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RCWD BOARD OF MANAGERS REGULAR MEETING AGENDA

Wednesday, February 28, 2018, 9:00 a.m.

Shoreview City Hall Council Chambers
4600 North Victoria Street, Shoreview, Minnesota

Agenda

CALL TO ORDER

ROLL CALL

SETTING OF THE AGENDA

APPROVAL OF FEBRUARY 12, 2018 WORKSHOP MINUTES, AND FEBRUARY 14, 2018 REGULAR MEETING MINUTES.

CONSENT AGENDA

The following items will be acted upon without discussion in accordance with the staff recommendation and associated documentation unless a Manager or another interested person requests opportunity for discussion:

Table of Contents

Permit Applications Requiring Board Action

No.	Applicant	Location	Plan Type	Recommendation
18-004	National Land Investors LLC	Blaine	Final Site Drainage Plan Land Development	CAPROC 9 items
18-005	Brenk Properties LLC	Fridley	Final Site Drainage Plan	CAPROC 5 items
18-008	Capra Utilities Inc	White Bear Township	Final Site Drainage Plan	CAPROC 5 items

CONSENT AGENDA (CONTINUED)

No.	Applicant	Location	Plan Type	Recommendation
18-010	Parkside North LLC	Blaine	Final Site Drainage Plan	CAPROC 7 items

It was moved by Manager _____ and seconded by Manager _____, to approve the consent agenda as outlined in the above Table of Contents in accordance with RCWD District Engineer’s Findings and Recommendations, dated February 21 & 22, 2018.

CAPROC= Conditional Approval Pending Receipt of Changes

PERMIT APPLICATIONS REQUIRING BOARD ACTION

No.	Applicant	Location	Plan Type	Recommendation
18-003	Gernette Development, LLC	Blaine	Final Site Drainage Plan Land Development Wetland Alteration	VARIANCE REQUEST & CAPROC 12 items

Two Actions: Variance Request and CAPROC decision.

It was moved by Manager _____ and seconded by Manager _____, to CAPROC permit 18-003 as outlined in accordance with RCWD District Engineer’s Findings and Recommendations, dated February 21, 2018.

CAPROC = Conditional Approval Pending Receipt of Changes

PUBLIC HEARING: URBAN STORMWATER REMEDIATION COST-SHARE REQUESTS FROM CITIES OF COLUMBIA HEIGHTS, FRIDLEY, HUGO, LINO LAKES, MAHTOMEDI, NEW BRIGHTON, ROSEVILLE, SHOREVIEW AND SAINT ANTHONY, WHITE BEAR TOWNSHIP AND MINNESOTA COMMERCIAL RAILWAY

OPEN MIKE

Any RCWD resident may address the Board in his or her individual capacity, for up to three minutes, on any matter not on the agenda. Speakers are requested to come to the podium, state their name and address for the record. Additional comments may be solicited and accepted 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 an upcoming agenda.

ITEMS REQUIRING BOARD ACTION

1. Consider Findings and Order Accepting Wellington Property Petition and Directing Appointment of Engineer. (Nick Tomczik)
2. Consider Award of Urban Stormwater Remediation Cost-Share Projects. (Kyle Axtell)
3. Consider Funding Agreement with City of Forest Lake for Enhanced Street Sweeping Implementation-2018 BWSR Clean Water Fund Grant. (Kyle Axtell)
4. Consider Pay Request #12 from Rachel Contracting, Inc. for Hansen Park Project. (Kyle Axtell)
5. Consider Final Order Directing the Repair of Branches 1 and 2 of Washington Judicial Ditch 2. (Phil Belfiori)

6. Consider Initiating Boundary Change Process between RCWD and Brown's Creek Watershed District. (Phil Belfiori)
7. Consideration of Treatment of Metro Shooting and Trost Settlements in District Financial Reports. (Phil Belfiori)
8. Consider Additional Direction to Staff Regarding Legislative Communication. (Phil Belfiori)
9. Consider Check Register dated February 28, 2018, in the amount of \$396,928.84 prepared by Redpath and Company.

ITEMS FOR DISCUSSION AND INFORMATION

1. Update on Browns Preserve Wetland Credit Status.
2. Update on DNR FEMA Modeling /Mapping Project.
3. Staff Reports
4. March Calendar.
5. Manager's Update.

**APPROVAL OF FEBRUARY 12, 2018 WORKSHOP
MINUTES, AND FEBRUARY 14, 2018 REGULAR
MEETING MINUTES.**

Draft

RCWD BOARD OF MANAGERS WORKSHOP

Monday, February 12, 2018, 1:00 p.m.

Rice Creek Watershed District Conference Room
4325 Pheasant Ridge Drive NE, Suite 611, Blaine, Minnesota

1

2 The Board convened workshop at 1:00 p.m.

3 Attendance: Board members, Patricia Preiner, John Waller, and Steve Wagamon.

4 Absent: Barbara Haake, Mike Bradley.

5 Others: Administrator Phil Belfiori; Permit Coordinator/Wetland Specialist Nick Tomczik (portion of
6 meeting); Communication & Outreach Coordinator Beth Carreño (portion of meeting); Technician
7 Lauren Sampedro (portion of meeting); Office Manager Theresa Stasica; and District Engineer Chris
8 Otterness and Emmy Baskerville (portion of meeting)-Houston Engineering (HEI), Drainage Attorney
9 John Kolb-Rinke Noonan (portion of meeting), Louis Smith-Smith Partners via telephone (portion of
10 meeting); Jackie Kotilinek -Redpath & Company via telephone (portion of meeting); Jason Husveth-CCES
11 (portion of meeting); Dan Hair (portion of meeting); Barbara Haake and Mike Bradley via telephone
12 (listening only).

13 Administrator Belfiori requested the addition of a brief discussion on the possible dates for the next
14 Strategic Directions workshop.

15 **Discuss Annual Review of Treatment of Metro Shooting and Trost Settlements in District Financial** 16 **Reports.**

17 Administrator Belfiori stated per the Boards 2015 direction this matter is reviewed annually in February.

18 Attorney Louis Smith informed the Board that Permit Coordinator/Wetland Specialist Nick Tomczik and
19 District Engineer Chris Otterness have confirmed that there is no change in the facts or circumstances
20 relevant to this issue. Attorney Smith stated their opinion does not change and he referred to the bold
21 italic text statement on page 2 of the Smith Partners memo.

22 Administrator Belfiori asked the Board for consensus to move on. The Board indicated a consensus of no
23 change from the statement made for last year's financial report. Administrator Belfiori informed the
24 Board that this item will brought to the February 28th Board meeting for action.

25 **Presentation on Browns Preserve Wetland Bank Status.**

26 Houston Engineering gave a presentation to the Board on the wetland bank annual monitoring and its
27 wetland credits accumulated to date. They informed the Board that the wetland bank exceeded initial
28 credit expectations. The wetland bank's original scope was the customary 5-years of
29 monitoring/vegetative management. Due to the additional year 6-2017 monitoring/vegetative
30 management, the site's vegetative condition improved and furthered credit development. Consultants
31 and staff discussed with the Board pros and cons of additional monitoring/vegetation management, 7th

32 year, specific to 3 areas within the wetland bank. After discussion with the Board, staff, consultants and
 33 Dan Hair a partner in the wetland bank, the Board’s consensus was that the risk was higher than the
 34 potential benefit of further developing wetland credits. The Board requested Mr. Hair, contact the
 35 District by February 26th to inform the District if Mr. Hair would like to pursue the discussed
 36 management/monitoring of these 3 areas for an additional year 7 at his cost. The District must provide
 37 timely direction to their consultants for scheduling site activity for additional management/monitoring
 38 or close out and development of long-term management plan.

39 **Update and Discussion on Boundary Investigation per 1/24/2018 Board Meeting.**

40 Administrator Belfiori and District Engineer Otterness gave a presentation to the Board on the recent
 41 boundary changes at the District since 2014, the directed field investigation of hydrologic boundary at Mr.
 42 McAllister Property, and the current hydrologic/political boundary at this property. HEI discovered that
 43 the Mr. McAllister property in fact drains to the Brown’s Creek Watershed District. District staff and
 44 consultants reviewed with the Board discrepancies between hydrologic boundary and political boundary
 45 in Washington County and the change of parcels from the District and the adjoining watershed districts.
 46 The Board discussed if they would like to begin a process to begin looking at options to undertake a more
 47 systematic process to align the District’s political boundary to its hydrologic boundary. Board reached
 48 consensus that it will discuss this issue further as part of the 2019 budget process.

49
 50 The Board by consensus agreed to consider initiating this process with the Brown’s Creek Watershed
 51 District at their February 28 Board meeting. Administrator Belfiori informed the Board that he would
 52 notify Mr. McAllister of the Boards consensus to consider authorizing the process of watershed boundary
 53 change along the entire common boundary between BCWD at the February 28 Board meeting.

54 **Discussion on Draft Legislative Communication.**

55 Administrator Belfiori informed the Board that option 3 of the workshop packet memo was modified on
 56 Thursday, February 8th and distributed by email and mail to the Board. Administrator Belfiori distributed
 57 a revised memo today due to communications with MAWD and specific language modifications to option
 58 2. Staff and consultants reviewed the 3 options with the Board as follows: 1) RCWD requests legislative
 59 support of the MAWD (high) priority legislative initiative related to the creation of a Stormwater Reuse
 60 Task Force (once or if a bill has been authored); 2) RCWD requests legislative support of the MAWD (high)
 61 priority legislative initiative related to amending the Watershed Law to allow electronic meeting
 62 participation consistent with the Open Meeting Law. Based on the previous discussion of the MAWD
 63 resolutions provided by the Middle Fork Crow River WD, this proposed bill would not require a watershed
 64 to implement electronic meeting participation. The bill seeks to provide watershed districts with the
 65 option; and 3) RCWD requests legislative support of House File 2687 and Senate Companion File 2419
 66 related to clarifying Minnesota Department of Natural Resources jurisdiction and permitting authority
 67 over the repair of existing public drainage systems. The bills seek to restore and reinforce the historic
 68 intent of public waters law in relation to public drainage system repairs.

69
 70 The Board by consensus agreed to include options 2 and 3 in the District’s legislative communication. Staff
 71 will bring a revised memo to the February 14th meeting based upon the Board’s discussion today for

72 action. Staff informed the Board that they can send out additional electronic messages to legislators
73 regarding the Stormwater Reuse Task Force once or if a bill has been authored.

74 **Update and on BWSR Watershed Based Funding for Metro Area.**

75 Administrator Belfiori and Communication & Outreach Coordinator Beth Carreño informed the Board that
76 the Board of Water and Soil Resources (BWSR) adopted an FY18/19 Watershed-Based Funding Pilot
77 program to have more systematic Clean Water Funding (CWF) for local water management authorities on
78 a watershed basis. The pilot project is for a two-year period beginning with FY2018 and allocates funding
79 within county boundaries. Each county in the metro-area will receive a base amount of \$250,000 plus
80 additional funds based on land area of each county. BWSR has not provided guidelines for the process of
81 distribution or prioritizing within counties or watersheds. BWSR has requested comments/suggestions to
82 them following the completion of the pilot program. Staff reviewed with the Board the proposed timeline
83 for meetings with counties/cities and DRAFT RCWD Working Paper for Watershed-Based Funding Pilot
84 Project. These documents were provided to the Board in the workshop packet. The Board discussed with
85 staff the use of the District's USWR cost-share program to be a vehicle to distribute funds.

86

87 The Board by had no changes at this time to the draft working paper. This item will be brought to the
88 Board's February 14th Board meeting for action.

89 **Update on Local Water Planning Reviews.**

90 District Technician Lauren Sampedro gave a brief update to the Board on draft plans that have been
91 submitted for review, those cities that have missed their District scheduled submittal, and upcoming
92 scheduled submittal dates.

93 **Initial Discussion on Urban Stormwater Remediation (USWR) Cost-Share Applications.**

94 Water Resource Specialist Kyle Axtell reviewed the 13 cost-share applications with the Board. He
95 reviewed the recommendations of the Citizen Advisory Committee, District Engineer and Staff. He also
96 informed the Board on a potential way to use other District funding sources to fund 11 of the applications
97 at some amount. The Board was favorable to the suggested potential funding options. Administrator
98 Belfiori informed the Board that the public hearing on the cost-share application and the USWR funding
99 action will occur at the Board's February 28th Board meeting.

100 **Update on Hansen Park Project.**

101 Water Resource Specialist Kyle Axtell updated the Board on contractor's completion of all pond dredging
102 and preliminary mass grading at Hansen Park and the final cost for change order #5 which was a
103 significant cost reduction from what was estimated, being only \$13,620 instead of roughly \$150,000. He
104 also updated the Board on dredging completion/near completion for the Mirror Lake Improvements
105 Project.

106 **Strategic Directions workshop scheduling.**

107 Administrator Belfiori informed the Board that 3/14 date had to be cancelled due to attendance. He
108 asked the Board if 3/16 or 3/20 would work. The Board by consensus agreed 3/20 at 1 p.m. and 3/26 at 1
109 p.m.

110 The workshop was adjourned at 4:24 p.m.

DRAFT

For Consideration of Approval at the February 28, 2018 Board Meeting.
Use these minutes only for reference until that time.

REGULAR MEETING OF THE RCWD BOARD OF MANAGERS

Wednesday, February 14, 2018

Shoreview City Hall Council Chambers
4600 North Victoria Street, Shoreview, Minnesota

Minutes

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CALL TO ORDER

President Patricia Preiner called the meeting to order, a quorum being present, at 9:00 a.m.

ROLL CALL

Present: President Patricia Preiner, 2nd Vice-Pres. John Waller, and Treasurer Steven Wagamon.

Absent: 1st Vice-Pres. Barbara Haake and Secretary Michael Bradley with prior notice.

Staff Present: Administrator Phil Belfiori, Technician Samantha Berger, Water Resource Specialist Kyle Axtell, Communications & Outreach Coordinator Beth Carreño, Office Manager Theresa Stasica.

Consultants: District Engineer Chris Otterness from Houston Engineering, Inc. (HEI); and District Attorney Louis Smith from Smith Partners.

Visitors: Ryan Anderson, Kent Peterson.

APPOINT ACTING-SECRETARY

Motion by Manager Waller, seconded by Manager Wagamon, to appoint Manager Waller as Acting-Secretary. Motion carried 3-0.

SETTING OF THE AGENDA

No changes to the agenda presented.

READING OF THE MINUTES AND THEIR APPROVAL

Minutes of the January 22, 2018 Strategic Direction Process Board of Managers Workshop.

Motion by Manager Wagamon, seconded by Manager Waller to approve the minutes as presented.

Motion carried 3-0.

Minutes of the January 24, 2018 Board of Managers Meeting. *Motion by Manager Wagamon, seconded by Manager Waller to approve the minutes as presented. Motion carried 3-0.*

35 **Minutes of the January 30, 2018 Washington Judicial Ditch 2, Branch 1 and 2 Repair Reports Public**
36 **Hearing Minutes.**

37 ***Motion by Manager Wagamon, seconded by Manager Waller to approve the minutes as presented.***
38 ***Motion carried 3-0.***

39

40 **CONSENT AGENDA**

41 The following items will be acted upon without discussion in accordance with the staff recommendation and
42 associated documentation unless a Manager or another interested person requests opportunity for discussion:

43 **Table of Contents**

44 **Permit Applications Requiring Board Action**

No.	Applicant	Location	Plan Type	Recommendation
13-087	Dennis Countryman Dellwood Country Club	Dellwood	After-the-Fact Final Site Drainage Plan	CAPROC 2 items
17-037	Frank Frattalone/ Jon Rausch I-35’s Business Park, LLC	Columbus	Final Site Drainage Plan	CAPROC 13 items
17-099	City of Arden Hills	Arden Hills	Final Site Drainage Plan	CAPROC 5 items
17-115	Alyssa Kaeding Gateway Green LLC	Forest Lake	Final Site Drainage Plan	CAPROC 5 items
17-119	Daniel Williams Meritex-Highcrest DC III, LLC	Roseville	Final Site Drainage Plan	CAPROC 5 items
18-009	Bruce Miller CM Properties 14, LLC	Lino Lakes	Final Site Drainage Plan	CAPROC 6 items

58

59 Permit Coordinator/Wetland Specialist Nick Tomczik requested an addition to permit 17-037 Engineers
60 report, on page 27, as additional Exhibit “19, TEP Finding report signed 1-24-2018.”

61 ***It was moved by Manager Waller, seconded by Manager Wagamon to approve the consent agenda as***
62 ***outlined in the above Table of Contents in accordance with RCWD District Engineer’s Findings and***
63 ***Recommendations for permit 13-087, 17-037, 17-099, 17-115, 17-119 and 18-009 dated January 31,***
64 ***February 7 & 8, 2018. Motion carried 3-0.***

65

66 **OPEN MIKE – LIMIT 12 MINUTES.** Any RCWD resident may address the Board in his or her individual
67 capacity, for up to three minutes, on any matter not on the agenda. Speakers are requested to come to
68 the podium, state their name and address for the record. Additional comments may be solicited and
69 accepted in writing. Generally, the Board of Managers will not take official action on items discussed at

70 *this time but may refer the matter to staff for a future report or direct that the matter be scheduled on an*
71 *upcoming agenda.*

72 No comments.

73

74 **ADDITIONAL ITEMS REQUIRING BOARD ACTION**

75 **1. Election of Officers.**

76 ***Motion by Manager Wagamon, seconded by President Preiner, to re-elect all officers to their***
77 ***current positions.***

78

79 Manager Waller commented there should be a rotation of officers on an annual basis. He
80 suggested they wait until they have a full Board present before voting on this item.

81

82 President Preiner noted they just updated the Board’s procedures and processes and there were
83 no requests to change the timing, which has been followed each year. She suggested they move
84 forward, unless there were additional concerns expressed by Board members.

85

86 **ROLL CALL:**

87 ***Manager Haake – Absent***

88 ***Manager Bradley – Absent***

89 ***Manager Waller – Nay***

90 ***Manager Wagamon – Aye***

91 ***President Preiner – Aye***

92

93 ***Motion carried 2-1.***

94

95 **2. Designation of Official Depository (currently Anchor Bank) and Official Newspaper (currently St.**
96 **Paul Pioneer Press)**

97 ***Motion by Manager Waller seconded by Manager Wagamon to designate Anchor Bank as the***
98 ***official depository of the Rice Creek Watershed District and to designate St. Paul Pioneer Press***
99 ***the official newspaper of the Rice Creek Watershed District.***

100

101 District Administrator Belfiori reported each year the Board must designate an official depository
102 and newspaper, as stated in the By-laws. The current depository is Anchor Bank and current
103 newspaper is the St. Paul Pioneer Press.

104

105 President Preiner inquired if comparisons have been done with other banks.

106

107 District Administrator Belfiori responded they have not done a comparison this year but did
108 conduct an analysis a few years ago.

109

110 President Preiner suggested they consider doing a comparison next year due to the changing
111 economy.
112

113 ***Motion carried 3-0.***
114

115 **3. Consider Legislative Communication for MAWD Legislative Day.**

116 District Administrator Belfiori referred to the information passed out prior to the meeting. He
117 reported this memo has been updated based on Board discussion at the February 12 Workshop
118 meeting. The MAWD Legislative Reception will be held on March 7 from 5:00 p.m. to 7:30 p.m.
119 and the Legislative Breakfast is scheduled on Thursday, March 8 from 7:00 a.m. to 9:00 a.m. Both
120 events will be held at the Embassy Suites in St. Paul. He directed the Board to page 4 and
121 highlighted the proposed changes.
122

123 District Administrator Belfiori reported the Board discussed three options at the Workshop on
124 February 12:
125

- 126 • **Option One – Support of the MAWD high priority legislative initiative related to the**
127 **creation of a Stormwater Reuse Task Force.** The Board discussion identified that the
128 language has yet to be drafted by MAWD. It was decided that this would not be included
129 in the today’s consideration but may come forward at a later date.
130
- 131 • **Option Two – Support of the MAWD high priority legislative initiative related to**
132 **amending the Watershed Law to allow electronic meeting participation consistent with**
133 **the Open Meeting Law.** Based on previous discuss with the Middle Fork Crow River
134 Watershed District, this proposed bill would not require a watershed to implement
135 electronic meeting participation but would provide watershed districts with the option to
136 do so.
137
- 138 • **Option Three – Support House File 2687 and Senate Companion File 2419 related to**
139 **clarifying Minnesota Department of Natural Resources jurisdiction and permitting**
140 **authority over the repair of existing public drainage systems.** This bill seeks to restore
141 and reinforce the historic intent of public waters law in relation to public drainage system
142 repairs.
143

144 District Administrator Belfiori directed the Board to the summary provide on page 3 of the report.
145 He stated based on consensus at the Workshop, the Board decided to move forward with Options
146 Two and Three. Based on the conversation with Ray Bohn on February 13, he indicated that the
147 draft language for 103D was a rough draft only and requested it not be distributed to legislators at
148 this time. Staff has developed revised language and indicates support of the MAWD initiative but
149 does not request authorship or a link to any proposed language. There is a three-stage
150 communication process and there will be time for modifications if necessary. Staff recommends

151 consideration and action regarding the revised proposed legislative communication based on the
152 February 12 Board Workshop discussion and new information provided to the Board in the
153 February 13 memo which was passed out before the meeting.

154
155 ***Motion by Manager Wagamon seconded by Manager Waller, to approve the strategy as***
156 ***presented by staff for communicating with District legislative representatives and include***
157 ***Option(s) 2 and 3 in the initial communication. Motion carried 3-0.***
158

159 **4. Consider Guiding Principles and Representative for BWSR Watershed Based Funding for Metro**
160 **Area.**

161 District Administrator Belfiori reported BWSR has adopted a Watershed Based Funding Pilot
162 program. It has approximately \$5,600,000 available for the next two bienniums in the metro
163 area. Each group of County stakeholders are working to establish a process, and the RCWD will
164 need to participate with the counties it is currently involved with. Eligible recipients are local
165 government units (LGUs) that include counties, soil and water conservations districts, watershed
166 management organizations (WMO), watershed districts and other local governments including
167 cities with a WMO approved local water plan. Eligible projects and programs must be contained
168 in a State-approved and locally adopted comprehensive watershed management plan. Each
169 eligible entity must select their voting representative and an alternate to represent their
170 organization at the convening meetings, which will take place in the next month. The purpose of
171 the meetings is to develop a process and plan to prioritize projects in each county and distribute
172 funds. Staff anticipated they will likely pursue either distributing funds to WMO/WD's by formula
173 or directly to a county with a watershed-based committee type approach. They may also include
174 base funding to a County-wide or SWCD program.

175
176 District Administrator Belfiori highlighted the timeline on page 75 of the agenda packet, and noted
177 the deadline is June 30, 2018. He reported staff recommends that funds awarded in the RCWD
178 be combined and redistributed through the District to provide larger, impactful amounts to
179 implement high-priority, collaborative projects with eligible City and County partners. He also
180 highlighted the justifications for this recommendation provided on page 76 of the agenda packet.

181
182 Manager Waller inquired if staff is proposing to recombine the money that comes from the County
183 to the District with other counties.

184
185 District Administrator Belfiori directed the Board to the Guiding Principles on pages 80 and 81 of
186 the agenda packet. This indicates that the money provided to the RCWD, either through a
187 formula or a watershed-based committee, would be distributed working with City and County
188 partners through collaborative-based projects to fund large scale projects within the District. It
189 does not specifically say where the funds would be spent after they are provided to the District
190 and BWSR has indicated it will be determined on a case by case basis. However, the approved
191 Urban Watershed Program allows the money to be distributed on a special County-only basis.

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Manager Waller noted he does not support the flexibility outlined in in the principles. He does support the concept that the money that came from Washington County be spent there on its projects. They do not know what counties are going to accept it. If one County accepts it and the other three do not, it is possible under these principles that the funds could be used outside of the County boundary limits. The money that comes from Washington County should go back to the City and urban stormwater. He supports what was done last summer, but views this as supplemental funds to the budget, not replacement funds. He does not support using the money outside the County boundary.

Manager Wagamon stated he is unsure what is trying to be accomplished. Originally the idea of the watershed was that the water did not know political boundaries and now it seems they are going backwards. Instead of having projects looking for money and picked on merit, it will be money looking for projects. He does not support it and they will have better projects if the money is in one group.

Communications & Outreach Coordinator Carreño stated the principles may appear vague because they do not have the answers and they do not want to say they will only take one path because it could exclude them from getting some of the funding. She spoke with Clean Water Specialist Barbara Peichel at BWSR to address these issues. Ms. Peichel would not say whether or not the funds had to stay in the County because BWSR currently reviews it on a case by case basis. They would be giving money for an approved program or project component and with that there are some restrictions with it. For example, if Washington County were to give Rice Creek \$100,000 and Rice Creek wanted to spend it in the entire watershed, it is her understanding that BWSR would give great credence to Washington County saying no. In theory, Washington County money could only be spent in Washington County, if that is what the conveners say, and the same can be said for both Ramsey and Anoka Counties. A County could also say that only money from their County can be spent there and the others could say it can go to anyone in the watershed. At that point, it would be up to the RCWD to decide what restrictions should be placed on the counties. One of the reasons they did not clearly state where the money will be spent is because they do not have that guidance yet. However, the Guiding Principles document would not keep them from having a future discussion as more facts become available.

Manager Waller stated he is very supportive of what was done last year with the urban and stormwater money coming back to the counties and targeting this money to the specific cities and counties within it. Washington County has 10 eligible organizations, Anoka County may only have two. He estimates Anoka County would receive a good amount of money and it should be spent on the Anoka County cities.

Communications & Outreach Coordinator Carreño stated Anoka County does have several water management districts.

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Manager Waller stated he would prefer the money stay in the boundaries and that the document reflect that.

District Engineer Otterness noted there are projects the District has been involved with that cross County jurisdictional boundaries, and it will be very challenging to allocate project costs and benefit by County.

Manager Wagamon stated this is precisely why the watershed was put into place.

District Administrator Belfiori commented staff is recommending they prepare written comments to BWSR on some of the improvements they would see for the next biennium. BWSR is hopeful there will be comments on how to improve this process and based on BWSR's comments at Metro MAWD, appear to be open to considering change.

President Preiner stated the resolution gives them something to be at the table with and is a starting point for giving direction.

District Administrator Belfiori agreed, and noted today, the Board is required to decide who to appoint for upcoming meetings. Also, the Guiding Principles can be modified at discussion moves forward. This is a starting point and he anticipates they will receive more information in the next couple.

Manager Wagamon inquired if they know what the reasoning was putting this program in place.

President Preiner inquired what the anticipated outcome is.

District Administrator Belfiori stated he understands the intent is to get some stable funding in order to build capacity and sustainable functionality for watershed management throughout the State. Many areas in the State do not have a way to sustain watershed management due to lack of staff and capacity. They are going through a one watershed/one plan approach around the State and this an approach to attempt to also incorporate metro watersheds.

President Preiner suggested they move ahead on the resolution and appoint District Administrator Belfiori to represent the RCWD with Communications & Outreach Coordinator Carreño as an alternate.

Manager Waller noted he supports the appointments, but not the working document.

Motion by Manager Wagamon, seconded by President Preiner, to offer Resolution 2018-02 Resolution to Assign Representative to Watershed Based Funding Work Groups:

274
275 THEREFORE, BE IT RESOLVED by the RCWD Board of Managers that:

276 NOW, THEREFORE, BE IT RESOLVED, that Rice Creek Watershed District selects Phil Belfiori to
277 represent Rice Creek Watershed District on the above-reference matters; and

278 BE IT FURTHER RESOLVED, in the absence of the representative named above, that person may
279 assign their duties and authorities to an alternate of their choosing Beth Carreño.

280
281 **ROLL CALL:**
282 ***Manager Waller – Aye***
283 ***Manager Haake – Absent***
284 ***Manager Bradley – Absent***
285 ***Manager Wagamon – Aye***
286 ***President Preiner – Aye***

287
288 Manager Waller stated he supports the appointments but would like to attend the Washington
289 County meeting.

290
291 ***Motion carried 3-0.***

292
293 ***Motion by Manager Wagamon seconded by Manager Waller to approve the attached RCWD***
294 ***working paper related to the BWSR Watershed Based funding pilot program.***

295
296 **ROLL CALL:**
297 ***Manager Waller – Nay***
298 ***Manager Haake – Absent***
299 ***Manager Bradley – Absent***
300 ***Manager Wagamon – Aye***
301 ***President Preiner – Aye***

302
303 Manager Wallers noted he is not supportive of the working papers.

304
305 ***Motion carried 2-1.***

306
307 Administrator Belfiori directed the Board to page 75 of the agenda packet and noted the
308 Washington County Consortium meeting will take place on March 7, 2018. He stated Manager
309 Waller is already on that mailing list as a member of the consortium.

310
311

- 312 **5. Consider Check Register dated February 14, 2018, in the amount of \$87,112.75 prepared by**
- 313 **Redpath and Company.**
- 314 ***Motion by Manager Wagamon, seconded by Manager Waller to approve check register dated***
- 315 ***February 14, 2018, in the amount of \$87,112.75, prepared by Redpath and Company. Motion***
- 316 ***carried 3-0.***
- 317

ITEMS FOR DISCUSSION AND INFORMATION

- 319 **1. District Engineer Update/Timeline.**
- 320 District Engineer Otterness asked the Board if there were any questions. There were none.
- 321
- 322 **2. Managers Update.**
- 323 Manager Waller provided updates on what was discussed at following meetings:
- 324
 - Washington County Water Consortium meeting: discussed land use and the need for bees.
 - 325 • Washington County Board meeting: Chair assured they would approve and take the
 - 326 upcoming funding; Chair is resigning and moving on to State Senate.
 - 327 • City of Hugo Council meeting: discussed White Bear Lake issue and impact; possibly putting
 - 328 consortium of cities back together; Hugo City Council is not going to engage in any legal
 - 329 briefing to the appellate court; DNR has sent out notices on watering; discussion regarding
 - 330 surface water and the drought in 1988.
 - 331 • City of Forest Lake City Council meeting: presentation was made by RCWD staff and the
 - 332 City Engineer on proper planning along Judicial Ditch #4’s branches and he supports the
 - 333 District’s aggressive point of view. President Preiner agreed it was good to do the
 - 334 presentation and hopefully the cities will work with the District to accomplish it.
 - 335

ADJOURNMENT

- 337 ***Motion by Manager Wagamon seconded by Manager Waller, to adjourn the meeting at 9:46 a.m.***
- 338 ***Motion carried 3-0.***
- 339

CONSENT AGENDA

The following items will be acted upon without discussion in accordance with the staff recommendation and associated documentation unless a Manager or another interested person requests opportunity for discussion:

Table of Contents

Permit Applications Requiring Board Action

No.	Applicant	Location	Plan Type	Recommendation
18-004	National Land Investors LLC	Blaine	Final Site Drainage Plan Land Development	CAPROC 9 items
18-005	Brenk Properties LLC	Fridley	Final Site Drainage Plan	CAPROC 5 items
18-008	Capra Utilities Inc	White Bear Township	Final Site Drainage Plan	CAPROC 5 items
18-010	Parkside North LLC	Blaine	Final Site Drainage Plan	CAPROC 7 items

It was moved by Manager _____ and seconded by Manager _____, to approve the consent agenda as outlined in the above Table of Contents in accordance with RCWD District Engineer's Findings and Recommendations, dated February 21 & 22, 2018.

CAPROC= Conditional Approval Pending Receipt of Changes

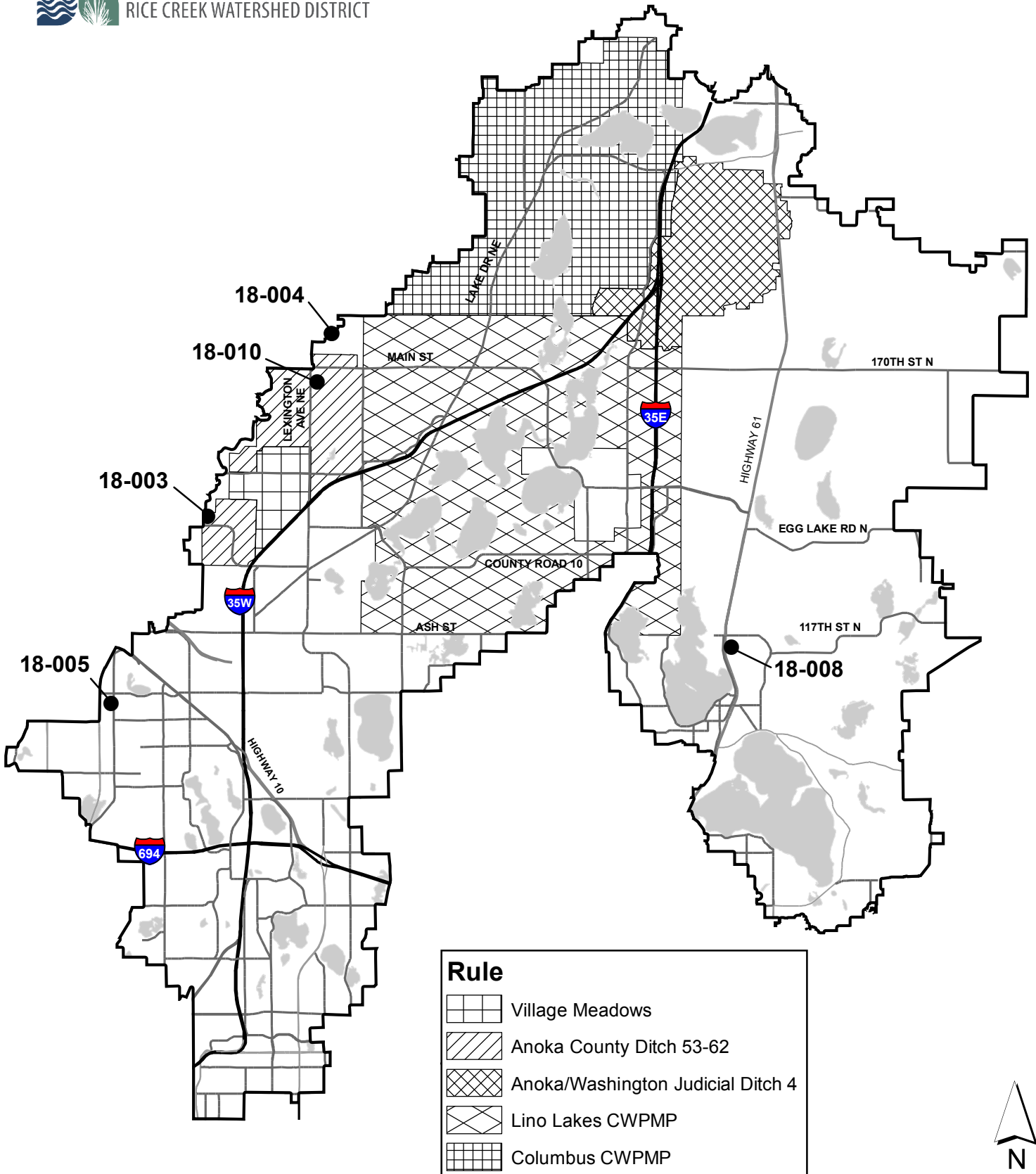
**RICE CREEK WATERSHED DISTRICT
CONSENT AGENDA**






February 28, 2018

It was moved by _____ and seconded by _____ to Approve, Conditionally Approve Pending Receipt Of Changes, or Deny, the Permit Application noted in the following Table of Contents, in accordance with the District Engineer’s Findings and Recommendations, as contained in the Engineer’s Findings and Recommendations, as contained in the Engineer’s Reports dated February 21 & 22, 2018.

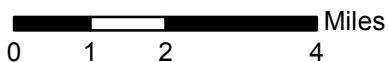
TABLE OF CONTENTS

<u>Permit Application Number</u>	<u>Applicant</u>	Page	Recommendation
Permit Location Map		19	
18-004	National Land Investors LLC	20	CAPROC
18-005	Brenk Properties LLC	26	CAPROC
18-008	Capra Utilities Inc	32	CAPROC
18-010	Parkside North LLC	38	CAPROC



Rule	
	Village Meadows
	Anoka County Ditch 53-62
	Anoka/Washington Judicial Ditch 4
	Lino Lakes CWPMP
	Columbus CWPMP

Permit Reviews
02/28/2018 Agenda





WORKING DOCUMENT: This Engineer's report is a draft or working document of RCWD staff and does not necessarily reflect action by the RCWD Board of Managers

Permit Application Number:
Permit Applicant Name:

18-004
Woodridge

Applicant/Landowner:

National Land Investors LLC
Ronald Stratton, Manager
4801 Island Pond Court #1004
Bonita Springs, FL 34134
Ph:
Fx:
r.g.stratton@gmail.com

Consultant:

Jacob Moser
Pioneer Engineering
2422 Enterprise Drive
Mendota Heights, MN 55120
Ph: 651-251-0606
Fx: 651-681-9488
jmoser@pioneereng.com

Official Representative

Lennar Corporation
Joe Jablonski
16305 36th Ave N Suite 600
Plymouth, MN 55446
Ph: 952-249-3014
Fx: 952-404-1909
joe.jablonski@lennar.com

Ken Arndt
Midwest Natural Resources, Inc.
1032 West 7th St. Suite 150
St. Paul, MN 55102
Ph: 612-310-6260
ken.arndt@mnrinc.us

Project Name: Woodridge

Purpose: FSD – Final Site Drainage, LD – Land Development; Single family residential development

Site Size: 38.24± acre parcel / 18.9 ± acres of disturbed area; existing and proposed impervious area is 0 ± acres and 7.33 ± acres, respectively

Location: Lever St NE, Blaine

T-R-S: W ½, Section 1, T31N, R23W

District Rule: C, D

Recommendations: CAPROC

It is recommended that this Permit Application be given Conditional Approval Pending Receipt of Changes (CAPROC) and outstanding items related to the following items.

Rule C – Stormwater

1. Applicant must submit the soil amendment worksheet and plan showing the areas where the soil amendments will occur.
2. Applicant must ensure that the proposed construction of Lever Street does not change the emergency overflow, or raise the elevations to ensure 1 foot of freeboard.

Rule D – Erosion and Sediment Control

3. Submit the following information per Rule D.4:
 - (b) Tabulation of the construction implementation schedule.

- (c) Name, address and phone number of party responsible for maintenance of all erosion and sediment control measures.
 - (h) Provide documentation that an NPDES Permit has been applied for and submitted to the Minnesota Pollution Control Agency (MPCA).
 - (i) A Storm Water Pollution Prevention Plan for projects that require an NPDES Permit.
4. Show erosion control measures on the storm sewer outlet pipe to the wetland.

Administrative

5. Send one final, signed 11x17 sized plan set to the District, and e-mail a full sized pdf copy to both the District and the District Engineer. Include a list of changes that have been made since approval by the RCWD Board. Final plans must include:
- Revision to the OCS 121 and 131 detail so that elevations are consistent with the storm sewer plan and the HydroCAD model.
 - Details with dimensions of the overflow weirs from the infiltration basin to the storm basin.
 - Update the high-water elevations.
6. Submit a copy of the plat or easements establishing drainage or flowage over stormwater management facilities, stormwater conveyances, ponds, wetlands, on-site floodplain up to the 100-year flood elevation, or any other hydrologic feature (if required).
7. The applicant must submit a Draft Declaration for Maintenance of Stormwater Management Facilities acceptable to the District for proposed onsite stormwater management and pretreatment features.
8. The applicant must provide an attested copy of the signed and notarized legal document(s) from the County Recorder. Applicant may wish to contact the County Recorder to determine recordation requirements prior to recordation.
9. The applicant must submit a surety of \$22,350 along with an original executed escrow agreement acceptable to the District. If the applicant desires an original copy for their records, then two original signed escrow agreements should be submitted. The applicant must provide the first \$5000 in the form of a check and has the option of providing the remainder of the surety amount in the form of a check or a Performance Bond or Letter of Credit. The surety is based on \$7,750 for 18.86 acres of disturbance, and \$14,600 for 29,269 CF of storm water treatment.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit. By accepting the permit, applicant agrees to these stipulations:

1. An as-built survey of all stormwater BMPs (ponds, rain gardens, trenches, swales, etc.) is to be submitted to the District for verification of compliance with the approved plans before return of the surety.

Exhibits:

1. Revised plan set containing 25 sheets revision date 2-15-2018 and received 2-16-2018.
2. Permit application, dated 1-3-2018 and received 1-9-2018.

3. Stormwater calculations, dated 12-22-2017 and received 1-9-2018, containing narrative, drainage maps, HydroCAD report for the 2-year, 10-year, and 100-year rainfall events for proposed and existing conditions and geotechnical report (dated 9-18-2017).
4. Revised stormwater calculations, revision date 2-15-2018 and received 2-16-2018, containing narrative, drainage maps, HydroCAD report for the 2-year, 10-year, and 100-year rainfall events for proposed and existing conditions and geotechnical report (dated 9-18-2017).
5. Revised stormwater calculations received 2-21-2018: existing condition drainage map (no date), flow rate summary and bounce and inundation table (dated 2-21-2018) and proposed and existing conditions HydroCAD reports (dated 2-21-2018).
6. Review file 17-156R.

Findings:

1. Description – The project proposed the construction of 56 single family homes on a 38.24 acre parcel, west of Lever Street and 0.5± miles north of 125th Avenue N (CSAH 14), in Blaine. The parcel is currently undeveloped (0 acres of impervious surface). The project will add 7.33± acres of impervious surface, and disturb 18.9 ± acres overall. While the project is within the legal boundary of the RCWD, it drains to three interconnected wetlands which outlet to the ACD 44 drainage system within the Coon Creek Watershed District (CCWD). The applicant has submitted a \$7,750 application fee, which corresponds to 7.5 acres of new/redeveloped impervious surface and <10 acres of land disturbance.
2. Stormwater – The applicant is proposing the BMPs as described below for the project:

Proposed BMP Description	Location	Pretreatment:	Infiltration Volume provided (CF)
Infiltration Basin 3 (pond with infiltration bench)	West of Street B cul-du-sac	Pond	19,732
Storm Basin 1	South of Street B cul-du-sac	NA – rate control only	
Infiltration Basin 2 (pond with infiltration bench)	South of Storm Basin 1	Pond	21,911

Soils on site are primarily HSG A poorly graded sand (SP) and HSG B silty sand (SM) and infiltration is considered feasible. Per Rule C.6(c)(1), the Water Quality requirement is 1.1-inches over the new/reconstructed area (7.33± acres) for a total requirement of 29,269± cubic feet. The applicant has provided 41,642± cubic feet of infiltration volume between elevations 900 to 900.8. Adequate pretreatment has been provided. The applicant has submitted calculations showing that the bench will drawdown the infiltration volume within 48-hours using an infiltration rate of 0.8-inches per hour, which is acceptable to the District Engineer. The geotechnical engineer identified the seasonal high water elevation at 897, thus adequate separation has been provided. The project is not located within a DWSM area.

Drainage Area	2-year (cfs)		10-year (cfs)		100-year (cfs)	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Leaving via ACD 44 (Wetland A Outlet)	1.60	1.61	2.12	2.16	3.54	3.56

The project is not located within the Flood Management Zone. Wetlands A, B and C are on property owned by the City of Blaine. The City of Blaine has indicated that the wetlands may be

used as a regional basin for rate control. Changes are within the tolerance of the model. The CCWD has been contacted regarding the project drainage. The applicant has complied with the rate control requirements of Rule C.7

The applicant has complied with the bounce and inundation criteria of Rule C.8 (moderately susceptible for wetlands B and C and slightly susceptible for wetland A. The low floor entry elevations are set based off of the emergency overflow of Lever Street. Applicant must ensure that Recommendation 2 is met to ensure compliance with the freeboard requirements of Rule C.9(g)

3. Wetlands – A wetland delineation was completed, and boundary decision was issued on 09-21-2017 under Review file 17-156R. The project will not impact any wetlands. The applicant is proposing a buffer around the wetlands on-site, however this is not a requirement of the RCWD.
4. Floodplain – The site is not in a regulatory floodplain.
5. Erosion Control – Proposed erosion control methods include silt fence, rock construction entrances, erosion control blanket, inlet protection and rip rap. An NPDES permit is required for the project. The information listed under the Erosion and Sedimentation Control Recommendations needs to be submitted. Otherwise, the project complies with RCWD Rule D requirements.
6. Drainage Systems – There are no public drainage systems of which RCWD is the drainage authority of on to the property. However, as noted above, the project does drains to the ACD 44 public drainage system within the CCWD. CCWD is the drainage authority for ACD 44, thus it is recommended the applicant verify 103E requirements with CCWD.
7. Documenting Easements and Maintenance Obligations – Applicant must provide a draft maintenance declaration for approval, and a receipt showing recordation of the approved maintenance declaration and the drainage and flowage easements.
8. Previous Permit Information – A wetland delineation was submitted under file 17-156R.

