and, when appropriate, archive its files, and fulfills the requirement of section 138.17, subdivision 7, as well and the Data Practices Act requirement that the District maintain a list of private and confidential data on individuals maintained by the

District (section 13.05, subdivision 1). The schedule also includes indication of whether the District stores information electronically or in hard copy form, in compliance with the Uniform Electronic Transactions Act, Minnesota Statutes section 325L.17.

- **Policy for Management of Permit Fees, Financial Assurances and Abandoned Property** provides protocols to manage assurances collected by the District from permittees and ensures that funds submitted are managed in accordance with the state unclaimed property law (chapter 345 generally and section 345.38 specifically), accompanied by an:
  - Escrow agreement template, for escrow of funds submitted by permittees in fulfillment of the financial performance-assurance requirements in the District rules.
- **Public Purposes Expenditures Policy** includes protocols and requirements to ensure that the District complies with the requirement in the state constitution (Article X, section 1) that expenditures by government bodies must serve a public purpose;
- **Fund Balance Policy** adopted to bring District fund-classification and -naming practices into compliance with general accounting standards.
- **Internal Controls and Procedures for Financial Management** provides terms for the management and administration of District finances.

The manual will be reviewed at the managers' annual business meeting and updated as necessary. The manual will be submitted within 60 days of adoption to the Office of the State Auditor in compliance with Minnesota Statutes section 6.756, as will any revisions and additional policies when adopted.

District staff and contractors are expected to conduct District business in accordance with the manual and to alert the Board of Managers to improvements and additions needed.

**Riley-Purgatory-Bluff Creek Watershed District**  
**General Governance Policies**

Adopted February 1, 2017

The following general governance policies help ensure sound administration of District business and continued focus of District resources on protection and improvement of the water resources in the Riley-Purgatory-Bluff Creek watershed.

**I. Contracting**

- a. The Board of Managers delegates to the administrator the authority to approve work-change directives and change orders for District projects that will result in a change in the cost of a project of \$10,000 or less.
- b. The administrator may require a District contractor to secure additional or replacement payment and/or performance bonds to cover any increased price of a District project resulting from a change order approved by the administrator.
- c. A change order approved by the administrator will be presented to the Board of Managers at its next meeting.

**II. Per diems**

- a. Managers may receive a per diem for participation in a meeting of the Board of Managers, approved meeting and training, and for other necessary duties. An activity must be authorized or requested by the Board of Managers or requested by the administrator to be considered a necessary duty for purposes of this policy.
- b. Managers will prepare claim forms for per diem and expenses in duplicate. The original will be submitted to the treasurer to be processed and approved in the same manner as other claims against the District. Claims for expenses should be submitted quarterly, and under any circumstances all claims for expenses in any given year must be submitted prior to January 15 of the following year. The manager will retain a copy for his or her personal records.
- c. A manager may receive only one per diem per day of service to the District.
- d. The District will establish the per diem rate by resolution. In the absence of such action by the Board, the per diem rate will be as specified in Minnesota Statutes section 103D.315, subdivision 8.

**III. Records management and retention**

- a. The District will make and preserve all records necessary to ensure the availability of a full and accurate accounting of the District's official activities, in fulfillment of Minnesota Statutes sections 15.17, subdivision 1, and 138.17.
- b. The District will adopt and maintain a records retention schedule, to be approved by the State Archives Office, governing the retention and/or disposal of records created by the District.

- c. In keeping with the direction of the Uniform Electronic Transactions Act, the District has determined that it will create and retain its records in electronic form to the greatest extent possible. The District's records retention schedule includes indication of records that may be retained in hard copy form, but District policy is to retain all records in electronic form. This policy is prospective as of November 2012, and the District does not intend to convert historic records from hard copy to electronic form.
- d. The administrator is the responsible authority for purposes of District compliance with the Data Practices Act, Minnesota Statutes chapter 13.
- e. The administrator is the data practices compliance official for purposes of District compliance with the Data Practices Act.

**IV. Delegated authority**

- a. No employee of the District may exercise authority beyond that which is allocated to the administrator by the District bylaws and policies that constitute the Governance Manual.
- b. Authority delegated to the administrator may not be delegated to other employees or contractors of the District.
- c. Duties assigned to the administrator may be delegated to other employees or contractors by the administrator, however the administrator will remain responsible to the Board of Managers for the proper execution of all delegated duties.
- d. All consultants to the District work under the direction of the administrator, except for auditors and legal counsels. Auditors and legal counsels' primary responsibility is to the board except when providing administrative or project/program support.
- e. The administrator may not commit funds of the District without the approval of the Board of Managers.

**V. Managers' authority**

- a. The Board President is authorized to speak on behalf of the District. No other manager may speak on behalf of the District unless authorized to do so by the Board of Managers.
- b. No individual manager may provide direction, instructions or authorization to the administrator unless specifically authorized to do so by the Board of Managers.
- c. A manager's request for information that would require more than 15 minutes of the Administrator's time must be approved by the board of managers. [Cumulative requests that require more than 30 minutes of the administrator's time in one calendar month must be approved by the board of managers.](#)
- d. A manager's request for information from consultants to the District, other than auditors or legal counsels, must be directed through the Administrator. Requests for information to auditors and legal counsels are governed by the board of managers.
- e. Individual managers cannot bind the District to agreements or expenditures.

### **Schedule of Regular Activities**

The District will observe the following schedule of required activities to ensure continued compliance with laws and regulations:

- The District conducts its annual business meeting in January. At that meeting the Board of Managers:
  - Approves a schedule of regular meetings of the Board of Managers and Citizens Advisory Committee for the ensuing year.
  - Reviews insurance needs and current coverage.
  - Authorizes, biennially, the solicitation of engineering, legal, auditing, accounting and other professional services proposals, per Minnesota Statutes section 103B.227, subdivision 5.
  - Names:
    - a District depository bank(s),
    - a permit security depository for bonds and letters of credit
    - a permit security depository for cash escrows,
    - and an official newspaper for publication of notices.
  - Names individuals to serve on the District's Citizens Advisory Committee, in compliance with Minnesota Statutes section 103D.331.
  - Reviews the District's fee and permit security schedules and directs the administrator to prepare revisions as warranted for adoption by resolution.
  - Reviews and, as necessary, directs the preparation of updates to its Governance Manual.
- The District annually publishes a newsletter or other watershed-wide communication that explains the District's programs, lists the members of the Board of Managers and notes District contact information, per Minnesota Statutes section 103B.227, subdivision 4. The District will maintain this information on its website as well.
- The District annually audits its accounts and expenditures, per Minnesota Statutes section 103D.335, subd. 1.
- The District annually submits to the Board of Water and Soil Resources a financial, activity and audit report each year by May 1 (within 120 days of the end of the District's fiscal year), per Minnesota Statutes section 103B.231, subdivision 14, and Minnesota Rules 8410.0150, subpart 1, and submits to the Office of the State Auditor an audit report by May 1 each year (within 120 days of the end of the District fiscal year), per Minnesota Rules 8410.0150, subpart 1.
- The District administrator annually prepares, in February, an end-of-year report of the Budget to the board.
- The District administrator annually prepares, in July, a report to the board on the status of fund balances in relation to the Fund Balance Policy.
- The administrator, as the Data Practices Act responsible authority, reviews in July each year the District's DPA policy and associated protocols to ensure

harmony with current law, in accordance with Minnesota Statutes section 13.05, subd. 1.

- The administrator annually assesses in July each year whether the District has abandoned property and returns abandoned property, if any, in accordance with the schedule in the Policy for Management of Permit Fees, Permit Securities and Abandoned Property.
- Annually on or before September 15 the District adopts a budget for the next year and decides on the total amount of funding necessary to be raised from ad valorem tax levies to meet the budget.
- Pursuant to the Truth in Taxation law, the District holds a further public informational meeting on its budget and levy at its December meeting at which the public is allowed to speak; the Board of Managers need not take any action to alter the budget and levy adopted in September; it may decrease, but may not increase the levy adopted in September prior to finalization by the county auditors at the end of December.

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# Riley-Purgatory-Bluff Creek Watershed District

## Bylaws

Adopted as amended, May 3, 2017

These bylaws establish governing rules for the Riley-Purgatory-Bluff Creek Watershed District (District) Board of Managers (Board), in compliance with Minnesota Statutes section 103D.315, subdivision 11.<sup>1</sup>

- I. **Office.** The District will maintain its principal place of business and its official records at an office located within the watershed, presently 18681 Lake Drive East, Chanhassen MN 55346. The Board may change the location of its principal place of business in accordance with Minnesota Statutes section 103D.321, subdivision 2.
- II. **Board of Managers.** The Board consists of four managers appointed by the commissioners of Hennepin County and one manager appointed by the commissioners of Carver County. Managers serve staggered three-year terms. A manager serves until his or her replacement is appointed.
  - a. *Vacancy.* A manager who is unable to fulfill his or her term will notify his or her county board of commissioners to allow the commission to appoint a replacement in a timely manner.
  - b. *Compensation.* The Board may elect to compensate its members for attending meetings and performing other duties necessary to properly manage the District and reimburse managers for expenses incurred in performing official duties. Compensation will be in accordance with Minnesota Statutes section 103D.315, subdivision 8, and policy established by the Board.
  - c. *Bonding.* Before a manager assumes his or her duties, the District at its expense will obtain and file a bond for the manager in accordance with Minnesota Statutes section 103D.315, subdivision 2.
  - d. *Insurance.* The Board will provide insurance for the managers for liability protection on such terms and in such amounts as the Board determines.
  - e. *Attendance.* Managers are expected to attend meetings of the Board. At the Board's discretion, a manager's failure to attend three consecutive regular meetings of the District may be reported to that manager's county board of commissioners.

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<sup>1</sup> All references in these bylaws to statutes are to the section or sections as they may be amended.

III. **Officers.** The Board annually, at its January meeting, will elect from among its members the following officers: president, vice president, secretary and treasurer. If any officer cannot complete his or her term of office, the Board immediately will elect from among its members an individual to complete the unexpired term. An officer's term as officer continues until a successor is elected or the officer resigns. The Board, by action at an official meeting, may appoint a manager as an officer *pro tem* in the event an officer is absent or unable to act, and action by that officer is required.

- a. *President.* The president will:
  - i. preside at all meetings as chair of the Board.
  - ii. sign and deliver in the name of the District contracts, deeds, correspondence or other instruments pertaining to the business of the District;
  - iii. be a signatory to the District accounts;
  - iv. be a signatory to District documents if the treasurer or secretary is absent or disabled, to the same extent as the treasurer or secretary.
- b. *Vice President.* The vice president will:
  - i. preside at meetings as chair in the absence of the president;
  - ii. be a signatory to the District accounts;
  - iii. be a signatory to District instruments and accounts if the president is absent or disabled, to the same extent as the president.
- c. *Secretary.* The secretary will:
  - i. be a signatory to resolutions and other documents certifying and memorializing the proceedings of the District;
  - ii. be a signatory to the District accounts;
  - iii. maintain the records of the District;
  - iv. make the required public and Board notice of all meetings in accordance with Minnesota Statutes chapter 13D and other applicable laws;
  - v. ensure that minutes of all Board meetings are recorded and made available to the Board in a timely manner and maintain a file of all approved minutes;
  - vi. keep a record book in which is noted the proceedings at all meetings.
- d. *Treasurer.* The treasurer will:
  - i. be a signatory to the District accounts and financial records;

- ii. present a report at the monthly meeting of the Board that includes a current check register and tracks each of the watershed district's funds and account balances;
- iii. provide such other records as are necessary to inform the Board of the financial condition of the District.

IV. **Committees.** All standing and special committees of the Board will be appointed by majority vote of the managers. [Membership on standing committees of the Board \(e.g. Governance, Personnel\) will be determined in January of each year. Other special committees may include persons who are not managers, but no member of a committee who is not a manager may offer a motion or vote on a matter put before the committee. It is the duty of a committee to act promptly and faithfully in all matters referred to it and to make reports as directed on the date established by the chair or Board. A complete and accurate copy of written reports will be made by the secretary and filed and recorded in the office of the Board.](#)

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a. *Citizens Advisory Committee.* In accordance with Minnesota Statutes section 103D.331, there is established a District citizens' advisory committee. The committee is known as the Citizens Advisory Committee (CAC). The CAC advises the Board on water resource-related community concerns and issues, and assists to develop and implement the education and outreach activities of the District. The CAC will meet according to a schedule set by its members each year and at such other times as the members of the CAC may determine. All meetings of the CAC are open to the public.

b. *Technical Advisory Committee.* In accordance with Minnesota Statutes section 103D.337, there is established a technical advisory committee (TAC) to the Board. The TAC is convened as necessary and appropriate to advise the Board on regulatory, watershed planning and other technical matters.

~~c.~~

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e. The Board may not delegate supervision of the District administrator or any District employee to a committee.

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V. **Meetings.** In January each year the Board will set a schedule of regular meetings for the coming year. Adjourned and special sessions may be held at such times as the Board deems necessary and proper.

a. Special meetings and emergency meetings may be called by the chair or any manager. Notice of a special or emergency meeting will be made by the secretary in accordance with the Open Meeting Law, Minnesota Statutes chapter 13D.

b. All meetings of the Board will be open to the public, except that a meeting or portion of a meeting may be closed in accordance with the Open Meeting Law.

- c. At all meetings of the Board, a majority of the members appointed will constitute a quorum necessary to do business, but a minority may adjourn from day to day.
- d. *Conduct of meetings.* At the time appointed for a meeting, the members will be called to order by the president as chair or, in his or her absence, the temporary chair. On determination of a quorum, the Board will proceed to do business in accordance with the agenda, as may be amended and approved by the Board.
  - i. The chair will preserve order and decide questions of order, subject to an appeal by any member. The chair may make motions, second motions, or speak on any question. The chair will be entitled to vote in the same manner as other members of the Board.
  - ii. The order of business for a meeting may be varied by the chair, but no public hearing convened by the Board will be closed before the time specified for the hearing in the notice.
  - iii. Every member before speaking will address the chair and will not proceed until recognized by the chair. A member called to order will immediately suspend his or her remarks until the point of order is decided by the chair.
  - iv. Any person may address the Board on a matter properly before the Board. The chair may limit the time allowed for a manager or other person addressing the Board to speak.
  - v. Any person may request that a matter be heard by the Board. The Board will consider such request and determine whether and, if approved, when to take up the matter or to defer the matter pending receipt of additional information thereon and direct the administrator to obtain such information.
  - vi. Every member will act with courtesy, civility and respect in all interactions as a member of the Board of Managers, maintaining an open mind, and participating in open communication; members should refrain from abusive conduct, personal charges or verbal attacks upon the character or motives of other members, staff or any member of the public.
- e. *Appeal of a chair ruling.* A manager may appeal to the Board from a ruling of the chair. If the appeal is seconded, the manager may speak once solely on the question involved and the chair may explain his or her ruling, but no other manager will participate in the discussion. The appeal will be sustained if it is approved by a majority of the managers present, exclusive of the chair.
- f. *Meeting rules.* In all points not covered by these rules, the conduct of a meeting of the Board will be governed by the current edition of *Robert's*

*Rules of Order. Robert's Rules* may be temporarily suspended by consent of a majority of the managers.

- g. *Resolutions.* A resolution will be presented in writing at a meeting or the Board may order that staff prepare a resolution reflecting action taken by the Board. The material terms of a resolution must be stated in the motion to adopt. Each resolution passed by the Board will be signed by the secretary and filed in the official actions of the District maintained at the District office.
- h. *Minutes and Records.* Minutes of all meetings of the Board and committees will be made by the secretary or, with respect to a committee meeting, the Board member responsible for making the minutes. When signed, the minutes will constitute ~~the~~ official record ~~and journal~~ of the Board proceedings. Except in extenuating circumstances, at the regular meeting of the Board, draft minutes of the preceding Board meeting will be reviewed by the Board and adopted as may be amended. Adopted minutes will be kept at the District offices. All written communications addressed to the Board, other materials included in a Board meeting packet, and all documents and materials submitted to the record in the course of a Board meeting will be filed in the District office with the minutes of the meeting.
- i. *Voting.* When the chair puts a question to the Board, every manager present will vote, except as a manager elects to abstain. The manner of voting on any business coming before the Board may be by voice vote. An affirmative or negative vote by any member will be entered in the minutes on his or her request. Affirmative and negative votes will be recorded on any motion at the request of a manager and the results entered in the minutes. Unless provided otherwise by law, any vote or ballot completed by a manager, whether binding or not, will be disclosed at the meeting at which it is taken; a survey of managers shall be presented at the next scheduled meeting at which the relevant item of business is considered, including the vote results and vote of each member.

VI. **Conflict of Interest.** The Board seeks to operate in accordance with high ethical standards and wishes to establish clear guidelines for the ethical conduct of District business. Ensuring that conflicts of interest do not affect District proceedings is an essential element of maintaining high ethical standards. Therefore, to specify and supplement its commitment to compliance with the Ethics in Government Act, Minnesota Statutes section 10A.07, the Board adopts the following conflict of interest policy:

- a. *Disclosure of conflicts.* A manager who has a personal financial interest, or other private interest or relationship that limits the manager's ability objectively to consider, deliberate or vote, in a matter scheduled to come before the Board must prepare a written statement describing the matter requiring action and the nature of the potential conflict. The manager

affected will deliver the statement to the president of the Board before the Board considers or takes action on the matter. If a potential conflict arises and a manager does not have sufficient time to prepare a written statement, the manager must orally inform the Board before the matter is discussed.

- b. *Abstention.* A manager must abstain from chairing any meeting, participating in any vote, offering any motion, or participating in any discussion on any matter that may substantially affect the manager's financial interests or those of an associated business or family member, unless the effect on the manager is no more than on any other member of the manager's business classification, profession or occupation. A manager also must abstain from chairing any meeting, participating in any discussion, offering any motion, or voting on any matter in which a private interest or relationship of the manager limits the manager's ability objectively to consider, deliberate or vote. The manager's nonparticipation in the matter will be recorded in the minutes.

VII. **Bylaws compliance, suspension and amendment.** These bylaws are adopted to facilitate the transaction of Board business. They should not be permitted to divert or hinder the expressed intent and desire of the Board. Informal compliance and substantial performance will be sufficient under the foregoing provisions in the absence of an objection seasonably taken. An objection will be deemed not seasonably taken as to any procedural matter provided for herein if a manager present at the meeting fails to object and request compliance with these bylaws during the meeting. To be seasonably taken by an absent member, an objection must be taken at the next regular meeting of the Board.

- a. Any provision of these bylaws may be suspended temporarily by a majority vote of the Board, except a provision that preserves the right of an absent manager.
- b. These bylaws may be amended by a majority of the Board on 30 days written notice of the proposed change(s), unless such notice is waived by all managers. Notice of any amendment is to be contained in the notice of the meeting at which the proposed amendment is to be considered. An amendment to these bylaws must be approved by a four-fifths majority of the Board.
- c. Interpretation of the bylaws and any amendment thereto will rest with the Board. The bylaws are to be interpreted as consistent with the state watershed laws, Minnesota Statutes chapters 103B and 103D, and other governing laws. In the event of a conflict, the governing laws control.
- d. These bylaws will be reviewed by the Board at least once every ~~five~~ **three** years.
- e. These bylaws govern internal conduct of the business of the District and neither create nor elucidate any right in any third party.

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I, \_\_\_\_\_, secretary of the Riley-Purgatory-Bluff Creek Watershed District Board of Managers, certify that the attached are true and correct copies of the bylaws of the Riley-Purgatory-Bluff Creek Watershed District, which were properly adopted by the Board of Managers [May 3, 2017].

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Mary Bisek, Secretary

Date: \_\_\_\_\_

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# Riley-Purgatory-Bluff Creek Watershed District

## Code of Conduct Policy

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### A. DECLARATION OF POLICY

The proper operation of democratic government requires that the public officials and employees be independent, impartial and responsible to the people; that government decisions and policy be made in the proper channels of the government structure; that public office not is used for personal gain; and that the public have confidence in the integrity of its government.

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In recognition of these goals, the Board of Managers has established this Code of Conduct for all public officials and employees of the District.

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Public officials hold office on behalf of the public. They are bound to uphold the Constitution of the United States and the Constitution of the State of Minnesota. Public officials must carry out impartially the laws of the nation, state and District in fostering respect for all government and otherwise faithfully discharge the duties of their office.

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Public officials shall be dedicated to fulfilling their responsibilities of office. They shall be dedicated to the public purpose and all programs developed by them shall be in the community interest. Public officials shall not exceed their authority or breach the law or ask others to do so. They shall work in full cooperation with other public officials and employees unless prohibited from doing so by the law.

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### B. BOARD OF MANAGERS CONDUCT WITH DISTRICT STAFF

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#### 1. Board authority. The Board of Managers member's statutory duties

are generally to be performed by the Board of Managers as a whole. The Board of Managers, and not individual members, supervises the administrator, and the administrator supervises staff. As individuals, Board of Managers members have no administrative authority. They cannot give orders or otherwise supervise District employees, unless specifically directed to do so by the Board of Managers. The full Board of Managers, however, holds the ultimate authority over all administrative affairs in the District.

Clear, honest communication that respects the abilities, experience, and dignity of each individual is expected. Poor behavior toward staff is not accepted.

2. Limitations on contact with District staff.

(a) Questions of District staff and requests for information shall be directed to the administrator. Materials supplied to a Board of Managers member in response to a request will be made available to all members of the Board of Managers.

(b) Board of Managers members shall not express concerns about the performance of a District employee in public, to the employee directly, or to the employee's supervisor. Comments about staff performance shall be made solely to the administrator through private correspondence or conversation.

(c) Individual Board of Managers members must not attempt to influence staff on the making of appointments, awarding of contracts, selecting of consultants, processing of development

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applications, or granting District permits outside of Board action at a Board meeting.

- (d) Request by a manager for staff support, even in high priority or emergency situations, shall be made to the administrator who is responsible for allocating District staff resources in order to maintain a professional, well-run organization.

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### C. MANAGERS CONDUCT WITH THE PUBLIC

1. No signs of partiality, prejudice, or disrespect will be tolerated on the part of individual Board of Managers members toward an individual participating in a public forum.
2. The Chairperson (or Vice-Chairperson in the Chairperson's absence) will determine and announce limits on speakers at the start of the public meeting. Generally, each speaker will be allocated three (3) minutes. If many speakers are anticipated, the Chairperson may shorten the time limit and/or ask speakers to limit themselves to new information and points of view not already covered by previous speakers. No speaker will be turned away unless exhibiting inappropriate behavior.
3. Only the Chairperson (or Vice-Chairperson in the Chairperson's absence), and not individual Board of Managers members, can interrupt a speaker during a presentation. Questions by the Board of Managers members of the public shall seek to clarify or expend information. It is never appropriate to belligerently challenge or belittle the speaker. Board of Managers member's personal opinions or inclinations about upcoming votes shall not be revealed.
4. The District attorney serves as advisory parliamentarian for the District and is available to answer questions or interpret situations according to parliamentary procedures. Final rulings on parliamentary procedure are made by the Chairperson, subject to the appeal of the full Board of Managers.

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D. MANAGERS CONDUCT IN UNOFFICIAL SETTINGS

1. It is appropriate for Board of Managers members to give a brief overview of the District policy when asked about a specific issue by constituents and to refer individuals to District staff for further information. It is inappropriate to overtly or implicitly promise Board of Managers action, or to promise that District staff will perform or expedite a specific service or function (monitor lake, rush a permit etc.).
2. It is acceptable to publicly disagree about an issue, but it is unacceptable to make derogatory comments about District staff, other Board of Managers members, their opinions and actions.
3. Board of Managers members are constantly being observed by the community every day that they serve in office. Their behaviors serve as models for proper behavior in the District. Honesty and respect for the dignity of each individual should be reflected in every word and action taken by Board of Managers members, 24 hours a day, seven days a week. It is a serious and continuous responsibility.

E. USE OF CONFIDENTIAL INFORMATION

A public official or employee of the District shall not use confidential information to further the employee's private interest, and shall not accept outside employment or involvement in a business or activity that will require the employee to disclose or use confidential information.

F. USE OF PROPERTY

A public official or an employee shall not use or allow the use of District time, supplies, or District owned or leased property and equipment for the employee's private interest or any other use not in the interest of the District, except as provided by law and with prior administrator approval for such use and the use is of minimal value.

## Riley-Purgatory-Bluff Creek Watershed District Policies and Procedures for Public Access to Documents

Adopted as amended February 4, 2015

Public access to the data of public bodies is governed by the Data Practices Act (DPA), Minnesota Statutes Chapter 13. The DPA states that data of public bodies are to be available to the public unless specifically protected by law where individual privacy would be violated or where other valid concerns outweigh the interest in public availability. The Riley-Purgatory-Bluff Creek Watershed District (District) recognizes the public interest in open access to its data as well as the public interest that requires that certain types of data not be publicly available. It is the intent of the District to comply fully with the DPA and, where the DPA allows for the exercise of judgment, to exercise that judgment consistent with the public interests underlying the law.

This policy is adopted pursuant to sections 13.025, subdivision 2, and 13.03, subdivision 2, of the DPA, which state that every public body shall establish procedures to implement the DPA. In addition, the District has adopted and maintains a Records Retention Schedule, which is an index of the records and data maintained by the District and describes private or confidential data on individuals collected by the District, in compliance with section 13.025, subdivision 1. This policy also is accompanied by a set of procedures to ensure that data on individuals are accurate and complete and to safeguard the data's security, consistent with section 13.05, subdivision 5, as well as an Inventory of Not-Public Data on Individuals to ensure that access to private and confidential data on individuals is limited to District personnel whose work or management assignments require access. The District also maintains a document setting forth the rights of data subjects under the DPA and procedures to guarantee the rights of data subjects in compliance with section 13.025, subdivision 3, and a document setting forth the rights of data subjects under the DPA.