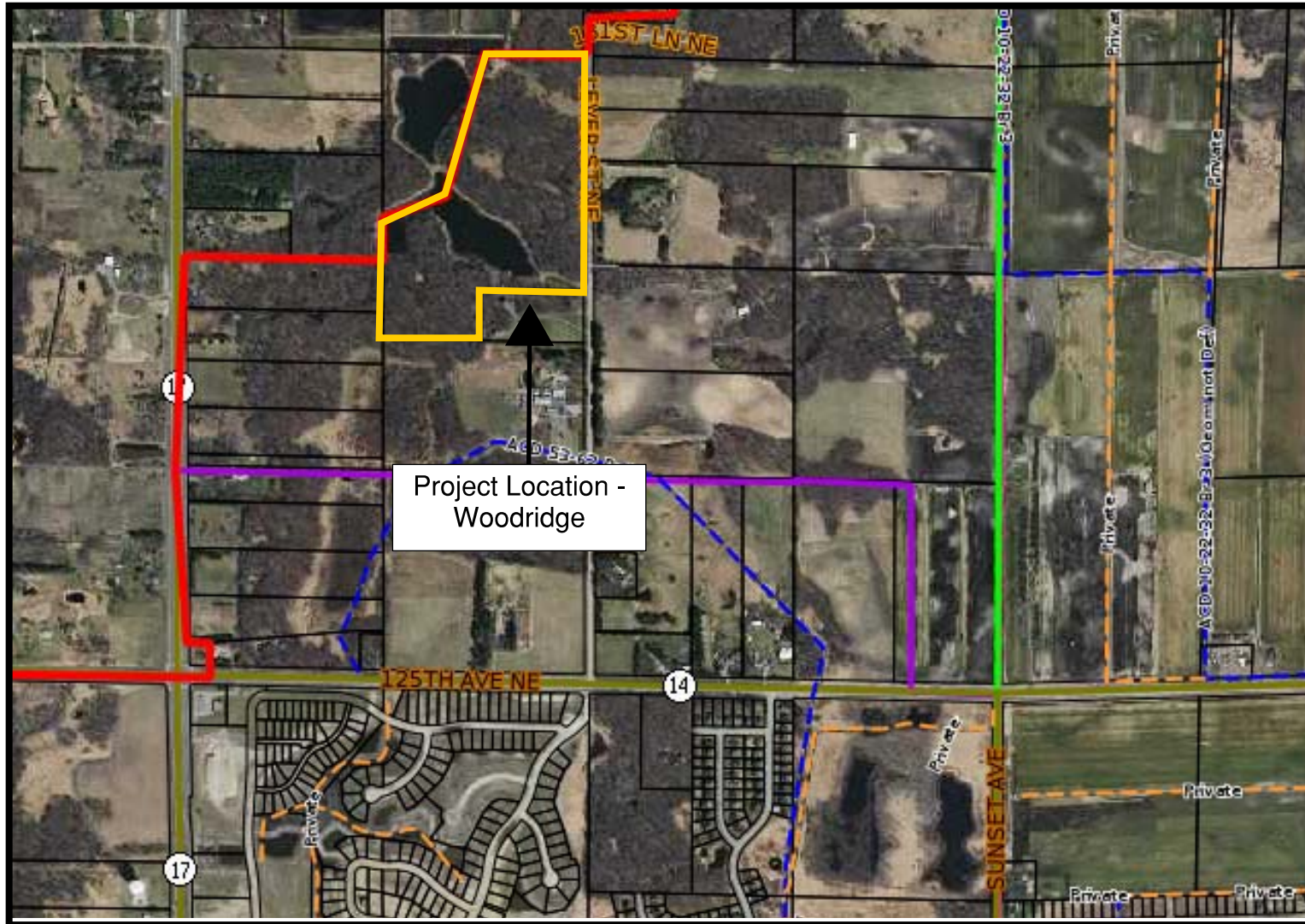
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.



Greg Bowles
MN Reg. No 41929













Katherine MacDonald
MN Reg. No 44590

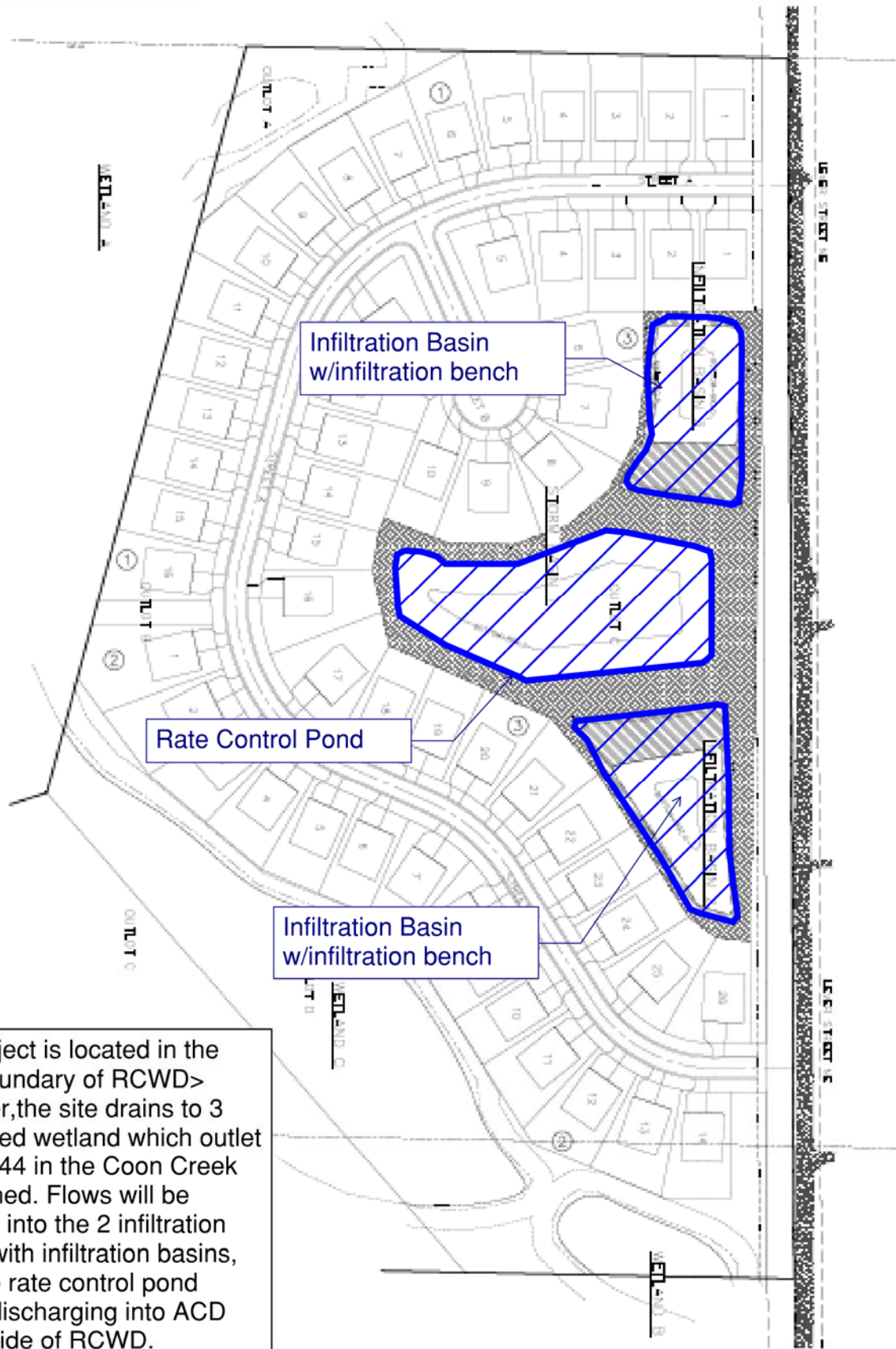


Project Location -
Woodridge

Legend

- | | | | |
|--|---|---|--|
|  District Boundary |  Public Waterway |  Public Ditch - Municipal |  Private Ditch |
|  Project Location |  Public Ditch - Open Channel |  Public Ditch - Tile |  Private Natural Waterway |
|  City Boundary |  Public Ditch - Stormsewer | | |





Infiltration Basin
w/infiltration bench

Rate Control Pond

Infiltration Basin
w/infiltration bench

The project is located in the legal boundary of RCWD> However, the site drains to 3 connected wetland which outlet to ACD 44 in the Coon Creek Watershed. Flows will be directed into the 2 infiltration basins with infiltration basins, and one rate control pond before discharging into ACD 44, outside of RCWD.

Legend



Proposed Stormwater Feature



Water Flow



WORKING DOCUMENT: This Engineer's report is a draft or working document of RCWD staff and does not necessarily reflect action by the RCWD Board of Managers

Permit Application Number:

18-005

Permit Applicant Name:

Brenk Brother Addition II

Applicant:

Brenk Properties, LLC
Jeff & Mike J. Brenk
7490 Central Avenue NE
Fridley, MN 55432
Ph: 763-784-5621
Fx: 763-784-6254
Jeff.brenk@brenkbros.com

Consultant:

Reabar Abdullah
Plowe Engineering, Inc.
6776 Lake Drive Suite 110
Lino Lakes, MN 55014
Ph: 651-361-8210
Fx: 651-361-8701
rabdullah@plowe.com

Project Name: Brenk Brother Addition II

Purpose: FSD – Final Site Drainage; Brenk Properties, LLC is adding a 37,995 sq. ft. building, parking lot, and infiltration pond to its existing building located at 7490 Central Ave.

Site Size: 9.92± acre parcel / 4.02 ± acres of disturbed area; existing and proposed impervious area is 3.32 ± acres and 4.52 ± acres, respectively

Location: 7490 Central Ave, Fridley MN 55432

T-R-S: NW ¼, Section 12, T30N, R24W

District Rule: C, D

Recommendations: CAPROC

It is recommended that this Permit Application be given Conditional Approval Pending Receipt of Changes (CAPROC) and outstanding items related to the following items.

Rule D – Erosion and Sediment Control

1. Submit the following information per Rule D.4:
 - (a) Name, address and phone number of party responsible for maintenance of all erosion and sediment control measures.
 - (b) Provide documentation that an NPDES Permit has been applied for and submitted to the Minnesota Pollution Control Agency (MPCA).

Administrative

2. Send one final, signed 11x17 sized plan set to the District, and e-mail a full sized pdf copy to both the District and the District Engineer. Include a list of changes that have been made since approval by the RCWD Board.
3. Submit a copy of drainage or flowage over stormwater management facilities, and/or stormwater conveyances (if easements are required by the City of Fridley).

4. The applicant must submit a Draft Declaration for Maintenance of Stormwater Management Facilities acceptable to the District for proposed onsite stormwater management and pretreatment features. If using existing Declaration for Maintenance, applicant must update to incorporate the revised BMPs.
5. The applicant must submit a surety of \$6,100 along with an original executed escrow agreement acceptable to the District. If the applicant desires an original copy for their records, then two original signed escrow agreements should be submitted. The applicant must provide the first \$5000 in the form of a check and has the option of providing the remainder of the surety amount in the form of a check or a Performance Bond or Letter of Credit. The surety is based on \$2,500 for 4.02 acres of disturbance and \$3,600 for 7,227 CF of storm water.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit. By accepting the permit, applicant agrees to these stipulations:

1. An as-built survey of all stormwater BMPs (ponds, rain gardens, trenches, swales, etc.) is to be submitted to the District for verification of compliance with the approved plans before return of the surety.

Exhibits:

1. Plan set containing 7 sheets dated 02-06-2018 and received 02-06-2018.
2. Permit application, dated 01-09-2018 and received 01-09-2018.
3. Permit application checklist, no date, received 01-11-2018.
4. Stormwater Calculations, dated 01-10-2018 and received 01-11-2018, containing narrative, drainage maps, HydroCAD report for the 2-year, 10-year, and 100-year rainfall events for proposed and existing conditions.
5. Revised Stormwater Calculations, dated 02-06-2018 and received 02-06-2018, containing narrative, drainage maps, HydroCAD report for the 2-year, 10-year, and 100-year rainfall events for proposed and existing conditions.
6. Final Soil Boring Report, dated 06-02-2017, and received 01-11-2018.
7. Alta Survey, dated 07-07-2017, and received 01-11-2018.
8. Official Plat, dated 07-25-2017, and received 01-17-2018.
9. Warranty Deed, dated 08-15-2017, and received 01-17-2018.
10. Application Fee, dated 01-09-2018, received 01-09-2018.
11. Permit file 06-069.

Findings:

1. Description – The project proposes to construct a building addition on the property north of the existing Brenk Properties building located at 7490 Central Ave NE in Fridley. The project includes the construction of a 37,995 SF building with additional parking lot and access road, and the expansion of two existing infiltration ponds. Approximately 4.02± acres of the 9.92± acre parcel will be disturbed. The project proposes to add 1.20± acres of impervious surface and reconstruct an additional 0.60± acres of impervious surface. The project drains to city storm sewer and eventually flows to Rice Creek and then to Locke Lake, the Resource of Concern. The applicant has submitted a \$2,250 application fee, which corresponds to 1-2.5 acres of new/redeveloped impervious surface and 2.5-10 acres of land disturbance.

2. Stormwater – The applicant is proposing to expand two of the existing on-site infiltration basins to meet water quality treatment and rate control for the proposed project.

BMP Description	Location	Pretreatment:	Existing Volume (CF)	Proposed Volume (CF)
Surface infiltration basin (East Pond)	Eastern property line	Sediment Depressional Area	1,270±	7,291±
Surface infiltration basin (West Pond)	Western property line	Sediment Depressional Area	7,615±	22,541±

Soils on site are primarily silty sands (HSG B) soils. Thus, infiltration is considered feasible. Per Rule C.6(c)(1), the Water Quality requirement is 1.1-inches over the new/reconstructed area (78,836± square feet) for a total requirement of 7,227± cubic feet. The expanded basins provide 20,947± cubic feet of additional treatment. The project treats approximately 100% of the proposed impervious area. The proposed infiltration basins have bottom elevation of 893.5, which maintains a 3-foot separation above the seasonal high water elevation. Both basins are expected to drawdown within 48 hours. Sediment depressional areas were constructed at the stormsewer outlets to capture sediment and provide pretreatment for the proposed infiltration basins. The infiltration basins are in a low/moderate DWSMA, but outside of the 1-year emergency response area. The project has complied with the design criteria of Rule C.9(a) and met the water quality requirements of Rule C.6.

Drainage Area	2-year (cfs)		10-year (cfs)		100-year (cfs)	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Stormsewer in Old Central Ave. (Outlet of East Pond and Existing South Pond)	4.40	3.81	6.75	4.95	15.37	8.87
Outlet of West Pond	1.88	0.0	4.21	0.04	8.11	4.14
Totals	6.28	3.81	10.96	4.99	19.59	13.01
80% of existing	5.02		8.77		15.67	

There are two outlets to the property as shown in the table above. The Proposed East Pond and Existing South Pond drain to a stormsewer in Old Central Ave while the Proposed West Pond drains to an existing pond located west of the property.

The project is located within the Flood Management Zone. The submitted information indicates that the project does not increase peak runoff rates in compliance with District Rule C.7. The applicant complies with freeboard requirements of Rule C.9(g).

3. Wetlands – There are no wetlands located within the project area.
4. Floodplain – The site is not in a regulatory floodplain.
5. Erosion Control – Proposed erosion control methods include silt fence, rock construction entrances, inlet protection and rip rap. An NPDES permit is required for the project. The information listed under the Erosion and Sedimentation Control Recommendations must be submitted. Otherwise, the project complies with RCWD Rule D requirements.
6. Drainage Systems – There are no public drainage systems under Chapter 103E authority on or adjacent to the property.

7. Documenting Easements and Maintenance Obligations – Applicant must provide a draft maintenance declaration for approval, and a receipt showing recordation of the approved maintenance declaration. A copy of the final plat has been received, however applicant must supply the additional drainage and flowage easements (if required).
8. Previous Permit Information – Final site drainage for a building addition at this site was approved under Permit 06-069. Enclosing the existing front entry and removing sidewalk for green space was reviewed under Permit 16-165R.

I assisted in the preparation of this report under the supervision of the District Engineer.

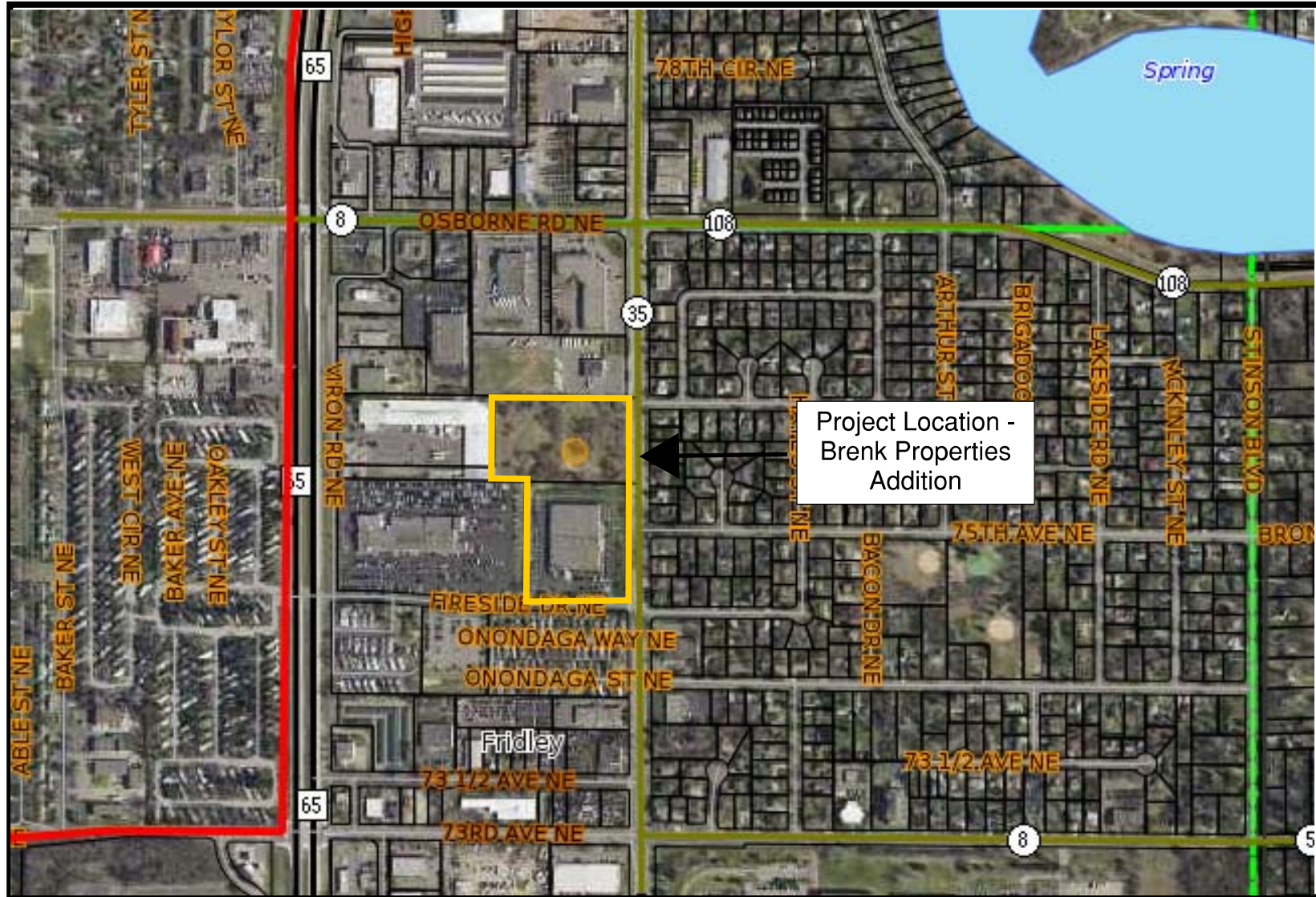
Hannah Rollin 2/21/2018

Hannah Rollin, EIT

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.

K. Mac Donald 2-21-18

Katherine MacDonald
MN Reg. No 44590



Legend

- | | | | |
|--|---|---|--|
|  District Boundary |  Public Waterway |  Public Ditch - Municipal |  Private Ditch |
|  Project Location |  Public Ditch - Open Channel |  Public Ditch - Tile |  Private Natural Waterway |
|  City Boundary |  Public Ditch - Stormsewer | | |





WORKING DOCUMENT: This Engineer's report is a draft or working document of RCWD staff and does not necessarily reflect action by the RCWD Board of Managers

Permit Application Number:

18-008

Permit Applicant Name:

Capra Properties, LLC

Applicant:

Capra's Utilities Inc.
Mike Capra
2340 Leibel Street
White Bear Lake, MN 55110
Ph: 651-762-2500
Fx: 651-762-2600
mike@capras.com

Consultant:

Colin Ose
AMI Consulting
3640 Talmage Circle Suite 200
Vadnais Heights, MN 55110
Ph: 651-337-9259
eli.rupnow@amiengineers.com
colin.ose@amiengineers.com
steven.gebauer@amiengineers.com

Project Name: Capra Properties, LLC

Purpose: FSD – Final Site Drainage; new construction

Site Size: 2.13± acre parcel / 2.13 ± acres of disturbed area; existing and proposed impervious area is 0.00 ± acres and 1.77 ± acres, respectively

Location: 2320 Leibel St, White Bear Township

T-R-S: NE ¼, Section 1, T30N, R22W

District Rule: C, D

Recommendations: CAPROC

It is recommended that this Permit Application be given Conditional Approval Pending Receipt of Changes (CAPROC) and outstanding items related to the following items.

Rule D – Erosion and Sediment Control

1. Submit the following information per Rule D.4:
 - (c) Name, address and phone number of party responsible for maintenance of all erosion and sediment control measures.
 - (h) Provide documentation that an NPDES Permit has been applied for and submitted to the Minnesota Pollution Control Agency (MPCA).

Administrative

2. Send one final, signed 11x17 sized plan set to the District, and e-mail a full sized pdf copy to both the District and the District Engineer. Include a list of changes that have been made since approval by the RCWD Board.
3. Applicant must submit a new and or revised declaration as necessary to cover all the remain BMPs from permit 14-061 and the current permit. Applicant must provide draft maintenance declarations for approval.

4. The applicant must provide an attested copy of the signed and notarized legal document(s) from the County Recorder. Applicant may wish to contact the County Recorder to determine recordation requirements prior to recordation.
5. The applicant must submit a surety of \$12,100 along with an original executed escrow agreement acceptable to the District. If the applicant desires an original copy for their records, then two original signed escrow agreements should be submitted. The applicant must provide the first \$5000 in the form of a check and has the option of providing the remainder of the surety amount in the form of a check or a Performance Bond or Letter of Credit. The surety is based on \$1,500 for 2.13 acres of disturbance and \$10,600 for 21,125 cubic feet of storm water treatment.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit. By accepting the permit, applicant agrees to these stipulations:

1. An as-built survey of all stormwater BMPs (ponds, rain gardens, trenches, swales, etc.) is to be submitted to the District for verification of compliance with the approved plans before return of the surety.
2. An as-built survey of wetland boundaries, including quantification of wetland impact, is to be submitted for verification that wetland impact does not exceed amount proposed.

Exhibits:

1. Updated plan set dated 2-20-2018 and received 2-20-2018.
2. Plan set dated 1-17-2018 and received 1-17-2018.
3. Permit application, dated 1-18-2018 and received 1-18-2018.
4. Updated stormwater Calculations, dated 2-20-2018 and received 2-20-2018, containing narrative, drainage maps, and HydroCAD report for the 2-year, 10-year, and 100-year rainfall events for proposed and existing conditions.
5. Stormwater Calculations, dated 1-17-2018 and received 1-17-2018, containing narrative, drainage maps, HydroCAD report for the 2-year, 10-year, and 100-year rainfall events for proposed and existing conditions, soil boring logs (dated 4-17-2017) and Wetland Delineation Report, (dated September 2017).

Findings:

1. Description – The proposed project, located within White Bear Township, consists of the construction of a building and adjacent parking lot. The project will result in an increase of 1.77± acres of impervious surfaces from 0.00± acres to 1.77± acres. The project drains to one of two BMPs, one of which outlet into existing wetlands, while the other discharged to the drainage swale on the north side of the property. Ultimately both discharge into Bald Eagle Lake which is the resources of concern. The applicant has submitted a \$2,100 application fee, which corresponds to 1-2.5 acres of new/redeveloped impervious surface and < 2.5 acres of land disturbance.
2. Stormwater – The applicant is proposing the BMPs as described below for the project:

Proposed BMP Description	Location	Pretreatment:	Volume provided
NURP Pond	Southern Property Line	N.A.	42,027± cubic feet
Bio-Filtration Basin	Northern Property Line	5' Grass Buffer	3,420± cubic feet

Soils on site are primarily HSG B silty sands (SM) at the surface with HSG A/B poorly graded sands with silt below (SP-SM). However, soil borings indicate a high water table thus, infiltration is not considered feasible. NURP ponds and bio-filtration basins are acceptable to meet the water quality requirement. The project removes one existing storm water pond located on the adjacent property to the east also owned by the applicant. Construction of the proposed pond must be completed within the permit term.

The proposed NURP pond will replace the existing storm water pond and provide additional treatment for the new impervious surfaces. The Water Quality requirement for the NURP pond is 2.5-inches over the tributary area of 3.49± acres, which includes the drainage to the existing pond for a requirement of 18,300± cubic feet. The NURP pond has been designed with an outlet control structure capable of preventing migration of floating debris and oil during the one-year storm event and controlling the 2-year, 10-year, and 100-year storm event. The EOF of the NURP pond has been stabilized with rip rap.

The Water Quality requirement is 1.69-inches over the new impervious area of 0.30± acres which draining to the bio-filtration basin for a requirement of 2,825± cubic feet. The applicant proposes to place the rock trench within the sand layer. 20 inches of sand minimum is proposed adjacent to the underdrain. The basin drain tile is above the standing water located in the northwest corner of the site, which is the estimated seasonal high water. The bio-filtration basin is expected to drawdown within 48 hours.

The total water quality requirement is 21,125± cubic feet (18,300+2,825). The project treats approximately 100% of the required impervious area. The freeboard requirements have been satisfied.

Drainage Area	2-year (cfs)		10-year (cfs)		100-year (cfs)	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Northwest Drainage	1.55	0.89	3.46	3.68	9.07	8.54
Southeast Drainage	1.01	1.10	1.88	2.89	6.29	9.69
Total*	2.55	1.81	5.28	4.91	13.82	13.01

*Differences due to differing time of concentrations

The project is not located within the Flood Management Zone. The increase in rate to the northwest for the 10-year event is within the tolerance of the model. The increase to the southeast flows directly into a large DNR wetland and is not expected to cause adverse impacts. The submitted information indicates that the project does not increase peak runoff rates, in aggregate, thus in compliance with District Rule C.7.

3. Wetlands – Wetlands are located within the project area, as delineated under 17-195R. A Notice of Decision was issued on 11-22-2017 stating that all wetlands, except the wetland located in the southeast corner of the property, meet the definition of an incidental wetland. Impacts to these wetlands therefore meet the criteria of No Loss (8420.0415). The applicant is proposing the construction of a stormwater pipe within the southeast wetland. The permanent wetland impacts from the proposed storm pipe total less than 100 square feet. This would meet the criteria of the *de minimis* exemption of 8420.0420 Subp. 8.
4. Floodplain – The site is not in a RCWD regulatory floodplain.
5. Erosion Control – Proposed erosion control methods include silt fence, bioroll, erosion control blanket, rock construction entrances, inlet protection and rip rap. An NPDES permit is required for the project. The SWPPP is located on sheets C6.0-C6.2. The information listed under the Erosion and Sedimentation Control Recommendations needs to be submitted. Otherwise, the project complies with RCWD Rule D requirements.

6. Drainage Systems – There are no drainage systems on or adjacent to the property.
7. Documenting Easements and Maintenance Obligations – Applicant must submit a new and or revised declaration as necessary to cover all the remain BMPs from permit 14-061 and the current permit. Applicant must provide draft maintenance declarations for approval, and a receipt showing recordation of the approved maintenance declaration and the drainage and flowage easements (if required).
8. Previous Permit Information – The previous pond and adjacent property were permitted under 14-078.

I assisted in the preparation of this report under the supervision of the District Engineer.

Ben Jore 2-21-2018

Ben Jore
EIT Reg. No 13431

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.

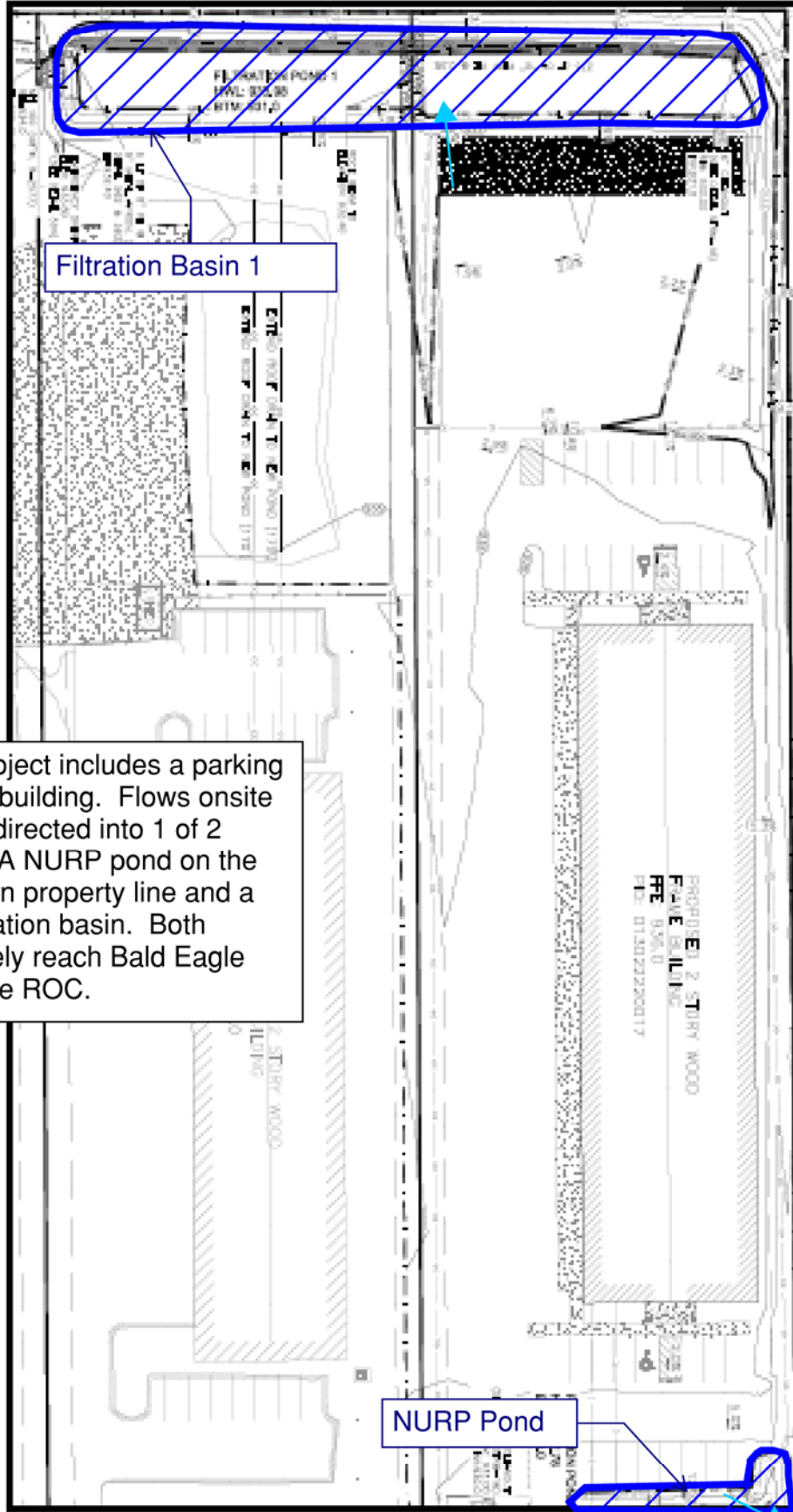
K. MacDonald 2-21-18

Katherine MacDonald
MN Reg. No 44590



- Legend**
- | | | | |
|--|---|---|--|
|  District Boundary |  Public Waterway |  Public Ditch - Municipal |  Private Ditch |
|  Project Location |  Public Ditch - Open Channel |  Public Ditch - Tile |  Private Natural Waterway |
|  City Boundary |  Public Ditch - Stormsewer | | |





This project includes a parking lot and building. Flows onsite will be directed into 1 of 2 BMPs. A NURP pond on the southern property line and a bio-filtration basin. Both ultimately reach Bald Eagle Lake the ROC.

Legend



Proposed Stormwater Feature



Water Flow



WORKING DOCUMENT: This Engineer's report is a draft or working document of RCWD staff and does not necessarily reflect action by the RCWD Board of Managers

Permit Application Number:

18-010

Permit Project Name:

Parkside North Apartments

Applicant/Owner:

Parkside North, LLC
Alan Roessler
3495 Northdale Blvd. NW, Suite 210
Coon Rapids, MN 55448
Ph: 763-753-6176
Fx:
alan@paxmar.com

Consultant:

T.J. Rose
Larson Engineering, Inc
3524 Labore Road
White Bear Lake, MN 55110
Ph: 651-481-9120
Fx: 651-481-9201
trose@larsonengr.com

Official Representative

Norhard, LLC
Alyssa Kaeding
290 9th Ave SW Suite 311
Forest Lake, MN 55025
Ph: 651-324-0724
Fx: 651-464-5908
Alyssa.kaeding@norhart.com

Project Name: Parkside North Apartments

Purpose: FSD – Final Site Drainage; construct a multi-level apartment building. Construction will include surface parking lot and an underground parking garage.

Site Size: 6.69± acre parcel / 4.54 ± acres of disturbed area; existing and proposed impervious area is 0± acres and 3.09 ± acres, respectively

Location: NE Corner of 122nd Ave. NE and Fraizer St. NE, Blaine

T-R-S: NW ¼, Section 12, T31N, R23W

District Rule: C, D

Recommendations: CAPROC

It is recommended that this Permit Application be given Conditional Approval Pending Receipt of Changes (CAPROC) and outstanding items related to the following items.

Rule D – Erosion and Sediment Control

1. Submit the following information per Rule D.4:

- (c) Name, address and phone number of party responsible for maintenance of all erosion and sediment control measures.
- (h) Provide documentation that an NPDES Permit has been applied for and submitted to the Minnesota Pollution Control Agency (MPCA).
- (i) A Storm Water Pollution Prevention Plan for projects that require an NPDES Permit.

Administrative

2. The wetland and buffer were part of the replacement wetland plan under permit 14-061. Per Rule F.5(b)(1), replacement plans and buffer areas must be within a platted outlot. Applicant must submit final plat demonstrating compliance with this requirement.
3. Send one final, signed 11x17 sized plan set to the District, and e-mail a full sized pdf copy to both the District and the District Engineer. Include a list of changes that have been made since approval by the RCWD Board.
4. Submit a copy of the plat or easements establishing drainage or flowage over stormwater management facilities, stormwater conveyances, ponds, wetlands, on-site floodplain up to the 100-year flood elevation, or any other hydrologic feature (if easements are required by the City of Blaine).
5. The applicant must submit a Draft Declaration for Maintenance of Stormwater Management Facilities acceptable to the District for proposed onsite stormwater management and pretreatment features. If using existing Declaration for Maintenance, applicant must update to incorporate the revised BMPs.
6. The applicant must provide an attested copy of the signed and notarized legal document(s) from the County Recorder. Applicant may wish to contact the County Recorder to determine recordation requirements prior to recordation.
7. The applicant must submit a cash surety of \$3,000 along with an original executed escrow agreement acceptable to the District. If the applicant desires an original copy for their records, then two original signed escrow agreements should be submitted. The surety is based on \$3,000 for land disturbance and \$0 for expanded stormwater basin.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit. By accepting the permit, applicant agrees to these stipulations:

1. An as-built survey of all stormwater BMPs (ponds, rain gardens, trenches, swales, etc.) is to be submitted to the District for verification of compliance with the approved plans before return of the surety.

Exhibits:

1. Plan set containing 9 sheets dated 02-09-2018 and received 02-09-2018.
2. Permit application, dated 01-18-2018 and received 01-19-2018.
3. Permit application checklist, no date, received 01-22-2018.
4. Stormwater Calculations, dated 01-19-2018 and received 01-19-2018, containing narrative, drainage maps, HydroCAD report for the 2-year, 10-year, and 100-year rainfall events for proposed and existing conditions.
5. Revised Stormwater Calculations, dated 02-09-2018 and received 02-09-2018, containing narrative, drainage maps, HydroCAD report for the 2-year, 10-year, and 100-year rainfall events for proposed and existing conditions.
6. Geotechnical Exploration, dated 01-03-2018 and received 01-19-2018
7. Permit Application Fee, dated 01-18-2018 and received 01-19-2018

Findings:

1. Description – The project proposes to construct a multi-level apartment building that includes a surface parking lot and underground parking garage. The project is located on a 6.69± acre parcel at the NE Corner of 122nd Ave. NE and Fraizer St. NE. This lot was previously part of a 137± acre Parkside North parcel, which was approved for mass grading (including floodplain and wetland impacts) under Permit 14-061 but requires additional permitting for the addition of impervious area. The lot currently has no impervious area. This application proposes to add 3.09± acres of impervious surface and disturb 4.54± acres overall. The project flows to Branch 1 of ACD 53-62 and ultimately to Golden Lake, the Resource of Concern. The applicant has submitted a \$3,750 application fee, which corresponds to 2.5 to 5 acres of new impervious surface and 2.5 to 10 acres of land disturbance.

2. Stormwater – The applicant is proposing to use Existing Pond 30 and Existing Pond 80 for water quality treatment.

BMP Description	Location	Required capacity		As-Built Volume (AF)
		Previous capacity used (AF)	NURP volume required (AF)	
Existing Pond 30	East of Frazier St 650± feet north of 122nd Ave	1.267	0.476	2.898
Existing Pond 80	North of 122nd Ave, 350± feet east of Frazier St	0.151	0.118	0.263*

*Acceptable within the margin of error for the calculations

Soils on site are primarily HSG A and B, consisting of poorly graded sand (SP), and silty sand (SM), and poorly graded sand with silt (SP-SM). The seasonal high water (SHW) elevation is estimated by the applicant and District Engineer to be 897. Previously infiltration was considered feasible in areas that could maintain the 3-foot of separation from the SHW. However, the City of Blaine has sited a new municipal well near the project and will not allow infiltration on site. Thus, infiltration is no longer considered feasible and the of existing stormwater ponds are acceptable to meet the water quality requirement. 100% of the site is treated by the NURP ponds. The applicant is Parkside North, LLC, who is also the owner of the ponds. The existing ponds meet the current design standards of Rule C.9(d). As-builts have been submitted, which are sufficient to show that the ponds have adequate capacity and are in the original design condition. Thus, the applicant is compliant with the water quality requirements of Rule C.6.

The project is not located within the Flood Management Zone. Rate control calculations demonstrating compliance with District rate control requirements were previously submitted under the Parkside development. While the drainage patterns are consistent, the applicant is proposing to add an additional 0.45± acres of impervious area to Pond 30 than what was assumed in the original calculations (2.64 acres of impervious surface was previously approved). Additionally, the applicant is proposing to reshape the live storage in both ponds. The expansion of the ponds does not affect the as-built dead storage volume of the ponds. The changes are noted in the table below.

	Existing Live Storage (SF)	Proposed Live Storage (SF)	Difference (SF)
Existing Pond 30	137,997	157,109	+19,112
Existing Pond 80	45,458	47,567	+2,109

With these expansions, the applicant will mitigate for the increase in impervious area and maintain existing live storage volume, and thus demonstrate compliance with District Rule C.7.

The project is in compliance with the bounce and inundation criteria of Rule C.8 and the freeboard requirements of Rule C.9(g).

3. Wetlands – The project is in accordance with the wetland mitigation plan previously permitted under 14-061. The applicant must comply with recommendation 2. The project will not impact any additional wetlands. The applicant will not affect any land north of the pond and therefore will not affect the previous compliance of Rule F.5(b)(2) and (3) previously established under permit 14-061.
4. Floodplain – The project is in accordance with the floodplain mitigation plan previously permitted under 14-061. The project will not impact any additional floodplain.
5. Erosion Control – Proposed erosion control methods include silt fence, rock construction entrances, inlet protection and rip rap. An NPDES permit is required for the project. Otherwise, the project complies with RCWD Rule D requirements.
6. Drainage Systems – There are no drainage systems on or adjacent to the property.
7. Documenting Easements and Maintenance Obligations – Applicant must update the maintenance declaration for existing Ponds 80 and 30. A copy of the final plat must be provided with additional drainage and flowage easements (if required).
8. Previous Permit Information – Mass grading of the project area, (which included floodplain and wetland impacts) was previously approved under Permit 14-061. Additionally, nearby construction of 45 single family homes, buildout of the NW portion of the Parkside development and construction of a Kwik Trip were previously approved under Permits 15-070, 16-025 and 17-116 respectively.

I assisted in the preparation of this report under the supervision of the District Engineer.

Hannah Rollin 2/21/2018



Hannah Rollin, EIT

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.

K. MacDonald 2-21-18

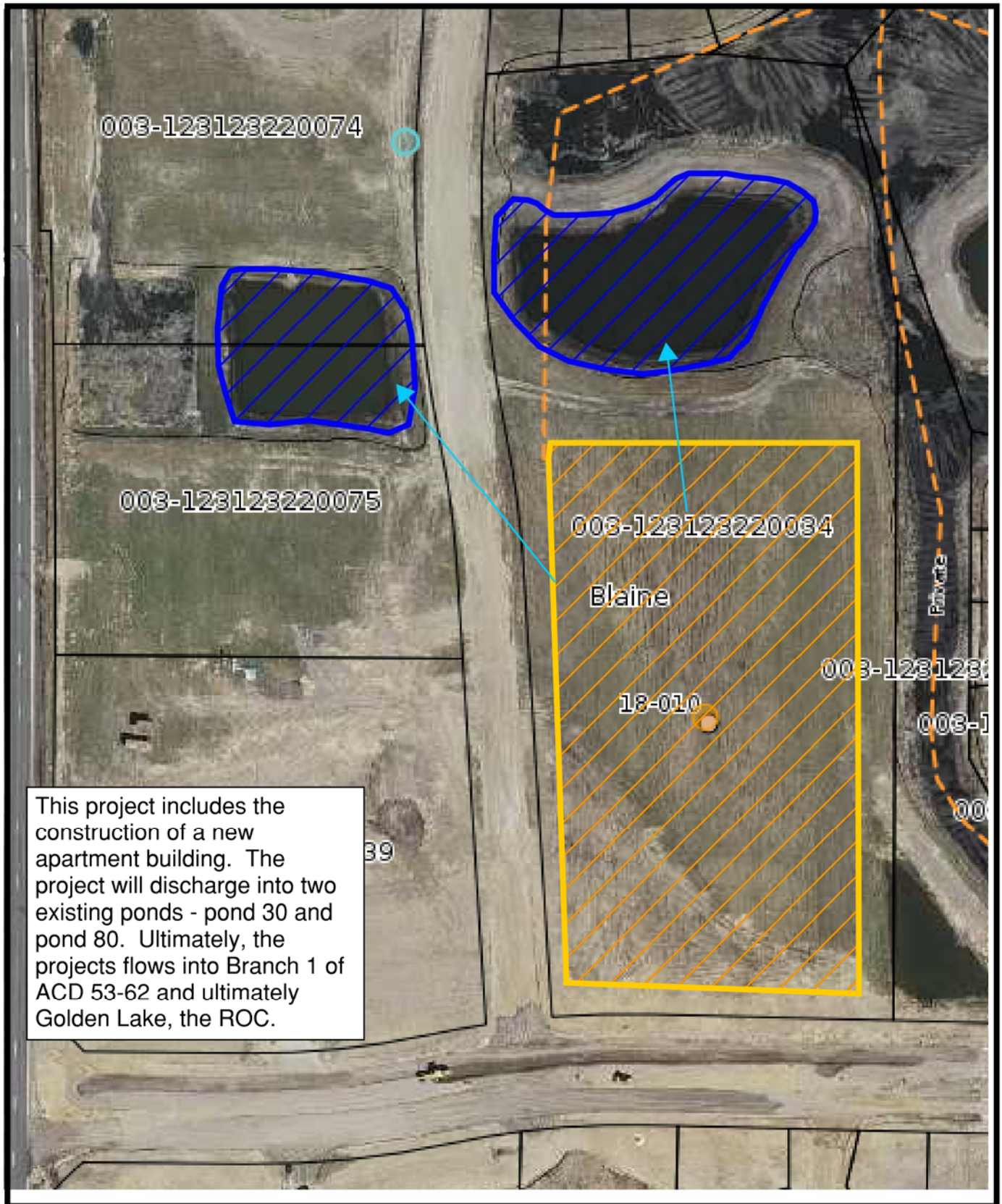
Katherine MacDonald
MN Reg. No 44590



- | | | | |
|--|---|---|--|
|  District Boundary |  Public Waterway |  Public Ditch - Municipal |  Private Ditch |
|  Project Location |  Public Ditch - Open Channel |  Public Ditch - Tile |  Private Natural Waterway |
|  City Boundary |  Public Ditch - Stormsewer | | |

Legend





This project includes the construction of a new apartment building. The project will discharge into two existing ponds - pond 30 and pond 80. Ultimately, the projects flows into Branch 1 of ACD 53-62 and ultimately Golden Lake, the ROC.