### Procedure for Review of District Documents

All requests to inspect or receive copies of District data, and all other inquiries regarding the DPA, must be [submitted on a form provided by the District](#) and delivered to the "Data Practices Compliance Official," at the following address:

Riley-Purgatory-Bluff Creek Watershed District  
18681 Lake Drive East  
Chanhassen, MN 55346

The District administrator is designated as the Data Practices Compliance Official and Responsible Authority.

Requests to inspect or obtain copies of District data must be in writing to ensure that the District's response is timely and complete. The District is able to most efficiently and completely respond to requests that are specific and detailed. The Data Practices Compliance Official will help to ensure that documents of interest have been gathered, that documents not subject to

**Commented [CB1]:** It's been 4 years are there any changes?

**Commented [LS2]:** No changes affecting this manual.

**Deleted:** in writing

inspection pursuant to the DPA have been segregated, and assistance is available to the requesting party. The District will provide requested data for inspection at the District office, or other location to be specified by the Data Practices Compliance Official. District files may not be removed from the District office.

The DPA requires that individuals be permitted to inspect or copy data within a reasonable time after a request. The District will attempt to respond to requests as quickly as possible. The response time will vary depending on the breadth of the request and the completeness and accuracy of the request.

If the District determines that certain data cannot be made available for inspection or copying, it will inform the individual of the classification of the data in question under the DPA and of the legal basis for denial of access.

The District may provide requested copies of data immediately or may advise that the copies will be provided as soon as reasonably possible thereafter. The ability to provide copies immediately depends on the number of copies requested, staff workload and the need to deliver the data elsewhere for copies to be made (e.g., oversize documents, tapes, electronic data).

### Costs

There is no cost to inspect documents. If document copies are requested, the requesting individual will be charged 25 cents per page for up to 100 letter- or legal-sized black-and-white printed copies, except that there is no charge for delivery by email of less than 100 pages or the equivalent (as determined by the District) of data. Standard charges will apply for re-delivery of data in the event of failure of email delivery resulting from incapacity of the recipient's email system. Copies of documents will not be certified as true and correct copies unless certification is specifically requested. The fee for certification is \$1 per document.

With respect to oversize copies, tapes, electronic data, photographs, slides and other unusual formats, the requesting individual will be responsible for the actual cost incurred by the District to make the copy itself or to use a vendor, except that there is no charge for electronic delivery of less than 100 pages of data or the equivalent (as determined by the District).

An individual requesting copies or the electronic transmittal of more than 100 pages of data is responsible to pay the District the actual cost, including the cost of staff time to search for and retrieve data and to make, certify, compile and transmit copies. Staff-time cost will be assessed based on established hourly rates. The District will not charge for staff time needed to separate public from protected data.

If an individual so asks, before copies are made the District will advise of the approximate number of pages of documents responsive to a request or the likely cost of responding to a request. Payment may not be made in cash (checks are accepted). The District may, at its discretion, require payment in advance.

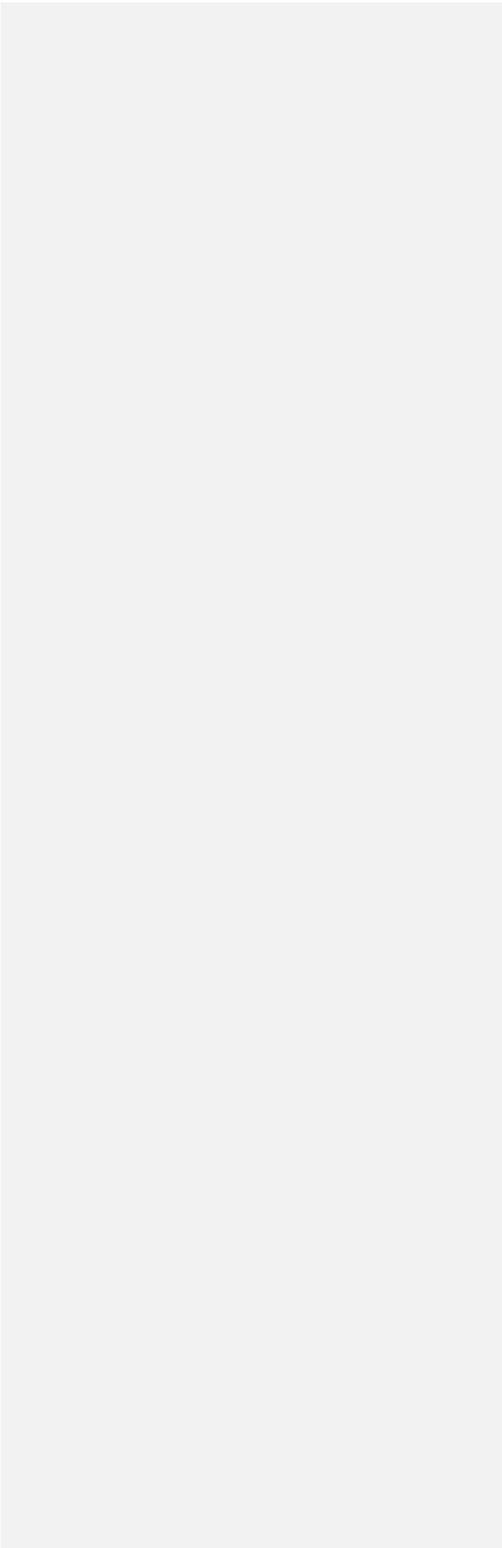
When an individual asks for a copy of data that have commercial value and were developed with a significant expenditure of public funds by the District, the District may charge a reasonable fee

Commented [CB3]: Have costs changed? Legal?

Commented [CB4]: This seems a lot.

Commented [LS5]: No change in these costs.

that relates to the actual cost of developing the data. As a condition of making certain commercially valuable data available, the District may require execution of a license agreement defining allowable use or further distribution.



## Riley-Purgatory-Bluff Creek Watershed District Security and Protection of Not-Public Data on Individuals

The Riley-Purgatory-Bluff Creek Watershed District establishes the following protocols pursuant to and in satisfaction of the requirement in Minnesota Statutes section 13.05, subdivision 5, that the District establish procedures ensuring appropriate access to not-public data on individuals. By incorporating employee access to not-public data in the District's Inventory of Data on Individuals, in the individual employee's position description, or both, the District limits access to not-public data to employees whose work assignment reasonably requires access.

### **Implementing Procedures**

#### *Data inventory*

Pursuant to Minnesota Statutes section 13.025, subdivision 1, the District has prepared a data inventory that identifies and describes all not-public data on individuals it maintains. To comply with the requirement in section 13.05, subdivision 5, the District has included indication of the managers and employees who have access to not-public data. (See *Appendix A: Inventory of Not-Public Data on Individuals*.)

In the event of a temporary duty as assigned by the administrator or a department director, an employee may access certain not-public data for as long as the work is assigned to the employee.

In addition to the employees listed in the data inventory, managers, the Responsible Authority/ Data Practices Compliance Official and counsel may have access to *all* not-public data maintained by the District if necessary for specified duties. Any access to not-public data will be strictly limited to the data necessary to complete the work assignment.

#### *Employee position descriptions*

Position descriptions may contain provisions identifying any not-public data accessible to the employee when a work assignment reasonably requires access.

#### *Data sharing with authorized entities or individuals*

State or federal law may authorize the sharing of not-public data in specific circumstances. Not-public data may be shared with another entity if a federal or state law allows or mandates it. Individuals will have notice of any sharing in an applicable Tennessee warnings or the District will obtain the individual's informed consent. Any sharing of not-public data will be strictly limited to the data necessary or required to comply with the applicable law.

To ensure appropriate access, the District will:

- Assign appropriate security roles, limit access to appropriate shared network drives and implement password protections for not-public electronic data;
- Password protect employee computers and lock computers before leaving workstations;
- Secure not-public data within locked work spaces and in locked file cabinets
- Shred not-public documents before disposing of them.

**Commented [CB6]:** Add office procedures to make sure that we protect information Check with legal.

**Commented [LS7]:** Policy is adequate to meet legal requirements, though additional safeguards always possible.

*Penalties for unlawfully accessing not-public data*

The District may utilize the penalties for unlawful access to not-public data as provided for in Minnesota Statutes, section 13.09. Possible penalties include suspension, dismissal or referring the matter to the appropriate prosecutorial authority who may pursue a criminal misdemeanor charge.

**Protection of Private and Confidential Data on Individuals**

*Accuracy and Currency of Data*

Employees of the District are requested, and given appropriate forms, to annually provide updated personal information for the District as necessary for District recordkeeping, tax, insurance, emergency notification and other personnel purposes. Other individuals who provide private or confidential information (e.g., managers) are also encouraged to provide updated information when appropriate.

*Data Safeguards*

Private and confidential information is stored in secure files and databases that are not accessible to individuals who do not have authorized access. Private and confidential data on individuals is accessed only by individuals who are both authorized and have a need to access such information for District purposes. (An individual who is the subject of data classified as private may access such data for any reason.)

The District administrator, as Responsible Authority, reviews forms used by the District to collect data on individuals and ensures that the District collects private or confidential data only as necessary for authorized District purposes.

Only managers and employees of the District whose work for the District requires that they have access to private or confidential data may access files and records containing such information. Employees' and managers' access is further governed by the following requirements:

- Private or confidential data may be released only to persons authorized by law to access such data;
- Private or confidential data must be secured at all times and not left in a location where they may be accessed by unauthorized persons;
- Private or confidential data must be shredded before it is disposed of pursuant to the [District's records retention policy](#).

Commented [CB8]: Only employees? Other people

Commented [CB9]: Per data retention policy

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When a contract with an outside entity requires access to private or confidential information retained by the District, the contracting entity is required by the terms of its agreement with the District to use and disseminate such information in a manner consistent with the DPA and the District's Policies and Procedures for Public Access to Documents.

## **Riley-Purgatory-Bluff Creek Watershed District** Private and Confidential Data – Rights of Data Subjects

In accordance with the Minnesota Data Practices Act, Minnesota Statutes chapter 13 (DPA), the following protocols and information are established by the Riley-Purgatory-Bluff Watershed District (District). This information is provided to you, as the subject of private or confidential data collected by the District to explain how (1) the District assures that all data on individuals collected by the District are accurate, complete and current for the purposes for which they were collected, and (2) to explain the security safeguards in place for District records containing data on individuals.

### **Rights to Access Government Data**

Minnesota law gives you, as the subject of private or confidential data collected by the District, and all members of the public the right to see data collected and maintained by the District, unless state or federal law classifies the data as not public. In addition, the DPA gives you and all members of the public the right to have access to or, if you wish, to copy any public data for any reason, as long as the data are not classified as not-public or copyrighted.

You have the right to:

- be informed, upon request, as to whether you are a subject of District data and how that data is classified;
- know what the District's procedures are for requesting government data;
- inspect any public data that the District collects and maintains at no charge;
- see public data that the District collects and maintains without telling the District who you are or why you want the data;
- have public data that the District collects and maintains explained to you;
- obtain copies of any public District data at a reasonable cost to you;
- be informed by the District in writing as to why you cannot see or have copies of not-public District data, including reference to the specific law that makes the data not-public;
- receive a response from the District to a data request in a reasonable time.
- contest the accuracy and completeness of public or private data the District has on you and appeal a determination by the District as to whether the data are accurate and complete;
- to ask the District, if you are under 18 years old, to withhold information about you from your parents or guardian;
- consent or revoke consent to the release of information the District has on you;
- release all, part or none of the private data the District has on you.

**Commented [CB10]:** Are these required and are they up to date.

**Commented [LS11]:** Yes and all reflected in current statute.

### Security of Private and Confidential Data

State law protects your privacy rights with regard to the information the District collects, uses and disseminates about you. The data the District collects about you may be classified as:

- Public – anyone can see the information;
- Private – only you and authorized District staff can see the information;
- Confidential – only authorized District staff can see the information.

When the District asks to you provide data about yourself that are private, the District will give you a notice called a Tennessee warning notice. This notice determines what the District can do with the data collected from you and the circumstances under which the District can release the data. The District will ask for your written permission before using private data about you in a way that is different from what is stated in the Tennessee notice you receive. The District also will ask for your written permission before releasing private data about you to someone other than those identified in the notice.

State law requires that the District protect private and confidential data about you. The District has established appropriate safeguards to ensure that your data are not inadvertently released or wrongfully accessed. The District disposes of private, confidential and other not-public data in accordance with its Records Retention Schedule, adopted July 2, 2014. Printed data are disposed of by shredding or other method sufficient to prevent the data from being ascertainable. Electronic data are destroyed or erased from media in a manner that prevents the data from being accessed or read. Data-storage systems in District computers are erased in the process of recycling.

**Commented [LS12]:** "Confidential data" are inaccessible to the individual subject of that data. Performance reviews are private personnel data.

**Commented [CB13]:** Can you define what the difference is – what are those situation. Performance review are confidential.

**Riley-Purgatory-Bluff Creek Watershed District  
Data Practices Advisory / Tennesen Warning**

Some or all of the information you are being asked to provide on the attached form is classified by state law as either private or confidential data. Private data is information that generally cannot be given to the public, but can be given to the subject of the data. Confidential data is information that generally cannot be given to either the public or the subject of the data.

**Commented [CB14]:** What is an example?

The Riley-Purgatory-Bluff Creek Watershed District's purpose and intended use of the information is:

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You  are /  are not legally required to provide the information.

Your failure or refusal to supply the information will have the following consequences:

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Other persons or entities who are authorized to receive the information include:

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**Riley-Purgatory-Bluff Creek Watershed District**  
Consent to Release – Request from an Individual

**Explanation of Your Rights**

If you have a question about anything on this form, or would like more explanation, please talk to the Riley-Purgatory-Bluff Creek Watershed District administrator before you sign it.

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I, [*name of individual data subject*], give my permission for the Riley-Purgatory-Bluff Creek Watershed District to release data about me to [*name of other entity or person*] as described on this form.

1. The specific data I want the Riley-Purgatory-Bluff Creek Watershed District to release are [*explanation of data*].
2. I have asked Riley-Purgatory-Bluff Creek Watershed District to release the data.
3. I understand that although the data are classified as private while in the possession of the Riley-Purgatory-Bluff Creek Watershed District, the classification/treatment of the data at [*name of other entity or person*] depends on laws or policies that apply to [*name of other entity or person*].

This authorization to release expires [*date/time of expiration*].

Individual data subject's signature \_\_\_\_\_  
Date \_\_\_\_\_

Parent/guardian's signature [*if needed*] \_\_\_\_\_  
Date \_\_\_\_\_

**Riley-Purgatory-Bluff Creek Watershed District**  
Consent to Release – Request from a Government Entity

**Explanation of Your Rights**

You have the right to choose what data we release. This means you can let us release all of the data, some of the data, or none of the data listed on this form. Before you give us permission to release the data, we encourage you to review the data listed and described here.

You have the right to let us release the data to all, some, or none of the persons or entities listed on this form. This means you can choose which entities or persons may receive the data and what data they may receive.

You have the right to ask us to explain the consequences for giving your permission to release the data.

You may withdraw your permission at any time. Withdrawing your permission will not affect the data that we have already released because we had your permission to release the data.

If you have a question about anything on this form, or would like more explanation, please talk to the District administrator before you sign it.

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I, *[name of individual data subject]*, give my permission for the Riley-Purgatory-Bluff Creek Watershed District to release data about me to *[name of other entity or person]* as described on this form. I understand that my decision to allow release of the data to *[name of other entity or person]* is voluntary.

**1.** The specific data that the Riley-Purgatory-Bluff Creek Watershed District may release to *[name of other entity or person]* are: *[description, explanation of data]*.

**2.** I understand the Riley-Purgatory-Bluff Creek Watershed District would release the data *[explanation of reason for the release]*.

**3.** I understand that although the data are classified as private at the Riley-Purgatory-Bluff Creek Watershed District, the classification/treatment of the data at *[name of other entity or person]* depends on laws or policies that apply to *[name of other entity or person]*. *[Include other known consequences.]*

This authorization to release the data expires *[date/time of expiration]*.

Individual data subject's signature \_\_\_\_\_

Date \_\_\_\_\_

Parent/guardian's signature (if data subject is a minor) \_\_\_\_\_

Date \_\_\_\_\_

**Riley-Purgatory-Bluff Creek Watershed District**

**Records Retention Schedule**

Adopted February 1, 2017

**Commented [CB15]:** Which of these are dictated from Statute – which ones are required?  
Can we do everything electronic?  
Invoices can the excel from receipts qualified

All District records are created and retained in electronic forms, except that record series shaded below may be created and/or retained in hard copy form.

**Formatted:** Highlight

**Administration**

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Advisory and technical committees – agendas, minutes, reports, related documents	Retain 10 years, then may be transferred to state archives	Public	
Affidavits of publication a. General notices, including project public hearings b. Rules	a. Retain 6 yrs b. Retain permanently	a. Public b. Public	
Agenda, board meetings and workshops	Retain 10 years, then may be transferred to state archives	Public	
Agreements and contracts, not otherwise scheduled herein	Retain 10 yrs after paid and audited	Public	
Annual reports	Retain 10 yrs, then transfer to state archives	Public	
Attorneys’ opinions a. Opinions of District attorney and correspondence relating thereto b. Official interpretation regarding questions of legal rights or liabilities affecting District	a. Retain permanently or transfer to state archives when no longer needed b. Retain 10 yrs, then transfer to state archives	a. Public b. Public/Private-nonpublic	a. b. 13.393 13.39
Authority to dispose of records	Retain permanently	Public	

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Bids and Quotations a. Accepted, noncapital projects b. Rejected, noncapital projects	a. Retain 10 yrs after completion of project b. Retain 6 yrs	a. Public/nonpublic b. Public/protected nonpublic until all bids opened	a. 13.37 b.
Budgets – record copy	Retain permanently or transfer to state archives	Public	
Consultant Contracts	Retain 10 yrs	Public	
Correspondence a. Constituents b. Municipalities/State Agencies c. Engineer d. Financial e. Transitory, such as electronic mail not in one of the above categories	a. Retain 6 yrs, then archive if documents historical b. Retain 6 years, then archive if historical c. Retain 10 yrs, then transfer to state archives d. Retain 5 yrs then transfer to state archives e. Retain until read	Private/public	13.37; 13.44
Drafts, duplicates, notes and other documents that have not become part of an official transaction, not otherwise scheduled herein	Retain 2 yrs	Public	
Governance a. Bylaws b. Policies	a. Retain permanently b. Retained only until superseded	a. Public b. Public	
Historical data and photographs	Retain permanently or transfer to state archives	Public	
Inventories – equipment supplies, etc.	Retain 10 yrs	Public	

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Lawsuits a. General b. Civil Lawsuits c. Criminal Lawsuits d. Attorneys' opinions, attorneys' briefs, testimony, depositions, correspondence, etc	a. Retain 10 yrs after settlement or resolution by court, administrative order and then transfer to state archives b. Retain 20 years after last activity c. Retain 2 years after last activity d. Retain 10 yrs, then archive	a. Public/private b. c. d. Public/private/ and non-public	a. 13.30, 13.39 b. c. d. 13.39, 13.39
Leases	Retain 10 yrs after expiration of lease	Public	
Levy (tax) files – tax levies, related correspondence	Retain 5 yrs then transfer to state archives	Public	
Membership association documents (MAWD, Metro MAWD, etc.)	Retain 3 yrs	Public	
Minutes – Board meetings and workshops	Retain permanently	Public	
Newsletters, press releases generated by the District	Retain 10 yrs	Public	
Notices – official District meetings	Retain 6 yrs	Public	
Public hearings records	Retain 6 yrs or until recorded in minutes, do not archive	Public	

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
<p>Recordings</p> <ul style="list-style-type: none"> <li>a. Board meetings and workshops – audio recordings, closed meetings</li> <li>b. Board meetings and workshops – open</li> </ul>	<ul style="list-style-type: none"> <li>a. Tapes and other recordings may be discarded 3 yrs after meeting; 8 yrs or until purchase or sale is completed or abandoned for real estate negotiations.</li> <li>b. Tapes and other recordings may be reused or discarded 1 yr after formal approval of written minutes by board</li> </ul>	<ul style="list-style-type: none"> <li>a. Nonpublic/public</li> <li>b. Public</li> </ul>	<ul style="list-style-type: none"> <li>a. 13D.05, subd. 3; 13.37</li> </ul>
<p>Technical Information</p> <ul style="list-style-type: none"> <li>a. Printed material regarding the District</li> <li>b. Printed material not regarding the District</li> </ul>	<ul style="list-style-type: none"> <li>a. Retain 10 yrs, then transfer to state archives</li> <li>b. Discard when no longer needed</li> </ul>	<ul style="list-style-type: none"> <li>a. Public</li> <li>b. Public</li> </ul>	

**Real Estate**

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Deeds	Retained until property is sold, then transfer to new owner; maintain copy permanently	Public	
Ditch records	Retain permanently	Public	
Easements a. Originals b. Temporary easements	a. Retained permanently and do not archive b. Discard after project completion or when no longer needed, whichever is later	a. Public b. Public	
Hazardous materials reports – phase I and II reports, leaking underground storage tank reports	Retain permanently	Public	
Property records (well records, building inspections, etc.)	Retain 20 yrs after sale of property	Public	
Property surveys	Retain permanently	Public	
Transaction records	Retain 10 yrs after sale of property	Public/ Confidential/ Protected Non-public	13.44; 13.585

**Bonds**

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Contractor license bonds, certificates of insurance, etc.	Retain 6 yrs after completion of contract	Public	
Fidelity bonds – managers	Retain 6 yrs after completion of service by manager	Public	
Performance and payment bonds	Retain 6 yrs after completion of contract	Public	
Permit financial assurances – bonds, letters of credit	Retain 6 yrs after permit closure <sup>2</sup>	Public	

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<sup>2</sup> Retain copy if original returned to provider.

**Financial/Accounting**

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Assessment rolls – copies of assessment rolls received from county auditor	Retained 6 yrs after final payment	Public	
Audit reports	Retain permanently	Public	
Billing statements	Retain 6 yrs	Public	
Bank statements – slips, bonds and reconciliations	Retain 6 yrs	Public	
Budget expenditure reports	Retain permanently	Public	
Checks – paid and returned a. Accounts payable b. Payroll	a. Retain 6 yrs b. Retain 6 yrs	a. Public b. Public/private	
Receipt registers	Retain permanently, and not archived	Public	
Deposit slips	Retain 6 yrs	Public	
General ledger – general, month-end	Retain permanently and do not archive	Public	
Investment documents – amounts invested and interest earned	Retain 4 yrs after maturity	Public	
Payroll	Retain permanently	Public/private	13.43
Pension and retirement plan	Retain permanently	Public or private	
Purged accounts	Retain 6 yrs (irrespective of audit)	Public	
Receipts and receipt books	Retain 6 yrs and do not archive	Public	
Staffing lists	Retain 6 yrs	Public	
Time sheets	Retain 6 yrs	Public/Private	13.43
W-2 statements	Retain 6 yrs	Public/Private	13.43
W-4 statements	Retain until replaced		
Workers’ compensation reports	Retain 20 years	Public/Private	176.231
1099 statements	Retain 6 yrs	Public/Private	13.43

**Insurance**

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Insurance – automobile, fire or other perils, property, public officials, general liability, umbrella liability	Retain 6 yrs after expiration	Public	
Workers' compensation a. Claim register b. Policies	a. Retain permanently b. Retain 6 yrs after expiration	a. Public b. Public	a. 176.231

**Permits**

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Applications – permits	Retain 10 yrs, then transfer to state archives	Public	
Correspondence – relating to permits	Retain 10 yrs, then transfer to state archives	Public	
Engineer's reports	Retain 10 yrs, then transfer to state archives	Public	
Inspectors' reports – includes reports, inspectors' documents relating to permit inspections	Retain 10 yrs, then transfer to state archives	Public	
Permit financial assurances – bonds, letters of credit	Retain 6 yrs after permit closure	Public	
Permits	Retain permanently	Public	
Plans	Retain permanently	Public	

**Personnel**

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Affidavit of publication for job opening	Retain 2 yrs	Public	13.43
Affirmative action files	Retain permanently	Public/Private	13.39, 13.43
Applications for employment – not hired	Retain 1 yr	Public	
Personnel policies and procedures, administrative policies	Retain permanently	Public	
Employment contracts	Retain 5 yrs after expiration	Public	
Equal employment opportunity reports, summary date	Retain 3 yrs	Public	
Examination file – completed examinations	Retain 2 yrs	Private	13.43
Employee medical records	Retain 5 yrs after separation from District	Public/private	13.43
Family Medical Leave Act documents	Retain 3 yrs in medical file, not in employee personnel file	Private	13.43
Grievance file	Retain 5 yrs after separation, not in employee personnel file	Public/private	13.43
Job descriptions	Retain until superseded	Public	
Personnel files – applications, accident reports, background check results, citations, personal history, employee references, attendance, disciplinary actions, performance evaluations, letters of appointments or promotion, termination or resignation	Retain 5 yrs after separation	Public/private	13.43
Payroll record – master copy	Retain permanently	Public/private	13.43
Unemployment claims, compensation	Retain 6 yrs	Public/private	13.43
Background check results – not hired	Retain 30 days	Nonpublic	13.87

**Projects**

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Board documents – resolutions, findings, conclusions	Retain 10 yrs, then transfer to archives	Public	
Contracts a. Petitioned projects b. Nonpetitioned projects	a. Retain permanently b. Retain 10 yrs, then transfer to state archives	Public	
Correspondence	Retain 10 yrs, then transfer to state archives	Public	
Engineer’s reports and related documents	Retain 10 yrs, then transfer to state archives	Public	
Petitions (for projects)	Retain 10 years, then transfer to state archives	Public	
Property surveys	Retain permanently	Public	
Public hearing documents – non-petitioned projects	Retain 10 yrs, then transfer to state archives	Public	
Public hearing documents – petitioned projects a. notices, written testimony, audio b. Related public hearing documents	a. Retain 6 yrs or until recorded in minutes; do not archive b. Retain 10 years and do not archive	a. Public b. Public	

**Programs**

<i>Name – Description</i>	<i>Retention, Archiving Instructions</i>	<i>Classification</i>	<i>State Statutory Reference</i>
Water quality, lake elevation, stream-flow a. Field notes and raw data b. Final reports	a. Retain until final report completed b. Retain permanently or transfer to state archives	Public	
Public opinion surveys	Retain permanently or transfer to state archives	Public	
Plans a. Watershed management plans b. Local water management plans c. Program plans and work plans – approved by Board	a. Retain permanently or transfer to state archives b. Retain until updated c. Retain 6 yrs and do not archive	a. Public b. Public c. Public	
Rules – District approved	Retain permanently	Public	

**Riley-Purgatory-Bluff Creek Watershed District**  
**Policy for Management of Permit Fees, Financial Assurances and Abandoned Property**

Adopted July 2, 2014

As provided by state law, the Riley-Purgatory-Bluff Creek Watershed District (District) receives fees from applicants to reimburse the District for the costs of processing and administering permits required by the District rules. The District also receives bonds, letters of credit and cash deposits (checks) as financial assurances to secure the performance of permittees in compliance with permit terms and conditions. To ensure that such assets are managed in accordance with sound financial practices and state law governing local government financial practices and management of abandoned property, the District establishes the following policy and protocols for the management of financial instruments, permit fees, and cash escrows.