Building Site



Legend

Existing SW Pond



Water Flow

PERMIT APPLICATIONS REQUIRING BOARD ACTION

No.	Applicant	Location	Plan Type	Recommendation
18-003	Gernette Development, LLC	Blaine	Final Site Drainage Plan Land Development Wetland Alteration	VARIANCE REQUEST & CAPROC 12 items

Two Actions: Variance Request and CAPROC decision.

It was moved by Manager _____ and seconded by Manager _____, to CAPROC permit 18-003 as outlined in accordance with RCWD District Engineer's Findings and Recommendations, dated February 21, 2018.

CAPROC = Conditional Approval Pending Receipt of Changes



WORKING DOCUMENT: This Engineer's report is a draft or working document of RCWD staff and does not necessarily reflect action by the RCWD Board of Managers

Permit Application Number:
Permit Applicant Name:

18-003
Park Place

Applicant:

Gernette Development, LLC
Gary Larson
17215 Naples St NE
Ham Lake, MN 55304
Ph:
Fx:
ggl.larson1935@gmail.com

Consultant:

Kjolhaug Environmental Services
Melissa Barrett
2500 Shadywood Road, Suite 130
Orono, MN 55331
Ph: 952-401-8757
Fx:
melissa@kjohaugenv.com

Park Construction Company
Jeff Carlson
1481 81st Ave NE
Minneapolis, MN 55432
Ph: 763-786-9800
Fx: 763-786-2952
jcarlson@parkconstructionco.com

Project Name: Park Place

Purpose: FSD – Final Site Drainage, LD – Land Development, WA – Wetland Alteration

Site Size: 18.5± acre parcel / 14.8± acres of disturbed area; existing and proposed impervious area is 1.2± acres and 11.0± acres, respectively

Location: 10201 Xylite St NE, Blaine

T-R-S: SE ¼, Section 22, T31N, R23W

District Rule: C, D, E, F, ACD 53-62 CWPMP Area

Recommendations: CAPROC

It is recommended that this Permit Application be given Conditional Approval Pending Receipt of Changes (CAPROC) and outstanding items related to the following items.

Rule D – Erosion and Sediment Control

1. Submit the following information per Rule D.4:

- (h) Provide documentation that an NPDES Permit has been applied for and submitted to the Minnesota Pollution Control Agency (MPCA).

Rule F – Wetland Alteration

- 2. Applicant must provide a "Transaction Form for Withdrawal of Wetland Credits from the Minnesota Wetland Bank" for the Blaine Site 7 wetland bank, which is signed by the bank user and the bank seller.

3. Per F.6(b)(4), submit to the District, a GIS shapefile or CADD file of the final WMC boundary.
4. The applicant must provide a draft declaration establishing a vegetated buffer area for the WMC for District approval. The declaration must include a vegetation management plan for District approval.
5. The applicant must provide a draft easement granting the District the authority to monitor, modify and maintain hydrologic and vegetative conditions within the WMC wetland and buffer adjacent to WMC wetland for District approval.
6. The applicant must provide a buffer signage plan including proposed signage and placement location for District consideration.

Administrative

7. Send one final, signed 11x17 sized plan set to the District, and e-mail a full-sized pdf copy to both the District and the District Engineer. Include a list of changes that have been made since approval by the RCWD Board.
8. Applicant must pay the remaining Anoka County Ditch 53-62 Water Management District Charge of \$690.29 associated with the parcel. This charge is payable to the District via check and should include ACD 53-62 WMD and the PIN number 003-223123330015 in the memo line.
9. Submit a copy of the plat or easements establishing drainage or flowage over stormwater management facilities, stormwater conveyances, ponds, wetlands, on-site floodplain up to the 100-year flood elevation, or any other hydrologic feature (if easements are required by the City of Blaine).
10. The applicant must submit a Draft Declaration for Maintenance of Stormwater Management Facilities acceptable to the District for proposed onsite stormwater management and pretreatment features.
11. The applicant must provide an attested copy of the signed and notarized legal document(s) from the County Recorder. Applicant may wish to contact the County Recorder to determine recordation requirements prior to recordation.
12. The applicant must submit a surety of \$78,250 along with an original executed escrow agreement acceptable to the District. If the applicant desires an original copy for their records, then two original signed escrow agreements should be submitted. The applicant must provide the first \$5000 in the form of a check and has the option of providing the remainder of the surety amount in the form of a check or a Performance Bond or Letter of Credit. The surety is based on \$6,750 for 14.8 acres of disturbance, \$59,900 for 119,881 CF of storm water ponds, and \$11,600 for 1,549 CY of floodplain mitigation.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit. By accepting the permit, applicant agrees to these stipulations:

1. An as-built survey of all stormwater BMPs (ponds, rain gardens, trenches, swales, etc.) is to be submitted to the District for verification of compliance with the approved plans before return of the surety.
2. Applicant must provide an as-built survey of the flood plain mitigation area to the District for verification of compliance with the approved plans.
3. An as-built survey of wetland boundaries, including quantification of wetland impact, is to be submitted for verification that wetland impact does not exceed amount proposed.

Exhibits:

1. Plan set containing 14 sheets dated and received 1-9-2018.
2. Permit application, dated 1-8-2018 and received 1-9-2018.
3. Stormwater Calculations, dated 9-12-2018 and received 9-13-2018, containing narrative, drainage maps, HydroCAD report for the 2-year, 10-year, and 100-year rainfall events for proposed and existing conditions, soils map, and floodplain calculations.
4. Authorization of Agent, dated 10-3-2017 and received 1-9-2018.
5. Geotech Report, dated 11-2-2017 and received 1-17-2018.
6. Revised Drainage Summary, dated and received 2-6-2018.
7. Revised Stormwater Calculations, dated and received 2-6-2018.
8. Discharge basin map, undated and received 2-6-2018.
9. Wetland Replacement Plan, dated 1-9-18, received 1-12-18.
10. Revised Wetland Replacement Plan, dated 1-9-18, received 1-18-18.
11. Email correspondence from the MnDNR regarding NHIS state-listed threatened and endangered species review, dated 10-24-17 and received within wetland replacement plan on 1-18-18.
12. Variance request, dated 1-9-18, received within wetland replacement plan on 1-18-18.
13. Revised Wetland Bank Withdrawal Form, dated 2-19-2018, received 2-19-2018.

Findings:

1. Description – The applicant is proposing to construct a 22,000± SF, two-story office building, attached 13,000± SF shop, and surrounding equipment and material staging yard. The project will disturb 14.8± acres and create 11± acres of new/reconstructed impervious surface. The site has an existing 1.2± acres of impervious surface. The applicant has submitted a \$13,850 application fee, which corresponds to >5 acres of new/redeveloped impervious surface, floodplain mitigation, wetland mitigation, >10 acres of land disturbance, and a variance application. The project drains to a wetland complex that discharges to ACD 53-62 which empties into Golden Lake, the resource of concern.
2. Stormwater – The applicant is proposing the BMP as described below for the project:

Proposed BMP Description	Location	Required NURP Volume	Volume provided
NURP Ponds	Western, Northern, and Eastern property lines	119,881± cubic feet below the outlet	121,597± cubic feet below the outlet

Soils on site are primarily silty sands (HSG B) soils. However, high groundwater levels were encountered during completion of soil borings and the seasonal high-water table is estimated to be between 904 and 906 throughout the site. The high seasonal groundwater levels hinder the ability to provided 3-feet of separation for infiltration. Thus, infiltration is not considered feasible and NURP Ponds are acceptable to meet the water quality requirement. The water quality requirement is governed by Rule C.9(d), which requires 2.5-inches over the area (13.21± acres)

draining to the ponds for a total requirement of 119,881± cubic feet. The proposed ponds exceed this volume. The project treats approximately 99% of the impervious area. Additional TSS removal is not practicable. Freeboard requirements are met onsite. The applicant has met all the Water Quality requirements of Rule C.6 and the design criteria of Rule C.9. The applicant has also meet freeboard requirements.

Drainage Area	2-year (cfs)		10-year (cfs)		100-year (cfs)	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Discharge 1	19.03	18.32	44.65	34.26	113.3	88.33
Discharge 2	1.92	0	5.36	1.53	14.6	8.58
Totals	20.95	18.32	50.01	35.79	127.9	96.91

The project is not located within the Flood Management Zone. The submitted information indicates that the project does not increase peak runoff rates in compliance with District Rule C.7.

The proposed ponds discharge to the north into a wetland complex that have been determined to be slightly susceptible by District staff (see Table C.4). The applicant has submitted calculations that indicate the small increase in runoff volume for the 2 and 10-year events of 2.069 and 2.546 acre-feet, respectively, do not constitute a substantial change in the bounce or inundation to the large (~49.3 acre) downstream wetland complex. This District Engineer agrees with these findings and the project is compliant with Rule C.8.

3. Wetlands – A wetland delineation was submitted and approved under 17-182R. The proposed project is located within the ACD 53/62 CWPMP area. The proposed project includes the construction of a transport facility building (7,000 SF) with two loading docks, three semi-truck service bays, and staff parking.

The wetland replacement plan was noticed to the TEP on 1-19-2018 and the comment period closed 2-12-2018. The applicant has responded to all TEP comments.

The project site is located within a District Comprehensive Wetland Protection and Management Plan (CWPMP) area. A MnRAM functional assessment was provided within the wetland replacement plan and found the wetland degradation status' to be moderately or severely degraded for all wetlands on site. Therefore, wetlands located within the WMC require a 2:1 replacement ratio, and wetlands outside of the WMC require a 1:1 ratio. The applicant has provided a detailed alternatives analysis, including offsite analysis, and demonstrated compliance with the sequencing requirements and adequately explained and justified the wetland impacts.

The applicant submitted an exemption application for Wetland 2 and a portion of Wetland 3. Application provided justification via historic aerial photography that these wetlands were created in areas of upland (excavated), and therefore meet the criteria of an incidental wetland (Mn Rule 8420.0105 Subp. D.) Incidental wetlands total 0.1688 acres.

The proposed project impacts requiring mitigation total 2.2183 acres of wetland, requiring 2.4918 acres of mitigation, consistent with Rule F Table 1. The applicant proposes the use of wetland bank credits from City of Blaine Site 7 wetland bank, which is within the same watershed (20) and Bank Service (7) as the wetland impacts. This wetland bank meets the requirement of Rule F6(d)(1). The Blaine city council must still approve this use of these credits but had requested approval by the District and USACE prior to presenting for council decision.

The applicant requested a Natural Heritage Database Review from the MnDNR to determine if there were any known state-listed threatened or endangered species located on site (for compliance with WCA 8420.0515). The MnDNR responded that the site contains no state-listed species, and that no further coordination is necessary, and no permit required.

The Wetland Management Corridor (WMC) is located on the site. The boundary has been adjusted consistent with F.6(b); however, the applicant is unable to fully meet the buffer provisions of Rule F.6(e)(2), which require an average buffer width of 50-feet and minimum width of 25-feet at all locations. The applicant has not met the 25-minimum width in all locations and would need to provide an additional 1.0 acre of buffer to meet the average 50-foot width. The applicant has requested a variance from the buffer requirements. Additionally, the stormwater pond located within the WMC buffer does not meet the 5:1 slope standards of the WMC. The TEP was consulted on the variance request and stated that the variance from the buffer width rule, as designed, is appropriate and that the wetland protection is maintained. The variance submittal and staff memo is provided as a separate document.

The buffer edge and WMC must be indicated by permanent, free standing markers. The property owner must file on the deed a declaration in a form approved by the District establishing a vegetated buffer area adjacent to the delineated wetland edge within the final WMC. The property owner must convey to the District and record or register, in a form acceptable to the District, a perpetual, assignable easement granting the District the authority to monitor, modify and maintain hydrologic and vegetative conditions within the WMC wetland and buffer adjacent to WMC. The vegetation management plan must meet requirements of Rule C.6(e)(1)(iv)-(v).

4. Floodplain – The site is partially located within a regulatory floodplain. The onsite 100-year flood elevation is 903.94. The project is proposing 1,823 CF of fill that will be mitigated on site within the proposed NURP pond. The mitigation volume provided is above the normal water level of the proposed NURP ponds and below the 100-year flood elevation of 903.94 totaling 53,622 CF and complies with the Rule E requirements.
5. Erosion Control – Proposed erosion control methods include silt fence, rock construction entrances, inlet protection and rip rap. An NPDES permit is required for the project. The SWPPP is located on sheets 10 and 11 of the plans. The information listed under the Erosion and Sedimentation Control Recommendations needs to be submitted. Otherwise, the project complies with RCWD Rule D requirements.
6. Drainage Systems – There are no drainage systems on or adjacent to the property. However, the property is within the ACD 53-62 Water Management District (WMD). The applicant must pay off the remaining \$690.29 WMD Charge.
7. Documenting Easements and Maintenance Obligations – Applicant must provide a draft maintenance declaration for approval, and a receipt showing recordation of the approved maintenance declaration and the drainage and flowage easements (if required).
8. Previous Permit Information – Previous permits 08-059 and 10-097 were for previous grading on a portion of the site.

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.

 2-21-18

Garrett Monson
MN Reg. No 54326

 2-21-18

Greg Bowles
MN Reg. No 41929

Technical Memorandum

To: Rice Creek Watershed District
Board of Managers

From: Garrett Monson, PE & Greg Bowles, PE
Houston Engineering, Inc.

Through: Chris Otterness, PE

Subject: Variance Request for Park Place, RCWD #18-003

Date: February 21, 2018

Cc: Phil Belfiori, RCWD
Nick Tomczik, RCWD
Gary Larson, Gernette Development, LLC, Applicant
Jeff Carlson, Park Construction Company, Agent
Melissa Barrett, Kjolhaug Environmental Services, Consultant

INTRODUCTION

Gary Larson, as the project applicant for the Park Place project has submitted a written request for a variance from Rice Creek Watershed District (RCWD) Rule F.6(e)(2), which requires that a "buffer adjacent to wetland within the final WMC must average at least 50 feet in width, measure at least 25 feet at all points, and meet the average width at all points of concentrated inflow" (hereafter buffer requirement). The applicant is also requesting a variance from RCWD Rule F.6(e)(10)(iii), which requires that (paraphrasing) "Buffer average slope will not be steeper than 5:1, and any stormwater feature within the buffer will not have exterior slopes greater than 5:1." The District Engineer evaluated the variance request per RCWD Rule L for Permit 18-003 in the Request for Variance and Statement of Hardship (Exhibit A) dated and received January 17, 2018.

The District Engineer evaluated the variance request by applying the "undue hardship" and "practical difficulties" test set forth in the municipal variance statute and incorporated by prior-adopted policy into the District's variance standard.

This standard is applied through the Board of Managers' consideration and weighing of the following criteria:

- (a) How substantial the variation is in relation to District Rule requirement(s);
- (b) the effect the variance would have on government services;
- (c) whether the variance will substantially change the character of the watershed resources or will be a substantial detriment to neighboring properties;
- (d) whether the practical difficulty can be alleviated by a feasible method other than a variance (economic considerations play a role in the analysis under this factor);
- (e) how the practical difficulty occurred, including whether the landowner created the need for the variance; and
- (f) whether in light of all of the above factors, allowing the variance will serve the interests of justice.

Ultimately, the Board determines whether consideration of the above criteria supports approval of a variance. The text below reviews the technical aspects of the proposal as they relate to the above criteria. The Board may exercise discretion in analyzing the applicant's compliance with the variance criteria – both generally and with regard to application of the individual variance (and other rule) criteria. The Board also may require input from legal counsel. Nothing herein should be construed as rendering a legal opinion.

PROJECT SUMMARY

The applicant is proposing to construct a 22,000± SF, two-story office building, attached 13,000± SF shop, and surrounding equipment and material staging yard. The project will disturb 14.8± acres and create 11± acres of new/reconstructed impervious surface. The project drains to Golden Lake which is the resources of concern. Proposed treatment for the project consists of a stormwater pond designed to NURP standards.

EVALUATION OF CRITERIA

Per practical difficulties criterion (a), the applicant has not met the average 50-foot requirement or the 25-foot minimum. The areas where the minimum distance is not met can be found in the Exhibit A Request for Variance dated 1-17-2018. The minimum buffer width of 25-feet is exceeded along the majority of the WMC buffer (807 linear feet). Along 102 linear feet the WMC buffer 50-foot average is met, with a maximum width of 75-feet provided. Along 139 linear feet, the WMC buffer width is 0-feet in order to avoid filling wetlands to create buffer, and meet project space/area requirements. No points of concentrated inflow will be present.

The average WMC buffer slope is 2-8% (flatter than minimum buffer slope requirement of 5:1). The interior side slopes within the narrow, zig-zag storm pond are 3:1. Side slopes within the northernmost storm ponds are 4:1. These BMPs are within the buffer. However, these are interior slopes and are not required to meet the minimum requirement of 5:1. The slopes were designed to minimize wetland impacts. Although the applicant requested a variance from F.6(e)(10)(iii), this District Engineer finds that the variance is not needed. The ER for Park Place, dated February 21, 2018 finds that the applicant would need to provide an additional 1-acre of buffer to meet the average 50-foot width. Other than Rule F.6(e)(2), the applicant will meet the remaining provisions of the buffer requirement.

Per criterion (b), issuance of a variance for the Park Place project is not expected to increase flooding (see criterion (c)) or have any negative effect on government services.

Per criterion (c), which sets the criteria for consideration of whether the variance will effect a substantial change in the character of resources within the watershed, the District Engineer used three criteria to assess substantial change: 1) water quality, defined the quantity of pollutants such as phosphorus and suspended sediment leaving the site and the potential for degrading water quality downstream; 2) the presence of and potential impact to special and impaired waterbodies as defined by various laws including the Minnesota Pollution Control Agency stormwater program, whether a water body is impaired and related designations including Wild and Scenic or Outstanding Natural Resource Value designations; and 3) flooding, the potential for flood damages or other adverse hydrologic impacts.

In assessing whether a substantial change in the character of the watershed resources may occur, we considered, not exclusively but as a measure of impact, the presence of and potential impact to the following:

- a 303(d) listed water body (i.e., an impaired water);
- a high quality or non-degraded wetland;
- a federally listed threatened or endangered species or state threatened, endangered or species of special concern and their critical habitat;
- a Scientific and Natural Area as defined by the Minnesota Department of Natural Resources;
- resources protected from nondegradation as identified within 7050.0180 Nondegradation for Outstanding Resource Value Waters; and
- Other generally sensitive resources.

Golden Lake, which receives project drainage, is listed on the Section 303(d) impaired water list. The affected designated use is aquatic recreation with a pollutant or stressor of nutrient/eutrophication biological indicators. The project as a whole is not expected to cause adverse impacts. Curb, gutter and storm sewer will route all of the drainage to a NURP pond to mitigate the effect of the lack of buffer by removing pollutants prior to runoff entering the wetlands.

It is not likely that the other resources identified above will be negatively affected by the reduced buffer widths.

Per criterion (c) and whether issuing the variance has a negative effect to the neighboring properties, we considered whether the granting variance will:

- cause or contribute to a change in the 100-year floodplain elevation immediately downstream or upstream of the project site
- increase the frequency or magnitude of flood damages to adjacent properties; or
- increase hardship downstream from peak flow and flood duration.

The proposed variance is for the buffer requirements, which has minimal effect of flood elevations. The applicant has complied with the Rule C stormwater requirements for peak rate and water quality.

The proposed variance on the buffer requirements will have a minimal effect on the adjacent wetland resources. The wetland complex is large and extends off the property to the north and east. Based on the size of the wetland and the length of the reduced buffer width, it does not appear that the reduced buffer will have an effect on the wetland resource. Additionally, the applicant is collecting and treating all of the runoff from the newly created impervious surface via NURP stormwater ponds, so no direct runoff will enter the wetland without treatment. The applicant is purchasing wetland bank credits for the entire wetland area disturbed. The applicant is providing buffer in areas where feasible.

Per criterion (d), an assessment of whether the practical difficulty can be alleviated by a feasible method other than a variance (economic considerations play a role in the analysis under this factor) is necessary. The applicant has indicated that the project cannot be built without the variance, as the project must be built to a minimum size to be marketable. The building size and location requirements are not engineering related and thus not evaluated. However, the applicant met the Wetland Conservation Act requirements to avoid and minimize wetland impacts. The entire site is comprised of the development area, wetlands, or buffer. To meet

the minimum buffer width requirement or the average buffer width requirement, additional wetland could be filled to create the buffer, however this is not considered acceptable under WCA and is not considered prudent.

Per criterion (e), we considered how the practical difficulty occurred, including whether the landowner created the need for the variance requires consideration. On the basis of the applicant's representation, the variance is necessary to make economic use of the property. Per the discussion above, there is no feasible way to do the project which meets the requirements of the applicant, the District and the City without a variance.

In consideration of criterion (f), some determination of whether in light of all of the above factors, allowing the variance will serve the interests of justice is necessary. This criterion lies largely in the Board's domain as it involves judgments of a non-technical nature. Our criterion for assessing this portion of the practical difficulties standard is the ability or inability of other permit applicants with similar site conditions to comply with the Rule C.6(c) water quality treatment and BMP siting requirements. Other applicants have had the ability to feasibly meet this requirement onsite because the site constraints presented here were not evident or alternative BMPs, such as inlet filtration, was shown to be effective in that setting.

EXHIBIT A

1. Variance request form dated and received 1-17-2018.

Exhibit A
Variance Request

The applicant's signature below affirms that the applicant has carefully read Rice Creek Watershed District Rule L, Variances, and the Permit Variance Guidance (effective July 1, 2013).

Date: January 9, 2018

Permit # RCWD Application #17-182R

Applicant: Gernette Development, LLC (AGENT: Park Construction, Jeff Carlson)

Address: 17215 Naples Street NE, Ham Lake, MN 55304

Telephone number: AGENT: 763-786-9800

Email: ggl.larson1935@gmail.com (AGENT: jcarlson@parkconstructionco.com)

Property location and county property identification number: Anoka County PID 22-31-23-33-0015

For all items below, attach additional sheets if necessary.

1. RCWD Rule from which variance is requested (circle applicable rule(s) and cite section/paragraph of rule):

A B C D E **F** G H I J

2. **Project description:** *Park Place: Consolidation and relocation of Park Construction company to one location (i.e., "Park Place") that will include a combined office, maintenance shop, warehouse, and construction parking and storage yard facility (i.e., construction company facility) with associated utilities, stormwater treatment areas, and buffers on avoided wetlands.*

3. **Requirements of applicable rule(s) from which variance is being requested:**

Rule F 6.E(2) Buffer adjacent to wetland within the Final WMC must average at least 50 feet in width, measure at least 25 feet at all points, and meet the average width at all points of concentrated inflow. RCWD Rule F 6.(e)(10)(iii) (paraphrasing) Buffer average slope will not be steeper than 5:1, and any stormwater feature within the buffer will not have exterior slopes greater than 5:1

4. Are you requesting a variance pursuant to **X** Undue Hardship or **X** Practical Difficulty standard (check one or both)? Please complete following sections accordingly. Greater specificity will benefit your request.

a. Description of Undue Hardship (must not rest entirely on economic burden).

Strict implementation of the Rule F 6 on the proposed site would cause undue hardship to the Applicant because implementation would either result in significant additional wetland fill in order to create rule width upland buffer (not advocated by BWSR and an economic burden with increased permitting and replacement costs), or would result in narrower and insufficient usable development pad area within which to meet the project purpose (i.e., the site would not meet the project purpose, and the Applicant would need to search for an alternate site). An offsite alternatives analysis comparing practicable sites in southern Coon Rapids and Blaine has demonstrated that development of the proposed site for the Park Place project will result in the least amount of impact to wetlands and WMC buffers when compared to development of other practicable sites. An expanded search for alternative sites would increase current Park Construction employee commute times and likely negatively impact the employee base of the company if a more distant company relocation were required.

b. Description of Practical Difficulty (must not rest entirely on economic burden).

The requested variance is to allow for deviations from (1) WMC buffer width minimums of 0-ft and averages of 50-ft, and (2) stormpond side slopes within the WMC greater than 5:1 in grade. The requested variance meets the "practical difficulties test" as follows:

- 1. The requested variance is reasonable in that it allows the Applicant to meet the project purpose, while at the same time minimize impacts to wetlands. No other alternative sites or project footprints are feasible that would have less wetland impact and not require a similar or greater variance.*
- 2. The requested variance is necessary to address the unique circumstances that exist due to the location and shape of wetlands on the property, and the shape of resulting usable space on the property. No other project footprint/design is feasible that would result in less wetland impact and not require a similar or greater variance.*
- 3. The requested variance will not change the essential character of the locality. It will be compatible with proposed character of the development site and adjacent similar use sites to the east and south.*

If requesting variance under Practical Difficulty standard, please respond to the following:

- (i) How substantial is the requested divergence from the District rule? *The Site Level WMC prior to development is 5.73 acres. As proposed, the post-development Final WMC will be 4.73 acres, which represents about 83% of the requirement (or 1.0 acre less than the requirement).*

The minimum buffer width of 25 feet is exceeded along the majority of the WMC buffer (870 linear feet). Along 102 linear feet the WMC buffer 50-ft average is met, with a maximum width of 75-ft provided. Along 139 linear feet, the WMC buffer width is 0-ft in order to avoid filling wetland to create buffer, and meet

project space/area requirements. **See Figure A attached.** No points of concentrated inflow will be present. Usable space adjacent to the 0-ft width buffer area is critical to meeting the project purpose. Large/long heavy equipment will need to use this space to circulate through the site. There is no other available circulation route for large equipment.

The average WMC buffer slope is 2-8% (flatter than 5:1). Side slopes within the narrow, zig-zag stormpond are 3:1. Side slopes within the northernmost stormponds are 4:1. Stormponds on the site were designed to meet treatment requirements, yet provide sufficient space to meet the project purpose.

- (ii) In what respects, and to what extent, would the variance increase the cost or difficulty of providing governmental services? *Decreased wetland buffer width does not increase extent or cost of governmental service at the location of the variance or anywhere else on the site.*
- (iii) How would the variance change the character of the water resource or be a detriment to neighboring properties? *Wetlands 1 and 3a (the water resource which the buffer is protecting) will not be negatively affected by the decreased buffer width. Currently, there is limited functional buffer along these wetland edges due to previous site disturbance. Therefore, the reduced width buffer will not affect the character of the adjacent water resources, nor will it be a detriment to neighboring properties.*

Post-development, stormwater runoff from the proposed development will be directed to BMP treatment areas located along and within the WMC buffer. These BMPs have been designed to meet stormwater requirements, and provide sufficient development pad space to meet the project purpose. Although interior sideslopes of ponds are 3:1 to 4:1 (versus the required 5:1), these steeper slopes continue for a very short distance due to the narrow design of the ponds. Therefore, their design will not affect the character of the adjacent water resources, nor are they a detriment to neighboring properties.

Although not officially incorporated into the Final WMC due to its perpendicular nature with respect to its position to onsite WMC wetland, a large onsite stormpond parallels wetland located immediately offsite to the north. At over 1.75 acres this pond will provide protection to wetland immediate offsite to the north. This offsite wetland is not WMC wetland because it is just outside the boundary of the CWPMP.

- (iv) How can your project goals be met without a variance? Is any of these alternatives infeasible or economically unreasonable? *Project goals could be met by filling additional portions of Wetlands 1 and 3a to create upland buffer of rule required width. It is feasible (but not prudent) to fill wetland to create upland buffer; additional wetland fill is not the intent of the rule.*

- (v) What is the cause of the practical difficulty? Did you or a prior landowner contribute to circumstances creating the practical difficulty? *The difficulty was not created by the applicant or a prior landowner. The site is bordered on the north and east by wetland, and contains one large DNR Public Wetland in the northeast portion. The site is also relatively narrow in the southeast portion – which influences the internal layout and uses. There is only one plan layout for the site that avoids and minimizes wetland to the extent practicable, provides adequate stormwater treatment, maintains flow through the site from properties to the south, and meets the goals and requirements of the applicant.*
- (vi) How do the interests of justice weigh in granting the variance? *The proposed variance request satisfies all interested parties - wetland impacts have been minimized to the extent practicable, WMC buffer is provided (at 83% of the required amount), and the plan is feasible for the applicant. No untreated overland flow to the wetland will occur with the stormwater management plan design that includes ponding upslope of most of the wetland edges. Due to the highly disturbed nature of the site/existing WMC buffer, buffer habitat value is predicted to be equal or greater post development with granting of the requested variance and with implementation of the buffer seeding and management plan.*

5. Will the proposed activity, if conducted in accordance with the requested variance rather than the strict terms of the District rule:

- a. Have an adverse effect on public health, safety or welfare? *No*
- b. Create public expense? *No*
- c. Adversely affect water quality, water control or drainage in the District? *No*

6. How would granting the variance be consistent with the spirit and intent of the District rules, generally, and the rule from which the variance is requested? *One intent of the WMC upland buffer rule is habitat value. Due to the highly disturbed nature of the site, buffer habitat value is predicted to be equal or greater post development with granting of the requested variance and with implementation of the buffer seeding and management plan.*

A second intent of the rule is to provide upland buffer along the boundaries of wetlands to provide water quality protection to the wetland from untreated runoff. With the proposed plan, no wetlands within the final site level WMC will receive untreated runoff. Stormwater treatment areas will be located along nearly the entire perimeter of the site.

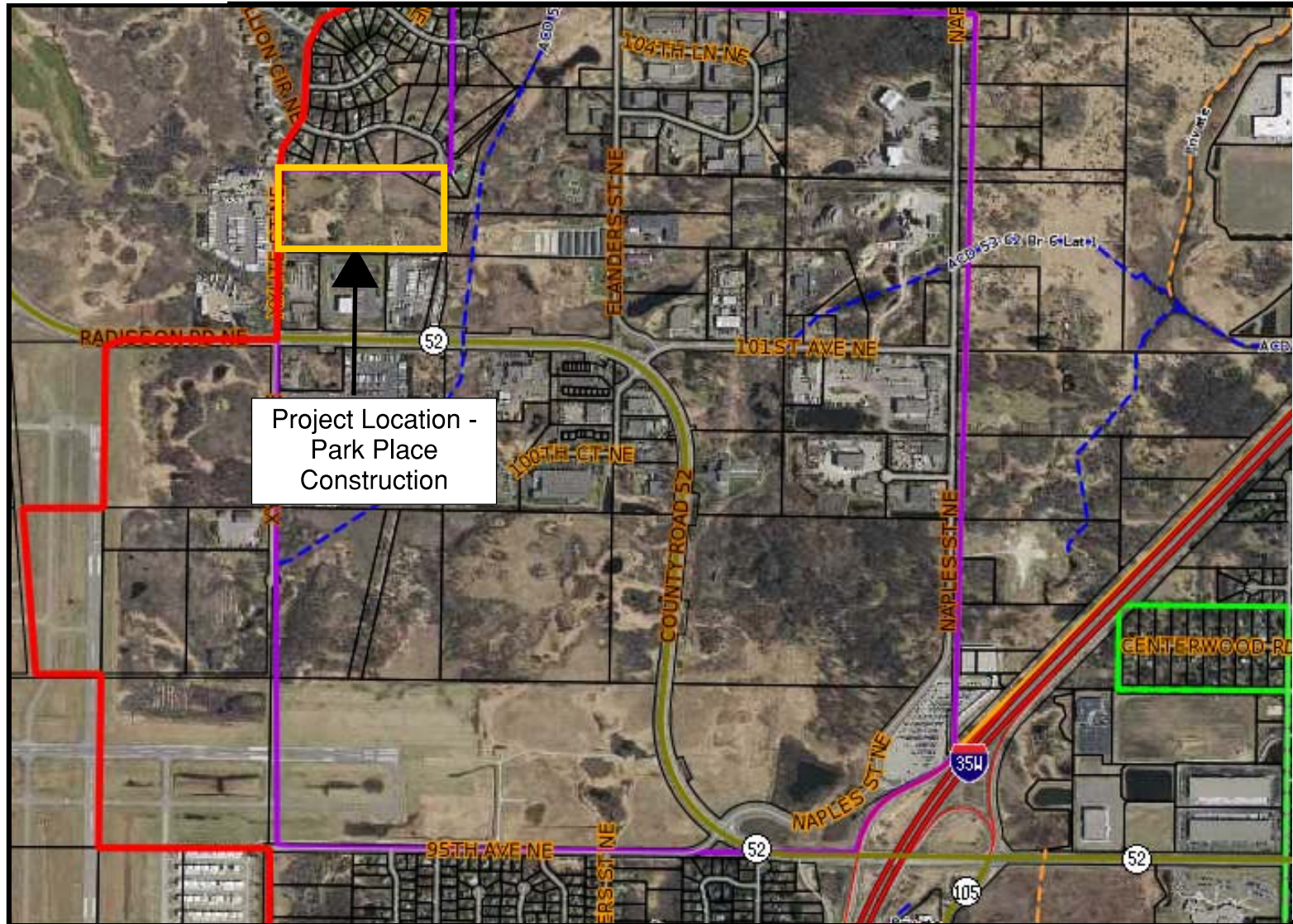
The proposed plan provides adequate water quality protection to WMC wetlands on the site, and meets the spirit and intent of the rule as practicable for the proposed project.











Applicant name: GARY LARSON Date: 1-17-2018

Applicant signature: *Gerhard Larson*

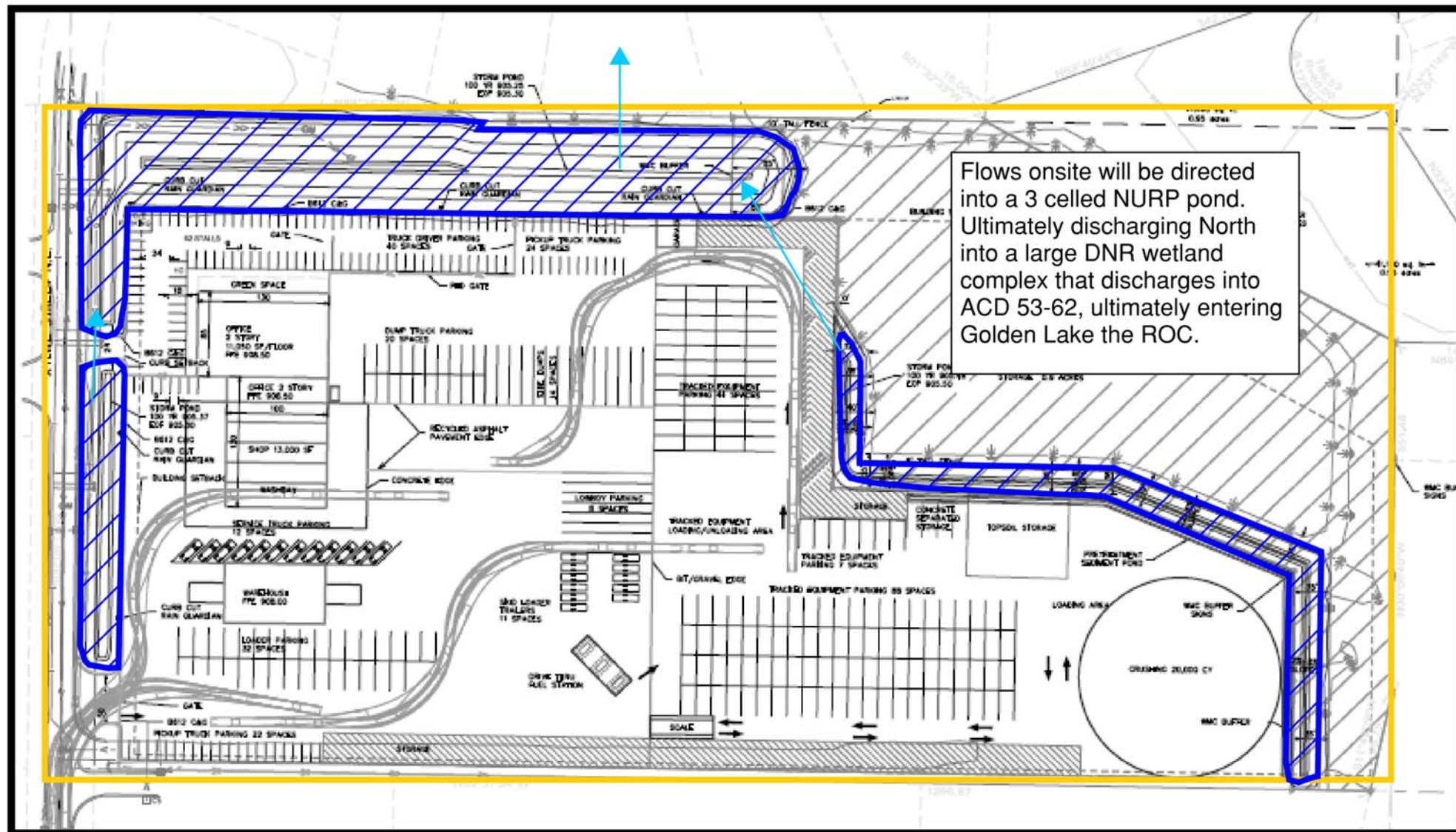
Staff Findings (RCWD only) *Gary*

Staff Recommendation (RCWD only)



- | | | | | | | |
|--|---|---------------|--|--|--|---|
|  District Boundary |  Public Waterway | Legend | |  Public Ditch - Open Channel |  Public Ditch - Municipal |  Private Ditch |
|  Project Location |  Public Ditch - Stormsewer | | |  Public Ditch - Tile |  Private Natural Waterway | |
|  City Boundary | | | | | | |





Legend

- Project Location
- Proposed Stormwater Pond
- ➔ Water Flow



**PUBLIC HEARING: URBAN STORMWATER REMEDIATION
COST-SHARE REQUESTS FROM CITIES OF COLUMBIA
HEIGHTS, FRIDLEY, HUGO, LINO LAKES,
MAHTOMEDI, NEW BRIGHTON, ROSEVILLE,
SHOREVIEW AND SAINT ANTHONY, WHITE BEAR
TOWNSHIP AND MINNESOTA COMMERCIAL
RAILWAY**



Pioneer Press newspaper February 7 & 14, 2018
Quad Press Newspaper February 13, 2018.
White Bear Press Newspaper February 14, 2018.
The Citizen Newspaper February 15, 2018.
Roseville Review Newspaper February 5, 2018.
New Brighton-Mounds View Bulletin February 5, 2018.
Shoreview-Arden Hills Bulletin February 5, 2018.
St. Anthony Bulletin February 5, 2018.
Sun Focus Newspaper February 16, 2018.
Forest Lake Times February 15, 2018.
Finance and Commerce February 13SW, 2018.
Blaine-Spring Lake Park Life newspaper February 16, 2018.
Mailed notice and USWR applications to RCWD counties February 5, 2018.
Mailed notice to RCWD cities February 5, 2018.
District website & posted notice at office February 5, 2018.
District email noticing February 5, 2018.

Rice Creek Watershed District

NOTICE OF PUBLIC HEARING on

Urban Stormwater Remediation Cost-Share Requests from Cities of Columbia Heights, Fridley, Hugo, Lino Lakes, Mahtomedi, New Brighton, Roseville, Shoreview and Saint Anthony, White Bear Township and Minnesota Commercial Railway

PLEASE TAKE NOTICE that at its **regular board meeting on Wednesday, February 28, 2018 at 9:00 a.m.** in the Shoreview City Council Chambers, 4600 North Victoria Street, Shoreview, Minnesota, the Rice Creek Watershed District (RCWD) Board of Managers will receive public comment under Minnesota Statutes 103B.251 on the ordering of one or more of the following projects: City of Columbia Heights – Silver Lake Boat Landing Stormwater Retrofits (\$50,000), City of Fridley – 69th Avenue Road Diet and Median Infiltration (\$50,000), City of Hugo – Stormwater Asset Management Program (\$12,000), City of Lino Lakes – LaMotte Neighborhood

4325 Pheasant Ridge Drive NE #611 | Blaine, MN 55449 | T: 763-398-3070 | F: 763-398-3088 | www.ricecreek.org

BOARD OF MANAGERS	Michael J. Bradley Ramsey County	Barbara A. Haake Ramsey County	Patricia L. Preiner Anoka County	Steven P. Wagamon Anoka County	John J. Waller Washington County
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Biofiltration Basin (\$39,500), City of Lino Lakes – West Shadow Lake Drive Sanitary Extension (\$50,000), City of Mahtomedi – Glendale Park BMP (\$50,000), City of Mahtomedi – Phase 3 Historic District Improvements (\$50,000), Minnesota Commercial Railway – Rice Creek Bridge Stabilization and Shoreline Protection (\$27,716), City of New Brighton – Lions Park Stormwater Reuse (\$50,000), City of Roseville – Evergreen Park Underground Filtration & Reuse (\$205,000), City of Shoreview – Rice Creek Fields Stormwater Reuse (\$50,000), City of Saint Anthony – Central Park Splash Pad Reuse Irrigation (\$50,000) and White Bear Township – Bald Eagle Lake Outfall Improvements (\$37,000). The RCWD may select all, some or none of the applications for full or partial funding. The RCWD’s total share of cost for selected projects will not exceed \$390,000 and would be funded by general tax levy on real property within the watershed. The cost-share requests can be reviewed at www.ricecreek.org or at the District office, 4325 Pheasant Ridge Dr., #611, Blaine, MN 55449-4539. 763-398-3070

ITEMS REQUIRING BOARD ACTION

1. Consider Findings and Order Accepting Wellington Property Petition and Directing Appointment of Engineer. (Nick Tomczik)

RESOLUTION 2018-06

RICE CREEK WATERSHED DISTRICT BOARD OF MANAGERS AS PUBLIC DRAINAGE AUTHORITY

FINDINGS AND ORDER ACCEPTING PETITION AND APPOINTING ENGINEER

Manager _____ offered the following Resolution and moved its adoption, seconded by Manager _____:

FINDINGS

1. Wellington Management, Inc., (Petitioner) and United Hospital Foundation (co-Petitioner) have petitioned the Board of Managers of the Rice Creek Watershed District (RCWD), Drainage Authority for the Anoka County Ditch 53-62 system (ACD 53-62), to realign a portion of ACD 53-62 Main Trunk and branches 4 and 5 for the purpose of a proposed mixed-use commercial/residential use of property riparian to the ditch.
2. The property over which the identified portions of ACD 53-62 passes is owned by United Hospital Foundation.
3. The action requested by Petitioner is re-alignment of the drainage system under Section 103E.227 with partial abandonment of the remnants under Section 103E.806.
4. The RCWD's action on the petition is governed by Minnesota Statutes Sections 103E.227 and 103E.806. The Petitioner has provided \$10,000 cash deposit bond. The petition is accompanied by exhibits. However, the exhibits do not adequately show the location of the realignment, and plans and specifications for the proposed ditch route. The petition does not contain a model of the proposed hydrologic condition in the realigned public drainage system. These defects in the petition can be remedied and should not delay the RCWD in assuming jurisdiction of these proceedings. In all other respects, the petition appears complete.
5. Notwithstanding the defects in the petition, the RCWD Board of Managers makes the following:

ORDER

- A. The Board of Managers accepts the petition and directs the Petitioner to correct the defects and provide a more detailed diagram of the proposed modifications to the drainage system and a hydrologic model of the proposed public drainage realignment. The detailed, supplemental information shall include:

- Alignment (provide and label lines on the map indicating the proposed alignment of public drainage system and portions proposed to be abandoned. Labels must include the names of the branches)
 - Open channel Profile (elevations and grades for all proposed modifications and description of how they relate to the as constructed condition of the system)
 - Cross section (bottom width, side slope, and top of bank width)
 - The proposed public drainage system right of way (in the form of a legal description that can be included in a permanent easement). This right-of-way must provide for a continuous access corridor for maintenance along at least one side of the open channel per the following, minimum performance standards:
 - 20' width, permanently vegetated, with no more than 5% cross-slope
 - Less than 5:1 longitudinal slope at any location
 - Culvert at crossings of the access corridor with the public drainage system open channel
 - Access from a public roadway
- B. The Board of Managers appoints Houston Engineering to investigate the effect of the proposed realignment and file a report of findings.
- C. The Engineer is directed to include in its investigation an assessment of effects from the realignment on benefitted property owners of the public drainage system.
- D. This order is not an approval of the realignment or partial abandonment proceedings, nor does it modify the drainage system. Subsequent proceedings on the petition will occur consistent with the requirements of Statutes Sections 103E.227 and 103E.806.

The question was on the adoption of the Resolution and there were __ yeas and __ nays as follows:

	<u>Yea</u>	<u>Nay</u>	<u>Absent</u>	<u>Abstain</u>
WALLER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HAAKE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRADLEY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WAGAMON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREINER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upon vote, the Chair declared the Findings and Order _____.

Michael Bradley, Secretary

Dated: February 28, 2018

* * * * *

I, Michael Bradley, Secretary of the Rice Creek Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I hereunto set my hand this 28th day of February, 2018.

Michael Bradley, Secretary



February 5, 2018

Public Ditch Authority
c/o Tom Schmidt, Rice Creek Watershed District
4325 Pheasant Ridge Drive
Blaine, MN 55449

Re: Petition for Realignment of Anoka County Ditch 53-62
Blaine, MN

Dear Mr. Schmidt:

With this letter and supporting documentation, Wellington Management, Inc. (Petitioner) formally petitions the Rice Creek Watershed District (RCWD) as the drainage authority for Anoka County Ditch 53-62, for permission to abandon and relocate a portion of the ditch that runs through the proposed Lexington Meadows development. This petition is made pursuant to Minnesota Statutes, Section 103E and RCWD Rule I.

Background

This request is made to accommodate a mixed-use commercial/residential development of property by the Petitioner. The development will consist of a combination of commercial and high-density residential lots and associated infrastructure. ACD 53-62 traverses the site from north to south, from 109th Avenue NE (CSAH 12) on the north, down to the edge of the property on the south. ACD 53-62 is currently located within the extents of the proposed development, necessitating the realignment.

Existing Conditions

The proposed site is the north half of the northeast quarter of Section 23, Township 31, Range 23 west. The site is bounded on the north by 109th Avenue NE (CSAH 12), on the east by Lexington Avenue NE (CSAH 17), on the south by commercial development, and on the west by undeveloped woodland. The main trunk of ACD 53-62 traverses the site from north to south, essentially creating two separate parcels of land on either side of the ditch. Branch 4 and Branch 5 of ACD 53-62 are located onsite, just south of 109th Avenue NE (CSAH 12). Branch 4 extends out from the main trunk to the east, to Lexington Avenue NE. Branch 5 extends out from the main trunk to the west, following along the south side of 109th Avenue NE.

There are several private ditches onsite that connect to the main trunk of ACD 53-62, as well as a private ditch along the westerly property line of the site.

RCWD has on file functional profiles for the main trunk of ACD 53-62, as well as Branch 4 and Branch 5 of ACD 53-62. The function profiles show the “as-constructed and subsequently improved” profile for the ditches. See Attachment 1 for RCWD function profiles.

RCWD also has a hydraulic model of this ditch system. According to RCWD, the regulatory flood elevation onsite is 897.0.

Proposed Conditions

The proposed plan of development proposes to realign the main trunk of ACD 53-62 further west, to allow for the development of the property. Approximately 1,300 feet of the main trunk of ACD 53-62 will be abandoned, from station 133+00 to station 120+00. The proposed main trunk will run west along Branch 5 for approximately 370 feet, then south for approximately 550 feet where it will flow into a proposed lake feature along the southern property line. The main trunk will then exit the lake feature at the southeast corner of the lake, and continue east along the south property line for approximately 350 feet before matching into the existing main trunk at the south property line. The official profile of this portion of the main trunk of ACD 53-62 is flat at an elevation of 891.46.

As part of the project, Anoka County Highway Department has required turn lane improvements to 109th Avenue NE (CSAH 12). The proposed improvements will result in a slight shift of the east edge of Branch 4 of ACD 53-62. The eastern 470 feet of Branch 4 of ACD 53-62 will be shifted south approximately 10 feet to allow for the 109th Avenue (CSAH 12) turn lane improvements.

Similarly, the east 470 feet of Branch 5 of ACD 53-62 will be shift south approximately 10 feet to allow for the 109th Avenue (CSAH 12) turn lane improvements. The portion of Branch 5 that will be shifted south will become the main trunk of ACD 53-62 per the proposed realignment of the main trunk.

The private ditches onsite within the proposed development area will be filled in to allow for development of the property. See Attachment 2 for grading plan showing the proposed plan of development and ditch realignment.

Funding

The Petitioner will provide 100% funding for design, construction, and oversight costs associated with the ditch realignment. No funding from RCWD or other public entities is being requesting for this project.

“Terms of the Funds”

The following language in the petition served as the “terms” of the bond/cash deposit. This is taken directly from state statute:

1. Accompanying this petition is the Petitioner’s escrow deposit of \$10,000. Petitioner acknowledges and agrees that additional deposit may be required as additional costs are incurred in the proceedings. Petitioner agrees to pay all costs and expenses that may be incurred if the proceedings are dismissed.

2. Petitioner acknowledges that the costs incurred before the proposed drainage system modification is established may not exceed the amount in the amount of the Petitioner's deposit.
3. Petitioner acknowledges that a claim for expenses greater than the amount of the deposit may not be paid unless an additional deposit is filed.
4. Petitioner acknowledges that if the drainage authority determines that the cost of the proceedings will be greater than the Petitioner's deposit before the proposed drainage system modification is established, the drainage authority must require an additional deposit to cover all costs to be filed within a prescribed time.
5. Petitioner acknowledges that the proceeding will be stopped until the additional deposit prescribed by the drainage authority is filed.
6. Petitioner acknowledges that if the additional deposit is not filed within the time prescribed, the proceeding must be dismissed.
7. Petitioner acknowledges that the costs of the Rice Creek Watershed District in the proceedings will be paid from the deposit.

Maintenance

Ownership and maintenance of the ditches will continue to be RCWD. The Petitioner will provide an easement and routes for RCWD access and maintenance.

We request that RCWD set a time and location for a public hearing on this partial abandonment petition and give notice of the hearing by mail to owners of all property benefited by the drainage system and either in a newspaper of general circulation within the affected drainage area or by publication on the RCWD web site pursuant to Minnesota Statutes, Sections 103E.805 and 103E.806.

Please contact me at (763)489-7912 or jradach@carlsonmccain.com if you have any questions or require any additional information.

Sincerely,



Joseph Radach, PE
Carlson McCain

Petitioner Signature



Steve Wellington
Wellington Management, Inc.



February 6, 2018

Public Ditch Authority
c/o Tom Schmidt, Rice Creek Watershed District
4325 Pheasant Ridge Drive
Blaine, MN 55449

Re: Petition for Partial Removal and Relocation of Anoka County Ditch 53-62
Lexington Meadows
Blaine, MN

Dear Mr. Schmidt:

With this letter, United Hospital Foundation (Co-Petitioner) formally supports Wellington Management, Inc. (Petitioner) in their petition to abandon and relocate a portion of Anoka County Ditch 53-62 at the proposed Lexington Meadows development. The Rice Creek Watershed District (RCWD) is the drainage authority for the ditch. The petition is made pursuant to Minnesota Statutes, Section 103E and RCWD Rule I.

United Hospital Foundation supports Wellington Management, Inc. as a co-petitioner for the ditch abandonment/relocation project. Wellington Management, Inc. will be fully responsible for all fees, construction costs, and permitting related to the project. United Hospital Foundation is acting as co-petitioner solely to allow for Wellington Management, Inc. to petition for the abandonment/relocation of portions of Anoka County Ditch 53-62 on the property that is currently owned by United Hospital Foundation.

Please contact me at (763)489-7912 or jradach@carlsonmccain.com if you have any questions or require any additional information.

Sincerely,

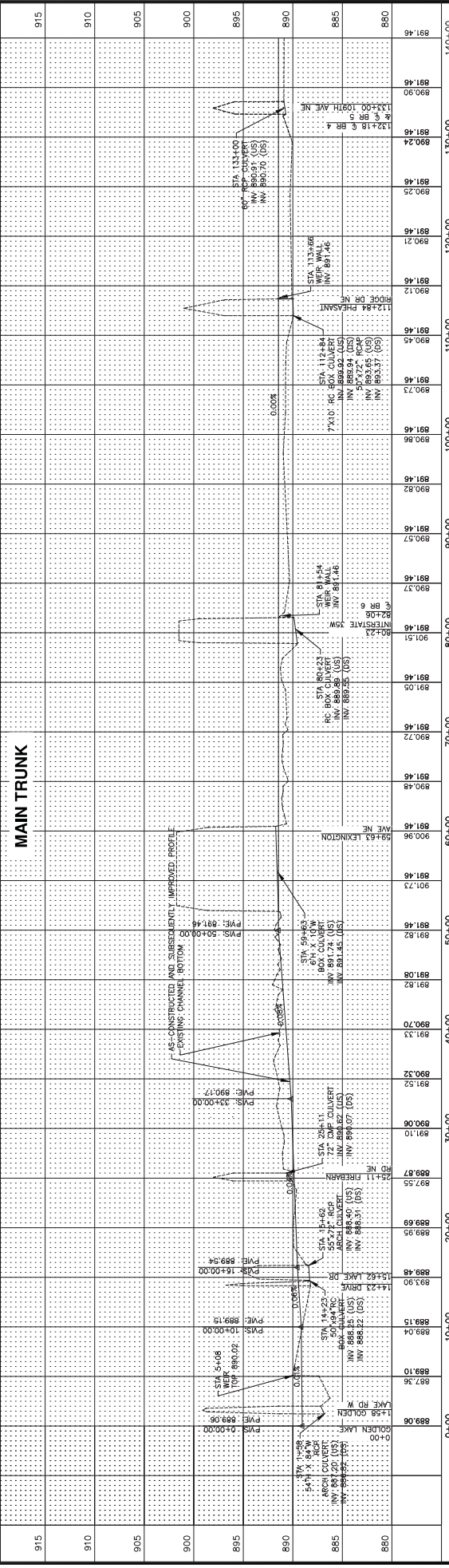
Joseph T. Radach, PE
Carlson McCain

Co-Petitioner Signature
United Health Foundation

Print Name: DAVID BYRD

Signature/Date: 2-6-18

ATTACHMENT 1
RCWD DITCH FUNCTION PROFILES



No.	Revision	By	Date

ANOKA COUNTY DITCH 53-62
FUNCTIONAL PROFILE
RICE CREEK WATERSHED DISTRICT

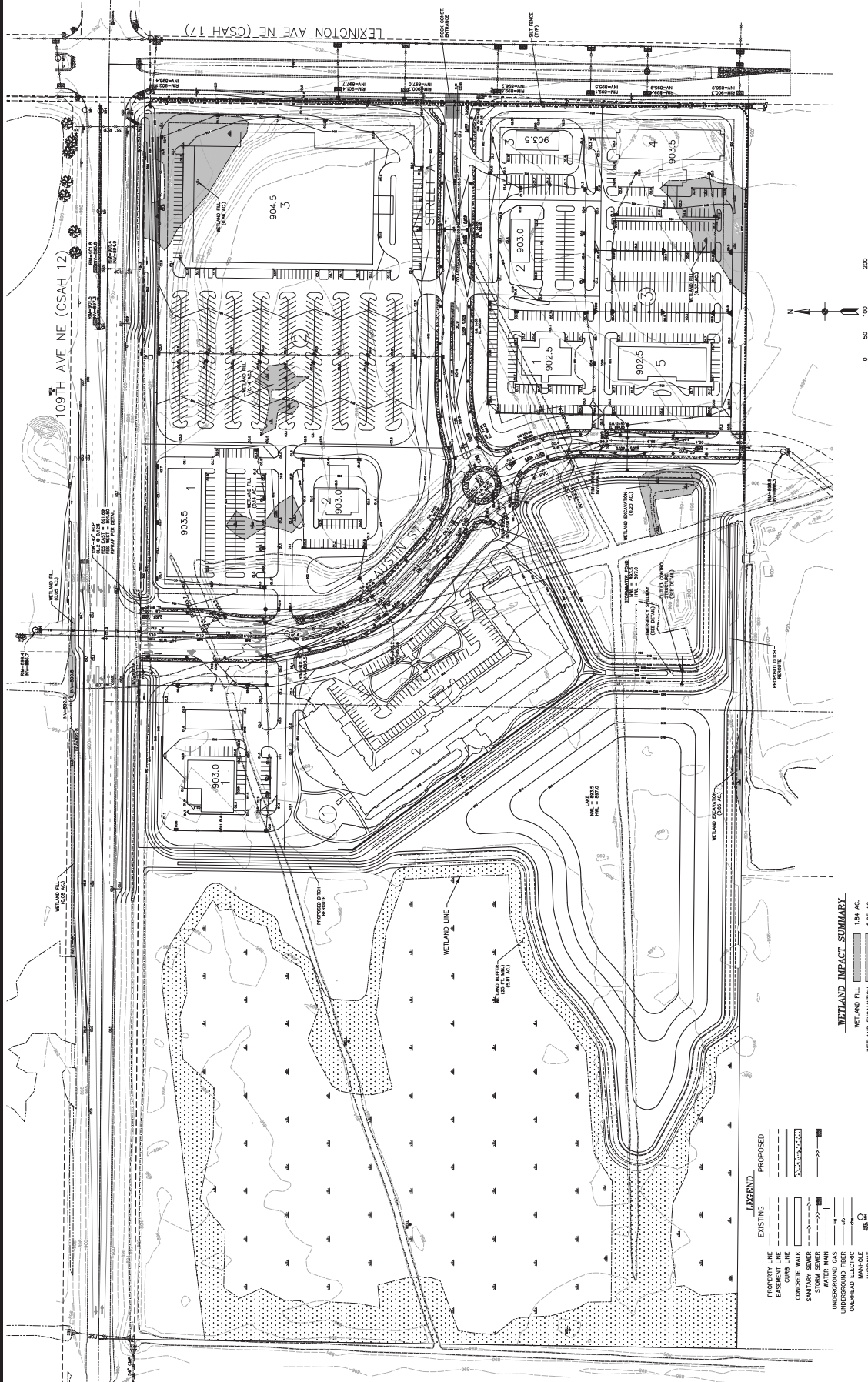
Maple Grove
P: 763.693.4572
F: 763.693.5572



Drawn by: DIL
Checked by: CCO
Date: 4-11-11
Scale: AS SHOWN

FIGURE 9
MAIN TRUNK
PROJECT NO. 5555-080.003.001

ATTACHMENT 2
PRELIMINARY GRADING PLAN



CALL BEFORE YOU DIG

Know what's below. Call before you dig.

BENCHMARKS

1. Project Survey Benchmark No. 9095
 Elevation = 902.21 (NOOD 29)
 marked with R.G. 40092, located at
 Elevation = 903.32 (NOOD 29)
2. Top of Property Corner Iron Monument
 marked with R.G. 40092, located at
 Elevation = 903.32 (NOOD 29)

WETLAND IMPACT SUMMARY

WETLAND FILL	1.84 AC.
WETLAND EXCAVATION	0.25 AC.
TOTAL WETLAND IMPACT	2.09 AC.
NOTE:	WETLAND REPLACEMENT CREDITS TO BE PURCHASED IN LIEU OF ON-SITE REPLACEMENT.
WETLAND BUFFER REQUIRED	5.81 AC.
(50 FT. AVERAGE WIDTH)	6.71 AC.

LEGEND

EXISTING	PROPOSED
PROPERTY LINE	PROPERTY LINE
EASEMENT LINE	EASEMENT LINE
CONCRETE WALL	CONCRETE WALL
SANITARY SEWER	SANITARY SEWER
STORM SEWER	STORM SEWER
WATER MAIN	WATER MAIN
UNDERGROUND FIBER	UNDERGROUND FIBER
OVERHEAD ELECTRIC	OVERHEAD ELECTRIC
HYDRANT	HYDRANT
GATE VALVE	GATE VALVE
SEWER SOAK	SEWER SOAK
POWER POLE	POWER POLE
EDGE OF FLOOD PLAIN	EDGE OF FLOOD PLAIN
10' CONTOUR	10' CONTOUR
500' Z CONTOUR	500' Z CONTOUR
(CURVE ELEVATIONS ARE TO CENTERLINE)	(CURVE ELEVATIONS ARE TO CENTERLINE)
SALT PILE	SALT PILE

ITEMS REQUIRING BOARD ACTION

2. Consider Award of Urban Stormwater Remediation Cost-Share Projects. (Kyle Axtell)

MEMORANDUM

Rice Creek Watershed District

Date: February 20, 2018
To: RCWD Board of Managers
From: Kyle Axtell, Water Resource Specialist/Project Manager
Subject: 2018 Urban Stormwater Remediation Program Applications

BACKGROUND & DISCUSSION

At its regular meeting on October 25, 2017 the RCWD Board authorized staff to solicit proposals for the 2018 Urban Stormwater Remediation Cost-Share Program. A request for proposals was released and eleven applicants submitted thirteen proposals by the application deadline of December 29, 2017. Proposals received were requested to be preliminary in nature, so as to not require large outlays of capital by applicants only to have their proposal denied. Further planning and design would occur upon approval by the RCWD Board. The RCWD has approximately \$392,000 available for project funding in 2018 and a total of \$721,216 was requested through the thirteen applications.

The purpose of this agenda item is to provide for a discussion among the Board members regarding the thirteen cost-share applications, resulting in a decision about which projects will be offered funding and at what level. RCWD staff will present a summary of reviews provided by staff, the District Engineer and the Citizen Advisory Committee, along with reasoning behind the final recommendations during the February 28, 2018 regular Board meeting, after a public hearing is held earlier in the meeting to receive public comment on the applications pursuant to M.S. 103B.251. There are two applications that could be funded through TMDL Implementation funds within the District's CIP, if the Board wishes.

RCWD staff discussed the applications with the RCWD Citizen Advisory Committee during its meeting on February 7, 2018. The CAC passed a motion recommending the Board of Managers allocate the available funding consistent with the committee's rankings as shown in the "CAC Ranking" column presented in Table 1 below. The CAC agreed with staff that Hugo's application was inconsistent with program criteria and would not be considered for funding.

Houston Engineering has also completed its independent review of the applications. A technical review memo is included behind each application in the packet for the Board's consideration. The engineer's summary matrix is also included for the Board's review.

All input from the CAC and Engineer has been considered by RCWD staff and incorporated into the final averaged rankings and funding recommendations, which can be found in Table 1. Clarifying notes are provided in Table 1 regarding the allocation of funds among eleven applications in total. Nine applications are proposed to be awarded funding through the District's Urban Stormwater Remediation Cost-Share Program and draft Resolution 2018-03 is attached for the Board's consideration.

Separately, the City of Lino Lakes' LaMotte Neighborhood Biofiltration Basin is proposed to be awarded funding through the Anoka Chain of Lakes TMDL Implementation Project and White Bear Township's Bald Eagle Lake Outfall Improvements Project is proposed to be awarded funding through the Bald Eagle Lake TMDL Implementation Project. Draft Resolutions 2018-04 and 2018-05, respectively, are attached for the Board's consideration as well.

MEMORANDUM
Rice Creek Watershed District

TABLE 1. Final Project Rankings and Funding Recommendations

Applicant	Project Title	Rankings			Request	Award	Source
		Staff	HEI	CAC Avg			
City of Fridley	69th Avenue Road Diet and Median Infiltration	1	1.5	2	\$ 50,000	\$ 47,500 ^	USWR
City of Roseville	Evergreen Park Underground Filtration & Reuse	2	1.5	4	\$ 205,000	\$ 45,000 *	USWR
City of New Brighton	Lions Park Stormwater Reuse	3	4	3	\$ 50,000	\$ 47,500 ^	USWR
City of Columbia Heights	Silver Lake Boat Landing Stormwater Retrofits	6	6	1	\$ 50,000	\$ 33,745 %	USWR
City of Shoreview	Rice Creek Fields Stormwater Reuse	4	4	6	\$ 50,000	\$ 47,500 ^	USWR
City of Lino Lakes	LaMotte Neighborhood Biofiltration Basin	5	8	5	\$ 39,500	\$ 39,500	ACOL TMDL
City of Mahtomedi	Glendale Park BMP	7	4	11	\$ 50,000	\$ 47,500 ^	USWR
White Bear Township	Bald Eagle Lake Outfall Improvements	8	10.5	7	\$ 37,000	\$ 35,000 @	BEL TMDL
City of Lino Lakes	West Shadow Lake Drive Sanitary Extension	9	8	10	\$ 50,000	\$ 47,500 ^	USWR
MN Commercial Railway	Rice Creek Bridge & Shoreline Stabilization	11	8	9	\$ 27,716	\$ 27,716 &	USWR
City of Mahtomedi	Phase 3 – Historic District Improvements	10	10.5	8	\$ 50,000	\$ 47,500 ^	USWR
City of St. Anthony	Central Park Splash Pad Reuse Irrigation	12	12	12	\$ 50,000	\$ 0	---
City of Hugo	Stormwater Asset Management Program	---	---	---	\$ 12,000	\$ 0 #	---
Totals					\$ 721,216	\$ 391,461	USWR
					\$ 35,000	\$ 39,500	BEL TMDL
							ACOL TMDL

Notes

- ^ Slight reduction from \$50,000 maximum to accommodate fair funding of selected projects
- * 4.5 acres irrigated X \$10,000 per acre
- % 50% of local match for MN Public Facilities Grant
- @ 2018 Bald Eagle Lake TMDL Implementation budget limited to \$35,000
- & Private applicant; will require detailed maintenance agreement
- # Project not eligible for funding through USWR cost-share program

Proposed motions: Manager _____ moves to offer resolution 2018-03 and its adoption, seconded by Manager _____.
 Manager _____ moves to offer resolution 2018-04 and its adoption, seconded by Manager _____.
 Manager _____ moves to offer resolution 2018-05 and its adoption, seconded by Manager _____.

Attachments: Draft Resolutions 2018-03, 2018-04 & 2018-05; Draft Cost-Share Agreement Template; Cost-Share Applications; RCWD Engineer Reviews & Summary Matrix

RESOLUTION 2018-03

**RICE CREEK WATERSHED DISTRICT
BOARD OF MANAGERS**

**ORDERING 2018 URBAN STORMWATER REMEDIATION
COST-SHARE PROJECTS PURSUANT TO MINNESOTA STATUTES §103B.251**

Manager _____ offered the following Resolution and moved its adoption, seconded by Manager _____,

WHEREAS the Rice Creek Watershed District has adopted a water resource management plan (WRMP) in accordance with Minnesota Statutes §103B.231;

WHEREAS the WRMP's Capital Improvement Plan (CIP) identifies a cost-share program to improve and remedy stormwater management systems in developed urban environments and, on October 25, 2017, the Board of Managers ("Board") authorized staff to initiate the program and solicit proposals;

WHEREAS the City of Fridley's "69th Avenue Road Diet and Median Infiltration Project", the City of Roseville's "Evergreen Park Underground Filtration & Reuse Project", the City of New Brighton's "Lions Park Stormwater Reuse Project", the City of Columbia Heights' "Silver Lake Boat Landing Stormwater Retrofits", the City of Shoreview's "Rice Creek Fields Stormwater Reuse Project", the City of Mahtomedi's "Glendale Park BMP", the City of Lino Lakes' "West Shadow Lake Drive Sanitary Extension Project", Minnesota Commercial Railway's "Rice Creek Bridge and Shoreline Stabilization Project", and the City of Mahtomedi's "Phase 3 – Historic District Improvements" (together, the "Projects") each has been reviewed by District Staff, the District Citizen Advisory Committee and the Board and found to meet program criteria;

WHEREAS in accordance with Minnesota Statutes §103B.251, subdivision 3, the District held a duly noticed public hearing on ordering of the Projects on February 28, 2018, at the Shoreview City Council Chambers, at which time all interested parties had the opportunity to speak for and against any of the Projects;

WHEREAS the RCWD Engineer has evaluated each of the Projects, including its technical elements and cost-effectiveness, and the Engineer's views have been fully considered by the Board;

WHEREAS the Board has reviewed and approved a template cost-share agreement for use with each of the entities proposing a project, providing generally that on the Board's ordering of a Project and its construction by the proponent, the District will provide reimbursement for 50 percent of approved construction costs up to a specified amount, and the proponent will maintain its project in accordance with a maintenance plan approved by the District;

WHEREAS the Board finds that each of the Projects, as constructed and maintained in accordance with the terms and responsibilities of the cost-share agreement, will be conducive to public health and promote the general welfare, and is in compliance with Minnesota Statutes §§103B.205 to 103B.255 and the WRMP adopted pursuant to §103B.231;

THEREFORE, BE IT RESOLVED that pursuant to Minnesota Statutes §103B.251 and the WRMP, each of the Projects is ordered; and

BE IT FURTHER RESOLVED that the Board of Managers hereby authorizes the Administrator to execute each of the respective cost-share agreements between the Rice Creek Watershed District and the Cities of Columbia Heights, Fridley, Lino Lakes, Mahtomedi, New Brighton, Roseville and Shoreview, and Minnesota Commercial Railway in accordance with the template agreement and on advice of counsel.

BE IT FINALLY RESOLVED that the limit of the District’s contribution for each project is as follows:

City of Fridley	\$47,500
City of Roseville	\$45,000
City of New Brighton	\$47,500
City of Columbia Heights	\$33,745
City of Shoreview	\$47,500
City of Mahtomedi (Glendale BMP)	\$47,500
City of Lino Lakes	\$47,500
Minnesota Commercial Railway	\$27,716
City of Mahtomedi (Phase 3 – Historic District)	\$47,500.

The question was on the adoption of the resolution and there were ___ yeas and ___ nays as follows:

	Yea	Nay	Absent	Abstain
WALLER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HAAKE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRADLEY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WAGAMON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREINER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upon vote, the President declared the Resolution _____.

Michael J. Bradley, Secretary

Dated: February 28, 2018

* * * * *

I, Michael Bradley, Secretary of the Rice Creek Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 28th day of February, 2018

Michael J. Bradley, Secretary

RESOLUTION 2018-04

**RICE CREEK WATERSHED DISTRICT
BOARD OF MANAGERS**

**ORDERING THE LAMOTTE NEIGHBORHOOD BIOFILTRATION BASIN PROJECT
PURSUANT TO MINNESOTA STATUTES §103B.251**

Manager _____ offered the following Resolution and moved its adoption, seconded by Manager _____,

WHEREAS the Rice Creek Watershed District has adopted a water resource management plan (WRMP) in accordance with Minnesota Statutes §103B.231;

WHEREAS Centerville Lake, located in Anoka County, is threatened by excessive phosphorus loading and subject to a Total Maximum Daily Load (TMDL) requiring reductions in phosphorus from internal and external sources;

WHEREAS the WRMP's Capital Improvement Plan (CIP) identifies a cost-share program to improve and remedy stormwater management systems in developed urban environments and, on October 25, 2017, the Board of Managers ("Board") authorized staff to initiate the program and solicit proposals;

WHEREAS the City of Lino Lakes' "LaMotte Neighborhood Biofiltration Basin" (the "Project") has been reviewed by District Staff, the District Citizen Advisory Committee and the Board and found to meet program criteria;

WHEREAS the WRMP CIP also identifies, for implementation, water quality treatment projects in the Anoka Chain of Lakes TMDL study area, including biofiltration practices, to remove phosphorus from stormwater runoff to the lakes;

WHEREAS in accordance with Minnesota Statutes §103B.251, subdivision 3, the District held a duly noticed public hearing on ordering of the Project on February 28, 2018, at the Shoreview City Council Chambers, at which time all interested parties had the opportunity to speak for and against the Project;

WHEREAS the RCWD Engineer has evaluated the Project, including its technical elements and its cost-effectiveness, in a technical memorandum dated January 25, 2018, and the Engineer's views have been fully considered by the Board;

WHEREAS the Board has reviewed and approved a template cost-share agreement for use with the Project, providing generally that on the Board's ordering of the Project and its construction by the City of Lino Lakes, the District will reimburse the City for 50 percent of the cost of its Project; and that the City will maintain its project in accordance with a maintenance plan approved by the District;

WHEREAS the Board finds that the Project, as constructed and maintained in accordance with the terms and responsibilities of the cost-share agreement, will be conducive to public health and promote the general welfare, and is in compliance with Minnesota Statutes §§103B.205 to 103B.255 and the WRMP adopted pursuant to §103B.231;

THEREFORE, BE IT RESOLVED that pursuant to Minnesota Statutes §103B.251 and the WRMP, the Project is ordered; and

BE IT FURTHER RESOLVED that the Board of Managers hereby authorizes the Administrator to execute a cost-share agreement between the Rice Creek Watershed District and the City of Lino Lakes with a reimbursement limit of \$39,500, in accordance with the template agreement and on advice of counsel.

The question was on the adoption of the resolution and there were ___ yeas and ___ nays as follows:

	Yea	Nay	Absent	Abstain
WALLER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HAAKE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRADLEY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WAGAMON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREINER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upon vote, the President declared the Resolution _____.

Michael J. Bradley, Secretary

Dated: February 28, 2018

* * * * *

I, Michael Bradley, Secretary of the Rice Creek Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 28th day of February, 2018

Michael J. Bradley, Secretary

RESOLUTION 2018-04

**RICE CREEK WATERSHED DISTRICT
BOARD OF MANAGERS**

**ORDERING BALD EAGLE LAKE OUTFALL IMPROVEMENTS
PURSUANT TO MINNESOTA STATUTES §103B.251**

Manager _____ offered the following Resolution and moved its adoption, seconded by Manager _____,

WHEREAS the Rice Creek Watershed District has adopted a water resource management plan (WRMP) in accordance with Minnesota Statutes §103B.231;

WHEREAS Bald Eagle Lake, located in Anoka, Ramsey and Washington Counties, is threatened by excessive phosphorus loading and subject to a Total Maximum Daily Load (TMDL) requiring reductions in phosphorus from internal and external sources;

WHEREAS the WRMP's Capital Improvement Plan (CIP) identifies a cost-share program to improve and remedy stormwater management systems in developed urban environments and, on October 25, 2017, the Board of Managers ("Board") authorized staff to initiate the program and solicit proposals;

WHEREAS White Bear Township's "Bald Eagle Lake Outfall Improvements" (the "Project") has been reviewed by District Staff, the District Citizen Advisory Committee and the Board and found to meet program criteria;

WHEREAS the WRMP CIP also identifies, for implementation, water quality treatment projects in the Bald Eagle Lake TMDL study area, including inline storm sewer treatment practices, to remove sediment and phosphorus from stormwater runoff to the lake;

WHEREAS in accordance with Minnesota Statutes §103B.251, subdivision 3, the District held a duly noticed public hearing on ordering of the Project on February 28, 2018, at the Shoreview City Council Chambers, at which time all interested parties had the opportunity to speak for and against the Project;

WHEREAS the RCWD Engineer has evaluated the Project, including its technical elements and its cost-effectiveness, in a technical memorandum dated January 25, 2018, and the Engineer's views have been fully considered by the Board;

WHEREAS the Board has reviewed and approved a template cost-share agreement for use with the Project, providing generally that on the Board's ordering of the Project and its construction by White Bear Township, the District will reimburse the Township for 50 percent of the cost of its Project; and that the Township will maintain its project in accordance with a maintenance plan approved by the District;

WHEREAS the Board finds that the Project, as constructed and maintained in accordance with the terms and responsibilities of the cost-share agreement, will be conducive to public health and promote the general welfare, and is in compliance with Minnesota Statutes §§103B.205 to 103B.255 and the WRMP adopted pursuant to §103B.231;

THEREFORE, BE IT RESOLVED that pursuant to Minnesota Statutes §103B.251 and the WRMP, the Project is ordered; and

BE IT FURTHER RESOLVED that the Board of Managers hereby authorizes the Administrator to execute a cost-share agreement between the Rice Creek Watershed District and White Bear Township with a reimbursement limit of \$35,000, in accordance with the template agreement and on advice of counsel.

The question was on the adoption of the resolution and there were ___ yeas and ___ nays as follows:

	Yea	Nay	Absent	Abstain
WALLER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HAAKE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRADLEY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WAGAMON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREINER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upon vote, the President declared the Resolution _____.

Michael J. Bradley, Secretary

Dated: February 28, 2018

* * * * *

I, Michael Bradley, Secretary of the Rice Creek Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 28th day of February, 2018

Michael J. Bradley, Secretary

**RICE CREEK WATERSHED DISTRICT
COST-SHARE AGREEMENT**

COST-SHARE AGREEMENT between the Rice Creek Watershed District, 4325 Pheasant Ridge Drive NE, Suite 611, Blaine, Minnesota 55449 and _____.

RECITALS

- A. _____ (Grantee) intends to construct a project titled “ _____ ” (“Project”).
- B. The Rice Creek Watershed District (District) has a cost-share program for the improvement and remediation of stormwater management systems in developed urban environments.
- C. In accordance with Program guidelines, the District desires to provide the Grantee cost-share assistance for the Project.

THEREFORE, in consideration of mutual promises set forth herein and other good and valuable consideration, the District and the Grantee agree as follows:

I. GRANTEE RESPONSIBILITIES.

- A. Design Plans and Maintenance Plan. The Grantee will submit (1) final Project plans and specifications, and (2) a maintenance [and/or operations] plan, to the District for the Administrator’s written approval. The Project plans and specifications must include a public education component. The District, in its discretion, may approve a non-structural public education component.
- B. Construction and Maintenance. The Grantee, through its own personnel and/or contractors, will construct the Project in accordance with the approved Project plans and specifications and maintain it indefinitely in accordance with the approved maintenance plan. In doing so, the Grantee will comply with all applicable laws and regulations and will be responsible for acquiring all permits, approvals and temporary and permanent rights of access or easement.
- C. Completion of Construction. The Grantee’s staff or consulting engineer will certify the completion of Project construction no later than December 31, 2020. The Grantee will submit to the District documentation of Project expenditures and the certification of completion no later than March 31, 2020.

II. DISTRICT RESPONSIBILITIES.

- A. Cost-Share Funds. To defray the Project cost to the Grantee, the District will provide the Grantee cost-share assistance in the amount of 50 percent of the Project’s eligible costs, as determined by the District, not to exceed \$XX,XXX.XX.
- B. Payment Schedule. On District approval of the Project plans and specifications and maintenance [and/or operations] plan, certification by the Grantee that it has obtained all necessary permits and approvals, and receipt of the Grantee’s issued notice to proceed, the District will disburse 50 percent of the RCWD Board approved cost-share amount to the Grantee. On District receipt of the certification of

completion and review of such Project documentation as it may require, the District will disburse the remaining RCWD Board approved funds.

C. Contingencies. The District's obligation to provide cost-share funds is contingent on the Grantee's compliance with the terms of this agreement, including but not limited to Project completion in accordance with the District-approved plans and specifications by December 31, 2019. The Grantee will return to the District any cost-share funds already received if this condition is not satisfied.

III. MISCELLANEOUS.

A. Relationship of Parties. Nothing in this agreement creates or establishes a partnership, joint venture or agency relationship between the parties. District review or approval of design plans and specifications, a maintenance plan and any other Project-related documents is solely for the District's own accounting for funds expended. As between the parties, the Grantee is solely responsible for selection of the Project design and the means, method and manner of construction. Nothing in this agreement creates any right in any third party or affects any immunity, defense or liability limitation enjoyed by either party.

B. Employees. The Grantee represents that it has or will secure, at its own expense, all personnel and/or contractors required for the performance of this agreement. No Grantee personnel or contractor will be considered an agent, representative or employee of the District.

C. Liability. The Grantee agrees to hold harmless and indemnify the District, and its managers, staff and representatives, against any claim, expense or damage, including attorney fees, arising from the performance of this agreement.

D. Assignment or Modification. This agreement binds and inures to the benefit of the Grantee and the District, and their respective successors and assigns. Neither party may assign this agreement without the prior written consent of the other. Any modification of the agreement must be in writing and signed by both parties.

E. Public Documents. All submitted information, including application, conceptual design, cost estimates, bid tabulations, final designs and specifications, copies of permits and proof of expenditures will become a part of the public record.

F. Effective Date. This agreement is effective as of the date all of the signatures below have been provided.

Dated: _____, 2018

[Grantee] _____

By: _____

Its: _____

Dated: _____, 2018

Rice Creek Watershed District

By: _____

Patricia Preiner, President



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Program Guidelines

1. Application

The application form for RCWD's Urban Stormwater Remediation Cost-Share Program can be downloaded from the District's website at <http://www.ricecreek.org/grants>. A complete application, including a preliminary conceptual design and pollutant reduction estimates, must be submitted for District review to ensure consistency of the project with RCWD water quality goals and objectives. **All sections (I through XIII) on the application form are required.**

2. Timetable & Prioritization

Applications will be accepted and reviewed according to the following schedule:

<i>Application Deadline</i>	<i>Citizen Advisory Committee Review</i>	<i>Public Hearing and Final Board Action</i>
December 29, 2017	February 7, 2018	February 28, 2018

Project funding consideration will be based on several factors including, but not limited to, the following: location, sustainability, consistency with District programs, capital and maintenance costs, and expected benefits (refer to Chapter 7.5 and Appendix G in the District's Watershed Management Plan). **For the 2018 funding cycle, priority will be given to applications involving stormwater reuse irrigation projects.** Unfunded applications may be resubmitted for consideration in a future funding year. Submittal of an application for funding, regardless of funding availability, does not in any way guarantee acceptance into the program.

3. Funding Availability

For 2018, the District anticipates making approximately \$390,000 available to fund the implementation of projects approved through this program. For approved projects, the District may fund up to 50% of eligible project costs, typically not to exceed \$50,000 per project. Eligible costs generally include construction materials, labor, and engineering costs, subject to District approval. The RCWD Board of Managers reserves the right to (1) offer additional funding to projects that result in multiple District-wide or regional benefits, (2) offer cost-share funding to a selected project for less than the requested amount, and/or (3) offer cost-share funding for only a specific portion(s) of a selected project.

Stormwater reuse irrigation project applications, if approved, will be offered funding at a level of \$10,000 per acre irrigated, provided that adequate stormwater supply and storage are available and/or constructed as a part of the project. All other standard funding provisions continue to apply.

4. Cost-Share Agreement & Schedule

Upon formal acceptance into the program by the RCWD Board, a cost-share agreement will be provided to the cost-share recipient and must be executed and returned to the District within 60 days. If an executed agreement is not received by the District before the specified date, encumbered funds may be withdrawn and made available for reallocation to another project. Projects funded in 2018 must be completed by December 31, 2020.

5. Design & Maintenance Plan

Final design specifications and calculations and an operation and maintenance plan must be submitted for District review and approval prior to initiation of the project. Failure to obtain District approval of the project design plans and operation and maintenance plan may result in cancellation of the cost-share agreement. Project monitoring and maintenance is the sole responsibility of the applicant. RCWD will not accept any maintenance responsibility for projects funded through this program.

6. Bids & Permits

Successful applicants must provide the District with information on bid tabulation or contractor quotes, the applicant's issued notice to proceed, and certification by the applicant that all necessary permits and approvals have been obtained. Acquisition of required permits and approvals will be the sole responsibility of the applicant.

7. Property Ownership

If the project is proposed to be built on property that is not owned by the applicant or is not currently subject to an easement owned by the applicant, a signed letter of concurrence shall be submitted by the landowner indicating their understanding that the applicant is seeking funds for a project proposed to be built on the landowner's property and that the landowner intends to work with the applicant to arrange for a transfer of title to the property or conveyance of a perpetual easement over the project area or some other form of permanent agreement to allow access for construction, operation and maintenance of the project within the project timeframe.

8. Education & Demonstration

Applicants must incorporate a public education component into the project. Possible options include installation of permanent project signage or hosting a public tour of the project. Other unique ideas are welcome. RCWD staff can be made available to assist successful applicants with this component of the project. Direct costs associated with the educational component may be included in the total estimated project cost.

9. Project Payment

The cost-share agreement will typically allow for 50% of District funds to be disbursed upon District approval of final project design and maintenance plans, if requested by the grantee. Final payment will only be made upon project completion. Applicants must provide paid invoices and documentation that the project was completed according to the approved design standards, specifications and pollution reduction values. Educational components of the projects (signage, tours, etc.) must be installed and/or complete prior to disbursement of the final grant payment.

10. Conformance to Guidelines

The District reserves the right to withdraw or withhold funding for any project not completed in accordance with these guidelines.

11. Submitted Information

Any submitted information, including applications, conceptual designs, cost estimates, bid tabulations, final designs and specifications, permits and proof of expenditures becomes part of the public record.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of Columbia Heights

Street Address: 590 40th Avenue, NE

City, State, Zip: Columbia Heights, MN 55421

II. PROJECT CONTACTS

Project Officer: Kevin Hansen

Financial Officer: Joseph Kloiber

Telephone: (763) 706-3705

Telephone: (763) 706-3600

Fax: (763) 706-3701

Fax: (763) 706-3671

Email: khansen@columbiaheightsmn.gov

Email: joseph.kloiber@columbiaheightsmn.gov

Tax Status: Exempt

Tax ID#: 41-6005069

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: Silver Lake Boat Landing Stormwater Retrofits

Location(s) of Project: West Shoreline of Silver Lake

City: Columbia Heights

State: MN

County: Anoka

Project Start Date: 04/01/2019

Project Completion Date: 10/30/2019

Project Type (check only those that directly apply):

Water Quality Treatment Project

Runoff Volume Control / Flood Storage Project

Peak Runoff Rate Control Project

Stormwater Reuse Irrigation Project

Other

Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested: \$ 50,000.00

Local Matching Contributions: \$ 17,491.00

State/Federal/Other Funds: \$ 269,962.00 Source(s): PFA PSIG

Total Estimated Project Cost: \$ 337,453.00

Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.

Kevin Hansen
Signature of Project Officer

12/22/17
Date

Public Works Director/City Engineer

Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

The City of Columbia Heights, as part of the Silver Lake TMDL Implementation Plan, proposes to redesign an existing stormwater treatment pond to enhance phosphorous removal efficiency resulting in reduced nutrient inputs to Silver Lake. The existing pond outlet configuration and design results in short-circuiting and maintenance issues for City staff. Activities necessary to implement the project include excavation and grading on the existing site to create a two cell stormwater pond and bioretention area. We are requesting \$50,000 from RCWD to assist in funding the estimated \$337,453 stormwater retrofit project.

The project is currently on the PFA FY 2018 Project Priority List (PPL) and we are working towards project certification for final plans and specifications. This is planned to be completed by April 2018.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Silver Lake
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

The Silver Lake TMDL specifically lists TP as a pollutant of concern and identifies this location as a subwatershed with retrofit potential. BMPs that will be incorporated into the Silver Lake Boat Landing Stormwater Retrofit include:

Two Cell Stormwater pond- The new two cell pond is proposed to be 0.26 acres larger than the existing 0.21 acre pond as well as an increased average pond depth to 4 feet. The new design maximizes the removal efficiency of the pond, specifically TP and TSS loads, within the tight footprint by extended detention within two pools. **Bioretention Area -** The two cell pond will outlet to a 0.21 acre bioretention area that will further reduce TP and TSS loads by nutrient uptake through vegetation and evapotranspiration. A filtration system is required due to soils which are poorly drained.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

NA

- Describe how long-term operation and maintenance of the project will be accomplished.