1. **Permit fee payments.** The District will accept, process and maintain permit fees in accordance with District rules and the following protocols.
  - a. The District will not accept cash in payment of permit fees.
  - b. Checks received by the District in payment of permit fees will be deposited within 10 business days of receipt.
2. **Financial assurance deposits.** The District will catalogue and maintain financial assurances and cash escrows in accordance with the following protocols:
  - a. Financial assurance instruments (bonds, letters of credit and checks) received by the District to secure performance of permit conditions will be logged in the Financial Assurance Log created for such purposes, then copied. A copy will be filed at the District offices. The Financial Assurance Log will include, at a minimum, the following information:
    - i. Permit number for which the financial assurance instrument is provided;
    - ii. Name of the permittee/escrow provider;
    - iii. Name, for bonds and letters of credit, of the surety;
    - iv. Amount(s) of the financial assurances provided;
    - v. Expiration date, if any, of the financial assurance;
    - vi. Location of the financial assurance instrument or deposit.
  - b. Original bonds and letters of credit will be deposited for safekeeping at a location to be designated annually by the District Board of Managers.
  - c. Submittal of checks to satisfy financial assurance requirements is disfavored by the District. But when, in the judgment of the District administrator, it is not reasonable to require a permit applicant to obtain a bond or letter of credit, the applicant may submit a check for deposit by the District to serve as the permit financial assurance. In such circumstances, 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 that specifies the terms and conditions under which the District accepts and holds the escrow, as well as the circumstances under which the District may use the escrowed funds.
    - i. The District, with the advice of counsel, will maintain a cash escrow agreement template for use by permittees/escrow providers.

- ii. The District will accept only certified checks or other bank drafts in payment of cash escrows.
    - iii. Permit approval may be revoked for failure to comply with this requirement.
  - d. No check will be accepted by the District to serve as a financial assurance to secure performance of permit conditions until District staff has verified receipt of an associated executed escrow agreement, specifying the required deposit amount and permit to be secured by the escrow. The check must be in the amount specified in the associated escrow agreement and must bear the number of the District permit(s) to be secured.
  - e. Checks received by the District as financial assurances will be deposited within 10 business days of receipt in an account designated by the administrator exclusively for permit escrows. The account will be at a board-designated depository institution.
3. **Maintenance of valid financial assurances.** To ensure that the District has the capacity to assure compliance with its rules and protect the District’s water resources in the event of noncompliance with permit conditions and/or rules, District staff will follow the protocols below to ensure that financial assurances of permit performance remain valid and enforceable:
- a. District compliance with the protocols in this section will be the responsibility of the District administrator.
  - b. The administrator will maintain the Financial Assurance Log.
  - c. The administrator will review the Financial Assurance Log monthly to ensure the continuing validity of financial assurances provided for active permits by identifying bonds and letters of credit that will expire within the ensuing 90 days.
  - d. The administrator will determine – in the course of his or her monthly review of the Financial Assurance Log – whether replacement of the financial assurance is needed for a particular project, and, if so, alert the permittee to the need to provide a replacement instrument at least 60 days prior to the expiration of the existing instrument.
  - e. If deemed necessary in response to a permittee’s unwillingness or inability to provide a replacement financial assurance, the administrator will contact counsel at least 30 days prior to the expiration of the financial assurance to initiate procedures to draw on the existing financial assurance.
    - i. The administrator will ensure that proper authorization for a financial assurance draw is secured in a timely manner, with a priority on the protection of District water resources.
4. **Return of financial permit assurances.** Financial assurance instruments will be returned in accordance with applicable District rules, including sections 5.5 and 12.4.
- a. The administrator will monthly designate financial assurances that may be returned in whole or in part to the surety (with notice to the principal/permittee) and, upon receipt of required documentation, take the steps necessary to return such instruments and/or funds.
  - b. The administrator will maintain record of returned financial assurances in the Financial Assurance Log and retain a copy of original financial assurance documents in compliance with the District records retention schedule.

5. **Abandoned property procedures.** State law imposes requirements applicable to any intangible asset in the District's possession that remains unclaimed for three years or more after the asset is no longer needed for District purposes (e.g., three years after a permitted project is completed and the associated financial assurance becomes eligible for release in accordance with District rules). To ensure compliance with abandoned-property requirements, the District establishes the following protocols.
- a. The District will annually assess whether cash escrows remain on deposit after completion of the applicable permitted work and attempt to return them. For cash escrows that have been in the District's possession for three years or more, unclaimed by the owner, staff will commence unclaimed property return procedures as follows.
    - i. By July 1 of each year, District staff will take reasonable steps to notify owners by mail of unclaimed property. A letter should be sent to all known addresses on file for the owner, notifying owner of the amount still held by the District and describing steps necessary to claim the property. Staff need not send such a letter if documentation in the District's possession indicates that the address(es) it has for the owner are inaccurate.
    - ii. If the owner cannot be found, the assets are deemed legally abandoned and the District will remit them to the state Commissioner of Commerce, along with the report required by Minnesota Statutes section 345.41, as may be amended, containing information on the identity of the owner of the unclaimed assets in the District's possession, a description of the assets, the date the assets became payable or returnable to the owner and any other information that may be required by the commissioner. Formatting and filing of the report will be in compliance with Department of Commerce guidance.
    - iii. By October 31 each year, the required report, verified by the administrator, should be filed with the commissioner and all assets unclaimed as of the preceding June 30 should be remitted to the commissioner.
    - iv. The District may deduct a service charge from the unclaimed assets remitted to cover costs of attempting to locate an owner and, if necessary, reporting and paying the unclaimed funds to the commissioner only if the escrow provider has agreed to the deduction of such charges.

**ESCROW AGREEMENT**

**Between the Riley Purgatory Bluff Creek Watershed District  
and \_\_\_\_\_**

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Commented [CB17R16]: Add date when form was created/last updated

Can we tie this to the form on the website

This agreement is made by and between the Riley Purgatory Bluff Creek Watershed District, a watershed district under Minnesota Statutes chapters 103B and 103D (RPBCWD), and \_\_\_\_\_, a \_\_\_\_\_ (Permittee), to establish a cash escrow in fulfillment of financial assurance requirements under RPBCWD permit no. \_\_\_\_\_.

**Recitals**

A. Pursuant to Minnesota Statutes section 103D.345, the RPBCWD has adopted and implements rules governing development and other activity within the boundaries of the RPBCWD that may have an impact on water resources.

B. RPBCWD rules require that as a condition of permit approval a permittee must provide and maintain a financial assurance in the form of a bond, letter of credit or cash escrow for the purpose of covering costs the RPBCWD may incur in monitoring and inspecting activity under the permit and in responding, if necessary, to violations of a watershed statute or RPBCWD rule, permit or order.

C. This agreement documents that a cash escrow has been submitted by Permittee or on Permittee's behalf to fulfill a financial assurance obligation under permit no. \_\_\_\_\_ and specifies the conditions and procedures under which the RPBCWD will hold and may draw on the escrow. Permittee and the RPBCWD, in executing this agreement, concur that it is legally binding.

**Agreement**

1. Permittee has submitted a cash escrow in the amount of \$ \_\_\_\_\_. The RPBCWD will hold the escrow in an escrow account where it may be commingled with escrow funds held by the RPBCWD on behalf of parties other than Permittee. The RPBCWD need not hold the funds in an interest-bearing account and Permittee will not be entitled to interest on the escrow. If the escrow is submitted in a form other than cash and the escrow amount is not credited promptly to the RPBCWD account, the RPBCWD may declare this agreement null and void by written notice to Permittee.

2. Unused escrowed funds will be released to Permittee and additional escrow funds will be submitted by Permittee or on Permittee's behalf in accordance with the RPBCWD rules and duly adopted resolutions and policies of the RPBCWD Board of Managers.

3. Escrow funds will become the sole property of the RPBCWD, and Permittee agrees to relinquish all legal and equitable interest therein, as follows:

a. The RPBCWD may invoice Permittee for permit review, compliance monitoring and other eligible costs in accordance with duly established RPBCWD procedures.

b. If after notice and opportunity to be heard the RPBCWD finds violation of a watershed statute or RPBCWD rule, permit or order, the RPBCWD may give written notice to Permittee. The notice will describe the violation and the action required to correct it. If within twenty (20) days of notice delivery the violation has not been corrected and arrangements acceptable to the RPBCWD have not been made, without further notice the RPBCWD may take steps it deems reasonable to correct the violation, and may have access to the property during reasonable times for that purpose, provided that the RPBCWD will give 24 hours' notice before entry and exercise due care to avoid unnecessary disturbance or damage to the property. If the RPBCWD finds that entry is required to address an occurring or imminent threat to water resources, it may enter and correct without prior hearing or opportunity to cure, but only to the extent reasonably necessary to address the threat.

c. The RPBCWD may invoice Permittee for reasonable costs incurred for activity under paragraph 3b. If payment is not made within 30 days, the RPBCWD may transfer funds from the escrow account into RPBCWD accounts and credit Permittee accordingly.

4. Escrow funds submitted hereunder are submitted to secure the performance of Permittee under permit no. \_\_\_\_\_. If the permit is issued, and if the Permittee and any agent, employee or contractor well and faithfully performs all activities and things undertaken and authorized by permit no. \_\_\_\_\_ in compliance with all applicable laws, including applicable statutes, rules, permit conditions, orders, agreements and stipulations of the RPBCWD, and pays, when due, all fees or other charges required by law, including all costs to the RPBCWD of administering and enforcing the terms of the above-stated permit and this agreement, including reasonable attorneys' fees, then on written notification to the RPBCWD of same and the

RPBCWD's confirmation thereof, the RPBCWD will release the escrowed funds to Permittee.

5. All obligations of the RPBCWD under this agreement in holding and using the escrow funds are to Permittee only. Nothing in this agreement creates any right in any third party as against the RPBCWD or in any way waives or abridges any immunity, defense or liability limit of the RPBCWD. Permittee indemnifies the RPBCWD for any claim, liability or cost the RPBCWD incurs as a result of a party other than Permittee asserting ownership in or a right to the escrow funds or any party thereof. Permittee will not assign or purport to assign any interest in the escrow funds or this agreement to any third party, except in conjunction with a transfer of Permittee's permit approved in writing by the RPBCWD.

6. Nothing in this agreement affects Permittee's legal right, if any, to appeal a finding of violation or seek a legal determination of the purposes to which the RPBCWD may use the escrow funds.

7. The Permittee agrees that, should the escrow funds submitted hereunder remain unclaimed by the Permittee or his successor in interest so as to become "abandoned property" as that term is defined in Minnesota law, the RPBCWD may assess a service charge from the unclaimed assets to cover costs of attempting to locate the Permittee or his successor in interest and, if necessary, reporting and paying the unclaimed funds as required by law.

8. This agreement is effective on the signature of the parties and terminates when the RPBCWD releases the escrow or declares the agreement null and void under paragraph 1, above. The agreement may be amended only in a writing signed by the parties. An increase or decrease in the amount of escrow funds held by the RPBCWD for permit no. \_\_\_\_\_ does not constitute an amendment.

9. Notice to Permittee under this agreement is effective when sent by certified mail to Permittee's address as stated in the permit application or such other address as Permittee subsequently has notified the RPBCWD in writing. The laws of the State of Minnesota will govern any legal proceeding concerning this agreement. Venue for any such proceeding will be in the county where the real property that is the subject of this agreement is located. The recitals are incorporated as a part of this agreement.

IN WITNESS WHEREOF, the parties hereto have executed this agreement.