City staff will inspect the inlets and outlets of the stormwater cells and the bioretention area and remove trash/debris on a monthly basis during the growing season. Embankments will be inspected annually or after major storm events for signs of erosion and/or failure.

Bioretention vegetation should be inspected annually to ensure that plantings are establishing and healthy, invasive species are kept to a minimum or eradicated, and if vegetation needs to be harvested to facilitate infiltration and water treatment. An inspection of the amount of sedimentation in the two cell pond and the bioretention area should be completed every 2-7 years. When the depth of the pond is <50% of the design depth, cleanout will be necessary.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

The poorly drained soils do not allow for infiltration, however, bioretention is proposed to reduce nutrient loads.

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

Silver Lake is a Tier II lake as identified in the Rice Creek Watershed District's Management Plan. Under this designation the RCWD supports, through cost share, implementation of stormwater retrofits to reduce the severity and frequency of algal blooms. This project aids the City of Columbia Heights in improving the quality of its surface waters by reducing the amount of pollutants reaching Silver Lake, in response to the TMDL. This project is identified in the TMDL implementation plan and is one of the few remaining projects left to complete within the watershed.

- List all project partners and their respective roles in implementing and/or supporting the project.

The City of Columbia Heights is currently working collaboratively with the Cities of New Brighton and Village of St. Anthony as well as the Three Rivers Park District and Rice Creek Watershed, to develop a comprehensive lake management plan for Silver Lake. The plan will identify TMDL implementation projects that have reduced phosphorous loading per the Silver lake TMDL. This project is one of the few remaining projects listed by the Silver lake TMDL implementation plan.

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

The estimated pollutant reduction for the 22 acre residential tributary area is 8 lb/year TP load and 2.5 tons/year TSS load based on P8 modeling. Additionally the proposed BMPs reduce peak discharge rates from existing by approximately 50% based on HydroCAD modeling. The proposed design provides rate control and flood storage for Atlas 14 rainfall depths, which was not feasible with the existing pond. Proposed native plantings will provide nutrient uptake benefits, facilitate evapotranspiration, provide educational opportunities and improve the aesthetics of the existing City owned parcel adjacent to the boat landing.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

Ramsey County Environmental Services currently monitors in lake water quality for Silver Lake. This monitoring is planned to be completed annually and is currently used to gauge the effectiveness of other BMPs and the progress towards meeting the goal of the TMDL. Three Rivers park District also completes an annual point intercept plant survey to assess increase in vegetation due to decreases in chlorophyll-a and an increase in secchi depth. These two data points will be used to monitor and evaluate a continued reduction in phosphorous inputs to Silver Lake through implementation of this project.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

Columbia Heights will complete direct mailings to residents within close proximity to the pond site to engage and inform residents on the need, benefits, and long term impacts of this pond redesign project.

In addition to the direct mailing, the city will include information and updates on the project in their newsletter and on the City of Columbia Heights website

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

Kevin Hansen- City of Columbia Heights Public Work Director
kevin.hansen@ci.columbia-heights.mn.us
(763)706-3705

Lauren Letsche- Engineering Technician IV/Stormwater Specialist-City of Columbia Heights
lauren.letsche@ci.columbia-heights.mn.us
(763)706-3709

FORM 6: ENGINEER'S COST OPINION
Silver Lake Boat Landing Stormwater Retrofits

Proj No. 1792-22
 WSB & Associates, Inc
 701 Xenia Avenue South
 Suite 300
 Minneapolis, MN 55416
 Phone (763) 541-4800
 Fax (763) 541-1700
 12/20/2017

ITEM	UNIT	PSIG ELIGIBLE ESTIMATED QUANTITY*	PSIG INELIGIBLE ESTIMATED QUANTITY	ENGINEER UNIT PRICE	PSIG ELIGIBLE ENGINEER'S EXTENDED PRICE
MOBILIZATION	LUMP SUM	1		\$15,000.00	\$15,000.00
CLEARING AND GRUBBING	LUMP SUM	1		\$10,000.00	\$10,000.00
REMOVE EXISTING CONCRETE STILLING BASIN, CURB & GUTTER, AND WEIR	EA	1		\$5,000.00	\$5,000.00
REMOVE PIPE CULVERTS	L F	129		\$10.00	\$1,290.00
REMOVE CHAINLINK FENCE	LF	420		\$3.00	\$1,260.00
DEWATERING	LUMP SUM	1		\$12,500.00	\$12,500.00
EXCAVATION	C Y	2404		\$13.00	\$31,252.00
COMMON BORROW	C Y	196		\$15.00	\$2,940.00
SELECT GRANULAR BORROW	C Y	103		\$20.00	\$2,060.00
COMPOST	C Y	26		\$50.00	\$1,300.00
TOPSOIL	C Y	587		\$23.00	\$13,501.00
IRON-ENHANCED SAND FILTER MEDIA	C Y	90		\$250.00	\$22,500.00
GEOTEXTILE FABRIC TYPE V	S Y	726		\$2.00	\$1,452.00
COARSE FILTER AGGREGATE	C Y	76		\$50.00	\$3,800.00
6" DRAINTILE WITH UTILITY TRACE WIRE	L F	370		\$12.00	\$4,440.00
PVC CLEANOUT	EA	4		\$350.00	\$1,400.00
BIOFILTRATION UNDERDRAIN VALVE	EA	2		\$2,000.00	\$4,000.00
24" RC PIPE SEWER	LF	150		\$65.00	\$9,750.00
48" STRUCTURE	EA	3		\$3,250.00	\$9,750.00
CONSTRUCT MH OVER EXISTING PIPE	EA	1		\$800.00	\$800.00
MUCK EXCAVATION	CY	367		\$20.00	\$7,340.00
RANDOM RIPRAP CLASS III	CY	20		\$60.00	\$1,200.00
SILT FENCE	L F	800		\$3.00	\$2,400.00
STORM DRAIN INLET PROTECTION	EA	3		\$100.00	\$300.00
CULVERT END CONTROLS	EA	2		\$250.00	\$500.00
EROSION CONTROL BLANKET	SY	1319		\$6.00	\$7,914.00
TURF REINFORCEMENT MAT (TRM)	SY	1300		\$10.00	\$13,000.00
MULCH	S Y	39			
SEED	AC	1		\$1,500.00	\$1,500.00
TREES	EA	4		\$500.00	\$2,000.00
PLUGS	EA	129		\$129.00	\$16,641.00
BEEHOUSES	EA	3		\$50.00	\$150.00
TURF ESTABLISHMENT	LUMP SUM	1		\$10,000.00	\$10,000.00
				SUBTOTAL	\$216,940.00
				10% CONTINGENCY:	\$21,694.00
				APPROXIMATELY 15% INDIRECT COSTS:	\$32,541.00
				TOTAL	\$271,200.00

associated with the construction of the proposed stormwater facility, which will directly reduce total s loading to Silver Lake. This project is identified in the Silver Lake TMDL Plan.

10% CONTINGENCY: \$21,694.00
 APPROXIMATELY 15% INDIRECT COSTS: \$32,541.00
TOTAL \$271,200.00

**Minnesota Public Facilities Authority
Point Source Implementation Grant Program
Form 4a - PSIG Project Costs**

Applicant: City of Columbia Heights

Date: 7/28/2017

Project: Silver Lake Boat Landing Stormwater Retrofits

Project Costs Based on: Estimated costs

Instructions: Fill in yellow cells. See notes at bottom.

	COLUMN A	COLUMN B	COLUMN C		COLUMN D	COLUMN E
	Start Date	End Date	Total Project Costs	ESTIMATED PSIG Eligible Costs	Estimated PSIG Eligible %	
1. Construction Costs						
Wastewater Treatment						
Sanitary Sewer Collection						
Stormwater Treatment	01/18/18	09/01/18	\$ 271,200	\$ 271,200		
Other:						
<i>Subtotal - Construction</i>			\$ 271,200	\$ 271,200		100.0%
2. Contingencies (5% of construction)			\$ 13,560	\$ 13,560		
3. Engineering / Other						
Planning / Pre-design	07/24/17	07/31/17	\$ 2,017	\$ 2,017		
Design (preparation of plans & specs)	07/31/17	09/01/17	\$ 20,676	\$ 20,676		
Inspection / Construction Mgmt				\$ -		
Legal / Financing Related Fees				\$ -		
Land Purchase				\$ -		
Other: Site monitoring/Permitting	01/01/18	06/01/19	\$ 30,000	\$ 30,000		
<i>Subtotal - Engineering / Other</i>			\$ 52,693	\$ 52,693		
Total Project Costs			\$ 337,453	\$ 337,453		100.0%

Total PSIG Eligible Cost \$ 337,453

Estimated PSIG Grant:
(PSIG Eligible Cost x 80%, \$7 million max) \$ 269,962

Additional funding needed (total project cost minus PSIG grant): \$ 67,491

Other funding: RCWD \$ 50,000

Other funding: City of Columbia Heights \$ 17,491

Other funding:

Total: \$ 67,491

Notes:

COLUMN A: For each activity, identify the **START DATE** on which eligible costs were, or are expected to be, incurred. On Form 4b (see tabs below), identify specific prior incurred costs for which the recipient will request reimbursement based on invoices. Items not identified on this form will not be considered for reimbursement. PFA may limit PSIG reimbursement for costs incurred prior to the grant award, even if identified on Form 4b. Submit an updated form prior to grant award. Contact your loan officer for more information.

COLUMN B: For each activity, identify the expected **END DATE** for which the work will be completed.

COLUMN C: Identify the **TOTAL PROJECT COSTS** (wastewater, stormwater or drinking water)

COLUMN D: Identify the **ESTIMATED PSIG ELIGIBLE COSTS** necessary to comply with the TMDL; to reduce the discharge of total phosphorus to one milligram per liter or less; to address the water quality-based effluent limits; or to meet a total nitrogen limit of 10 mg/L for land based treatment.

ATTACH A DETAILED BREAKDOWN of the estimated PSIG eligible construction costs on a separate sheet (see Form 6). The Minnesota Pollution Control Agency will determine the grant eligible portion of the total construction costs.

COLUMN E: The worksheet will calculate the estimated PSIG eligible percentage based on the estimated PSIG eligible costs in Column D compared to total project costs in Column C. This same percentage will be applied to contingencies and engineering/other project costs.

DESIGN BY:
1" = 20'

CHECK BY:

REVISIONS

NO.	DATE	DESCRIPTION

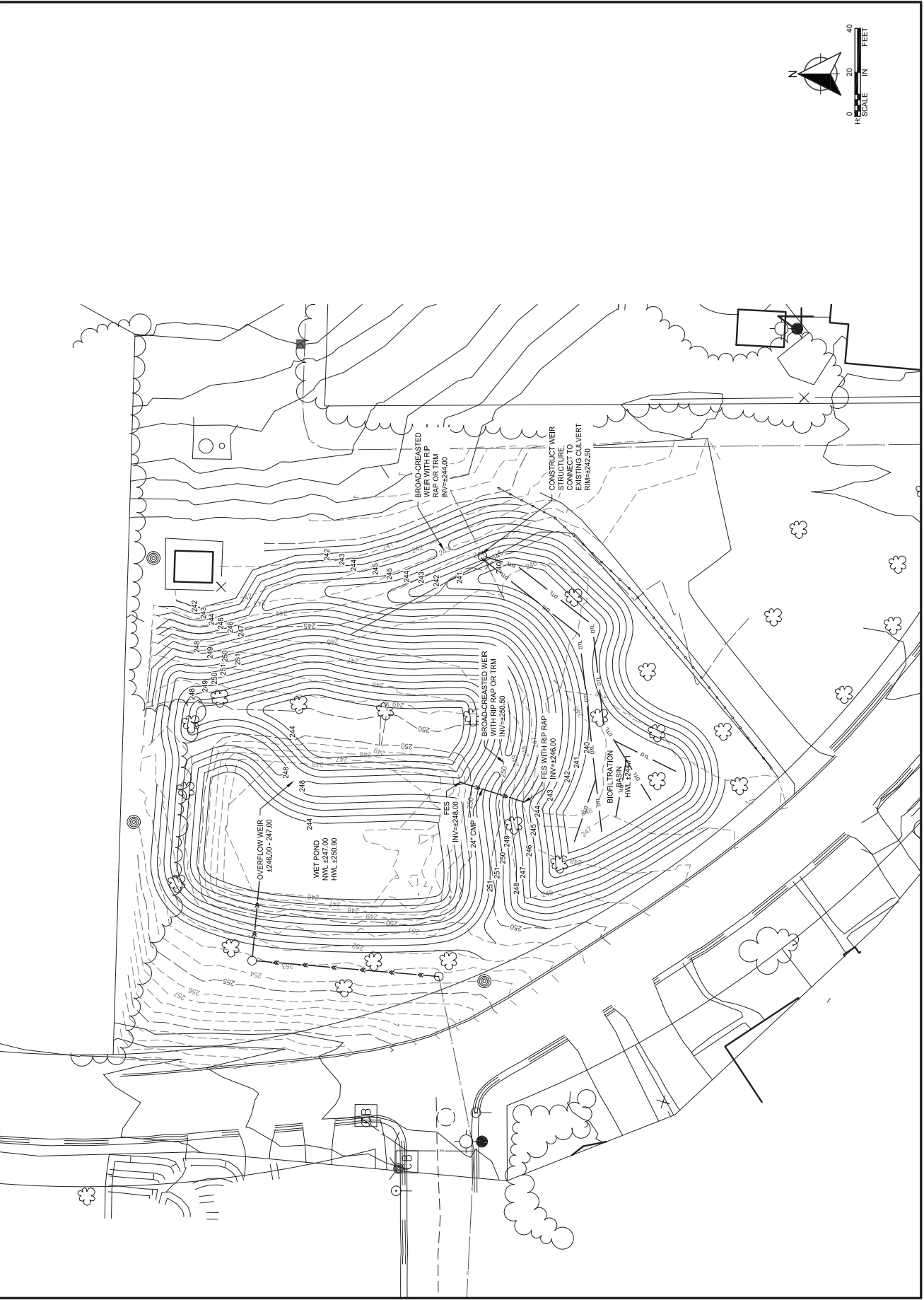
DATE: _____ LIC. NO.: _____

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, REPORT AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SILVER LAKE BOAT LANDING
STORMWATER RETROFITS
CITY OF COLUMBIA HEIGHTS

GRADING AND DRAINAGE PLAN

C:300





COLUMBIA
HEIGHTS
REDEVELOPMENT AUTHORITY



WSB PROJECT NO.:
01792-220

SCALE: NO SCALE
DESIGN BY:
PLAN BY:
CHECK BY:

NO.	DATE	DESCRIPTION

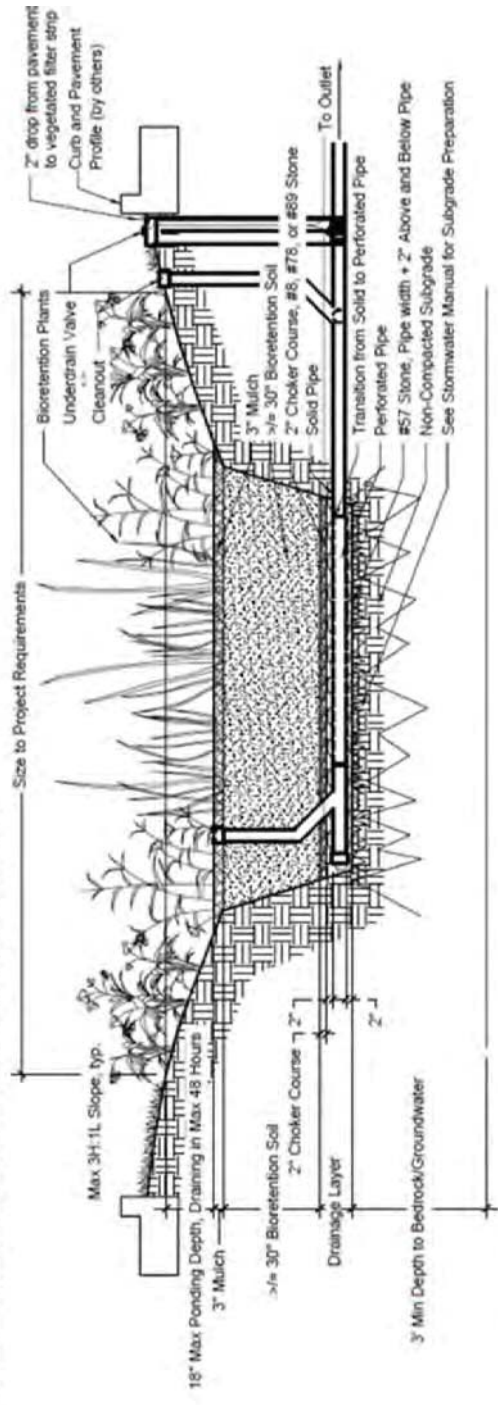
DATE: _____
LIC. NO. _____
HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CITY OF COLUMBIA HEIGHTS
STORMWATER RETROFITS
SILVER LAKE BOAT LANDING

MN STORMWATER
MANUAL DETAILS

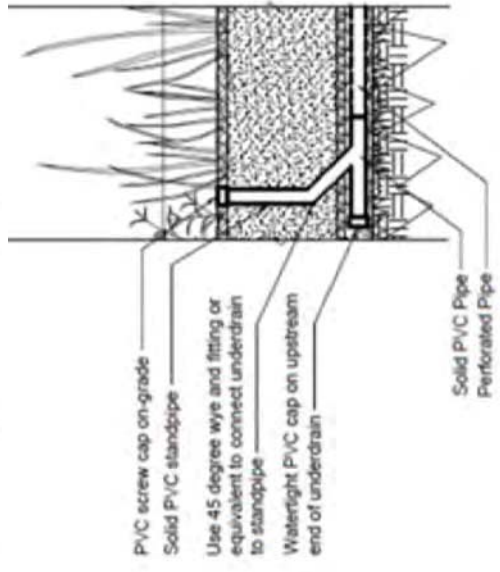
C302

Note: this detail shows and off line system. To show an on line system this detail should be modified to include an overflow structure, set at the maximum ponding elevation.

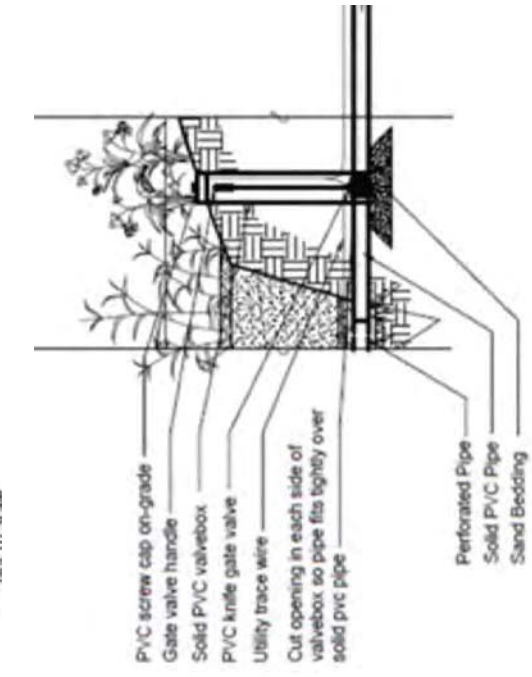


Bioretention Parking Median-Section

Not To Scale



Cleanout



Underdrain Valve

Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of Columbia Heights – 2018 Urban
Stormwater Cost-Share Program Application
for Silver Lake Boat Landing Stormwater
Retrofits

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of Columbia Heights, we offer the following comments for your use:

- The applicant is proposing to retrofit and expand an existing BMP that is currently short circuiting near the Silver Lake boat landing. The BMP discharges to Silver Lake, which is a Tier II lake.
- This project does not include volume reduction, which is the highest priority BMP category for the District. However, the project is consistent with both the Silver Lake TMDL and District Watershed Management Plan. The BMP will be a combination NURP pond and bioretention basin. The City will maintain the BMP.
- The applicant stated that P8 estimated the expansion of the BMP would remove 8 lbs. of TP annually and 5,000 lbs. of TSS annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$1,406 per pound of TP and \$2.25 per pound of TSS, based on a 30-year capital life of the BMP.
- The effectiveness of the project would be determined by ongoing monitoring performed by Ramsey County Environmental Services and the Three Rivers Park District within Silver Lake.
- The project has moderate educational opportunity. The applicant is proposing direct mailings to the surrounding community and publishing information on the project in a City publication and on the City website.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of Fridley
 Street Address: 6431 University Avenue NE
 City, State, Zip: Fridley, MN 55432

II. PROJECT CONTACTS

Project Officer: <u>James Kosluchar, PE</u>	Financial Officer: <u>Shelly Peterson</u>
Telephone: <u>(763) 572-3550</u>	Telephone: <u>(763) 572-3520</u>
Fax: _____	Fax: _____
Email: <u>jim.kosluchar@fridleymn.gov</u>	Email: <u>shelly.peterson@fridleymn.gov</u>
Tax Status: <u>Local Government</u>	Tax ID#: <u>41-6007700</u>

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: 69th Avenue Road Diet and Median Infiltration
 Location(s) of Project: 69th Avenue NE from Central Avenue to Fridley City Limits (see location map)
 City: Fridley State: MN County: Anoka
 Project Start Date: 06/15/2018 Project Completion Date: 09/15/2018

Project Type (check only those that directly apply):

- | | |
|---|---|
| <input checked="" type="checkbox"/> Water Quality Treatment Project | <input checked="" type="checkbox"/> Runoff Volume Control / Flood Storage Project |
| <input type="checkbox"/> Peak Runoff Rate Control Project | <input type="checkbox"/> Stormwater Reuse Irrigation Project <input type="checkbox"/> Other |

Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested:	\$ <u>50,000.00</u>
Local Matching Contributions:	\$ <u>300,263.00</u>
State/Federal/Other Funds:	\$ <u>0.00</u> Source(s): _____
Total Estimated Project Cost:	\$ <u>350,263.00</u>

Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.


 Signature of Project Officer

12/28/17
 Date

Director of Public Works/City Engineer
 Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

The goals and activities of this project include reduction of impervious surface and strong water quality improvements associated with a half-mile resurfacing project by the City of Fridley. The proposed project would reduce impervious surface on 69th Avenue by 1.17 acres, and treat 74% of the corridor's stormwater runoff. This would be accomplished through reduction in pavement and construction of a vegetated swale within a median which will provide infiltration treatment, as well as aesthetic improvements.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Rice Creek, Locke Lake, and the Mississippi River
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

69th Avenue is a well-traveled east-west road connecting Central Avenue and Interstate 10. Within Fridley's limits, Medtronic's Rice Creek campus, Cummins Engineering, and Rice Creek townhomes all maintain entrances onto 69th Avenue. The project proposes to disconnect the impervious surface along 69th Avenue and redirect runoff to a swale vegetated with native and low-maintenance grasses. This BMP would treat 74% of the stormwater runoff from this site. This BMP would also be the first use of low-maintenance grasses in a City right-of-way, serving as a demonstration project for future City road reconstruction projects.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

The project proposes to infiltrate stormwater along a residential/commercial roadway which will provide groundwater recharge that currently does not exist. The Type A soils are projected to allow a high infiltration rate (0.8 in/hr).

- Describe how long-term operation and maintenance of the project will be accomplished.

The project proposes to use low-maintenance grass convert a an overly-wide street into a parkway. Maintenance of the drainage system and plantings will be the responsibility of the City of Fridley. It is noted that a reduction in overall maintenance is anticipated, as deicing, plowing, and pavement repair will decrease significantly along this roadway.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

The project reduces lane widths of 69th Avenue, which will remain within standards, resulting in a reduction of impervious surface on this roadway of 30%. The project maximizes infiltration along this roadway by routing 74% of the storm water from impervious surfaces to a swale capable of providing treatment above and beyond the water quality volume. Trees will also be planted alongside the swale to provide additional infiltration.

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

The project fulfills several goals and policies in the RCWD WMP, including:

5.5-2 ... mitigate the increase in the rate and volume of runoff resulting from land disturbance....

5.5-6 Foster and encourage the use of regional Best Management Practices, to reduce the rate and volume of runoff.

5.4-4 Look for opportunities to establish voluntary rate control measures and other practices to improve drainage...

- List all project partners and their respective roles in implementing and/or supporting the project.

The City of Fridley will construct and maintain the project. Trees will be provided through the City's "Improving Community Forests through Citizen Engagement" grant from the DNR. The City's corporate volunteer group, including employees of Medtronic and Cummins that work along the 69th Avenue corridor, have offered their partnership in providing volunteers for tree plantings. Medtronic has offered additional assistance with watering and care of new plantings. The RCWD would become a partner with these entities in support of this project.

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

Annual Infiltration Basin Removals are provided using the MIDS calculator for over one million gallons of stormwater runoff per year treated by this project, including removal of nearly 4 pounds of Phosphorus and over 700 pounds of Total Suspended Solids per year.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

Runoff rates and concentrations of pollutants will be sampled prior to the project and after the project to illustrate its impacts.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

Signage is proposed to be installed along a trail on the north side of the project at two locations. This informational signage would inform walkers and cyclists, including the businesses and residents in the area of the project partners, benefits of native vegetation, and the impact of impervious surface on water quality.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

The project will be bid in the spring of 2018, so no contractor is yet known. City of Fridley key staff involved in the project include Jim Kosluchar: Public Works Director/City Engineer, Brandon Brodhag: Project Engineer, Rachel Workin: Environmental Planner, and Jeff Jensen: Street/Parks Operations Manager.

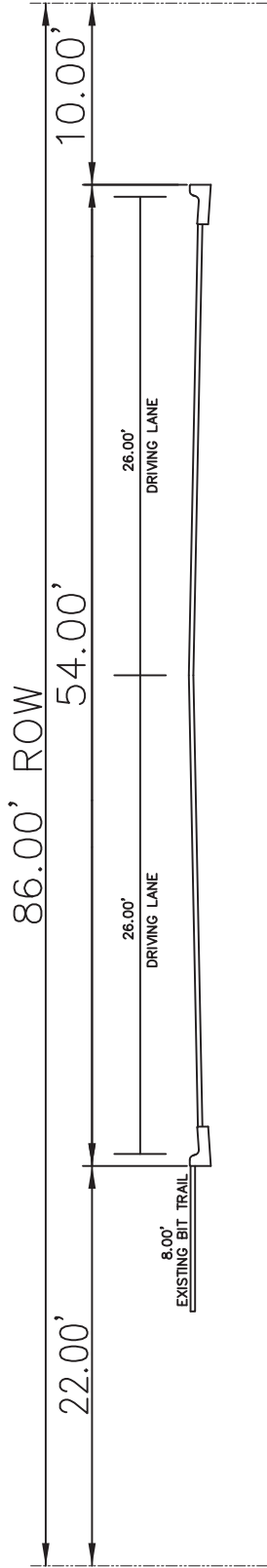
CITY OF FRIDLEY
69TH AVENUE REHAB PROJECT ST2018-01
STORM INFILTRATION SWALE
OLD CENTRAL AVE TO CITY LIMITS



NOTE: RED AREAS REPRESENT
PROPOSED STORM
INFILTRATION SWALE

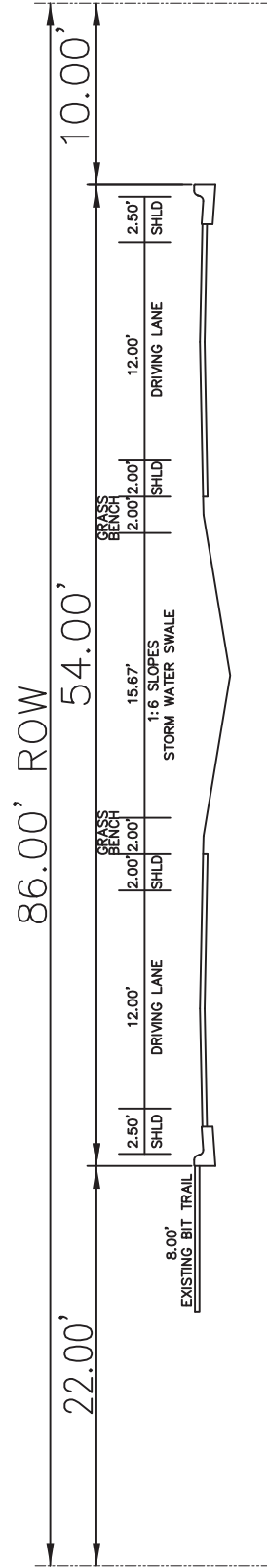
EXISTING CONDITIONS

VIEW TO EAST



PROPOSED STORM WATER SWALE

VIEW TO EAST



ITEM NO.	ITEM	UNIT	GRANT ELIGIBLE			LOCAL		
			TOTAL QUANTITY	UNIT COST	TOTAL COST	TOTAL QUANTITY	UNIT COST	TOTAL COST
1	MOBILIZATION	LUMP SUM	0.3	\$ 40,000.00	\$ 12,000.00	0.7	\$ 40,000.00	\$ 28,000.00
2	REMOVE CURB & GUTTER	LIN FT	0	\$ 3.70	-	200	\$ 3.70	\$ 740.00
3	REMOVE CASTING	EACH	0	\$ 125.00	-	9	\$ 125.00	\$ 1,125.00
4	REMOVE GATE VALVE & BOX	EACH	0	\$ 205.00	-	7	\$ 205.00	\$ 1,435.00
5	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	0	\$ 2.00	-	60	\$ 2.00	\$ 120.00
6	COMMON EXCAVATION - HAUL EXCESS RELCAIM OFF SITE (P)	CU YD	1023	\$ 15.00	\$ 15,345.00	2361.21	\$ 15.00	\$ 35,418.15
7	SUBGRADE EXCAVATION (EV)	CU YD	300	\$ 10.00	\$ 3,000.00	0	\$ 10.00	\$ -
8	AGGREGATE BASE PREPARATION (P)	STATION	0	\$ 300.00	-	26.13	\$ 300.00	\$ 7,839.00
9	AGGREGATE BASE, CLASS 7 FULL DEPTH RECYCLED PRODUCTION (P)	SQ YD	0	\$ 1.30	-	10804	\$ 1.30	\$ 14,045.20
10	BITUMINOUS JOINT SAW & SEAL	LIN FT	0	\$ 5.00	-	1960	\$ 5.00	\$ 9,800.00
11	BITUMINOUS MATERIAL FOR TACK COAT	GALLONS	0	\$ 4.00	-	230	\$ 4.00	\$ 920.00
12	SP12.5 2" WEAR COURSE SPWB340R	TON	0	\$ 70.00	-	958	\$ 70.00	\$ 67,060.00
13	SP12.5 1.5" NON WEAR COURSE SPWB330B	TON	0	\$ 70.00	-	720	\$ 70.00	\$ 50,400.00
14	10" GATE VALVE & BOX	EACH	0	\$ 2,870.00	-	7	\$ 2,870.00	\$ 20,090.00
15	F&Hydrant w/ 6" GV Assbly - EXTRA DEPTH	EACH	0	\$ 6,500.00	-	8	\$ 6,500.00	\$ 52,000.00
16	CASTING ASSEMBLY	EACH	0	\$ 792.00	-	5	\$ 792.00	\$ 3,960.00
17	ADJUST FRAME &RING CASTING	EACH	5	\$ 370.00	\$ 1,850.00	4	\$ 370.00	\$ 1,480.00
18	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	0	\$ 21.00	-	190	\$ 21.00	\$ 3,990.00
19	TRUNCATED DOMES	SQ FT	0	\$ 46.00	-	24	\$ 46.00	\$ 1,104.00
20	TRAFFIC CONTROL	LUMP SUM	0.3	\$ 15,000.00	\$ 4,500.00	0.7	\$ 15,000.00	\$ 10,500.00
21	STORM DRAIN INLET PROTECTION	EACH	0	\$ 175.00	-	9	\$ 175.00	\$ 1,575.00
22	FERTILIZER TYPE 3 (TYPE 3)(350 LB/AC)	POUND	333	\$ 2.00	\$ 666.00	0	\$ 0.75	\$ -
23	COMMON TOPSOIL	CU YD	764	\$ 45.00	\$ 34,380.00	0	\$ 45.00	\$ -
24	SEEDING	ACRE	0.95	\$ 6,000.00	\$ 5,700.00	0	\$ 6,000.00	\$ -
25	SEED MIXTURE (25-121)(120 LB/AC)	POUND	110	\$ 6.15	\$ 676.50	0	\$ 6.15	\$ -
26	SEED MIXTURE (35-121)(120 LB/AC)	POUND	18	\$ 6.15	\$ 110.70	0	\$ 6.15	\$ -
27	HYDRAULIC SOIL STABILIZER (2100 LB/AC)	POUND	1995	\$ 3.00	\$ 5,985.00	0	\$ 3.00	\$ -
28	TREES (INSTALLED BY OTHERS)	TREE	200	\$ 1.50	\$ 5,985.00	0	\$ 1.50	\$ -
28	24" STOP LINE WHITE: EPOXY	SQ FT	0	\$ 30.00	-	146	\$ 30.00	\$ 4,380.00
29	4" SOLID LINE WHITE: EPOXY	LIN FT	0	\$ 0.46	-	9467	\$ 0.46	\$ 4,354.82
30	4" SOLID DOUBLE LINE YELLOW: EPOXY	LIN FT	0	\$ 3.50	-	160	\$ 3.50	\$ 560.00
31	CROSSWALK EPOXY	SQ FT	0	\$ 4.40	-	270	\$ 4.40	\$ 1,188.00
32	TURN ARROWS: EPOXY	SQ FT	0	\$ 25.00	-	48	\$ 25.00	\$ 1,200.00
33	PAVEMENT MESSAGE WHITE: EPOXY	SQ FT	0	\$ 25.00	-	52	\$ 25.00	\$ 1,300.00
34	REPAIR/REPLACE PET FENCING AND IRRIGATION SYSTEM/MAINTENANCE OF MAILBOXES	LUMP SUM	0	\$ 3,000.00	-	1	\$ 3,000.00	\$ 3,000.00
35	OVERFLOW DRAINAGE FOR STORM INFILTRATION SWALE	LUMP SUM	1	\$ 35,000.00	\$ 35,000.00	0	\$ 35,000.00	\$ -
36	INFORMATIONAL SIGNAGE	LUMP SUM	1	\$ 2,000.00	\$ 2,000.00	0	\$ 2,000.00	\$ -
37	MISC ITEMS	LUMP SUM	0	\$ 6,000.00	\$ -	1	\$ 6,000.00	\$ 6,000.00

SUBTOTAL \$ 127,198.20
5% CONTINGENCY \$ 6,359.91
5% ENG/ADM
TOTAL \$ 133,558.11
ESTIMATED RCWD FUNDS \$ 50,000.00
ESTIMATED LOCAL FUNDS \$ 83,558.11

Minnesota MIDS Calculator -- Version 3: January 2017

Notes:

- 1) Make sure macros are enabled. If not, click Microsoft Office Button in upper left hand corner. Click "Excel Options". Click "Trust Center". click "Trust Center Settings" and then click "Macro Settings". Set Macro Settings to "Enable All Macros" and restart Excel.
- 2) Enter Site Information in blue cells below
- 3) Go to MIDS BMP Calculator tab and follow instruction on top of that page

Project Name:	69th Avenue Road Diet and Median Infiltration
User Name / Company Name:	City of Fridley
Date:	12/27/17
Project Description:	Reconstruction of 69th Ave east of Central Ave-lane width reduction and median swale.
Are you using the calculator to determine compliance with a Construction Stormwater permit? (Yes/No)	No

Legend

User input cells
Calculation cells
Constant values
Value obtained from another sheet

Site Information

Retention Requirement (inches):	1.1
Site's Zip code:	55432
Annual Rainfall (inches):	31.2
Phosphorus EMC (mg/L):	0.3
TSS EMC (mg/L):	54.5
Fraction of annual rainfall events that produce runoff:	0.9

Existing Roadway Area

Land Cover (acres)	A soils	B Soils	C Soils	D Soils	Totals (acres)
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land					0
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed					0
Impervious Cover (acres)					2.94
				Total:	2.94

Existing Watershed Area Routed to BMPs (Summary of "MIDS BMP Calculator" Tab)

Land Cover (acres)	A soils	B Soils	C Soils	D Soils	Totals (acres)
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land					0
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed					0
Impervious Cover (acres)					2.18
				Total:	2.18

Summary Information

Total impervious cover (acres)	2.94
Total watershed area (acres)	2.94
Site runoff coefficient, Rv	0.95
% Impervious	100%
Development volume retention requirement (cubic feet)	11,743
Volume removed by BMPs (cubic feet)	19,080
Additional volume removal needed to meet requirement (cubic feet)	0
Percent volume removed	100.00%
Pre-project annual volume (acre-ft)	6.54
Annual volume removed by BMPs (acre-ft)	6.54
Percent annual volume removed	100.00%
Pre-project annual Particulate P load (lb/yr)	2.93
Annual Particulate load removed by BMPs (lb/yr)	2.93
Pre-project annual Dissolved P load (lb/yr)	2.40
Annual Dissolved P load removed by BMPs (lb/yr)	2.40
Percent annual TP removed	100.00%
Pre-project annual TSS load (lb/yr)	969
Annual TSS load removed by BMPs (lb/yr)	969
Percent annual TSS removed	100.00%

Note:
Green cells will fill in when MIDS BMP Calculator tab is complete

Grey Cells are calculated using Site Information entered above

Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of Fridley – 2018 Urban Stormwater Cost-Share Program Application for 69th Ave Road Diet and Median Infiltration

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of Fridley, we offer the following comments for your use:

- The applicant is proposing to reduce the amount of impervious surface of 69th Ave by 1.17 acres through replacing the median with an infiltration BMP and native grasses. The BMP is within the direct drainage of Rice Creek, which is a listed impaired water body.
- This project includes volume reduction, which is the highest priority BMP category for the District. The project also reduces and disconnects impervious surface. The City will maintain the BMP.
- The applicant provided MIDS calculations estimating the BMP would remove 5.3 lbs. of TP annually and 969 lbs. of TSS annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$2,191 per pound of TP and \$12.05 per pound of TSS, based on a 30-year capital life of the BMP.
- The effectiveness of the project would be determined by measuring the rate and concentration of runoff from the BMP drainage area before and after project completion.
- The project has moderate/high educational opportunity. The applicant is proposing signage along the trails paralleling 69th Avenue.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of Hugo
 Street Address: 14669 Fitzgerald Avenue North
 City, State, Zip: Hugo, MN 55038

II. PROJECT CONTACTS

Project Officer: Mark Erichson Financial Officer: _____
 Telephone: (651) 286-8463 Telephone: _____
 Fax: _____ Fax: _____
 Email: MErichson@wsbeng.com Email: _____
 Tax Status: Private Business Tax ID#: _____
(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: Stormwater Asset Management Program (SWAMP)
 Location(s) of Project: City-wide
 City: Hugo State: MN County: Washington
 Project Start Date: 01/01/2018 Project Completion Date: _____
 Project Type (check only those that directly apply):
 Water Quality Treatment Project Runoff Volume Control / Flood Storage Project
 Peak Runoff Rate Control Project Stormwater Reuse Irrigation Project Other
 Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested: \$ 12,000.00
 Local Matching Contributions: \$ 12,000.00
 State/Federal/Other Funds: \$ 0.00 Source(s): _____
 Total Estimated Project Cost: \$ 24,000.00
 Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.

Mark Erichson
 Signature of Project Officer

12-29-17
 Date

 City Engineer
 Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

Stormwater Asset Management Program (SWAMP) was designed to customize prioritization for annual BMP inspection and maintenance activities. Information from the city's BMP inventory and drainage areas will be incorporated into SWAMP to allow for efficient management of MS4 basins. Results of inspections and maintenance prioritizations can also be tied to each basin to efficiently manage infrastructure and annual reporting. The SWAMP calculates annual TSS and TP removal efficiencies and load reductions provided by each basin. With this information, a cost/benefit for completing maintenance activities or improvement projects can be established for each basin, creating a road map to prioritize, budget, and manage Hugo's stormwater infrastructure.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Rice Creek, Clearwater Creek, Bald Eagle, Oneka
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project including any stormwater reuse components.

Best Management Practices include scheduling, tracking, and storing MS4 infrastructure inspections, budgeting stormwater inspection and maintenance activities, tracking TSS and TP load reductions for project development or TMDL accounting, and allowing City's to rank pond maintenance projects in terms of pollutant removal and cost-benefit.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

N/A

- Describe how long-term operation and maintenance of the project will be accomplished.

The SWAMP program is used to help Hugo develop a standard operating procedure for inspections and maintenance of their MS4 owned and operated facilities (BMPs). The SWAMP program is a tool to aid City staff in selection of priority locations to conduct inspection and maintenance activities on City and privately owned BMPs. The program dynamically updates loading estimates based upon inspection activities; therefore keeping the information current and useful for many years into the future. The program will receive annual routine updates.

- If applicable, describe how the project minimizes impervious surface and how it minimizes infiltration.

N/A

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

The SWAMP is designed to help City's meet written procedure and treatment effectiveness requirements for stormwater basins and smaller structural pollutant devices as part of the MS4 permit. The program also helps in budgeting for stormwater maintenance in the local surface water management plan and the City's CIP. Water quality is a main priority identified in Hugo's local surface water management plan and the SWAMP helps the City to effectively utilize the existing BMPs in their TP removal.

- List all project partners and their respective roles in implementing and/or supporting the project.

The City of Hugo will be the main project sponsor and be the project manager of the project. The City of Hugo will share information from the program with private BMP owners within the City to assist in their tracking BMP inspection and maintenance activities, as well as generating cost benefit assessments on their maintenance activities. Rice Creek Watershed will be a project sponsor and have a support role in the project.

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. (Attach separate sheets.)

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. (NOTE: Mandatory for RCWD to consider your proposal!)

This program will yield significant pollutant removals for years to come. Pollutant reduction estimates will vary for each project identified for maintenance. The program goal is to ensure the dollars that are allocated for maintenance are put to the greatest and best use. The program has incorporated a PondNet water quality model which estimates TSS and TP load reductions from maintenance activities and helps guide the city to conduct the appropriate level of maintenance to generate the highest pollutant removal life cycle cost benefit. The program also aides the City in identifying undersized BMPs for the drainage areas and recommends locations where BMP enhancements or retrofits are needed.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. (Attach separate sheets.)

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

The program is the strategy that the City will use to guide its BMP inspection and maintenance activities. The City will define success as utilizing the program to guide an annual inspection program that leads to an ongoing maintenance program that is predictive in nature resulting in maintenance activities occurring to preserve conveyance and water quality function in perpetuity.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. (Applicants must include a public education component into the project.)

The SWAMP program provides calculated responses regarding pond and BMP maintenance priorities to residents and members of City Council when questions arise. The information in the program allows the City staff to better understand resident complaints and provide quick responses where the BMP of concern is on the inspection and maintenance schedule. The program is also be a great educational tool to help inform City Council in understanding upcoming maintenance requirements and appropriately allocate funds in the CIP for BMP maintenance.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

Scott Anderson - Hugo Public Works Director
651-762-6326

Mark Erichson - City Engineer
651-286-8463



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of Lino Lakes
 Street Address: 600 Town Center Parkway
 City, State, Zip: Lino Lakes, MN 55014

II. PROJECT CONTACTS

Project Officer: <u>Michael Grochala</u>	Financial Officer: <u>Sarah Cotton</u>
Telephone: <u>(651) 982-2427</u>	Telephone: <u>(651) 982-2410</u>
Fax: _____	Fax: _____
Email: <u>michael.grochala@ci.lino-lakes.mn.us</u>	Email: <u>sarah.cotton@ci.lino-lakes.mn.us</u>
Tax Status: <u>Local Government</u>	Tax ID#: <u>41-0883446</u>

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: LaMotte Neighborhood Biofiltration Basin
 Location(s) of Project: City Park at Lamotte Drive and Lamotte Circle
 City: Lino Lakes State: MN County: Anoka
 Project Start Date: 05/01/2018 Project Completion Date: 12/31/2019
 Project Type (check only those that directly apply):
 Water Quality Treatment Project Runoff Volume Control / Flood Storage Project
 Peak Runoff Rate Control Project Stormwater Reuse Irrigation Project Other
 Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested: \$ 39,500.00
 Local Matching Contributions: \$ 39,500.00
 State/Federal/Other Funds: \$ 0.00 Source(s): _____
 Total Estimated Project Cost: \$ 79,000.00
 Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.


 Signature of Project Officer

12/29/17
 Date

 Community Development Director
 Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

Centerville Lake is listed on the MPCA Impaired Waters List as impaired for excess nutrients. A TMDL has been established for Centerville Lake in the Peltier-Centerville Lakes TMDL Report (2013). The Lamotte neighborhood project will consist of roadway, drainage, sanitary and watermain improvements. The proposed Lamotte Neighborhood Stormwater Biofiltration Basin will treat 7.8 acres of currently untreated stormwater prior to discharging into Centerville Lake, resulting in a removal of 3 pounds per year of total phosphorous. The City of Lino Lakes is requesting \$39,500 of grant funds to match their \$39,500 in local fund contribution to assist in providing stormwater water quality treatment to a previously untreated drainage area that is directly tributary to Centerville Lake.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Centerville Lake
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

The City will be completing roadway and utility improvements including a full reconstruction and addition of curb and gutter, stormsewer, maintenance of sanitary sewer and the extension of watermain to the neighborhood. The City is requesting funds for the Stormwater Biofiltration Basin only. The Lamotte neighborhood improvement project will not trigger RCWD Stormwater Management Rule C, therefore all stormwater management and water quality treatment will be done on behalf of the interest and desire of the neighborhood residents and the City of Lino Lakes.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

Six geotechnical borings were completed within the Lamotte neighborhood and only one encountered groundwater. The groundwater was measured at approximately 6-ft below the ground surface, so there are not anticipated to be any impacts to groundwater. The biofiltration basin will include an underdrain due to clayey underlying soils, therefore no interaction between the stormwater runoff and groundwater is expected.

- Describe how long-term operation and maintenance of the project will be accomplished.

The stormwater BMP will become a part of the City's stormwater program and will be included in the annual and long-term maintenance plans.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

There will be no increase in impervious surface as a result of this project - the proposed roadway will match existing road widths. Infiltration was considered as a stormwater BMP, however due to underlying clayey soils, it is not recommended.

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

According to the Peltier Lake and Centerville Lake TMDL, phosphorous loading from watershed runoff makes up approximately 24% of the TP loading to the lake. Although the TMDL cites a 0% Load Reduction for Watershed TP loading to Centerville Lake, the 3lb TP/yr of removal will benefit the overall lake reduction goal of 45% TP from existing conditions. In the City's existing Local Surface Water Management Plan, water quality improvements for Centerville Lake in conjunction with the street and utility project has been identified as the primary subwatershed action.

- List all project partners and their respective roles in implementing and/or supporting the project.

N/A

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

The Minnesota Pollution Control Agency (MPCA) Minimal Impact Design Standards (MIDS) BMP calculator was used to show a reduction of 3 lb/yr of Total Phosphorous and 660 lb/yr of Total Suspended Solids. The calculator assumes a surface area that is consistent with what is shown in the conceptual design, and overall provides 60% TP removal, which is consistent with the Minnesota Stormwater Manual's estimates for a biofiltration basin stormwater BMP.

The existing discharge point from the Lamotte neighborhood to Centerville Lake is a drainage outlet open channel that is susceptible to erosion and sedimentation. The final design for the stormwater biofiltration BMP will provide non-erosive flow velocities (less than 4 feet per second during the 10-year storm event) to ensure that the channel does suffer from erosion and sedimentation due to the proposed BMP.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

Centerville Lake has been previously monitored by the MPCA. Based on TMDL Report, Centerville Lake displays relatively higher chlorophyll concentrations as compared to TP, indicating that the lake is eutrophic. We propose including future monitoring activities led by a citizen committee to evaluate the effects of the proposed Stormwater BMP. The data collected by the MPCA will serve as a baseline for transparency, chlorophyll-a and total phosphorus indicators on the lake's health. It is anticipated that with the implementation of this water quality BMP in an area where there was previously no treatment, the total phosphorus entering the lake will be reduced which may be shown by an improvement in transparency, chlorophyll-a, and total phosphorus measurements.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

There have been various public and neighborhood meetings for the Lamotte neighborhood improvement project and residents are engaged and interested in providing stormwater treatment for their neighborhood. It is anticipated that the conversation on the purpose and success of the BMP will continue through future neighborhood meetings as well as be included in mailer updates to ensure that information is being made known to the public.

Depending on interest from residents, the City will include an informational sign that designates the BMP and its purpose.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.


Michael Grochala - Community Development Director
Diane Hanke - City Engineer
Jim Stremel - Project Manager
Katy Thompson - Water Resources Engineer
Contractor and Erosion Control Specialist TBD

Centerville Lake

Existing Outlet Channel -
Protect outfall and restore
channel and banks

Proposed Biofiltration Basin

PIN: 223122410012
Owner: City of Lino Lakes

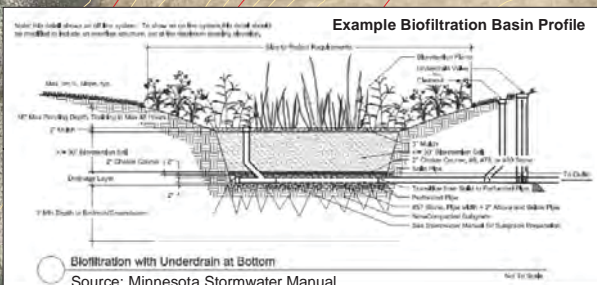


CITY OF LINOLAKES

**Biofiltration Basin
Conceptual Design**

Lamotte Neighborhood
Improvement Project
City of Lino Lakes

0 85 Feet
1 inch = 85 feet



- Existing Storm Sewer
- Proposed Storm Sewer
- Proposed Storm Structure
- Proposed Contour
- Reconstructed City Street
- Proposed Drainage Areas to Basin
- Impervious Area Contributing to Biofiltration Basin
- Proposed Biofiltration Basin

4/10/2024 11:30 AM
 DATE: 12/22/2023
 USER: JAMES
 PROJECT: LAMOTTE NEIGHBORHOOD IMPROVEMENT PROJECT
 DRAWING: STORMWATER MANAGEMENT



LAMOTTE NEIGHBORHOOD STORMWATER BMP COST ESTIMATE

1	MOBILIZATION	LS	1	\$3,500.00	\$3,500.00
2	DEWATERING	LS	1	\$5,000.00	\$5,000.00
3	PERFORATED 6" DRAIN TILE	LF	220	\$20.00	\$4,400.00
4	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 1	EACH	1	\$3,000.00	\$3,000.00
5	COMMON EXCAVATION - BIOFILTRATION BASIN	CY	450	\$25.00	\$11,250.00
6	COMMON EXCAVATION - LAKE OUTLET CHANNEL	CY	300	\$25.00	\$7,500.00
7	60/40 SAND COMPOST MIX	CY	150	\$38.00	\$5,700.00
8	GEOTEXTILE FABRIC TYPE 3	SY	400	\$2.50	\$1,000.00
9	COARSE FILTER AGGREGATE	CY	50	\$50.00	\$2,500.00
10	RIP RAP CLASS III	CY	10	\$95.00	\$950.00
11	EROSION CONTROL BLANKET CATEGORY 3N	SY	1,520	\$3.00	\$4,560.00
12	SEED MIX 33-261	SY	600	\$7.00	\$4,200.00
13	SEED MIX 33-262	SY	900	\$7.00	\$6,300.00
TOTAL				\$59,860.00	\$59,860.00
CONTINGENCY TOTAL (10%)				\$5,986.00	\$5,986.00
SUBTOTAL TOTAL				\$65,846.00	\$65,846.00
INDIRECT COST TOTAL (20%)				\$13,169.20	\$13,169.20
TOTAL				\$79,000.00	\$79,000.00

Project Information

Calculator Version:	Version 3: January 2017
Project Name:	Lamotte Neighborhood Biofiltration Basin
User Name / Company Name:	WSB/City of Lino Lakes
Date:	12/28/2017
Project Description:	
Construction Permit?:	No

Site Information

Retention Requirement (inches):	1.1
Site's Zip Code:	55038
Annual Rainfall (inches):	31.6
Phosphorus EMC (mg/l):	0.3
TSS EMC (mg/l):	54.5

Total Site Area

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land					0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed				6.81	6.81
			Impervious Area (acres)		0.99
			Total Area (acres)		7.8

Site Areas Routed to BMPs

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land					0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed				6.81	6.81
			Impervious Area (acres)		0.99
			Total Area (acres)		7.8

Summary Information

Performance Goal Requirement

Performance goal volume retention requirement:	3953	ft3
Volume removed by BMPs towards performance goal:	922	ft3
Percent volume removed towards performance goal	23	%

Annual Volume and Pollutant Load Reductions

Post development annual runoff volume	6.2639	acre-ft
Annual runoff volume removed by BMPs:	1.7283	acre-ft
Percent annual runoff volume removed:	28	%

Post development annual particulate P load:	2.811	lbs
Annual particulate P removed by BMPs:	2.404	lbs
Post development annual dissolved P load:	2.3	lbs
Annual dissolved P removed by BMPs:	0.668	lbs
Percent annual total phosphorus removed:	60	%

Post development annual TSS load:	928.6	lbs
Annual TSS removed by BMPs:	659.6	lbs
Percent annual TSS removed:	71	%

BMP Summary

Performance Goal Summary

BMP Name	BMP Volume Capacity (ft3)	Volume Recieved (ft3)	Volume Retained (ft3)	Volume Outflow (ft3)	Percent Retained (%)
1 - Bioretention basin (with underdrain)	922	3953	922	3032	23

Annual Volume Summary

BMP Name	Volume From Direct Watershed (acre-ft)	Volume From Upstream BMPs (acre-ft)	Volume Retained (acre-ft)	Volume outflow (acre-ft)	Percent Retained (%)
1 - Bioretention basin (with underdrain)	6.2639	0	1.7283	4.5356	28

Particulate Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained (%)
1 - Bioretention basin (with underdrain)	2.8112	0	2.4041	0.4071	86

Dissolved Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained (%)
1 - Bioretention basin (with underdrain)	2.3001	0	0.6679	1.6322	29

TSS Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained (%)
1 - Bioretention basin (with underdrain)	928.56	0	659.62	268.94	71

BMP Schematic



Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of Lino Lakes – 2018 Urban Stormwater
Cost-Share Program Application for LaMotte
Neighborhood Biofiltration Basin

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of Lino Lakes, we offer the following comments for your use:

- The applicant is proposing to build a bioretention BMP in LaMotte park as part of their street reconstruction project. Treatment would not be required for this project under current District Rules. The project would provide treatment for a previous untreated area that drains directly to Centerville Lake, which is a Tier I lake.
- This project does not include volume reduction, which is the highest priority BMP category for the District. However, the project does provide treatment to City streets where not previous treatment occurred. The City will maintain the bioretention BMP.
- The applicant stated that MIDs estimated the BMP would remove 3 lbs. of TP annually and 660 lbs. of TSS annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$878 per pound of TP and \$4 per pound of TSS, based on a 30-year capital life of the BMP.
- The effectiveness of the project would be determined by continued monitoring of Centerville Lake as part of a TMDL.
- The project has moderate/high educational opportunity. The applicant is proposing to continue engaging the neighborhood in project meetings and add signage describing the BMP and its purpose.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of Lino Lakes
 Street Address: 600 Town Center Parkway
 City, State, Zip: Lino Lakes, MN 55014

II. PROJECT CONTACTS

Project Officer: <u>Michael Grochala</u>	Financial Officer: <u>Sarah Cotton</u>
Telephone: <u>(651) 982-2427</u>	Telephone: <u>(651) 982-2410</u>
Fax: _____	Fax: _____
Email: <u>michael.grochala@ci.lino-lakes.mn.us</u>	Email: <u>sarah.cotton@ci.lino-lakes.mn.us</u>
Tax Status: <u>Local Government</u>	Tax ID#: <u>41-0883446</u>

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: West Shadow Lake Drive Sanitary Extension
 Location(s) of Project: West Shadow Lake Drive, Shadow Court and Sandpiper Drive
 City: Lino Lakes State: MN County: Anoka
 Project Start Date: 09/01/2018 Project Completion Date: 12/31/2019
 Project Type (check only those that directly apply):
 Water Quality Treatment Project Runoff Volume Control / Flood Storage Project
 Peak Runoff Rate Control Project Stormwater Reuse Irrigation Project Other
 Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested: \$ 50,000.00
 Local Matching Contributions: \$ 299,000.00
 State/Federal/Other Funds: \$ 0.00 Source(s): _____
 Total Estimated Project Cost: \$ 349,000.00
 Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.

Michael Grochala
 Signature of Project Officer

12/29/17
 Date

 Community Development Director
 Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

Reshanau Lake is listed on the MPCA Impaired Waters List due to excess nutrients. In the West Shadow Lake Drive (WSLD) neighborhood residents have drinking wells and individual sewage treatment systems (ISTS) in close proximity to each other, and many are near the end of their expected life. The WSLD neighborhood is known to have a high groundwater table and directly drains to Reshanau Lake. While ISTS systems can remove total phosphorus (TP) when designed correctly, the concern is that as these systems age, their proximity to each other, and the drain field conditions may prevent the design TP removals. In an effort to prevent noxious algal blooms and meet the waste load allocations for Reshanau Lake, the City is proposing to include the extension of municipal utilities, including sanitary sewer, as part of their street reconstruction project. The goal is to connect the residential properties and remove the aging ISTS and drain fields. The City is requesting \$50,000 of funds to match their \$349,000 local fund contribution.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Reshanau Lake
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

The City will be extending municipal services with the West Shadow Lake Drive Street Reconstruction project. The street project will include the required stormwater treatment under Rule C. The City is requesting grant funding for the sanitary sewer extension only, to prevent additional phosphorus and pollutants from entering Reshanau Lake from the 62 residential septic systems and drain fields sited within 500 feet of the lake.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

The West Shadow Lake Drive neighborhood is known to have a high groundwater table, based on soil surveys, the water table is within one foot of the surface for most of the neighborhood. ISTS systems are not effective at immobilizing phosphorus when the soils are saturated and common practice is to provide at least two feet of separation between the bottom of the drain field and the saturated zone. Without this separation, the design TP removal rates are not achieved. By connecting the 62 residences to the municipal system, the City hopes to protect the groundwater from residential septic waste and phosphorus contamination.

- Describe how long-term operation and maintenance of the project will be accomplished.

The sanitary sewer will become part of the City of Lino Lakes municipal infrastructure and will be maintained accordingly.

The pervious concrete that will be constructed for stormwater management will be vacuumed annually to prevent the voids from filling with sand and organic matter and ensure proper drainage continues.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

The City proposes to increase the width of the roadway to improve emergency vehicle access into the neighborhood. In order to reduce the amount of impervious surface created, the shoulders will be paved with a pervious concrete. Unfortunately in the majority of the neighborhood, the groundwater is within one foot of the surface and does not have adequate separation, so the pervious system will be required to be lined and drained with drain tile.

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

By connecting these residents to the municipal sanitary sewer, the City estimates they can prevent 77 pounds of phosphorus from reaching Reshanau Lake via the aging septic systems and drain fields. The Lino Lakes Chain of Lakes TMDL and the City's Local Surface Water Management Plan, have identified water quality improvements in the Reshanau Lake Resource Management Unit as a top priority.

- List all project partners and their respective roles in implementing and/or supporting the project.

N/A

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

Pollutant reduction for the removal of ISTS and the extension of sanitary sewer was quantified using methodology from the U.S. Environmental Protection Agency (USEPA) Onsite Wastewater Treatment Systems Manual and Minnesota Pollution Control Agency (MPCA) High Rate Soil Absorption (HRSA) Task Force Final Report. Using these resources, we reviewed the local soils, proximity to impaired waters, age of systems, and the loading rates to determine the total phosphorus generated by the residences along WSLD, as well as the estimated treatment provided by the existing ISTS.

1. The local soils and groundwater do not have an adequate unsaturated zone for septic treatment to reach the design TP removal of 85 to 95%. Based on U.S. EPA case studies, with the water table at 30 cm below the surface, the maximum TP removal rate with this minimal separation is estimated at 59%.
2. The average age of the ISTS along WSLD is 34 years, the MPCA estimates a design life of 30 years, while the average age of replacement according to City records is 27 years.
3. The 62 residences along WSLD produce 822 pounds of TP annually, which is treated by ISTS. The 37 systems that are over 27 years old and within 500-ft of Reshanau Lake produce 442 lb of TP annually, treated in a septic tank and drain field, this results roughly 83% reduction in TP, leaving 77 pounds of TP to enter the water table and Reshanau Lake on an annual basis.

The City proposes to connect all residences to a municipal sanitary sewer extension at the residents' request and to protect the groundwater and Reshanau Lake from pollutants originating in these aging systems. Preliminary analysis of these systems indicates that by connecting these homes to a municipal system the City can prevent 77 pounds of total phosphorus from entering ground and surface water resources along West Shadow Lake Drive, along with other wastewater effluent discharges that may be directly entering the water table and lake.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

Reshanau Lake has been previously monitored by the MPCA, establishing a baseline transparency of roughly 2-feet, indicating that the lake is eutrophic. We propose including future monitoring activities led by a citizen committee to evaluate the effects of the proposed stormwater treatment and sanitary sewer improvements on the lake. The data collected by the MPCA will serve as a baseline for transparency, chlorophyll-a and total phosphorus indicators on the lake's health. It is anticipated that with the extension of sanitary service and abandonment of residential septic systems, the total phosphorus entering the lake will be reduced which will be shown by an improvement in transparency, chlorophyll-a, and total phosphorus measurements.

XII. Education & Demonstration

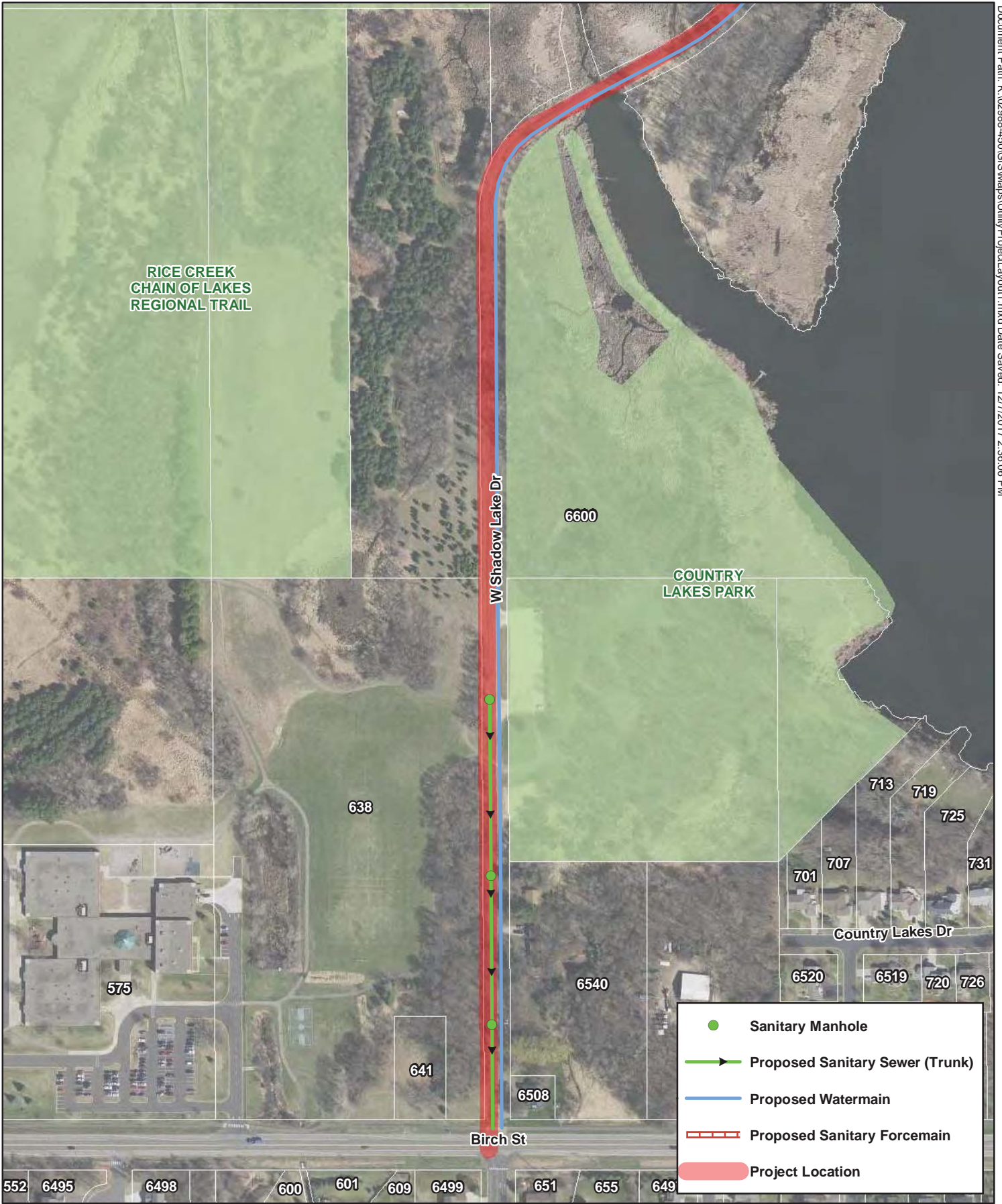
Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

There have been various public and neighborhood meetings for the West Shadow Lake Drive neighborhood improvement project, and residents are engaged and interested in the positive impact that a municipal sanitary system will have on the lake that is used for recreation and scenic views. It is anticipated that conversation on the purpose and success of the sanitary sewer extension will continue through future neighborhood meetings as well as be included in mailer updates to ensure that information is being made known to the public.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.




Michael Grochala - Community Development Director
Diane Hanke - City Engineer
Jim Stremel - Project Manager
Katy Thompson - Water Resources Engineer
Contractor and Erosion Control Specialist TBD



Utility Project Layout 1
 West Shadow Lake Drive
 Lino Lakes, MN
 December 2017





 Proposed Watermain
 Proposed Sanitary Forcemain
 Project Location



Utility Project Layout 2
 West Shadow Lake Drive
 Lino Lakes, MN
 December 2017





	Proposed Watermain
	Existing Watermain
	Proposed Sanitary Forcemain
	Existing Sanitary Forcemain
	Project Location

Utility Project Layout 3
 West Shadow Lake Drive/
 Shadow Ct/Sandpiper Dr
 Lino Lakes, MN
 December 2017





03/20/17
 CITY OF LINO LAKES
 STREET RECONSTRUCTION PROGRAM
 PRELIMINARY COST ESTIMATE



West Shadow Lake Drive, Shadow Court & Sandpiper Drive - Sanitary Sewer

ITEM	UNIT	QUANTITY	UNIT PRICE (\$)	AMOUNT (\$)
Mobilization	LS	1	5,000.00	5,000.00
3" HDPE SDR 17-Forcemain	LF	4,500	30.00	135,000.00
8" PVC SDR 35 Sewer Pipe	LF	900	35.00	31,500.00
48" Diameter Manhole	LF	47	300.00	14,100.00
Manhole Casting	EACH	5	700.00	3,500.00
Chimney Seals	EACH	5	300.00	1,500.00
4" PVC SDR 40 Service Pipe	LF	180	30.00	5,400.00
4" x 8" PVC Wye	EACH	6	200.00	1,200.00
1-1/2" HDPE SDR 17-Service pipe	LF	1,920	12.00	23,040.00
1-1/2" x 3" Wye	EACH	64	250.00	16,000.00
Connect to Existing System	EACH	2	1,500.00	3,000.00
Dewatering	LS	1	25,000.00	25,000.00

SUBTOTAL CONSTRUCTION COST \$264,240.00

10% CONTINGENCY \$26,424.00

SUBTOTAL CONSTRUCTION WITH CONTINGENCY \$290,664.00

20% ADMINISTRATION, ENGINEERING AND LEGAL \$58,132.80

TOTAL ESTIMATED SANITARY SEWER CONSTRUCTION COST: \$348,796.80



Memorandum

To: Project File

From: Katy Thompson, PE

Date: December 26, 2017

Re: West Shadow Lake Drive Septic System TP Loading Calculations
WSB Project No. 010326-000

Background

Reshanau Lake is a 303(d) impaired water of the state for excess nutrients since 2006, regularly exceeding the state standard of 60 µg/L of total phosphorus for shallow lakes, as well as for chlorophyll-a and water clarity. A total maximum daily load of 0.71 pounds per day during the summer growing season (established by the 2013 Lino Lakes Chain of Lakes Nutrient TMDL). The total phosphorus TMDL budget for Reshanau Lake is as follows:

	Existing Load [lb/year]	Shallow Lake Standard [lb/year]	
Stormwater Load	12	12	0%
Watershed Load	16	16	0%
Upstream Lake Load	219	153	-30%
Atmospheric Load	6	6	0%
Internal Load	596	61	-90%
TOTAL	849	248	-71%

Single-family homes make up most of Reshanau Lake’s shoreline and many of these homes are not connected to municipal services, instead utilizing private wells and septic systems for their drinking and wastewater needs.

While individual septic systems when correctly designed and maintained, do not pose a threat to drinking water wells or natural resources, when improperly designed or sited, they can leach pollutants, including pathogens, nitrogen and phosphorus, that can impact public safety and water quality.

The U.S. Environmental Protection Agency (USEPA) estimated that 50 to 70% of onsite treatment systems fail in Minnesota, due to inadequate soil layers and surfacing of effluent (EPA 2002). It is likely that while the systems along West Shadow Lake Drive were correctly designed at the time, many have failed simply due to the high groundwater table present in the area. Without adequate separation between the drain field and water table, the wastewater mixes with the groundwater and follows the groundwater into neighboring surface waters.

Monitoring by the USEPA shows the amount of phosphorus leached into groundwater depends on the:

1. Individual soil characteristics;
2. Unsaturated percolation zone thickness;
3. Applied loading rate; and
4. Age of the system.

The EPA also found that amount of phosphorus in groundwater can vary from background levels to the full septic tank effluent concentration.

Methodology

Based on this information we have evaluated the septic systems along West Shadow Lake Drive to estimate the existing total phosphorus loading that may be entering Reshanau Lake from these aging systems.

Local Soils

The Minnesota NRCS staff has developed a “Sensitive Soils for Nutrient Management” based:

1. Frequency of flooding – 50 times or more in 100 years
2. Soil texture – coarse textured soils within three feet of surface
3. Depth to bedrock – bedrock within 40 inches of surface
4. Seasonal high water table within two feet of soil surface
5. Presence of ponding at any point in the year
6. Slopes greater than six percent

The combination of these factors indicates how effective a soil will be at preventing the leaching of nutrients beyond the root zone or the movement of nutrients towards surface waters. Soils assigned a rating of sensitive should not be used for nutrient management activities. The Minnesota NRCS has classified the entire WSL area as Sensitive (Soil Survey Staff 2017).

Proximity to Impaired Water

Of the 62 residential septic systems, all but two are within 500 feet of Reshanau Lake.

Seasonal Water Table

At best, according to NRCS soils data, the depth to water table in the WSL area is only 30 cm, or almost one foot below the ground surface. This indicates that its likely that all the septic systems do not meet the recommended separation of two feet and most are likely sited in the water table.

Age of System

According to City records, nine of the 62 septic systems have been replaced, while the rest are still the original systems, with an average age of 34 years old. The average age for replacement is 27 years old, which is consistent with MPCA life expectancy estimates of 30 years for for soil treatment and dispersal systems receiving septic tank effluent (MPCA 2016). For the purposes of this analysis, we are considering only those over 27 years to be “aging” and contributing to the phosphorus loading of Reshanau Lake.

Loading Rate

Using methodology from the MPCA’s *Design Guidance for Large Subsurface Wastewater Treatment Systems*, we have estimated the loading rates from all the residences based on the finished floor area and number of bedrooms for the residence. The USEPA has estimated that the average effluent concentration of total phosphorus leaving the septic tank to be 13 mg/L before entering the drain fields (USEPA 1978), combined with functional soil infiltration systems, 85 to 95 percent of the total phosphorus could be removed (USEPA 2002).

The wastewater generated by the residences along West Shadow Lake Drive is estimated to contain 822 pounds of total phosphorus on an annual basis. Even assuming all systems are 95% effective at removing the total phosphorus from the waste water, 41 pounds of phosphorus would still be entering the groundwater and Reshanau Lake.

Results

Combining the loading rate from the number of systems that are aging (48 systems) and within 500 feet of Reshanau Lake results in 6,174 gallons of wastewater generated per day using the MPCA design guidance. Combined, these 37 systems produce 542 pounds of total phosphorus annually that is treated by an aging septic system.

Based on the soils data, all these systems are sited within 30 cm of the water table. To account for the small amount of treatment that can still occur in this unsaturated zone, we have assumed roughly 59% removal efficiency based on a USEPA case study of septic tank effluent and soil water quality (USEPA 2002). A summary of our results is shown on the table below.

Table 0-1. West Shadow Lake Drive Aging Septic Systems and Total Phosphorus Contributions

Residential Waste Water Volume	6,174 gallons per day
	2,253,565 gallons per year
TP in Residential Waste Water	1.21 lb TP per day
	442 lb TP per year
TP in Septic Tank Effluent	0.52 lb TP per day
	188 lb TP per year
TP Entering Water Table	0.21 lb TP per day
	77 lb TP per year

Conclusions

The 62 residences along West Shadow Lake Drive produce 442 pounds of total phosphorus annually which is treated by individual septic systems. Most of these systems are within 500 feet of impaired Reshanau Lake and are over 27 years old. In addition, all systems are within one foot of the water table. The City proposes to connect all residences to a municipal sanitary sewer extension at the residents' request and to protect the groundwater and Reshanau Lake from pollutants originating in these aging systems. Preliminary analysis of these systems indicates that by connecting these homes to a municipal system the City can prevent 77 pounds of total phosphorus from entering ground and surface water resources along West Shadow Lake Drive, along with other wastewater effluent discharges that may be directly entering the water table and lake.

References

- Minnesota Pollution Control Agency, 1984. *High Rate Soil Absorption (HRSA) Task Force Final Report*. November 1, 1984. Available online at <https://www.pca.state.mn.us/sites/default/files/ists-hsrareport.pdf>. Accessed December 19, 2017.
- Minnesota Pollution Control Agency, 2013. *Lino Lakes Chain of Lakes Nutrient TMDL*. July 2013. Available online at <https://www.pca.state.mn.us/sites/default/files/wq-iw11-13e.pdf>. Accessed December 26, 2017.
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- USEPA, 1978. *Management of Small Waste Flows*. September 1978. Available online at <https://nepis.epa.gov/Exe/ZyPDF.cgi/2000I625.PDF?Dockkey=2000I625.PDF>. Accessed December 26, 2017.
- USEPA, 2001. *Source Water Protection Practices Bulletin: Managing Septic Systems to Prevent Contamination of Drinking Water*. July 2001. Available online at

Project File
December 26, 2017
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https://www.epa.gov/sites/production/files/2015-06/documents/2006_08_28_sourcewater_pubs_septic.pdf. Accessed December 26, 2017.

USEPA, 2002. *Onsite Wastewater Treatment Systems Manual*. EPA/625/R-00/008. February 2002. Available online at https://www.epa.gov/sites/production/files/2015-06/documents/2004_07_07_septics_septic_2002_osdm_all.pdf. Accessed December 26, 2017.

Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of Lino Lakes – 2018 Urban Stormwater
Cost-Share Program Application for West
Shadow Lake Drive Sanitary Extension

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of Lino Lakes, we offer the following comments for your use:

- The applicant is proposing to extend City sanitary sewer to serve residents near Reshanau Lake, along West Shadow Lake Drive. The properties are currently served by individual septic treatment systems that are aging and not performing adequately due to high water tables. The system currently discharges an estimated 77 lbs of TP to Reshanau Lake, which is a Tier II lake.
- This project does not include volume reduction, which is the highest priority BMP category for the District. The project also does not treat stormwater. However, the project does reroute sanitary waste water that currently discharges to Reshanau Lake. The City will maintain the sanitary sewer.
- The applicant provided a memo estimating the BMP would remove 77 lbs. of TP annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$151 per pound of TP.
- The effectiveness of the project would be determined by continued monitoring of Reshanau Lake by a civilian task force. The effectiveness will be impacted by the timing of residents connecting to the sanitary sewer.
- The project has low educational opportunity. The applicant is proposing to continue engaging landowners regarding connections to the sanitary sewer. The project is subterranean and thereby not visible.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of Mahtomedi, MN
 Street Address: 600 Stillwater Road
 City, State, Zip: Mahtomedi, MN 55115

II. PROJECT CONTACTS

Project Officer: <u>Bob Goebel</u>	Financial Officer: <u>Scott Schaefer</u>
Telephone: <u>(651) 773-9730</u>	Telephone: <u>(651) 426-3344</u>
Fax: _____	Fax: <u>(651) 426-1786</u>
Email: <u>bgoebel@ci.mahtomedi.mn.us</u>	Email: <u>sschaefer@ci.mahtomedi.mn.us</u>
Tax Status: <u>local government</u>	Tax ID#: <u>local government</u>

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: Glendale Park BMP (part of 2017 Street Improvement Project)
 Location(s) of Project: Dahlia Street (between Forest Ave. and Warner Ave.), Warner Avenue, and Glendale Park
 City: Mahtomedi State: MN County: Washington
 Project Start Date: 05/01/2018 Project Completion Date: 11/30/2018

Project Type (check only those that directly apply):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Water Quality Treatment Project | <input checked="" type="checkbox"/> Runoff Volume Control / Flood Storage Project |
| <input checked="" type="checkbox"/> Peak Runoff Rate Control Project | <input type="checkbox"/> Stormwater Reuse Irrigation Project <input type="checkbox"/> Other |

Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested:	\$ <u>50,000.00</u>	
Local Matching Contributions:	\$ <u>252,331.20</u>	
State/Federal/Other Funds:	\$ <u>5,000.00</u>	Source(s): <u>State Aid for Local Transportation</u>
Total Estimated Project Cost:	\$ <u>307,331.20</u>	

Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.

Bob Goebel
 Signature of Project Officer

12-28-17
 Date

Bob Goebel - Public Works Director
 Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

The Glendale Park BMP improvements that are being considered by the City Council are aimed to increase the stormwater quality, volume control, and infiltration in this fully developed neighborhood. This project proposes to capture and redirect stormwater from the Dahlia/Warner area to an educational BMP in the Glendale Park. Water currently flows through private property without treatment to a private pond and large wetland. The BMP in Glendale Park would allow the City to control runoff rates, provide additional stormwater treatment, and alleviate the storage of runoff from public roadways on private property.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: White Bear Lake
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

The project would include the construction of a bio-filtration/infiltration basin in Glendale Park, focused on rate control and stormwater management for water captured on Dahlia Street. The improvements would be completed in the park where the City has property rights and room to construct stormwater treatment. Conceptually this would be constructed adjacent to the existing low area in the park, but final location would be vetted through the Parks Commission.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

Groundwater levels near this project site are generally deep (deeper than 16' from the surface) and are therefore not anticipated to be impacted with this project.

- Describe how long-term operation and maintenance of the project will be accomplished.

The City Public Works Department will be the responsible party for maintenance of the BMP and storm sewer pipes.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

The project proposes minimal increase to impervious area, but proposes an increase in infiltration or filtration (depending on soil conditions).

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

The City of Mahtomedi is almost fully developed so it is challenging to find effective, large-scale methods for infiltration at sites that are currently not infiltrating surface water. The additional stormwater basin is a potential opportunity for infiltration in an urban, residential area, consistent with Policy 5.1-5 in the WMP. This project will improve water quality and reduce runoff volume by increasing the size of the existing stormwater basin, and it will educate the public and residents that live near the project site about the benefits of the BMP.

- List all project partners and their respective roles in implementing and/or supporting the project.

Project partners include the City of Mahtomedi Public Works Staff, the Mahtomedi City Council, MnDOT State Aid, Rice Creek Watershed District, and the City Engineer. Public Works plans on maintaining the storm sewer and BMPs. The City would promote the project in a newsletter and electronically. MnDOT State Aid and RCWD would be financial partners, and the City Engineer would design and monitor construction of the BMP.

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

The proposed improvements offer several drainage benefits to the area. A type C hydrologic group was assumed for all soils based upon visual inspection of the area.

P8 was used to model the water quality benefits of this project. The tributary 11.7 acre site (3.1 acres of impervious) is expected to generate 2,567 lbs of total suspended solids (TSS) and 8.1 lbs of total phosphorus (TP). The existing BMP removes approximately 1,529 lbs of TSS (60%) and 2.4 lbs of TP (30%).

Expanding the BMP results in an addition removal of 568 lbs of TSS (total of 2097 lbs and 82%) and 1.9 lbs of TP (total of 4.3 lbs and 53%).

Rate Reduction: A HydroCAD model calculated the existing off-site discharge rate for the 1-year storm event to be reduced from 6.14 cfs to 1.10 cfs. Offsite rate reductions were also calculated for the 10-year and 100-year storm events.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

Success for effectiveness on this project will be measured by drawdown measurements for the stormwater basin. Capacity testing may also be implemented based on the requirements of RCWD. This Level 2 testing would be in the form of hydraulic conductivity tests performed over multiple locations in the expanded basin.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

Mahtomedi issues a quarterly Newsletter to all residents and it would be the City's intent to feature this project and partnership with RCWD in a newsletter.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

Project Manager: Nick Guilliams nguilliams@wsbeng.com

Project Engineer: Jacob Newhall jnewhall@wsbeng.com

Project Engineer: Alex Miller amiller@wsbeng.com

City Public Works Director: Bob Goebel bgoebel@ci.mahtomedi.mn.us

Contractor: to be determined at bidding and communicated to RCWD

WSB Project: Glendale Park BMP (2017 Street Improvement Project) *Design By:* AKM
Project Location: City of Mahtomedi *Checked By:* MRH
City Project No.: 17-01
WSB Project No.: 2859-570 *Date:* 12/27/2017

Item No.	MnDOT Specification No.	Description	Unit	Estimated Total Quantity	Estimated Unit Price	Estimated Total Cost
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A. SURFACE IMPROVEMENTS

1	2021.501	MOBILIZATION	LUMP SUM	1	\$10,400.00	\$10,400.00
2	2101.502	CLEARING	TREE	5	\$500.00	\$2,500.00
3	2101.507	GRUBBING	TREE	5	\$500.00	\$2,500.00
4	2104.501	REMOVE AND REPLACE CONCRETE CURB AND GUTTER	LIN FT	580	\$22.00	\$12,760.00
5	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	60	\$6.00	\$360.00
6	2104.504	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	150	\$7.00	\$1,050.00
7	2104.505	REMOVE GRAVEL DRIVEWAY	SQ YD	90	\$2.00	\$180.00
8	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	690	\$4.00	\$2,760.00
9	2104.509	REMOVE SIGN	EACH	6	\$45.00	\$270.00
10	2104.509	REMOVE STAIR CASE	LUMP SUM	1	\$2,000.00	\$2,000.00
11	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	620	\$3.00	\$1,860.00
12	2104.601	SALVAGE AND REINSTALL LANDSCAPE STRUCTURES	LUMP SUM	1	\$5,000.00	\$5,000.00
13	2104.602	SALVAGE AND REINSTALL MAIL BOX	EACH	15	\$55.00	\$825.00
14	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	hour	20	\$200.00	\$4,000.00
15	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	40	\$2.50	\$100.00
16	2360.501	TYPE SP 12.5 WEARING COURSE MIX (2,C)	TON	100	\$70.00	\$7,000.00
17	2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (2,C)	TON	100	\$68.00	\$6,800.00
18	2360.503	TYPE SP 9.5 WEARING COURSE MIX (2,C) (3.0" THICK)	SQ YD	60	\$30.00	\$1,800.00
19	2502.604	4" INSULATION	SQ FT	75	\$45.00	\$3,375.00
20	2504.602	IRRIGATION SYSTEM REPAIR	LUMP SUM	1	\$1,500.00	\$1,500.00
21	2506.516	CASTING ASSEMBLY (STORM)	EACH	8	\$600.00	\$4,800.00
22	2506.602	CHIMNEY SEAL (STORM)	EACH	8	\$175.00	\$1,400.00
23	2521.501	4" CONCRETE WALK	SQ FT	200	\$8.00	\$1,600.00
24	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	150	\$55.00	\$8,250.00
25	2531.602	PEDESTRIAN CURB RAMP	EACH	1	\$1,000.00	\$1,000.00
26	2557.602	REPAIR DOG FENCE	EACH	2	\$200.00	\$400.00

WSB Project: Glendale Park BMP (2017 Street Improvement Project)
Project Location: City of Mahtomedi
City Project No.: 17-01
WSB Project No.: 2859-570

Design By: AKM
Checked By: MRH

Date: 12/27/2017

Item No.	MnDOT Specification No.	Description	Unit	Estimated Total Quantity	Estimated Unit Price	Estimated Total Cost
27	2563.601	TRAFFIC CONTROL	LUMP SUM	1	\$5,000.00	\$5,000.00
28	2573.502	SILT FENCE, TYPE MACHINE SLICED	LIN FT	200	\$4.00	\$800.00
29	2573.530	STORM DRAIN INLET PROTECTION	EACH	2	\$200.00	\$400.00
30	2573.533	FILTER LOG TYPE WOOD FIBER BIOROLL	LIN FT	200	\$3.50	\$700.00
31	2575.505	SODDING TYPE LAWN (INCL TOPSOIL & FERT)	SQ YD	1,500	\$6.00	\$9,000.00
32	2575.505	LANDSCAPING	LUMP SUM	1	\$2,500.00	\$2,500.00
33	2582.502	4" SOLID LINE PAINT	LIN FT	30	\$2.00	\$60.00
34	2582.503	CROSSWALK MARKING - PAINT	SQ FT	75	\$4.00	\$300.00

CONSTRUCTION TOTAL \$103,250.00

CONTINGENCY TOTAL (10%) \$10,325.00

SUBTOTAL TOTAL \$113,575.00

INDIRECT COST TOTAL (28%) \$31,801.00

TOTAL - SURFACE IMPROVEMENTS \$145,376.00

B. STORM SEWER IMPROVEMENTS

35	2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	100	\$5.00	\$500.00
36	2451.609	FILTRATION BASIN AGGREGATE	TON	825	\$15.00	\$12,375.00
37	2451.609	PIPE DRAIN AGGREGATE	TON	90	\$15.00	\$1,350.00
38	2501.515	15" RC PIPE APRON	EACH	1	\$800.00	\$800.00
39	2502.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 1	EACH	6	\$1,500.00	\$9,000.00
40	2502.541	6" PERF PE PIPE DRAIN	LIN FT	300	\$15.00	\$4,500.00
41	2503.541	15" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	920	\$35.00	\$32,200.00
42	2503.602	CONNECT TO EXISTING STORM SEWER	EACH	1	\$800.00	\$800.00
43	2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LIN FT	36	\$375.00	\$13,500.00
44	2573.601	CONSTRUCT STORMWATER BMP	LUMP SUM	1	\$40,000.00	\$40,000.00

CONSTRUCTION TOTAL \$115,025.00

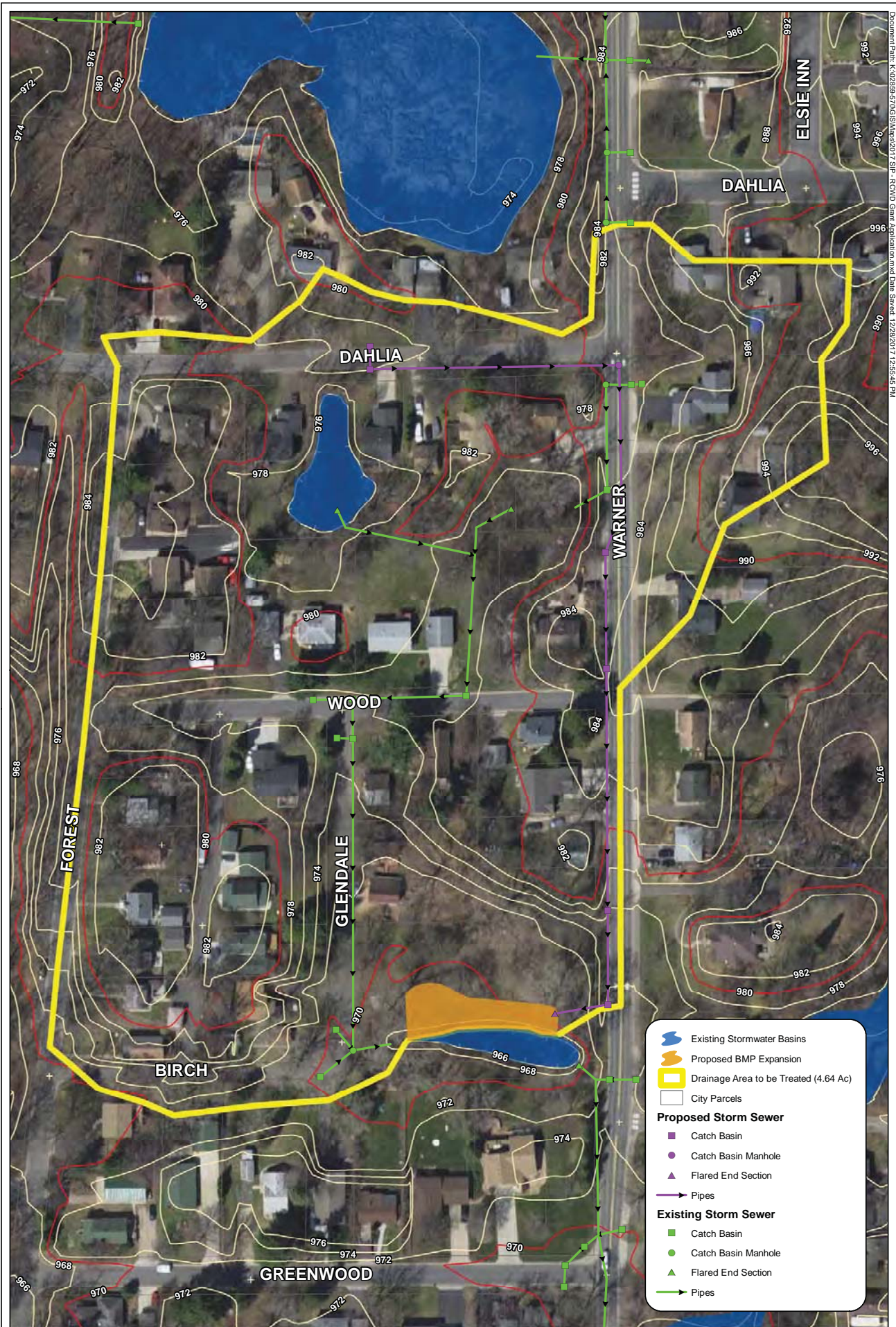
CONTINGENCY TOTAL (10%) \$11,502.50

SUBTOTAL TOTAL \$126,527.50

INDIRECT COST TOTAL (28%) \$35,427.70

TOTAL - STORM SEWER IMPROVEMENTS \$161,955.20

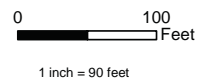
Grand Total - Glendale Park BMP \$307,331.20



- Existing Stormwater Basins
- Proposed BMP Expansion
- Drainage Area to be Treated (4.64 Ac)
- City Parcels
- Proposed Storm Sewer**
- Catch Basin
- Catch Basin Manhole
- Flared End Section
- Pipes
- Existing Storm Sewer**
- Catch Basin
- Catch Basin Manhole
- Flared End Section
- Pipes



RCWD Grant Application
 2017 Street Improvement Project
 City of Mahtomedi



Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of Mahtomedi – 2018 Urban Stormwater
Cost-Share Program Application for Glendale
Park BMP

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of Mahtomedi, we offer the following comments for your use:

- The applicant is proposing to construct storm sewer under reconstructed streets to redirect stormwater to an expanded BMP basin in Glendale Park within the drainage area to White Bear Lake, which is a Tier I lake.
- This project may include volume reduction, which is the highest priority BMP category for the District. The groundwater table indicates that infiltration may be feasible, but site specific soil conditions will determine whether infiltration or biofiltration is used. The City will maintain the BMP.
- The applicant stated that P8 estimated the expansion of the BMP would remove an additional 1.9 lbs. of TP annually and 568 lbs. of TSS annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$5,392 per pound of TP and \$14.08 per pound of TSS, based on a 30-year capital life of the BMP.
- The effectiveness of the project would be determined by the drawdown capacity of the BMP.
- The project has high educational opportunity. The applicant is proposing on site signage in a high traffic area and to publish information on the project in a City publication.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of Mahtomedi
 Street Address: 600 Stillwater Road
 City, State, Zip: Mahtomedi, MN 55115

II. PROJECT CONTACTS

Project Officer: <u>Bob Goebel</u>	Financial Officer: <u>Scott Schaefer</u>
Telephone: <u>(651) 773-9730</u>	Telephone: <u>(651) 426-3344</u>
Fax: _____	Fax: <u>(651) 426-1786</u>
Email: <u>bgoebel@ci.mahtomedi.mn.us</u>	Email: <u>sschaefer@ci.mahtomedi.mn.us</u>
Tax Status: <u>local government</u>	Tax ID#: <u>local government</u>

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: Phase 3 - Historic District Improvements
 Location(s) of Project: West of TH244, East of White Bear Lake, South of Dahlia Street, North of Doover Lane
 City: Mahtomedi State: MN County: Washington
 Project Start Date: 05/01/2018 Project Completion Date: 11/30/2018
 Project Type (check only those that directly apply):
 Water Quality Treatment Project Runoff Volume Control / Flood Storage Project
 Peak Runoff Rate Control Project Stormwater Reuse Irrigation Project Other
 Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested:	\$	<u>50,000.00</u>	
Local Matching Contributions:	\$	<u>259,403.49</u>	
State/Federal/Other Funds:	\$	<u>0.00</u>	Source(s): <u>Municipal funds, grant funds</u>
Total Estimated Project Cost:	\$	<u>309,403.49</u>	<u>Special assessments</u>

Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.