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**

By \_\_\_\_\_ Date:  
Administrator

**PERMITTEE**

By: \_\_\_\_\_ Date:  
*[print name here]*  
as \_\_\_\_\_ of \_\_\_\_\_.

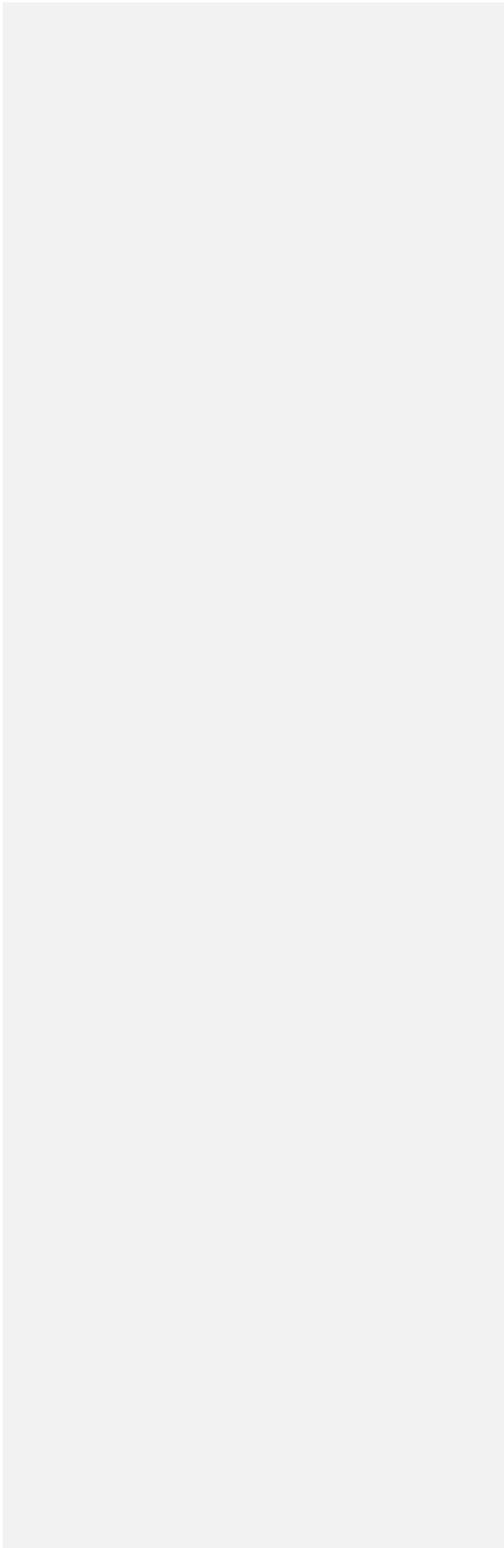
State of Minnesota  
County of :

This instrument was acknowledged before me on \_\_\_\_\_,  
by \_\_\_\_\_, as \_\_\_\_\_  
of \_\_\_\_\_.

\_\_\_\_\_ (Signature of notarial officer)

(Stamp)

Notary Public  
My commission  
expires:



**ESCROW PROVIDER ACKNOWLEDGEMENT & RELEASE**

The undersigned acknowledges having received and understood the agreement to which this acknowledgement is attached. By signing, the undersigned agrees to hold the Riley Purgatory Bluff Creek Watershed District (RPBCWD) harmless from and releases any and all claims the undersigned may have to the funds or any part thereof provided to the RPBCWD for the purposes described in and under the terms of the agreement.

Acknowledged, intending to be legally bound:

\_\_\_\_\_ Date:  
By: *[print name]*  
Title \_\_\_\_\_  
Company \_\_\_\_\_

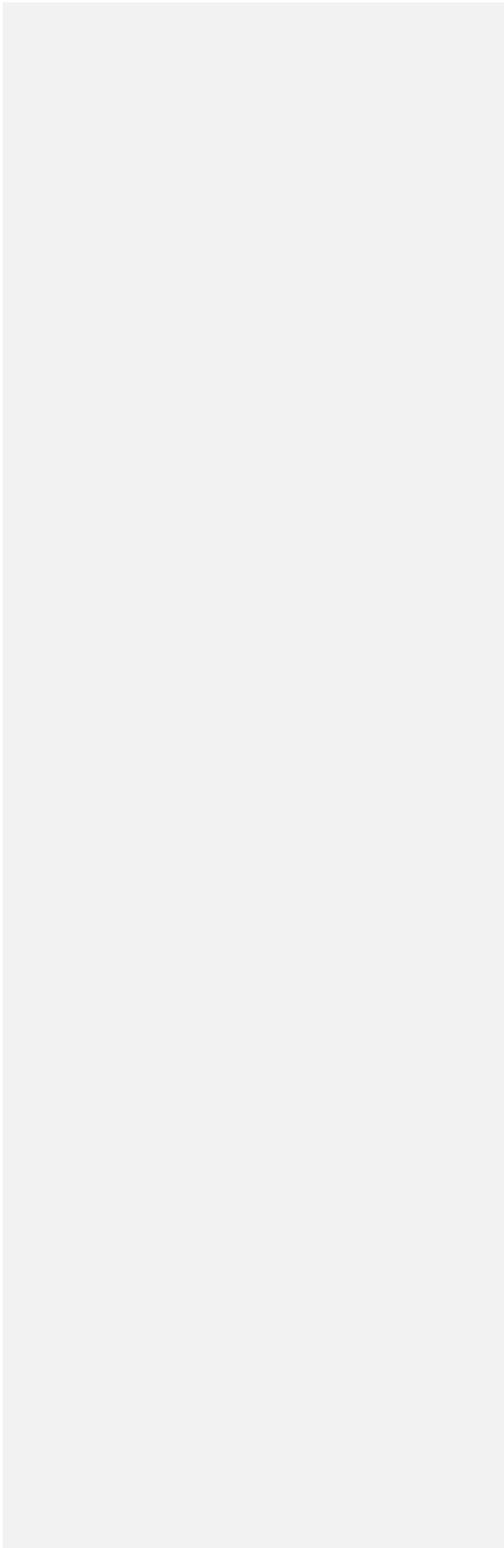
State of Minnesota  
County of :

This instrument was acknowledged before me on \_\_\_\_\_,  
by \_\_\_\_\_, as \_\_\_\_\_  
of \_\_\_\_\_.

\_\_\_\_\_ (Signature of notarial officer)

(Stamp)

Notary Public  
My commission expires:



**Riley-Purgatory-Bluff Creek Watershed District**  
**Public Purposes Expenditures Policy**

Adopted as amended June 29, 2015

Minnesota law mandates that governmental entities make expenditures only for public purposes and only as authorized to accomplish the purposes for which the entity was created. The Riley-Purgatory-Bluff Creek Watershed District (District) establishes the following policy and protocols to ensure that District expenditures serve clear, documented watershed district purposes. The District administrator will be responsible for the implementation of this policy and associated protocols.

1. **Travel.** The District may pay reasonable and necessary expenses for travel, lodging, meals and appropriate incidental expenses related to the performance of official District functions. Expenditures must be approved in advance by the administrator (for employees) or Board of Managers (for managers and the administrator) and must be directly related to the performance of District functions.
  - a. An employee or manager will be reimbursed for mileage expenses incurred when using the employee's or manager's personal vehicle to conduct District business. Mileage will be reimbursed at the tax-deductible mileage rate set by the federal Internal Revenue Service. Mileage expenses need not be approved in advance, but mileage expenses will be reimbursed only when accompanied by documentation of the date, number of miles traveled, purpose and destination(s). Mileage for employee commuting to and from the District offices will not be reimbursed.
  - b. *Overnight in-state travel.* Expenses eligible for reimbursement include:
    - i. Registration for workshops, conferences, seminars and other events pertaining to District business;
    - ii. Mileage and parking - use of personal vehicle (only) will be reimbursed at the tax-deductible mileage rate set by the federal Internal Revenue Service;
    - iii. Meals;
    - iv. Gratuities (15 percent of expenses incurred);
    - v. Lodging;
    - vi. Other actual expenses.
  - c. *Overnight out-of-state travel.* For out-of-state travel, the Board of Managers **when applicable** must approve all expenditures in advance. In determining whether to approve out-of-state travel, the Board of Managers will give particular consideration to whether representation from the District has been requested by a state or federal governmental office or other host entity whose purpose or work particularly relates to the District's purposes, projects or programs. The District will reimburse airfare at the coach or lesser-cost rate; mileage will be reimbursed at the IRS rate. If two or more managers or staff travel together by car, only the driver will receive reimbursement. Lodging and meal costs are limited to those which are reasonable and necessary. Receipts are required for lodging, airfare and meals. Expenses eligible for reimbursement include:

**Commented [CB18]:** This section needs to be revised.

A form should be developed. Currently, administrator Bleser presents on her travels through staff report.

- i. Round-trip coach-class (or lesser-cost) airfare;
- ii. Registration for conferences, seminars and other events pertaining to District business;
- iii. Mileage and parking – use of personal vehicle (only) will be reimbursed at the tax-deductible mileage rate set by the federal Internal Revenue Service and the cost of renting an automobile will be reimbursed only if necessary to conduct District business (reimbursed to airport and back using personal vehicle);
- iv. Meals;
- v. Gratuities (15 percent of expenses incurred);
- vi. Lodging;
- vii. Other actual expenses.

**Commented [CB19]:** Comment should we be going to a flat fee there and back drop off and pick-up

2. **Employee and manager training.** The District may pay reasonable registration, tuition, travel and incidental expenses (including lodging and meals) for education, development and training when expenditures are directly related to the performance of duties. Expenditures must be approved in advance by the administrator (for employees) or Board (for managers and the administrator).

**Commented [CB20]:** Check directly the betterment of the organization and skills – benefit for the watershed. By the president and administrator

3. **Safety and health programs.** The District may pay for safety and health programs that promote healthier and more productive employees and reduce costs to watershed taxpayers, including costs associated with workers’ compensation and disability benefits claims, insurance premiums and lost time resulting from employee absences.

4. **Manager and employee recognition and appreciation.** The District may pay for programs that recognize managers and employees for significant contributions to the District’s performance and demonstrated commitment to the District’s effective and efficient fulfillment of its purposes in accordance with an annual plan and budget for such events, approved by the Board. The District may pay for occasional manager and employee appreciation events or activities conducted in accordance with an annual plan and budget for such events, approved by the Board. No expenditure for manager or employee recognition will be made under this policy unless and until the structure, purposes and criteria for recognition are approved by the Board.

a. The District will not pay employees direct non-salary payments (i.e., bonuses) except as conditioned on achievement of performance goals specified in a written employment agreement.

5. **Food and beverages.** The District may pay for food and beverages when necessary to ensure meaningful, efficient and effective participation of employees, managers or the public in activities, events and functions directly related to District purposes. Circumstances under which District expenditures for food and beverages will be allowed include:

a. Food and/or beverages provided as part of a structured agenda of a conference, workshop, work session, outreach meeting or seminar, when the topic or subject of which relates to the official business of the District and the majority of the participants are not District employees or managers;

b. Food and/or beverages may be provided as part of a workshop or formal meeting primarily for District employees or managers where food and/or beverages are necessary to facilitate the conduct of the meeting, to ensure continuity and support the participation of employees, managers and other participants. Examples of potential qualifying events include:

- i. An extended planning or operational analysis meeting;
    - ii. An extended meeting to develop long-term strategic plans;
    - iii. A structured training session for employees generally; or
    - iv. Official meetings of the District Board, a committee, task force or advisory group.
  - c. Food and/or beverages may be provided for occasional employee or manager recognition and appreciation events and activities, when approved by the Board in accordance with a District employee recognition and appreciation plan and budget.
  - d. The District may pay for food and/or beverage expenses incurred in connection with a meeting or event attended by employees and/or managers, the primary purpose of which is to discuss, negotiate or evaluate a plan, program, project or other endeavor directly related to District purposes.
  - e. District meetings, workshops and training sessions will be scheduled to avoid the need to provide food whenever possible.
6. **Outreach and stakeholder involvement.** The District may pay for community and stakeholder outreach and involvement programs to ensure that efficient and effective District programs, projects and meetings are conducted to gather public and intergovernmental input and participation in District planning, research, rulemaking and program or project design.
7. **Membership, donations.** The District may pay for membership in the Minnesota Association of Watershed Districts in accordance with Minnesota Statutes section 103D.335, subdivision 20. District funds may be expended for membership in other professional organizations if the organization is an association of a civic, educational or governmental nature and its activities are directly related to District purposes or the improvement of District operations. District funds may not be donated to any professional, technical or charitable organization, person or private institution. The District may contract for services rendered by such organizations.
8. **Protocols.** The following protocols are established to ensure compliance with above policies:
- a. For employees other than the administrator, the written approval of the administrator must be secured prior to an event or activity to qualify as a District expenditure.
  - b. All invoices or reimbursement requests must include or be accompanied by a copy of the administrator's written approval and must include itemized receipts or other appropriate documentation of expenses incurred. Documentation also must include the date the expense(s) were incurred, location, purpose, participating or attending individuals and relevant affiliation, explanation of the need for food and/or beverage for the meeting, event or activity, and any other relevant information.
  - c. Copies of all documentation specified herein will be recorded and maintained in accordance with the District records retention policy.
9. **Use of District property**
- a. District property, including but not limited to computers, phones, fax machines and other office equipment, will be used exclusively for District business, except

for incidental personal use by District staff that does not interfere with or impede the conduct of District business to any substantial degree.