 Signature of Project Officer

1-8-18
 Date

Bob Goebel - Public Works Director
 Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

The goal of this project is to provide additional storm sewer facilities, enhanced stormwater treatment, and improved drainage within the public rights-of-way for the Historic District neighborhood. Project activities will include installation of a storm sewer system on Park Ave, Crocus St, Birch St, Halcyon Ln, Ash St, Doover Ln, and a portion of Wildwood Beach Rd, and installation of 3 stormwater BMPs intended to provide additional treatment to runoff prior to leaving the system. These improvements will more effectively treat stormwater in this residential area adjacent to White Bear Lake. Water quality treatment structures proposed with the project will remove total suspended solids (TSS) and total phosphorus (TP) and provide an outlet to the neighborhood in larger rain events.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: White Bear Lake
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

This project proposes to improve the system by routing stormwater to water quality treatment structures to be maintained by the City.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

Groundwater levels near this project site are generally deep (deeper than 16' from the surface) and are therefore not anticipated to be impacted with this project.

- Describe how long-term operation and maintenance of the project will be accomplished.

The City Public Works Department will be the responsible party for maintenance of the storm sewer pipes and BMPs.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

The project does not propose any additional impervious surface, only additional treatment of the existing impervious.

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

The project is at the top of the watershed, and ultimately drains to and would benefit White Bear Lake and downstream sub-watersheds.

- List all project partners and their respective roles in implementing and/or supporting the project.

Project partners include the City of Mahtomedi Public Works Staff, the Mahtomedi City Council, Rice Creek Watershed District, and the City Engineer (applicant). Public Works plans on maintaining the associated stormwater pipes and BMPs, the City will promote the project, the RCWD would be a financial partner, and the City Engineer will design monitor construction of the project.

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

A P8 model was created to estimate the total phosphorus (TP) and total suspended solids (TSS) leaving the site in existing conditions. Hydrologic soil group 'B' was applied to pervious surfaces with a curve number of 63 based on USGS soil survey data. The existing drainage area consists of 17.31 acres of pervious and 2.99 acres of impervious area. The model estimated 6.7 lbs of TP and 2,082 lbs of TSS leaving the site annually.

The drainage area to the proposed CDS Hydrodynamic Separator is 4.9 acres, 0.84-acres are impervious. A SHSAM model using a continuous runoff model and a generic sediment removal response function shows that the CDS 3025 structure will remove approximately 486 lbs of TSS per year (70%). A combination of P8 modeling and SHSAM modeling estimates the CDS structure to remove approximately 1.3 lbs of TP annually (19%).

Using the same method with a SHSAM model, it was estimated that the two - 3' sump structures (IDs 5500 and 5200) will remove a total of 312 lbs and 0.20 lbs of TSS and TP annually, respectively.

The combination of all three structures will remove a total of 798 lbs of TSS and 1.5 lbs of TP from the project site annually.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

Contech's CDS (continuous deflective separation) structure requires regular maintenance to function properly. The total quantity of pollutant removals would be determined during the maintenance of the treatment structure.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

Mahtomedi issues a quarterly Newsletter to all residents, and it would be the City's intent to feature the project and partnership with the watershed district in the City-wide newsletter. Details would include information on sediment removal and efforts to improve water quality in White Bear Lake and Lost Lake.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

Project Manager: Nick Guilliams nguilliams@wsbeng.com

Project Engineer: Jacob Newhall jnewhall@wsbeng.com

Project Engineer: Alex Miller amiller@wsbeng.com

City Public Works Director: Bob Goebel bgoebel@ci.mahtomedi.mn.us

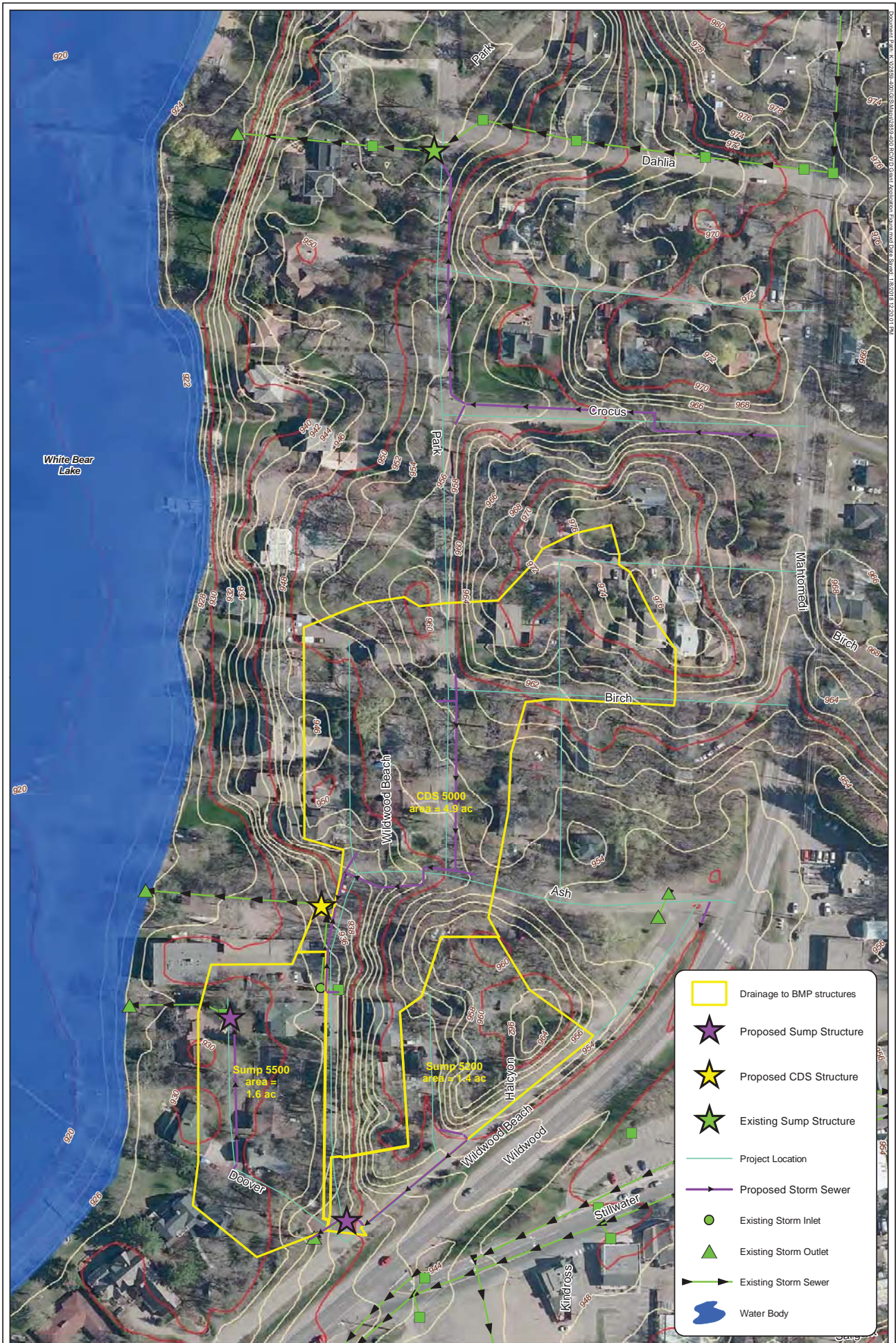
Contractor: to be determined at bidding and communicated to RCWD

Opinion of Probable Cost

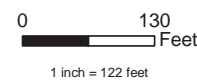
WSB Project: Phase 3 - Historic District Improvements	Design By: AKM	
Project Location: City of Mahtomedi	Checked By: MRH	
City Project No.: 18-01		
WSB Project No: 02859-400	Date: 1/8/2018	

Item No.	MN/DOT Specification No.	Description	Unit	Estimated Total Quantity	Estimated Unit Price	Estimated Total Cost
D. DRAINAGE IMPROVEMENTS						
127	2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	315	\$11.00	\$3,465.00
128	2104.509	REMOVE DRAINAGE STRUCTURE	EACH	3	\$440.00	\$1,320.00
129	2451.609	PIPE BEDDING MATERIAL	TON	125	\$7.00	\$874.30
130	2501.502	22" SPAN RC PIPE SEWER - ARCH CULVERT	LIN FT	52	\$60.00	\$3,120.00
131	2501.502	22" SPAN RC PIPE SEWER - ARCH APRON	EACH	2	\$850.00	\$1,700.00
132	2501.602	12" PIPE APRON	EACH	3	\$650.00	\$1,950.00
133	2501.602	15" PIPE APRON	EACH	2	\$700.00	\$1,400.00
134	2501.602	18" PIPE APRON	EACH	1	\$800.00	\$800.00
135	2501.602	36" PIPE APRON	EACH	1	\$1,800.00	\$1,800.00
136	2502.602	8" PVC PIPE DRAIN CLEANOUT	EACH	1	\$250.00	\$250.00
137	2503.511	8" PVC PIPE SEWER	LIN FT	175	\$40.00	\$7,000.00
138	2503.541	12" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	590	\$35.00	\$20,650.00
139	2503.541	15" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	1225	\$35.00	\$42,875.00
140	2503.541	18" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	235	\$40.00	\$9,400.00
141	2503.602	CONNECT TO EXISTING STORM SEWER	EACH	3	\$1,200.00	\$3,600.00
142	2506.602	CHIMNEY SEAL	EACH	27	\$225.00	\$6,075.00
143	2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LIN FT	80	\$300.00	\$24,000.00
144	2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN H	EACH	3	\$1,500.00	\$4,500.00
145	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 1	EACH	12	\$1,200.00	\$14,400.00
146	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 2	EACH	1	\$50,000.00	\$50,000.00
147	2506.516	CASTING ASSEMBLY (STORM)	EACH	15	\$700.00	\$10,500.00
148	2511.501	RANDOM RIPRAP CLASS SPECIAL	CU YD	100	\$90.00	\$9,000.00
149	2511.515	GEOTEXTILE FABRIC TYPE IV	SQ YD	305	\$3.50	\$1,067.50
CONSTRUCTION TOTAL						\$219,746.80
CONTINGENCY TOTAL (10%)						\$21,974.68
SUBTOTAL						\$241,721.48
INDIRECT COST TOTAL (28%)						\$67,682.01
TOTAL SCHEDULE D - DRAINAGE IMPROVEMENTS						\$309,403.49
Grand Total - Phase 3 - Historic District Improvements Project						\$309,403.49

Highlighted items are cost-share eligible plus contingencies & engineering = \$173,385



RCWD Grant Application
 2017 Street Improvement Project
 City of Mahtomedi



Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of Mahtomedi – 2018 Urban Stormwater
Cost-Share Program Application for Historic
District Improvements Phase 3

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of Mahtomedi, we offer the following comments for your use:

- The applicant is proposing to construct storm sewer under reconstructed streets to redirect stormwater to a separator BMPs in the Historic District within the drainage area to White Bear Lake, which is a Tier I lake.
- This project does not include volume reduction, which is the highest priority BMP category for the District. The applicant is proposing a hydrodynamic separator and sump manholes. Neither of these are BMPs that are typically recommended by the District for primary treatment, but they do provide pre-treatment of stormwater in a previously untreated area with little to no space for primary BMPs. The City will maintain the BMPs.
- The applicant estimated the BMPs would remove 1.5 lbs. of TP annually and 798 lbs. of TSS annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$6,876 per pound of TP and \$13 per pound of TSS, based on a 30-year capital life of the BMP.
- The effectiveness of the project would be determined by the sediment removed during maintenance of the BMPs.
- The project has moderate educational opportunity. The applicant is proposing to publish information on the project in a City publication.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): Minnesota Commercial Railway (MNNR)
Street Address: 508 Cleveland Avenue North
City, State, Zip: St. Paul, MN 55114

II. PROJECT CONTACTS

Project Officer: Robert Bagaus Financial Officer: Matt Looyen, CFO
Telephone: (651) 632-9000 Telephone: (651) 632-9015
Fax: _____ Fax: (651) 632-9033
Email: rbagaus@mnnr.net Email: mlooyen@mnnr.net
Tax Status: Private Business - Railroad Tax ID#: 41-1572875
(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: MNNR Rice Creek Bridge Stabilization and Shoreline Protection Project
Location(s) of Project: Rice Creek at the MNNR bridge
City: New Brighton State: MN County: Ramsey
Project Start Date: 03/01/2018 Project Completion Date: 12/21/2019
Project Type (check only those that directly apply):
 Water Quality Treatment Project Runoff Volume Control / Flood Storage Project
 Peak Runoff Rate Control Project Stormwater Reuse Irrigation Project Other
Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested: \$ 27,716.00
Local Matching Contributions: \$ 0.00
State/Federal/Other Funds: \$ 83,460.00 Source(s): Minnesota Commercial Railway
Total Estimated Project Cost: \$ 111,176.00
Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT (An original signature page must be received with this application)

I certify that the information contained within this application is true and accurate.
Robert Bagaus 12-22-17
Signature of Project Officer Date
Chief Maintenance of Way Officer
Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

This bridge and shoreline stabilization project will reduce the sedimentation of Long Lake by addressing shoreline erosion at the Minnesota Commercial Railway Bridge spanning Rice Creek. Development since the bridge was built in the 1920's has increased scour at the bridge. The project will restore the shoreline, stabilize the railroad bridge, and provide protection against future erosion with rip-rap and a vegetative buffer. The project is estimated to cost \$111,176 and the Minnesota Commercial Railway intends to use the RCWD's grant of up to \$27,716 along with the railroad's \$83,460 investment in order to complete the project.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Long Lake and Lower Rice Creek
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

- 1) Stabilizing the abutments to address movement to the structure due to bank degradation from scour over time.
- 2) Placement of approximately 75TN of 18" Rip-Rap along a 30' section of shoreline to stabilize the shoreline and prevent additional sedimentation due to stream bank scour in Rice Creek.
- 3) Planting of a vegetative buffer between the railroad tracks and the waterway to limit run-off into Rice Creek and further stabilize the bank from further movement.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

The project will protect groundwater only to the extent that it will prevent further shoreline material from being washed into the surface waters and carried on into the groundwater system.

- Describe how long-term operation and maintenance of the project will be accomplished.

The site will be inspected annually as part of the MNMR's annual bridge inspection program, at which time changes in the project's condition will be noted. Changes will be evaluated by the railroad's RBE (Railroad Bridge Engineer) and the RBE will, consult with designated RCWD personnel to develop appropriate corrective action. The corrective action (observation, maintenance, or repair) will be undertaken as provided herein and in accordance RBE's design as approved by the RCWD within an mutually acceptable time frame.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

The use of a vegetative buffer in lieu of a more impervious means of ground stabilization will improve drainage off of the railroad grade and reduce erosion of the bank, while minimizing run-off.

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

The Long Lake Management Action Plan included in the RCWD Southwest Urban Lakes Study (EOR, Inc. 2009) indicated the need to control sedimentation in Long Lake, particularly the northern reach of the lake where water clarity is below standard. The Long Lake MAP recommendations included shoreline restoration and taking actions to reduce shoreline erosion. The proposed project will restore the shoreline and provide protection against future shoreline erosion due to the high velocity streamflow at the project site.

- List all project partners and their respective roles in implementing and/or supporting the project.

The MNRR will be the sole entity performing the work items associated with this project.

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

The proposed project will prevent approximately 1300 CF of bank sediment entering Rice Creek. This volume is based on known changes to the shoreline in the proposed project area in the last two decades. Assuming future erosion will continue at the same rate as in past, the project would eliminate approximately 65CF of sediment from entering the waterway on an annual basis.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

The railway will continue to monitor the stability of the rip-rapped bank during its annual bridge inspection and will note changes to the rip-rap over time. If the rip-rap remains in place and there is no discernible loss of material from the bank, it can be reasonably inferred that the project continues to prevent additional sediment from entering the waterway and as a whole is successful. Measurement of loss at the project location will be used in lieu of measurement of sedimentation downstream since the Railway has no access to private properties downstream to measure nor will it be possible to differentiate whether downstream sediment is from the project site or elsewhere in the drainage basin.

This project is part of a larger project, which is supported by RCWD, to seek funding from the Minnesota Legislature to build a new clear railway bridge over the creek, leaving the existing piers in place to allow them to function as a water control point downstream. This larger project will include the construction of retaining walls along the shoreline in the area for additional long term shoreline stability.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

The Railway will provide the City of New Brighton and Long Lake Park, and others who the railway may not know downstream, a description of this project and its goal to reduce sediment deposits downstream on shorelines which also may impact Water Supply intakes downstream.

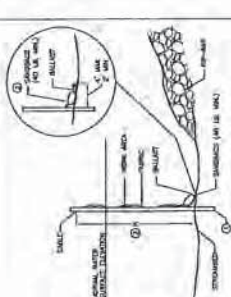
XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

Chief MOW Officer: Robert Bagaus - Minnesota Commercial Railway; rbagaus@mnnr.net; (651) 632-9013
Railway Bridge Engineer: Peter Schierloh, PE - SW Bridge Engineers, LLC; pschierloh@swbridge.com; (608) 772-1885
Railway Bridge Contractor: E80 Bridge Constructors, LLC; (608) 846-1880

PROPOSED SCOPE OF WORK:

1. STABILIZE THE EXISTING BRIDGE ABUTMENT BEARING AREAS BY REMOVING EXISTING LEAVING AND BEARING ON A POLYMER CONCRETE LAYING PAD SO THEY ARE PLUMB AND RESTING TOWARDS THE HEAD OF THE ABUTMENT.
2. REMOVE THE EXISTING LEAVING TOWER HEADWALLS AND STABILIZE THE EXISTING LEAVING TOWER HEADWALLS BY THE ADDITION OF VERTICAL TIMBER TO PROTECT THE RAILROAD TRACKS FROM LOSS OF MATERIAL.
3. STABILIZE THE STREAM BANK TO PREVENT FURTHER SCOUR DURING THE RAILROAD GRADE CONSTRUCTION ON THE RAILROAD GRADE.
4. STABILIZE THE EXISTING BRIDGE BETWEEN THE BRIDGE AND THE RAILROAD GRADE TO REMOVE EROSION OF THE BANK ABOVE THE RAILROAD GRADE.



EROSION CONTROL NOTES:

TURBIDITY BARRIERS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING AND MAINTAINED IN PLACE THROUGHOUT THE DURATION OF THE WORK. THE BARRIER SHALL IMPROVE SILT TRAP AND PREVENT EROSION OF THE BANKS NECESSARY TO MAINTAIN THEIR UTILITY.

ALL TEMPORARY MATERIALS TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE. ALL DISTURBED AREAS WHICH ARE NOT COVERED WITH RIP-RAP TO BE SEEDED & MULCHED IN ACCORDANCE TO THE SPECIFICATIONS.

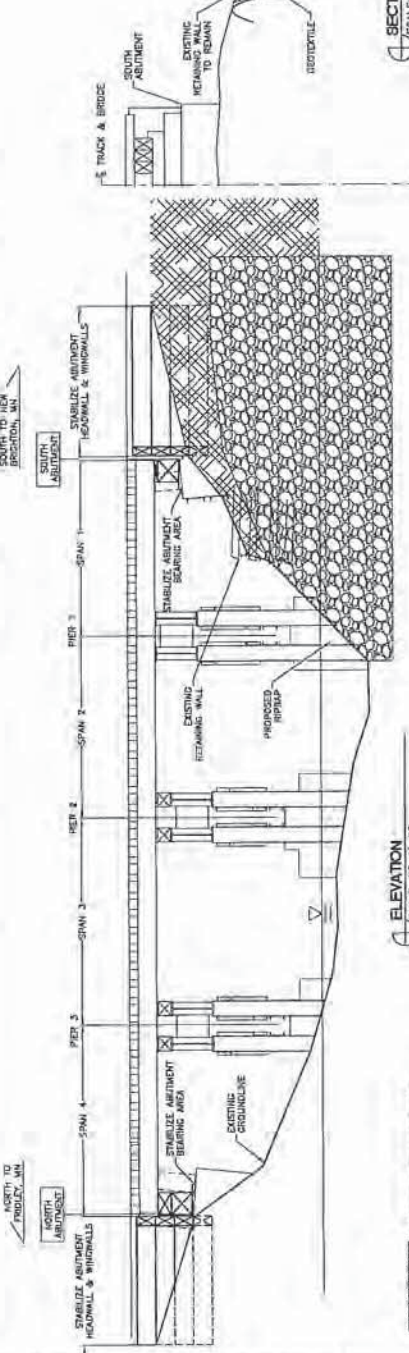
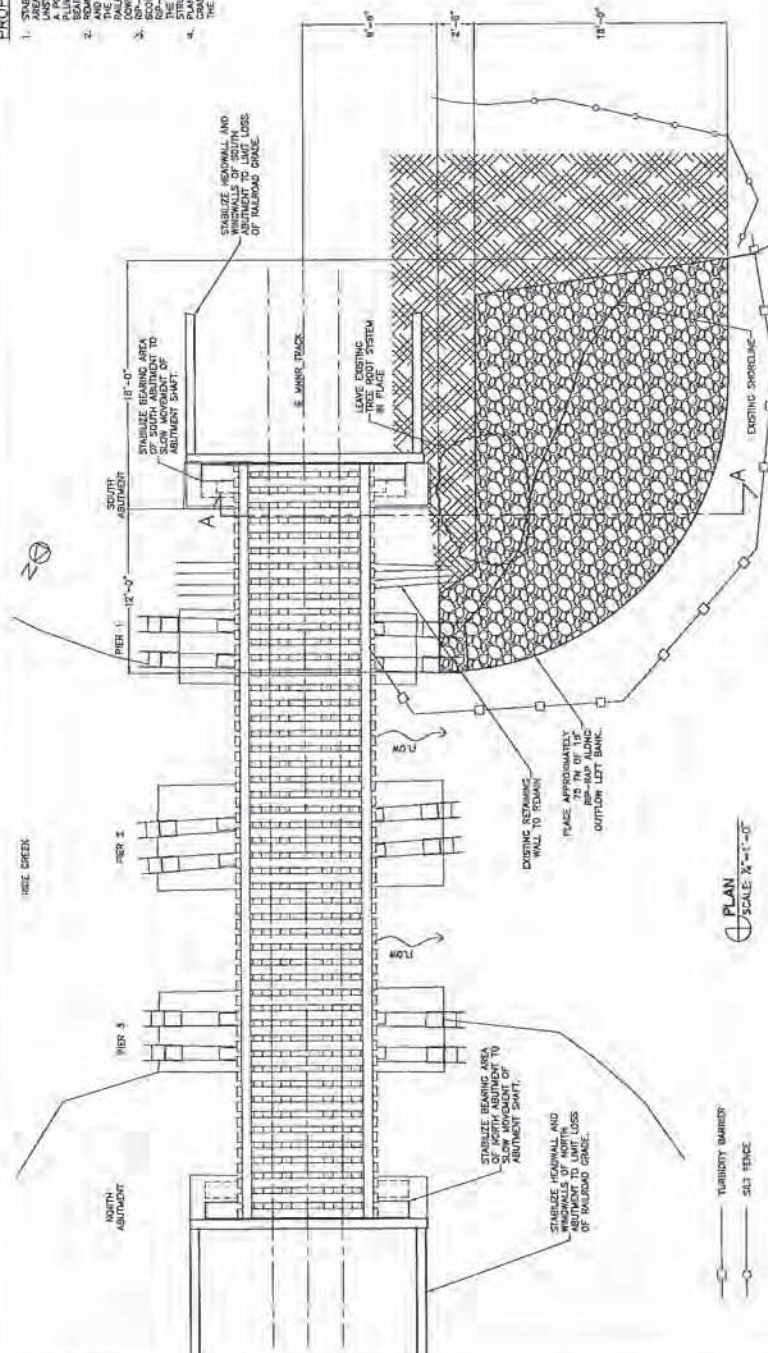
CONSTRUCTION AND MAINTENANCE OF THE BARRIER SHALL BE LIMITED TO THE PERIOD OF WATER TABLE BEING HIGH AND ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE PERIOD OF WATER TABLE BEING LOW. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE PERIOD OF WATER TABLE BEING LOW. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE PERIOD OF WATER TABLE BEING LOW.

TURBIDITY BARRIER NOTES:

DETAILS OF CONSTRUCTION, MATERIALS AND METHODS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE DMR STANDARDS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIERS MAY BE REMOVED AT THE ENGINEER'S DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED, OR REVISIONS ARE NECESSARY.

1. DRIVEN STEEL PILES, PILES OR CHANNELS, LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT THE BARRIER.
2. SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE OWNER OR PROJECT ENGINEER.
3. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
4. WHICH BARRIER HEIGHT, IT EXCEEDS 8 FT., POSTS SHALL BE USED TO SUPPORT THE BARRIER.
5. ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE BARRIER TO BE REMOVED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM SIDE.
6. FLAT ALTERNATIVE WILL ONLY BE ALLOWED WITH THE INSTALLATION OF POSTS. VERTICALS AND HORIZONTALS SHOULD BE MADE TO ALLOW THE BARRIER TO BE REMOVED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM SIDE.
7. WHEN WORKING IN NAVIGABLE WATERWAYS, THE BARRIER SHALL BE REMOVED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM SIDE.



SECTION A-A ELEVATION
SCALE: 1"=1'-0"



RICE CREEK BRIDGE SCOUR REMEDIATION PROJECT
GENERAL LAYOUT

DESIGN BY: M.S. SCALE: AS SHOWN
DESIGN CHECK BY: J.C. DATE: DEC 12, 2017
DRAWN BY: J.C. AFC
DATE CHG: 07/18/18

MINNESOTA COMMERCIAL BANK
1000 W. WASHINGTON ST. ST. PAUL, MN 55102

THIS DRAWING SET HAS BEEN REDUCED



ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST WORKSHEET

Rates, Taxes, & Mark-ups

Hourly Labor Rate (Inc Overhead, Taxes, Expenses, Benefits): \$ 67.50
 Hourly Equipment Rate (Operated or Idle): \$ 38.50

Material Sale Tax: 7.375%

Contingency: 10%

LABOR		MATERIAL				SUBCONTRACTING		TOTAL			
WORK FUNCTION	MANHOU	LABOR COST	MATERIAL	UNITS	QUANTIT	UNIT COST	MATERIAL COST	WORK FUNCTION	COST	COST	TOTAL COST
										+ Contingency	
Rice Creek Bridge - New Brighton, MN		\$0					\$0			\$0	0.00
Task 1: Engineering Analysis & Design		\$0					\$0			\$0	0.00
a) Bathymetric survey of Rice Creek through MNRR Bridge.		\$0					\$0	Engineering Services	\$6,000	\$6,000	6,000.00
b) Rip-rap permitting and design.		\$0					\$0	Engineering Services	\$8,750	\$9,625	8,750.00
c) Analysis of inspection findings and recommendations.		\$0					\$0	Engineering Services	\$2,600	\$2,860	2,600.00
Task 2: Bridge Stabilization		\$0					\$0			\$0	0.00
Mobilization	50	\$5,830					\$0	Mobilization Trucking Costs	\$1,400	\$1,540	7,230.00
Daily Hyrall Access to Site (10% total hours)	27.5	\$3,207	Structural Timber	BF	900	\$2.75	\$2,905	Sanitary Facilities	\$125	\$138	6,236.53
1) Stabilize both abutment bearing areas after bank movement:	110	\$12,826	Timber Hardware	LS	1	\$300.00	\$352	Timber Material Disposal	\$1,250	\$1,375	14,428.13
a) Jack span and remove the existing shifted timber caps.		\$0	Polymer Concrete	CF	6	\$285.00	\$1,866			\$0	1,866.26
b) Form and pour a polymer concrete leveling pad on the back half of the existing concrete foundation, providing a level bearing surface 24" clear below proposed base of stringer elevation.		\$0					\$0			\$0	0.00
c) Install a 14"x14"x14" cap and a 10"x14"x10" sub cap on the back half of the foundation between the stringer and foundation. Do Not Nap Caps		\$0					\$0			\$0	0.00
d) Anchor the cap to the concrete, pin the sub cap to the cap, and anchor the stringers to the sub cap to stabilize against movement.		\$0					\$0			\$0	0.00
2) Stabilize both abutment headwalls after bank movement:		\$0	Structural Timber	BF	4550	\$2.75	\$14,887			\$0	14,886.55
1) Excavate and remove the existing shifted and displaced headwalls.	20	\$2,332	Timber Hardware	LS	1	\$350.00	\$411			\$0	2,742.81
2) Install new 8"x16"x26" headwall timbers (16" vertical, approximately 5' total height. At each abutment.	60.0	\$6,996					\$0			\$0	6,996.00
3) Add timber wingwalls to both sides of the new headwalls, extending back 8'-12' from the back face of the headwall to stabilize approach fill leading into the bridge.	60.0	\$6,996					\$0			\$0	6,996.00
4) Tamp up and line the track on the south end of the bridge for approximately 100LF.	15.0	\$1,749					\$0			\$0	1,749.00
5) Haul in fill and ballast to complete repairs.	10.0	\$1,166	Compactable Fill	TN	20	\$17.00	\$399			\$0	1,565.08
		\$0	Ballast	TN	125	\$11.00	\$1,514			\$0	1,613.91
		\$0					\$0			\$0	0.00
		\$0					\$0			\$0	0.00
		\$0					\$0			\$0	0.00
Task 3: Stream Bank Stabilization		\$0					\$0			\$0	0.00
Daily Hyrall Access to Site (10% total hours)	14.5	\$1,691	Rip-rap	TN	75	\$20.00	\$1,761	Subcontract Trucking of Rip-rap	\$3,000	\$3,300	5,451.33
1) Stream Bank Rip-rap & Vegetative Buffer Stabilization:		\$0	Geotextile	SY	20	\$3.00	\$70			\$0	70.43
a) Establish Erosion control and clear debris from work area.	15	\$1,749					\$0			\$0	1,749.00
b) Place geotextile fabric in location of proposed rip-rap.	15	\$1,749					\$0			\$0	1,749.00
c) Place 75 TN of 18" rip-rap.	100	\$11,660					\$0			\$0	11,860.00
d) Plant vegetative buffer between edge of ballast and rip-rap.	5	\$583					\$0	Landscaping Subcontract	\$4,268	\$4,716	4,870.50
e) Remove erosion control after vegetation has established itself.	10	\$1,166					\$0			\$0	1,166.00
		\$0					\$0			\$0	0.00
TOTALS:		Labor: \$59,699					Material: \$24,065			Subcontracting: \$30,154	
										TASK 1 TOTAL:	\$17,350
										TASK 2 TOTAL:	\$66,110
										TASK 3 TOTAL:	\$27,716
										GRAND TOTAL:	111,176.51

Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: Minnesota Commercial Railway (MNNR) –
2018 Urban Stormwater Cost-Share Program
Application for MNNR Rice Creek Bridge
Stabilization and Shoreline Protection Project

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by Minnesota Commercial Railway, we offer the following comments for your use:

- The applicant is proposing to stabilize abutments and stream banks around a rail road bridge crossing Rice Creek within the drainage area to Long Lake, which is a Tier II lake.
- This project does not include volume reduction, which is the highest priority BMP category for the District. The applicant is proposing shoreline stabilization to prevent erosion. The applicant will maintain the stabilization and bridge.
- The applicant estimated the stabilization would protect 65 CF of sediment annually or approximately 6,200 pounds of TSS from entering Rice Creek annually.
- Based on the estimate reduction of TSS, the average annual cost is approximately \$1 per pound of TSS per year over a 20-year period.
- The effectiveness of the project would be determined by the lack of sediment erosion observed during annual inspection.
- The project has low educational opportunity. The applicant is proposing to reach out to downstream municipalities to describe the project and its potential benefits for them.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of New Brighton
 Street Address: 803 Old Highway 8 NW
 City, State, Zip: New Brighton, MN 55112

II. PROJECT CONTACTS

Project Officer: <u>Craig Schlichting</u>	Financial Officer: <u>Brenda Davitt</u>
Telephone: <u>(651) 638-2056</u>	Telephone: <u>(651) 638-2102</u>
Fax: <u>(651) 638-2044</u>	Fax: <u>(651) 638-2044</u>
Email: <u>craig.schlichting@newbrightonmn.gov</u>	Email: <u>brenda.davitt@newbrightonmn.gov</u>
Tax Status: <u>Local Government</u>	Tax ID#: <u>9675988</u>

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: Lions Park Stormwater Reuse
 Location(s) of Project: New Brighton Lions Park - 600 14th Street NW
 City: New Brighton State: MN County: Ramsey
 Project Start Date: 10/02/2017 Project Completion Date: 06/29/2018

Project Type (check only those that directly apply):

- | | |
|---|---|
| <input type="checkbox"/> Water Quality Treatment Project | <input type="checkbox"/> Runoff Volume Control / Flood Storage Project |
| <input type="checkbox"/> Peak Runoff Rate Control Project | <input checked="" type="checkbox"/> Stormwater Reuse Irrigation Project |
| <input type="checkbox"/> Other | |

Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested:	\$	<u>50,000.00</u>	
Local Matching Contributions:	\$	<u>50,000.00</u>	
State/Federal/Other Funds:	\$	<u>150,000.00</u>	Source(s): <u>Metropolitan Council</u>
Total Estimated Project Cost:	\$	<u>250,000.00</u>	

Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.

 12/21/2017
 Signature of Project Officer Date

Director of Community Assets
 Title & Development

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

The purpose of the project described in this application is to utilize an existing stormwater pond and install a water reuse system to irrigate 5.8 acres of recently constructed athletic fields. The overall goals associated with the proposed project are to limit the use of groundwater for irrigation, provide water quality benefits for nearby Rice Creek and Long Lake, and to provide educational information related to water reuse to park visitors.

The amount of funds requested totals \$50,000. This number coincides with offered funding at a level of \$10,000 per acre irrigated. The required match of \$50,000 will be met which corresponds with the cost-share request found in Section IV of this application. The funding from RCWD will allow for larger underground storage tanks to be installed.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Rice Creek/Rush Lake/Long Lake
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

This stormwater reuse project will provide water quality benefits for nearby Rice Creek, Rush Lake and Long Lake. The new stormwater pond outlets to a wetland in Long Lake Park that is connected to Rush Lake which empties into Rice Creek and the north basin of Long Lake, ultimately draining to the Mississippi River. Rice Creek is impaired for both aquatic life and recreation. The new stormwater pond is a NURP pond with a 10:1 safety bench and adequate capacity to remove sediment. Porous pavers were also installed in the adjacent parking lot as part of the overall construction of Lions Park.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

By utilizing stormwater reuse, it is estimated that 60-70 percent of the average annual irrigation demand for the athletic fields will be met, thus reducing the amount of groundwater needed to irrigate.

- Describe how long-term operation and maintenance of the project will be accomplished.

Our preliminary irrigation design includes a pre-filter to remove dirt, debris, and organic matter from the harvested water. This keeps the tank clean resulting in better water quality and less tank maintenance. We also anticipate the inclusion of a UV system to remove ecoli or other bacterial concentrations. Using UV leaves no residual chemicals in the treated water that can affect aquatic life or human interaction. With UV light we would anticipate a maintenance plan to clean and replace bulbs (as a future City stormwater expense). It is also the Cities responsibility to remove sediment from the storm pond.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

Past contamination of this area prohibits infiltration. However, the athletic fields utilize filtration by being constructed of a sand/peat mix over a drain tile network. Discharge from the drain tile network will also be recycled within the reuse system.

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

This stormwater reuse feature will remove excess pond surface water to fill storage tanks thus reducing the discharge to local waterbodies. Additionally, reuse of stormwater reduces the need for groundwater pumping and unnecessary use of aquifer water.

- List all project partners and their respective roles in implementing and/or supporting the project.

Metropolitan Council
New Brighton Parks, Recreation and Environmental Commission
Rice Creek Watershed District

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

Using the MIDS calculator to evaluate utilizing storm water from the existing pond for park irrigation, the following annual load reductions have been estimated for the nearby receiving surface waters: 1,256 pound of total suspended solids, 6.9 pounds of total phosphorus. Additionally, reuse system will reduce the stormwater runoff volume by 8.5 acre-ft per year.

The irrigation will also reduce groundwater withdrawal from the City's water supply wells, which are currently facing unique challenges related to the long-term impacts from the TCAAP groundwater plume. The City has been treating their water supply to remove TCE related to the TCAAP plume for many years, but in 2015 six city wells were taken out of service while options were being evaluated to address concerns with an emerging contaminant of concern related to the TCAAP plume. A pilot study was completed in 2016 and the City is looking to start construction of an addition to Water Treatment Plant #1 to remove 1,4-Dioxane in the summer of 2017. This situation has added further challenges for the City's water supply, but it would benefit from the stormwater reuse project. Using the MIDS calculator, we have estimated that 60-70 percent of the average annual irrigation demand in the park will be met.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

To evaluate the effectiveness and success of this project, the installation would include a flow meter or meters to quantify the amount/volume of water being generated from re-use and not coming from our valuable groundwater sources. This data will then be quantified and submitted to the MN DNR Water Conservation Reporting System as part of the Cities annual water appropriation permit.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

This project location is well suited for public education due to the proximity to Long Lake Regional Park as well as a 25-acre residential development. The park and pond involve a unique setting that offers numerous benefits related to highly visible stormwater reuse demonstration and educational opportunities. Project signage will be created as part of the City's park development to provide educational information on the reuse system and its benefits. The information would also recognize the growing interest of similar systems that are being put into use around the metro area.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

The project is still in the preliminary design phase and contractors have not yet been selected.

Project Specifications

Plans include:

1. A floatable intake (from the pond)
2. A self flushing inlet screen
3. A pump station enclosure
4. An underground cistern for storage of stormwater (routed from the adjacent pond)
5. A UV treatment system
6. An irrigation control cabinet

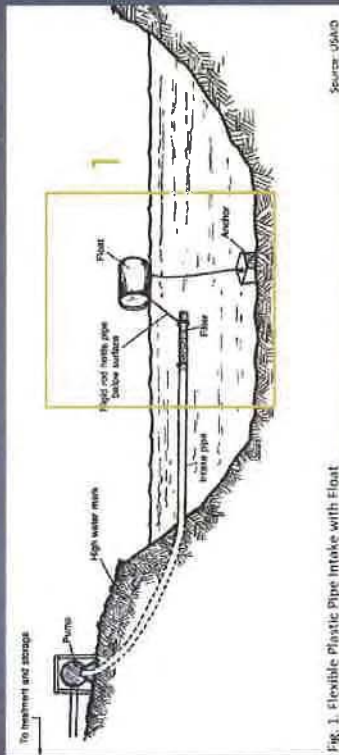


Fig. 1. Flexible Plastic Pipe Intake with Float





Project Budget

Task	Estimated Cost		
	City	RCWD	Metropolitan Council
Site Investigation	\$2,500		--
Plans and Specifications	\$2,500		--
Construction			
Education (Publications and Kiosks)	\$5,000		--
Underground Storage	--	\$50,000	\$35,000
Treatment (includes items below)	--		\$110,000
Package treatment plant (filtration & UV)			
Hydro-pneumatic tank			
Isolation Valve			
Backflow prevention, RPZ			
Valve Building Structure			
Electrical and Controls			
Delivery and Start-Up			
Piping and Installation	\$40,000		\$5,000
Total	\$50,000	\$50,000	\$150,000
		\$250,000	



Bioretention Gardens

absorb rainwater and filter pollutants using soil, stone and plants.