- b. District property must be used for only its intended purposes.
- c. The administrator may not dispose of any District property with a value of more than \$1,000 without prior authorization of the Board of Managers.

10. **Miscellaneous.**

- a. The District administrator will secure an approval described above for expenses he or she will incur from the president of the Board of Managers, except that the administrator may approve or pay expenses for District-conducted programs, events and activities.
- b. The District will not pay for alcoholic beverages under any circumstances.

**Riley-Purgatory-Bluff Creek Watershed District**  
**Fund Balance Policy**

Adopted as amended February 1, 2017

[DRAFT Amendment December 4, 2019](#)

**I. Purpose**

Pursuant to Statement No. 54 of the Governmental Accounting Standards Board concerning fund balance reporting and governmental-fund type definitions, and the recommendation of its auditor, the Riley-Purgatory-Bluff Creek Watershed District establishes specific guidelines the District will use to maintain an adequate fund balance to provide for cash-flow requirements and contingency needs because major revenue, most notably half of the District's annual levy, is received in the second half of the District's fiscal year.

The policy also establishes specific guidelines the District will use to classify fund balances into categories based primarily on the extent to which the District is legally required to expend funds only for certain specific purposes.

**II. Classification of Fund Balances, Procedures**

**1. Nonspendable**

- This category includes funds that cannot be spent because they either (i) are not in spendable form or (ii) are legally or contractually required to be maintained intact. Examples include inventories and prepaid amounts.

**2. Restricted**

- Fund balances are classified as restricted when constraints placed on those resources are either (i) externally imposed by creditors, grantors, contributors, or laws or regulations of other governments or (ii) imposed by law through constitutional provisions or enabling legislation.

**3. Committed**

- Fund balances that can only be used for specific purposes pursuant to constraints imposed by action of the District Board of Managers. The committed amounts cannot be used for any other purpose unless the District removes or changes the specified use by taking the same type of action it employed to commit those amounts.
- The Board of Managers will annually or as deemed necessary commit specific revenue sources for specified purposes by resolution. This action must occur prior to the end of the reporting period, but the amount to be subject to the constraint may be determined in the subsequent period.

- The Board of Managers may remove a constraint on specified use of committed resources by resolution.

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#### 4. Assigned

- Amounts for which a specified purpose has been stated, but are neither restricted nor committed. Assigned fund balances include amounts that are intended to be used for specific purposes.
- Only the District board of managers has the authority to assign and remove assignments of fund balance amounts for specified purposes.

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#### 5. Unassigned

- A residual classification that includes amounts that have not been assigned to other funds and that have not been restricted, committed, or assigned to specific purposes.

**Deleted:** The District has established a minimum-fund balance policy consisting of the following three components:

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#### 6. Other Principles and Procedures

- *Working capital.* The District will endeavor to maintain an unassigned fund balance of an amount not less than 50 percent of the next year's budgeted expenditures for working capital. This will assist in maintaining an adequate level of fund balance to provide for cash-flow requirements and contingency needs because major revenues, including property taxes and other government aids are received in the second half of the District's fiscal year.
- A negative residual amount may not be reported for restricted, committed, or assigned fund balances.

**Deleted:** ~~<#>Emergency reserve.~~ Beyond the working-capital reserve in the first half of the year, the District will endeavor to maintain additional funds to provide for emergencies. At the end of each fiscal year, the District will establish an emergency reserve for unforeseen expenditures equal to 5 percent of the next year's budget. ~~<#>Budget stabilization.~~ To buffer budget volatility, the District will endeavor to maintain a fund balance to help manage fluctuations in the operating budget. The District will maintain a balanced budget, and will endeavor to ensure that the carryover balance at the end of the year is 5 to 7 percent of the next year's budget. These funds could be used to cover, for example, one-time expenditures to avoid future budget increases, offset shortfalls in revenue, fund unanticipated operative expenses.

### III. Monitoring and Reporting

The District administrator will annually prepare a report on the status of fund balances in relation to this policy and present the report to the District managers in conjunction with the annual audit report to the State of Minnesota.

When both restricted and unrestricted resources are available for use, it is the District's general policy to first use restricted resources, then use unrestricted resources as needed. When committed, assigned or unassigned resources are available for use, it is the District's general policy to use resources in the following order; 1) committed 2) assigned and 3) unassigned.

**Riley-Purgatory-Bluff Creek Watershed District**  
**Internal Controls and Procedures for Financial Management**

Adopted July 2, 2014

[DRAFT AMENDMENT December 4, 2019](#)

This policy is adopted to provide the Riley-Purgatory-Bluff Creek Watershed District (District) with written internal controls and procedures for financial management. Adherence to this policy and procedures will ensure that the District's finances are managed in accordance with generally accepted accounting principles and best practices, and will minimize District administrative costs.

- I. **Annual budget.** The administrator annually develops a proposed budget for presentation to the Board of Managers for review. After adjustments as directed by the Board, the District schedules and issues appropriate notice for a public hearing on the proposed budget. Following the public hearing but before September 15 each year, the Board of Managers adopts the annual budget and certifies it to the Hennepin County auditor.
  - a. Amounts in any approved budget category may not be reallocated or exceeded by more than 10 percent of the total program/project amount without approval of the Board of Managers.
  - b. Actual expenditures may not materially deviate from the amount in an approved budget category.
- II. **Annual financial statements.** Annual financial statements are accepted by the Board of Managers, then submitted to the Board of Water and Soil Resources and the Office of the State Auditor within 180 days of the end of each fiscal year.
  - a. In preparation for the annual audit of the District finances, the administrator prepares the following documents:
    - i. Copies of approved budgets and all budget amendments;
    - ii. Detailed general ledger (through year-end);
    - iii. Bank reconciliation and bank statements;
    - iv. Copies of disbursements and receipts;
    - v. Copy of tax (levy) settlements from Hennepin County;
    - vi. Copy of certification levy;
    - vii. Listing of accounts payable and copies of signed checks;
    - viii. Grant and other funding agreements;
    - ix. List of capital assets, showing all deletions and additions;
    - x. Copies of invoices;
    - xi. Approved minutes.
  - b. The administrator annually presents the audit for acceptance to the Board of Managers at a monthly meeting.
- III. **Monthly financial management protocols.**
  - a. The District contracts with a certified public accountant to manage the checking accounts and investment funds of the District.
  - b. The administrator receives monthly bills and invoices at the District office.

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- c. The administrator is responsible for deposit of checks or cash received at the District.
- d. The administrator creates an Excel spreadsheet listing vendor, invoice number, invoice amount and general ledger coding; a list of deposits with coding and a list of credit card charges with coding, and emails this information to the accountant.
- e. The accountant prepares checks pursuant to these recommendations to pay the monthly bills.
- f. Payroll is processed through a third party payroll service. The administrator submits employee hours to the payroll service for each pay period. The payroll service prepares payroll on a semi-monthly basis by direct deposit and is responsible for all tax filing requirements, tax forms, and PERA payments or filing requirements.
- g. The accountant prepares a monthly treasurer's report that includes a listing of bills to be paid and tracks account balances. The accountant also prepares an internal report for the treasurer.
- h. The administrator reviews the treasurer's report and distributes the report to the Board of Managers for the review prior to the Board's monthly meeting.
- i. The treasurer also reviews the bills to determine whether to recommend payment. All bills are available for review by any member of the Board of Managers on request.
- j. The treasurer reviews the treasurer's report for accuracy prior to presentation to the Board of Managers.
- k. At the monthly Board meeting, the treasurer presents the treasurer's report. The Board of Managers receives and discusses, as necessary, the treasurer's report, then authorizes payment of the monthly bills as presented in the check register.
- l. Following Board authorization to pay the bills, the administrator mails payment to vendors as authorized.

**Deleted:** administrator reviews the bills and recommends payment; the accountant prepares checks pursuant to these

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- IV. **Spending Authority.** All expenditures by the District must be approved in advance by the Board, except that the Board by resolution may delegate to the administrator the authority to bind the District, with or without countersignature, to a purchase of goods or services, or to enter into a contract for same, when the cost thereof does not exceed \$10,000 or under other specified conditions.
  - a. The Board has authorized the administrator to expend up to \$5,000 on a single purchase without prior Board approval and affirms that authority in adopting this policy.
  - b. The administrator may not purchase any real estate or easements on real estate without prior authorization for the Board of Managers.
- V. **Banking**
  - a. The District maintains a current signature card at the depository bank.
  - b. The administrator and treasurer may transfer funds between District accounts and may deposit funds into District accounts.
  - c. Cash withdrawals from District accounts are prohibited.

- d. The administrator, in consultation with the treasurer, is authorized to invest District funds in accordance with Minnesota Statutes chapter 118A.
  - e. All deposits to District accounts must be made intact, and the District's bank is instructed not to return cash from a deposit to a District account.
- VI. **Checking**
- a. The administrator is not an authorized signatory of District checks.
  - b. All checks, drafts or other orders for the payment of money, notes or other evidence of indebtedness issued in the name of the District shall not be valid unless signed by two managers, except that a check, draft or other order for payment of less than \$100 is valid with one manager's signature.
- VII. **Credit card use.** The administrator is authorized to incur charges to the District credit card, with a maximum single charge of \$5,000 and allowable billing-period maximum charges totaling \$10,000.
- a. A receipt must be obtained for all District credit card purchases. Credit card purchases for which a detailed receipt is not provided must be reimbursed by the individual making the purchase.
- VIII. **Reporting**
- a. All expenditures and investments, receipts and disbursements made must be compiled for presentation to the Board of Managers by the treasurer in a timely manner.
  - b. The annual audit will be filed with the Board of Water and Soil Resources and the Office of the State Auditor within 120 days of the end of the District's fiscal year (January 1 – December 31).
  - c. The administrator and treasurer will regularly review relevant records and documents for any of the following, and report to the treasurer (for the administrator) or the Board of Managers (for the treasurer) any of the following if found:
    - i. Unusual or unexplained discrepancy between actual performance and anticipated results (costs in a general expense categories well beyond the budgeted amount);
    - ii. Receipts that do not match deposit slips;
    - iii. Disbursements to unknown and/or unapproved vendors;
    - iv. A single signature on a check or pre-signed blank checks;
    - v. Gaps in receipt or check numbers;
    - vi. Late financial reports;
    - vii. Disregard of internal control policies and procedures.
- IX. **Depositories and collateralization.** In accordance with state law, the District names an official depository or depositories at its January meeting each year (depository bank(s)). In the event the Board of Managers does not designate a depository in any particular year, the last-designated depository will continue in that capacity. Each depository bank provides the District with a proof of collateralization in accordance with state law (Minnesota Statutes section 118.03) for an amount equal to the amount on deposit at the close of the depository bank's banking day beyond the amount covered by federal insurance, if any. The collateral provided by each depository bank will be maintained in an account in the trust department of a bank or other financial institution not owned or

controlled by the same (depository) bank or in a restricted account at a federal reserve bank. [District funds are managed pursuant to the Investment and Depository Policy, adopted \[XXXX, YYYY\].](#)

X. **Financial Assurances and Abandoned Property.** *See* District Policy for Management of Financial Assurances and Abandoned Property, adopted November 21, 2012.

XI. **Miscellaneous**

- a. The District will not maintain a petty cash fund.
- b. The District will not accept cash (currency) in payment of permit fees or financial assurances.
- c. The District will not cash personal or third-party checks.
- d. The administrator must not fail to insure District property against theft and casualty loss.

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## RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

### INVESTMENT AND DEPOSITORY POLICY

DRAFT December 4, 2019

#### 1. PURPOSE

The purpose of this policy is to establish the Riley Purgatory Bluff Creek Watershed District's investment objectives, establish specific guidelines that the District will use in the investment of funds, and establish District depository policy. It will be the responsibility of the District administrator to invest District funds in order to attain a market rate of return while preserving and protecting the capital of the overall portfolio and to ensure compliance with District policy and with statutory requirements applicable to the District's designation a depository financial institution. Investments will be made in compliance with statutory constraints and in safe, low-risk instruments that are approved by the RPBCWD Board of Managers.

#### 2. SCOPE

This policy applies to all financial assets of the District.

#### 3. SPECIFIC REVENUE SOURCES AND POOLING OF FUNDS

The District will report proceeds of specific revenue sources as restricted, committed or assigned for specific purposes, as applicable, and maintain its budget and accounts in a manner consistent with these designations. Except for cash in these certain restricted, committed and assigned funds, the District will consolidate cash and reserve balances from all funds to maximize investment earnings and increase efficiencies with regard to investment pricing, safekeeping and administration. Investment income will be allocated to the various funds based on their respective participation and in accordance with generally accepted accounting principles.

#### 4. DESIGNATION OF DEPOSITORY AND COLLATERALIZATION

The District Board of Managers annually will designate a financial institution or institutions in the State of Minnesota as the depository of District funds. In the event the Board of Managers does not designate a depository in any particular year, the last-designated depository will continue in that capacity. Each depository will furnish collateral, as necessary, in the manner and to the extent required by Minnesota Statutes Section 118A.03, as it may be amended, and other applicable law. Collateral will be held in safekeeping in compliance with Section 118A.03, as it may be amended.

## 5. DELEGATION OF AUTHORITY

Minnesota Statutes Section 118A.02 provides that the governing body may authorize the treasurer or chief financial officer to make investments of funds under Sections 118A.01 to 118A.06 or other applicable law. Pursuant to Article VI of the District Bylaws and Governance Policies: Executive Limitations Policy 6, Asset Protection, the Board of Managers authorizes the District administrator to invest District funds pursuant to this policy and state law for the District.

The District administrator shall assure compliance with this policy and further develop and maintain adequate controls, procedures, and methods assuring security and accurate accounting on a day-to-day basis.

## 6. OBJECTIVES

At all times investments of the District shall be made and maintained in accordance with Minnesota Statutes Chapter 118A as it may be amended. The primary objectives of the District investment activities shall be in the following order of priority:

### A. SECURITY

Security of principal is the foremost objective of the investment portfolio. Preserving capital and protecting investment principal shall be the primary objective of each investment transaction. Specific risks will be managed as follows:

*Credit Risk.* Credit risk is the risk of loss due to failure of the security issuer or backer. Designated depositories will have insurance through the Federal Deposit Insurance Corporation or the Securities Investor Protection Corporation. To ensure security when considering an investment, the District will cross-check all depositories under consideration against existing investments to make certain that funds in excess of insurance limits are not deposited with the same institution unless collateralized as outlined herein. Furthermore, the Board of Managers will approve all financial institutions, brokers and advisers with which the District will do business.

*Concentration of Credit Risk.* The District will diversify its investments according to type and maturity. The District portfolio, to the greatest extent feasible, will contain a mixture of short-term (shorter than one year) and long-term (more than one year) investments. The District will attempt to match its investments with anticipated cash-flow requirements. Extended maturities may be utilized to take advantage of higher yields.

*Interest Rate Risk.* Interest rate risk is the risk that the market value of securities in the portfolio will fall due to changes in general interest rates. The District will minimize interest rate risk by structuring its investment portfolio to ensure that securities mature to meet cash requirements for ongoing operations, thereby avoiding the need to sell securities on the open market prior to maturity.

*Custodial Risk.* The District will minimize deposit custodial risk, which is the risk of loss due to failure of the depository bank (or credit union), by obtaining collateral for all uninsured amounts on deposit, and by obtaining necessary documentation to show compliance. (See section III.)

#### B. LIQUIDITY

The investment portfolio shall remain sufficiently liquid to meet projected disbursement requirements. This is accomplished by structuring the portfolio so that securities mature concurrent with cash needs to meet anticipated demands. Generally, investments will have short terms and/or “laddered” maturities so that funds become available on a regular schedule. Liquid funds will allow the District to meet possible cash emergencies without being significantly penalized on investments.

#### C. RETURN ON INVESTMENT

The investment portfolio shall be designed to manage the funds to maximize returns consistent with items A and B above and within the requirements set forth in this policy. Subject to the requirements of the investment objectives herein, it is the policy of the District to offer financial institutions and companies within the District the opportunity to bid on investments; the District will seek the best investment yields.

### 7. PRUDENCE

The “prudent person” standard shall be applied in managing District investments. All investment transactions shall be made in good faith with the degree of judgment and care, under the circumstances, that a person of prudence, discretion, and intelligence would exercise in the management of their own affairs, in accordance with this policy.

### 8. ELIGIBLE INVESTMENTS

All investments shall be in accordance with Minnesota Statutes section 118A.04.

### 9. INVESTMENT RESTRICTIONS

In addition to statutory prohibitions, investments specifically prohibited are derivative products, structured notes, inverse index bonds, repurchase agreements not authorized by statute, and other exotic products.

## **10. SAFEKEEPING**

District investments, contracts and agreements will be held in safekeeping in compliance with Minnesota Statutes Section 118A.06. In addition, before accepting any investment of District funds and annually thereafter, the supervising officer of the financial institution serving as a broker for the District shall submit a certification stating that the officer has reviewed the District Investment and Depository Policy and incorporated statement of investment restrictions, as well as applicable state law, and agrees to act in a manner consistent with the policy and law. The District will annually will provide the policy, as it may be amended. The certification shall also require the supervising officer to disclose potential conflicts of interest or risk to public funds that might arise out of business transactions between the firm and the District. All financial institutions shall agree to undertake reasonable efforts to preclude imprudent transactions involving the District funds.

## **11. CONFLICT OF INTEREST**

Any District manager or staff member involved in the investment process shall refrain from personal business activity that could conflict with proper execution of the investment program or which could impair his/her ability to make impartial investment decisions.

## **12. INTERNAL CONTROLS AND REPORTING**

Internal controls are designed to prevent loss of public funds due to fraud, error, misrepresentation, unanticipated market changes, or imprudent actions. Before the District invests any surplus funds, competitive quotations shall be obtained. If a specific maturity date is required, either for cash flow purposes or for conformance to maturity guidelines, quotations will be requested for instruments which meet the maturity requirement. The District will accept the quotation which provides the highest rate of return within the maturity required and within the limits of this policy.

The District administrator shall be limited to investing funds for up to a maximum term of seven years. The District administrator shall request approval from the District Board to authorize investment of funds for terms exceeding seven years.

Monthly, the District administrator shall provide an investments report to the District Board. Investments shall be audited and reported with financial statement

annually. It shall be the practice of the District Board to review and amend the investment policy from time to time as needed.

**Riley-Purgatory-Bluff Creek Watershed District**  
**Policy on Permit Fee Reimbursement**

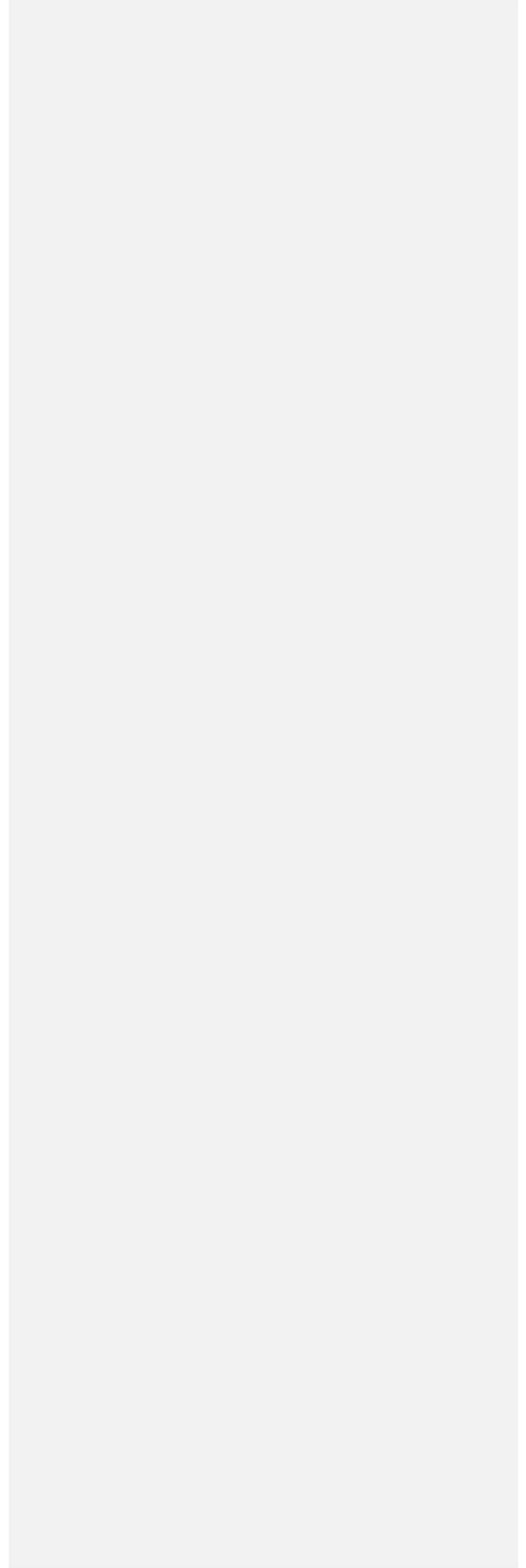
Adopted July 2, 2014

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1. On receipt of written notice of the withdrawal of a permit application with a request for fee refund, the administrator will analyze the permitting record to date and determine the costs the District has incurred, including but not limited to the costs of consultant services, analysis of proposed activities and inspection of property, and the administrator will prepare a written accounting of expenses incurred;
2. When District costs are less than the fee paid by the applicant, the administrator will forward reimbursement of the difference as a payable item at the next regular meeting of the Board of Managers, except that under all circumstances the District will retain the \$10 permit fee authorized by Minnesota Statutes section 103D.345 to cover administrative costs.
3. When District costs exceed the fee paid by the applicant, the administrator will inform the applicant in writing that no reimbursement will be paid and forward to the applicant the accounting that is the basis for this determination, and the administrator will include the notice to the applicant and the accounting that is the basis for this determination to the Board of Managers at its next meeting.
4. Financial assurances provided by an applicant will be released in accordance with District Rule M.

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## Appendix A



**Riley-Purgatory-Bluff Creek Watershed District**  
**Inventory of Not-Public Data on Individuals**  
January 2015

This document describes private or confidential data on individuals maintained by the Riley-Purgatory-Bluff Creek Watershed District (see Minn. Stat. 13.05 and Minn. Rules 1205.1200).

This document is also part of the District's procedures for ensuring that not-public data are only accessible to individuals whose work assignment reasonably requires access (see Minn. Stat. 13.05, subd. 5). In addition to the employees listed, the District managers and District legal counsel also will have access to not-public data as needed as part of specific assignments or under certain circumstances.

Please direct all questions about this inventory to the District Data Practices Compliance Official:

**Claire Bleser**  
[cbleser@rpbewd.org](mailto:cbleser@rpbewd.org)  
952-607-6512

Field Code C

Name of Record, File, Process, Form or Data Type	Description	Data Classification	Citation for Classification	Employee/Manager Access
Appeal data	Data maintained as a result of processing appeals of determinations about the accuracy and/or completeness of public and private data on individuals	Public Private	MS 13.03, subd. 4	Administrator.
Applicant records	Completed assessments and results, related documentation, and application forms.	Public Private	MS 13.43	Administrator.
Attorney Data	Data related to attorney work product or data protected attorney-client privilege	Private	MS 13.393	Staff on as needed basis as part of specific work assignments.
Citizen Advisory Council member data	Data pertaining to advisory council applicants and appointees.	Public Private Confidential	MS 13.601	Administrator; other staff as needed.
Civil investigative data	Data that are collected in order to start or defend a pending civil legal action, or because a civil legal action is expected	Confidential Public	MS 13.39	Administrator; other staff as needed.

Continuity of Operations	Personal home contact information used to ensure that an employee can be reached in the event of an emergency or other disruption affecting continuity of operation of a government entity.	Private	MS 13.43, subd. 17	Administrator.
Employee expense reports	Expense reimbursement requests	Public Private	MS 13.43	Administrator.
Employee personnel records	Record of prior and current employment history. Data relating to hiring, assessments, payroll, pension and retirement, promotion, medical, family leave, grievances and discipline and related administrative personnel actions; drug-and-alcohol-testing and background-check results	Public Private	MS 13.43	Administrator.
Motor vehicle data	Information on license plate numbers, owners, and registration status of vehicles.	Private	MS 168.346	Administrator.
Personal contact and online account information	Telephone number, email address and usernames and passwords collected, maintained, or received by the District for notification purposes or as part of a subscription list for an entity's electronic periodic publications as requested by the individual.	Private	MS 13.356	Administrator; consultants as needed for specific projects and programs.

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Personnel data	Data about employees, applicants, volunteers and independent contractors; data disclosed for the purpose of administration of the workers' compensation program as provided in chapter labor relations information	Public/Private/ Confidential	MS 13.43 179A.03, subd. 4	Administrator.
Response to data requests	Data collected by the District Data Practices Compliance Official in responding to requests for data maintained by the District.	Public Private	Various	Administrator; staff as necessary.
Security information	Data that would substantially jeopardize the security of information, possessions, individuals or property against theft, tampering, improper use, attempted escape, illegal disclosure, trespass, or physical injury, if the data were released to the public	Private	MS 13.37	Administrator.
Social Security numbers	Social Security numbers assigned to individuals	Private	MS 13.355	Administrator.
Unemployment compensation billings	Records of billings for employee unemployment compensation	Private	MS 13.43	Administrator.

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Workers compensation billings	Records of billings for employees who receive workers compensation benefits	Private	MS 13.43	Administrator.
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