Stormwater is rain that runs off hard surfaces and carries pollution to our streams. Montgomery County has thousands of practices like this one to protect streams and the Chesapeake Bay.

They're our streams. Let's keep them clean!



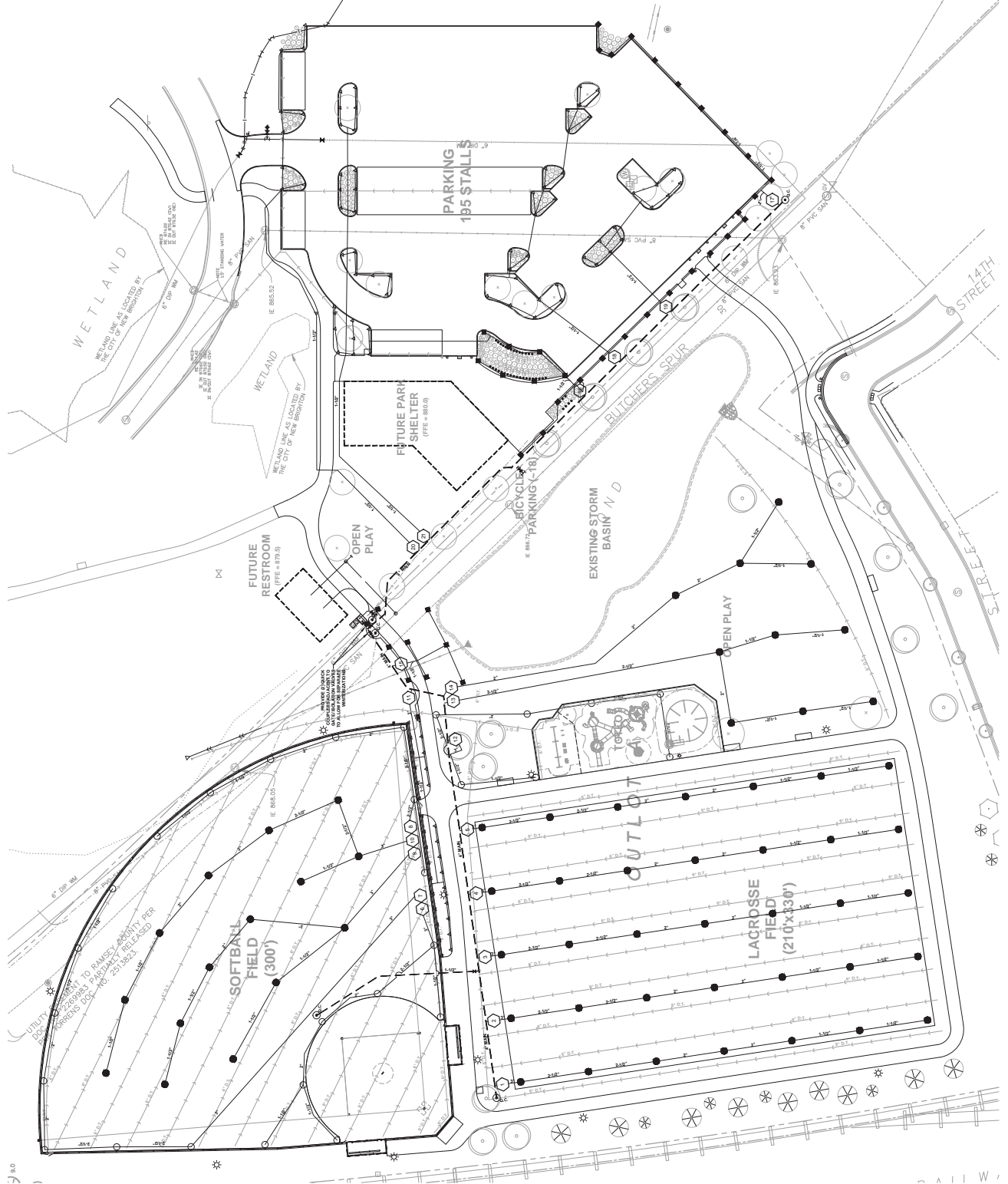
IRRIGATION PLAN

ANDERSON-JOHNSON ASSOCIATES, INC.
 LANDSCAPE ARCHITECTS
 1000 N. BROADWAY, SUITE 200
 DENVER, CO 80202
 PHONE: 303.733.4411
 FAX: 303.733.4412
 WWW.AJASSOCIATES.COM

NEW BRIGHTON LIONS PARK (PROJECT 165)
 CITY OF NEW BRIGHTON
 LONG LAKE REGIONAL PARK

- LEGEND**
- REFERENCE KEY TO SITE DETAILS
 - DETAIL ID NUMBER (TOP)
 - DETAIL NUMBER (BOTTOM)
 - 1"=40' SCALE
 - IRrigation PVC Lateral Piping
 - IRrigation PVC Lateral Piping (Number Indicates Pipe Size)
 - IRrigation PVC Lateral Piping (Number Indicates Pipe Size) (Inventory # Refer to Note #2)
 - ISOLATION GATE VALVE
 - QUICK COUPLER
 - IRrigation SURF HEADS:
 - 1. HUNTER 1/2" STAINLESS DUAL SPRING NOZZLED
 - 2. HUNTER 1/2" STAINLESS DUAL SPRING NOZZLED
 - 3. HUNTER MP ROTATOR FOR SPRAY
 - PROPOSED IRRIGATION SERVICE CONNECTION (LATERAL/PIPHOLE ENCLOSURE AND CONTROL VALVE LOCATION)
 - PROPERTY LINE

- NOTES:**
1. REFER TO SHEET C1.1, GRADING AND DRAINAGE PLAN FOR GENERAL NOTES.
 2. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND SHALL REPORT TO THE ARCHITECT AT THE START OF WORK. NOTIFY ENGINEER AND SCAPE ARCHITECT IF EXISTING PRESSURE DIFFERS.
 3. WATER METER SHALL BE AVAILABLE FROM PROVIDOR + SERVICE CONNECTION SHALL BE INSTALLED AT THE BACK OF ALL LOT PLATS. NOTIFY ENGINEER AND SCAPE ARCHITECT IF EXISTING PRESSURE DIFFERS.
 4. LAYOUT WORK AS ACCURATE AS POSSIBLE. THE CONTRACTOR MAY MAKE NECESSARY ADJUSTMENTS TO THE LAYOUT AS NECESSARY TO ACCOMMODATE ACTUAL FIELD CONDITIONS. HEAD LOCATIONS SHALL BE ACCURATE TO THE CENTER OF THE PIPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO INSTALLATION FOR EXISTING AND PROPOSED SITE CONDITIONS. UTILITIES AND SERVICES PRIOR TO TRENCHING.
 5. LATERAL PIPING SHALL BE A MINIMUM OF 12 INCHES DEPTH AND MANHOLE SHALL BE 18 INCHES DEPTH. ALL PIPING SHALL BE 12 INCHES DEPTH BEFORE BACKFILLING.
 6. ALL MAINLINE PIPING SHALL BE PVC DEER 24 CLASS 3000. LATERAL LINE PIPING FOR SMALL FIELDS SHALL BE PVC DEER 24 CLASS 15000.
 7. ALL PIPING SHALL BE 12 INCHES DEPTH PRIOR TO INSTALLATION AT AREAS OUTSIDE OF WALL FIELDS SHALL BE PVC DEER 24 CLASS 1500.
 8. ALL PIPING WITH NO BE LABEL SHALL BE 1".
 9. ALL SPRINKLERS SHALL BE AS NOTED ON LEGEND.
 10. ADJUST HEADS FOR GRADE. AS NECESSARY AFTER GRADES HAS BEEN ESTABLISHED AND ALL SETTLEMENT AT HEADS HAS OCCURRED.
 11. ALL BEERS, BACKFLOW PREVENTORS AND WIRE BIRMS SHALL BE SET WITH STEMS SHALL BE SET PERPENDICULAR TO FINISHED GRADE.
 12. CONTROL VALVE WIRING SHALL BE 14 GAUGE UL/LL AWG RATED RECORDOR MADE WITH 3/4" WIRE CONNECTOR (S.D.V.) OR APPROVED EQUAL.
 13. PLACE ALL VALVES IN APPROVED VALVE BOXES.
 14. USE TEFALON TAPE ON ALL THREADED JOINTS.
 15. CONDUCT PERFORMANCE TEST IN THE PRESENCE OF OWNER AND ARCHITECT FOLLOWING COMPLETION OF SYSTEM INSTALLATION.
 16. CONDUCT AND DEMONSTRATE TO OWNER THE WINTERIZATION AND SPRING STARTUP PROCESS BY THE FALL OF COMPLETION.
 17. ZONES PROVIDING OVER TO GRW SHALL BE 7" PLASTIC GLOBE VALVES. ZONES PROVIDING LESS THAN 30" GRW SHALL BE 1" PLASTIC GLOBE VALVES.
 18. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EQUIPMENT INCLUDING TOOLS TO COMPLETE THE PROJECT.
 19. IRRIGATION CONTRACTOR IS TO COORDINATE WITH THE UTILITY CONTRACTOR TO PROTECT EXISTING UTILITIES.
 20. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO INSTALLATION OF IRRIGATION.
 21. LOCATION OF IRRIGATION MAIN AND LATERAL LINES SHOULD NOT CONFLICT WITH EXISTING UTILITIES AND DRAINAGE ROCK.





Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of New Brighton – 2018 Urban Stormwater
Cost-Share Program Application for Lions Park
Stormwater Reuse

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of New Brighton, we offer the following comments for your use:

- The applicant is proposing to construct a stormwater reuse system to irrigate 5.8 acres within the New Brighton Lions Park within the drainage area to Long Lake, which is a Tier II lake.
- This project includes volume reduction, which is the highest priority BMP category for the District. The applicant is proposing a water reuse system to be used with an existing NURP pond for ball filled irrigation. The City will maintain the BMP.
- The applicant estimated the BMPs would remove 6.9 lbs. of TP annually and 1,256 lbs. of TSS annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$1,208 per pound of TP and \$7 per pound of TSS, based on a 30-year capital life of the BMP.
- The effectiveness of the project would be determined by the quantity of water irrigated from the underground storage tanks.
- The project has moderate/high educational opportunity. The applicant is proposing to add signage in the park to explain the BMP and its potential use around the Metro.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): Roseville, City of
 Street Address: 2660 Civic Center Drive
 City, State, Zip: Roseville, MN 55113

II. PROJECT CONTACTS

Project Officer: <u>Ryan Johnson</u>	Financial Officer: <u>Chris Miller</u>
Telephone: <u>(651) 792-7049</u>	Telephone: <u>(651) 792-7031</u>
Fax: <u>(651) 792-7040</u>	Fax: <u>(651) 792-7040</u>
Email: <u>ryan.johnson@cityofroseville.com</u>	Email: <u>chris.miller@cityofroseville.com</u>
Tax Status: <u>Local Government</u>	Tax ID#: <u>41-6007849</u>

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

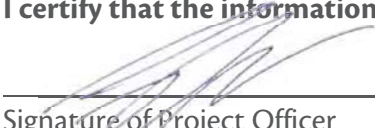
Project Name: Evergreen Park Underground Filtration and Reuse Project
 Location(s) of Project: Evergreen Park (Fairview Ave & County Rd B)
 City: Roseville State: MN County: Ramsey
 Project Start Date: 08/01/2018 Project Completion Date: 11/30/2018
 Project Type (check only those that directly apply):
 Water Quality Treatment Project Runoff Volume Control / Flood Storage Project
 Peak Runoff Rate Control Project Stormwater Reuse Irrigation Project Other
 Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested: \$ 205,000.00
 Local Matching Contributions: \$ 205,000.00
 State/Federal/Other Funds: \$ 300,000.00 Source(s): Met Council
 Total Estimated Project Cost: \$ 710,000.00
 Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.



 Signature of Project Officer

 Environmental Specialist

 Title

29-Dec-17

 Date

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

The City of Roseville will be installing a one ac-ft underground reuse project that will incorporate water quality, rate control, and volume reduction components. The City will be installing this project at Evergreen Park which is located on Fairview and County Road B, which is on the Fairview Trunk Storm Sewer system. This project will help reduce local flooding issues in an area where the City needs to remove 9 ac-ft of volume. The City received a Met Council grant for \$300,000 for the \$710,000 project. The City is applying for \$205,000, which is 50% of the remaining project amount.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: RCD 4 & Little Lake Johanna
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

The project will incorporate a header row (and/or separate StormTrap vault) to remove gross floatables and sediment from the stormwater. The project will also incorporate a sand filtration bed in the vault to achieve water quality improvements in an area of the City where soils don't allow for infiltration. The concrete vault will detain water until it can be filtered and slowly released back into the trunk system. The Reuse component will water four City baseball fields that are just under 4.5 acres in total size.

If bids come in favorable in late 2018/early 2019, the City is looking to add in Opti-RTC to maximize the benefit from the system by allowing the City to store additional water that could be used for reuse. The City is also looking into modifying the sand filter with iron shavings to increase phosphorus removal.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

This project is in heavy soils and infiltration is not feasible, and the City uses potable water for irrigation from the Saint Paul Regional Water Services, so there will be no impact to the groundwater in area.

- Describe how long-term operation and maintenance of the project will be accomplished. The maintenance of the underground gallery will be completed by the City. At a minimum, the BMP will be maintained in the spring and fall, with additional inspections in-between to monitor the sediment buildup in the manhole and header row of the gallery. The City will perform additional maintenance as it is needed throughout the year.
- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.
 - NA. The project will be installed in the green space of a City Park, and infiltration is not feasible due to heavy soils.
- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

RCWD's SW Urban Lakes Study identifies several projects for the Little Lake Johanna watershed. While Evergreen Park is not specifically mentioned, there are projects that are adjacent to Fairview Ave. that flow into the same system (pg. 110-123).

RCWD's Water Management Plan has Little Lake Johanna listed as an impaired water (pg 4-3).

Little Johanna has been listed on the PCA's 303d list since 2004 for Nutrient/eutrophication biological indicators.

The City's DRAFT Comprehensive Surface Water Management Plan calls out several issues along the Fairview Trunk Storm Sewer System that this project will help address. Figure 19c highlights some of the area affected by the overtaxed system. The CIP (Table 18) with the CSWMP calls for Trunk Storm Sewer Analysis in 2018 (#7) and Underground Project 1 (#8) that is going to be updated to the Evergreen Park underground reuse project, and the basis for this application.

- List all project partners and their respective roles in implementing and/or supporting the project.

The City of Roseville will be the lead on the project and will implement all aspects. The City will also perform annual maintenance (at a minimum), and follow up as needed. The Met Council awarded the City a grant for \$300,000 for the project, and the City will perform all required reporting activities for the funding.

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

The removals for the 2014 plan that is submitted with this application has a volume reduction of 118,000 CF, 4,055 lbs of sediment, and 11.5 lbs of phosphorus on an annual basis. These numbers were included in a September 2012 memo to the City from our Hydraulic consultant (Hydromethods) who calculated the numbers using WinSLAMM.

The proposed modifications to create a separate vault for sediment and gross floatables, and the inclusion of a filtration component will increase the removal numbers above. The volume reduction should stay the same as it was created using a water budget for irrigating the fields. Long term there is a possibility to increase the storage (through the OPTI-RTC) and work with the Brimhall Elementary to allow for them to use reuse water also. This is a long term plan and hasn't been vetted. It is a great opportunity, though.

Given the data from the MN Stormwater Manual, the mid reduction for the media filter for TP is 50%. The drainage area for this section of the Fairview Trunk System is approximately 95 acres of residential and institutional uses. WinSLAMM estimates that 69lbs of TP annually flow through the system from Roselawn to County Road B. The City estimates that there is an additional 10 lbs of phosphorus that can be removed from a sand filter. This can go up or down depending on the final design (use of iron enhanced sand, final overflow elevations from reuse, etc.).

Given the size of the drainage area, and the fact there needs to be 9 ac-ft of storage within this area to improve the storm sewer function, the rate reduction from the 1 ac-ft project will be negligible.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

The City will inspect the underground storage and reuse system on a monthly basis, and after heavy rainfalls to ensure the system is functioning properly. The City will track the amount of sediment and floatables that are captured by the sump and hood, monitor the post construction use of potable water, and ensure that the filtration system is functioning. All of these components will be the measure of the effectiveness of the system.

Overall, the underground storage is one component within the larger scope of the Fairview trunk storm sewer system. The storage of one ac-ft of stormwater will be an added success in a storm sewer system that is undersized for its current development.

Before the project starts, the City will install a water use to determine pre-construction use for irrigating the ballfields. This number will be compared to the post construction potable water use when the irrigation is being run from the reuse. This will be another measure of success for the project.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

The City will put together a one to two page fact sheet, and Engineering Staff will work with its Communication Department to publish an article in the local Roseville News that is mailed out every other month to all City residents. The article (and fact sheet) will show how the system works, why it is important, and how it improves the water quality through the RCD 4 system. The City also has the opportunity to install signage at an appropriate location within the park to educate park-goers about water reuse.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

Ryan Johnson with the City of Roseville will be the lead contact for the project. The City will design, provide installation oversight, inspect and maintain the project. Maintenance Staff will perform the monthly inspections, along with Ryan Johnson. The City will install this project during the summer/fall of 2019 as a stand-alone project. Ryan can be reached at 651-792-7049 and ryan.johnson@cityofroseville.com

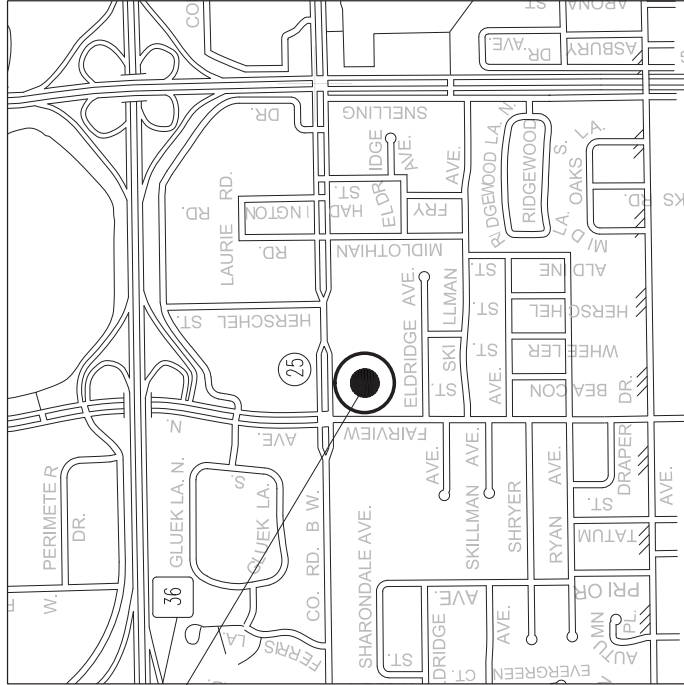
CITY OF ROSEVILLE

RAMSEY COUNTY, MINNESOTA
PLANS FOR:

EVERGREEN PARK STORMWATER REUSE

CITY PROJECT NO. 14-10

EVERGREEN PARK
1810 COUNTY ROAD B WEST
ROSEVILLE, MN 55113



UTILITY SYMBOLS

- UTILITY POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- TELEPHONE AND POWER JOINT ON STREET POLES
- ON TELEPHONE POLES
- ANCHOR
- STREET LIGHT
- STREET LIGHT
- RECREATIONAL TELEPHONE CABLE
- GAS MAIN
- WATER MAIN
- CONDUIT
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE
- RECREATIONAL TELEPHONE MANHOLE
- BURIED TELEPHONE CABLE
- BURIED ELECTRIC CABLE
- BURIED TELEPHONE CABLE
- SEWER, SANITARY
- SEWER, STORM
- SEWER MANHOLE
- MANHOLE

PLAN REVISIONS	
DATE	APPROVED BY

THIS PLAN AND/OR SPECIFICATION WAS PREPARED SPECIFICALLY FOR THIS PROJECT AND ANY RE-USE OF DETAILS FROM THIS PROJECT IS AT THE USER'S RISK. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR ANY RE-USE ON OTHER PROJECTS IS THE RESPONSIBILITY OF THE PERSON, AGENCY, OR CORPORATION USING THIS PLAN OR SPECIFICATION DATA FROM THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS THE BEST AVAILABLE INFORMATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR ANY RE-USE ON OTHER PROJECTS IS THE RESPONSIBILITY OF THE PERSON, AGENCY, OR CORPORATION USING THIS PLAN OR SPECIFICATION DATA FROM THIS PROJECT.

GOVERNING SPECIFICATIONS

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, SHALL GOVERN.
CITY OF ROSEVILLE STANDARD SPECIFICATION FOR UTILITY AND STREET CONSTRUCTION.

INDEX

SHEET NO.	SHEET DESCRIPTION
1	TITLE SHEET
2	CONSTRUCTION NOTES AND REMOVALS PLAN
3	EXISTING CONDITIONS AND REMOVALS PLAN
4	SITE LAYOUT
5-7	CONSTRUCTION PLAN AND PROFILE
8	ELECTRICAL PLAN
9	TRAFFIC CONTROL PLAN
10-13	UNDERGROUND VALT AND RESTORATION
14-17	UNDERGROUND VALT DETAILS
18-19	PUMP STATION DETAILS
20-21	MISCELLANEOUS DETAILS

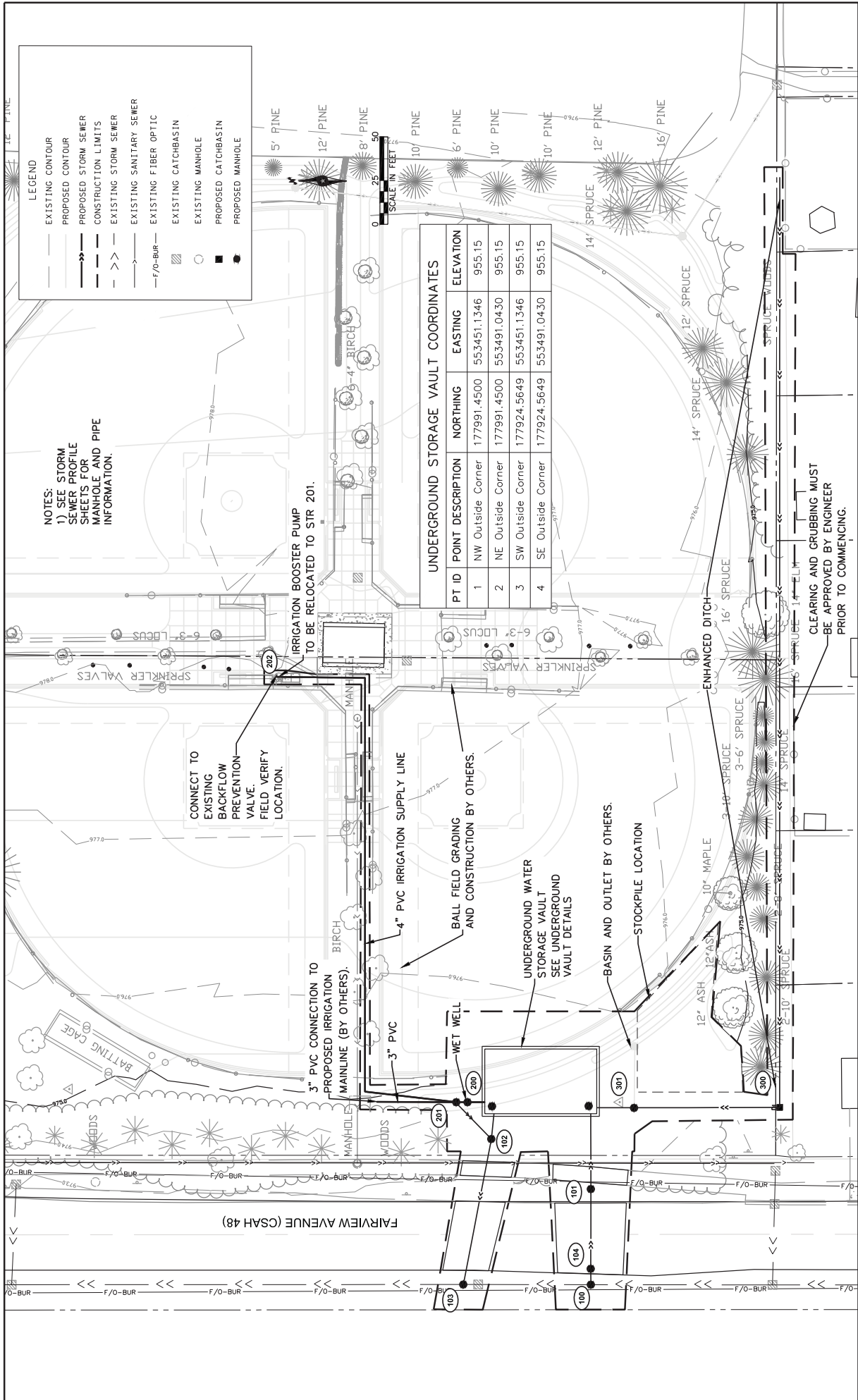
THIS PLAN CONTAINS.....21.....SHEETS



I HEREBY CERTIFY THAT THESE PLANS 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.

SIGNATURE David W. Filupiak PRINT NAME DAVID FILUPIAK
DATE 1/28/15 LIC. NO. 19596

RECOMMENDED FOR APPROVALCITY ENGINEER, CITY OF "ROSEVILLE".....20.....



LEGEND

- EXISTING CONTOUR
- - - PROPOSED CONTOUR
- - - PROPOSED STORM SEWER
- - - CONSTRUCTION LIMITS
- - - EXISTING STORM SEWER
- - - EXISTING SANITARY SEWER
- - - EXISTING FIBER OPTIC
- - - F/O-BUR
- ▨ EXISTING CATCHBASIN
- EXISTING MANHOLE
- PROPOSED CATCHBASIN
- PROPOSED MANHOLE

NOTES:
 1) SEE STORM SEWER PROFILE SHEETS FOR MANHOLE AND PIPE INFORMATION.

UNDERGROUND STORAGE VAULT COORDINATES

PT ID	POINT DESCRIPTION	NORTHING	EASTING	ELEVATION
1	NW Outside Corner	177991.4500	553451.1346	955.15
2	NE Outside Corner	177991.4500	553491.0430	955.15
3	SW Outside Corner	177924.5649	553451.1346	955.15
4	SE Outside Corner	177924.5649	553491.0430	955.15

CITY OF ROSEVILLE
SITE LAYOUT
EVERGREEN PARK STORMWATER REUSE

ENGINEERS
PLANNERS
DESIGNERS

ES&E
Consulting Group, Inc.

DRAWN BY: LAB
 DESIGNED BY: LAB
 CHECKED BY: DWF
 COM. NO. 0438

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.
 Print Name: David Filipiak
 License No. 19596
 Date: 1/28/2015

NO DATE BY CID APPR

SHEET 4 OF 21

CLEARING AND GRUBBING MUST BE APPROVED BY ENGINEER PRIOR TO COMMENCING.

CONNECT TO EXISTING BACKFLOW PREVENTION VALVE. FIELD VERIFY LOCATION.

IRRIGATION BOOSTER PUMP TO BE RELOCATED TO STR 201.

4" PVC IRRIGATION SUPPLY LINE
 BALL FIELD GRADING AND CONSTRUCTION BY OTHERS.

UNDERGROUND WATER STORAGE VAULT SEE UNDERGROUND VAULT DETAILS

BASIN AND OUTLET BY OTHERS.
 STOCKPILE LOCATION

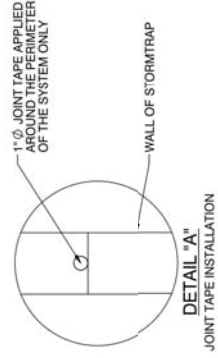
ENHANCED DITCH

FAIRVIEW AVENUE (CSAH 48)

STORMTRAP INSTALLATION SPECIFICATION

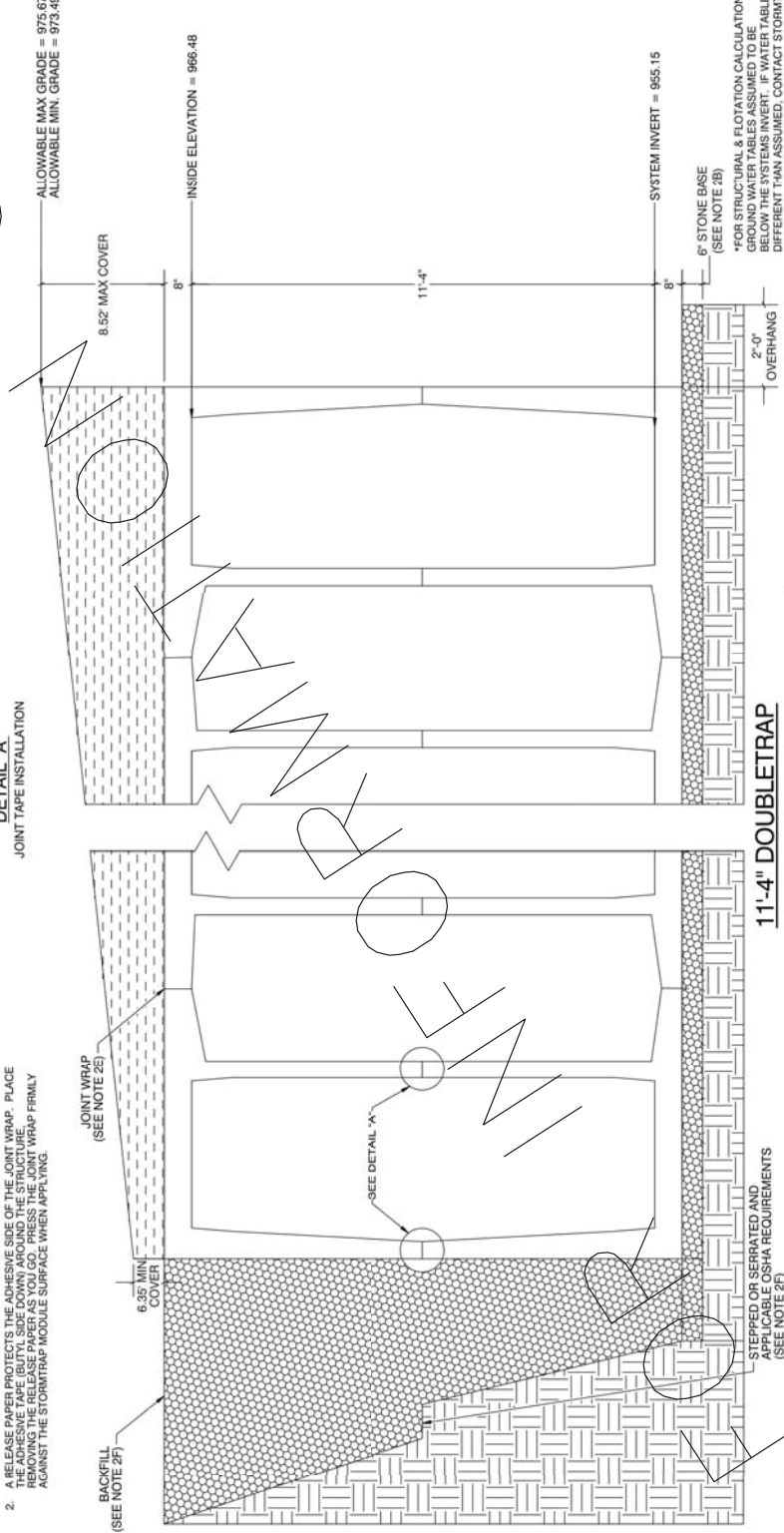
- STORMTRAP MODULES SHALL BE MANUFACTURED ACCORDING TO SHOP DRAWINGS AND SHALL INDICATE SIZE AND LOCATION OF ROOF OPENINGS AND INLET/OUTLET PIPE OPENINGS.
- STORMTRAP SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C891-09 STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES. THE FOLLOWING ADDITIONS AND EXCEPTIONS SHALL APPLY:
 - SPECIFICATIONS ON THE ENGINEERS DRAWINGS SHALL TAKE PRECEDENCE.
 - STORMTRAP MODULES SHALL BE PLACED ON A LEVEL PAD OF 3/4" AGGREGATE, THAT EXTENDS 2'-0" PAST THE OUTSIDE OF THE SYSTEM PER ASTM C891-09 CONCRETE UTILITY STRUCTURES.
 - THE STORMTRAP MODULES SHALL BE PLACED SUCH THAT THE MAXIMUM SPACE BETWEEN ADJACENT MODULES DOES NOT EXCEED 3/4". IF THE SPACE EXCEEDS THE MAXIMUM SPACE, THE JOINT SHALL BE RESEAL WITH APPROPRIATE ADJUSTMENT MADE TO THE PERIMETER HORIZONTAL JOINT OF THE STORMTRAP MODULES SHALL BE SEALED TO THE FOOTINGS WITH PREFORMED MASTIC JOINT SEALER ACCORDING TO ASTM C891-09, 8.8 AND 8.12.
 - ALL EXTERIOR AND INTERIOR JOINTS BETWEEN ADJACENT STORMTRAP MODULES SHALL BE SEALED WITH PRE-FORMED, COLD-APPLIED, SELF-ADHERING ELASTOMERIC JOINT SEALER. THE SEALER SHALL BE APPLIED TO THE JOINT SURFACE CONFORMING TO ASTM C891-09 AND SHALL BE 0.4" INTEGRATED PRIMER SEALANT AS APPROVED BY STORMTRAP. THE ADHESIVE EXTENDER JOINT W/MP SHALL BE INSTALLED ACCORDING TO THE FOLLOWING INSTALLATION INSTRUCTIONS:
 - USE A BRUSH OR WET CLOTH TO THOROUGHLY CLEAN THE OUTSIDE SURFACE AT THE POINT WHERE THE JOINT WRAP IS TO BE APPLIED.
 - THE ADHESIVE TAPE (BUTY) SIDE DOWN AROUND THE STRUCTURE. REMOVE THE RELEASE PAPER AS YOU GO. PRESS THE JOINT WRAP FIRMLY AGAINST THE STORMTRAP MODULE SURFACE WHEN APPLYING.

F. THE FILL PLACED AROUND THE STORMTRAP UNITS MUST BE DEPOSITED ON BOTH SIDES OF THE STORMTRAP UNITS. THE FILL BEHIND ONE SIDE SHALL BE MORE THAN 2'-0" HIGHER THAN THE FILL ON THE OPPOSITE SIDE. BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY OR OTHERS AS SPECIFIED BY THE SR. CARE SHALL BE TAKEN TO PREVENT WEDGE ACTION. SLOPES BOUNDING OR WITHIN THE AREA TO BE BACKFILLED MUST BE SERRATED TO PREVENT WEDGE ACTION. (REFERENCE ARTICLE 502.10 I.D. OF THE SPECIFICATIONS). BACKFILL MATERIAL TO CONSIST OF 1/4" TO 3/4" WASHED COARSE AGGREGATE STONE OR APPROVED EQUAL.



STORMTRAP SPECIFICATION

- TOTAL COVER: MIN. 6.35" MAX. 8.52" CONSULT STORMTRAP FOR ADDITIONAL COVER OPTIONS.
- CONCRETE CHAMBER DESIGNED FOR AASHTO HS-20 HIGHWAY LOADING. MIN. SOIL PRESSURE 3000 PSF.
- ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY ARE TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO STORMTRAP INSTALLATION.
- FOR STRUCTURAL AND FLOTATION CALCULATIONS THE GROUND WATER TABLE IS ASSUMED TO BE BELOW THE SYSTEMS INVERT. IF WATER TABLE IS DIFFERENT THAN ASSUMED, CONTACT STORMTRAP.
- FOR STRUCTURAL CALCULATIONS THE SOIL DENSITY IS ASSUMED TO BE 120 PCF.
- FOR FLOTATION CALCULATIONS THE GROUND WATER TABLE IS ASSUMED TO BE BELOW THE SYSTEMS INVERT. IF WATER TABLE IS DIFFERENT THAN ASSUMED, CONTACT STORMTRAP.
- STORMTRAP IS NOT WATER TIGHT. CONTACT STORMTRAP FOR WATER TIGHT OPTIONS. WATER TIGHT APPLICATION TO BE PROVIDED BY OTHERS.
- STORMTRAP STRUCTURAL DESIGN TO BE CONFIRMED UPON FINAL CONFIRMATION OF DESIGN ELEMENTS.



StormTRAP
 2495 WEST BUNGALOW ROAD
 MORRIS, IL 60450
 P: 815-941-4663
 F: 815-416-1100

SRF CONSULTING GROUP
 ONE CARLSON PARKWAY, STE 150
 MINNEAPOLIS, MN 55405
 Phone: 763-475-0010
 Fax: 763-475-2429

EVERGREEN PARK
 ROSEVILLE, MN

DATE: 31-OCT-2014
 APPROVED BY:

ISSUED FOR: PRELIMINARY

REV.	DATE	DESC.	DNWG.
1	31-OCT-2014	ISSUED FOR PRELIMINARY	AC

SCALE: NTS
 SHEET TITLE: DOUBLETRAP INSTALLATION SPECIFICATIONS
 SHEET NUMBER: 1.0

NO.	DATE	BY	CHKD	APPR

CITY OF ROSEVILLE
 UNDERGROUND VAULT DETAILS
 EVERGREEN PARK STORMWATER REUSE

SRF ENGINEERS PLANNERS DESIGNERS
 Consulting Group, Inc.

DRAWN BY: LAB
 DESIGNED BY: LAB
 CHECKED BY: LAB
 COM. NO. 04-138

SHEET 14 OF 21

STORMTRAP
 THE CONCRETE PIPE ACCESS SYSTEM FOR STORMWATER TRAPS
 2493 WEST BUNGALOW ROAD
 MINNEAPOLIS, MN 55405
 P: 815-941-4683
 F: 815-416-1100

SRF CONSULTING GROUP
 ONE CARLSON PKWY N, STE 150
 MINNEAPOLIS, MN 55305
 Phone: 763-475-0010
 Fax: 763-475-2429

EVERGREEN PARK
 ROSEVILLE, MN

DATE: 31-OCT-2014

APPROVED BY:

ISSUED FOR:

PRELIMINARY

REV.: DATE: DESC. DWG.

ISSUED FOR: PRELIMINARY AC

SCALE: NTS

SHEET TITLE:

RECOMMENDED DOUBLETRAP INSTALLATION SPECIFICATIONS

SHEET NUMBER:

2.0

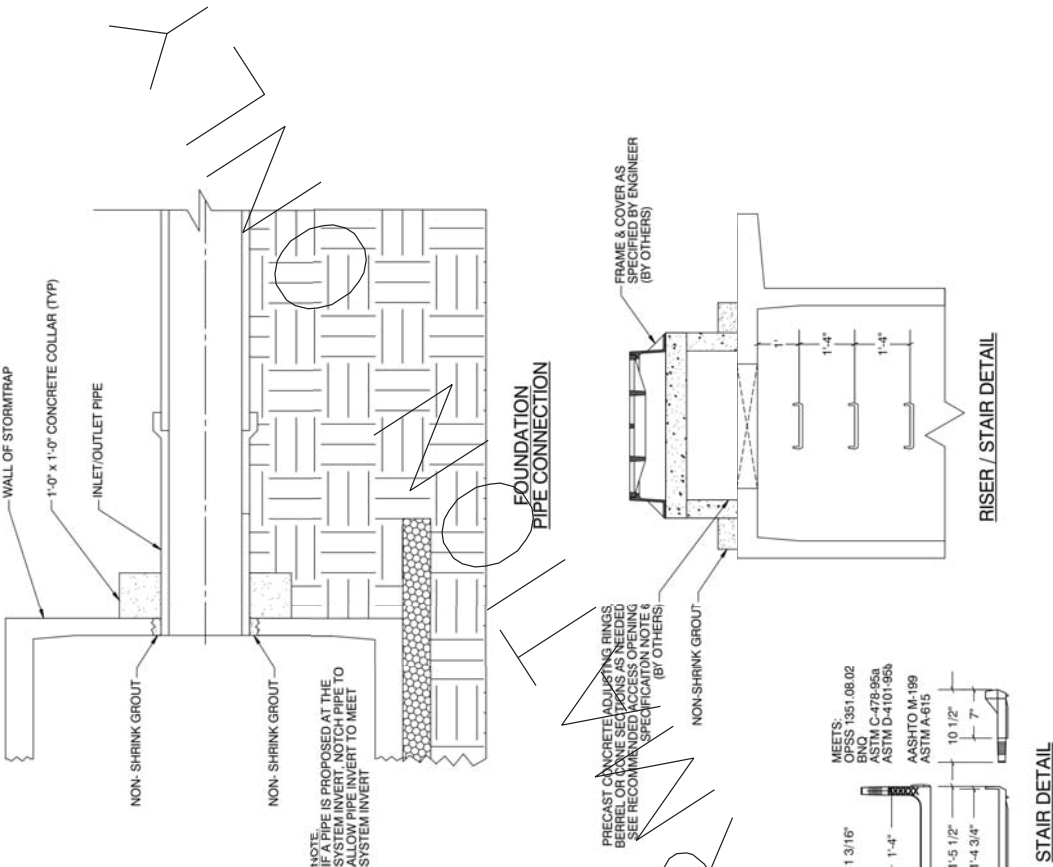
SHEET 15 OF 21

CITY OF ROSEVILLE
 UNDERGROUND VAULT DETAILS
 EVERGREEN PARK STORMWATER REUSE

ENGINEERS
 PLANNERS
 DISTRICTS

SRF
 Consulting Group, Inc.

DRAWN BY: LAB
 DESIGNED BY: LAB
 CHECKED BY: DJF
 COM. NO. 04-38



RECOMMENDED ACCESS OPENING SPECIFICATION

1. A TYPICAL ACCESS OPENING FOR THE STORMTRAP SYSTEM ARE 2'-0" IN DIAMETER. ACCESS OPENINGS LARGER THAN 2'-0" IN DIAMETER NEED TO BE APPROVED BY STORMTRAP. ALL OPENINGS MUST BE INSTALLED WITH A MINIMUM OF 2'-0" OF CLEARANCE IN ALL DIRECTIONS FROM THE EDGE OF THE STORMTRAP UNITS.
2. PRECAST CONCRETE STEPS PRODUCED BY M.A. INDUSTRIES PART #PSS-RFC (SEE DETAIL) TO THE RIGHT ARE PROVIDED INSIDE ANY UNIT WHERE DEEMED NECESSARY. THE HIGHEST STEP IN THE UNIT IS TO BE PLACED A DISTANCE OF 1'-0" FROM THE INSIDE EDGE DISTANCE OF STORMTRAP UNITS. ALL ENSURING STEPS SHALL BE PLACED WITH A MAXIMUM DISTANCE OF 1'-0" FROM THE INSIDE EDGE OF THE UNIT. ALL STEPS SHOULD BE MOVED OR ALTERED TO AVOID OPENINGS OR OTHER IRREGULARITIES IN THE UNIT.
3. STORMTRAP LIFTING INSERTS MAY BE RELOCATED TO COINCIDE WITH THE ACCESS OPENING OR THE CENTER OF GRAVITY OF THE UNIT AS NEEDED.
4. STORMTRAP ACCESS OPENINGS MAY BE RELOCATED TO AVOID INTERFERENCE WITH INLET AND/OR OUTLET PIPE OPENINGS SO PLACEMENT OF STEPS IS ATTAINABLE.
5. STORMTRAP ACCESS OPENINGS SHOULD BE LOCATED IN ORDER MEET THE APPROPRIATE MUNICIPAL REQUIREMENTS. STORMTRAP RECOMMENDS AT LEAST ONE ACCESS OPENING PER SYSTEM FOR ACCESS AND INSPECTION.
6. USE PRECAST ADJUSTING RINGS AS NEEDED TO MEET GRADE. STORMTRAP RECOMMENDS FOR COVER OVER 2" TO USE PRECAST DUNNELL ON CONE SECTIONS. (BY DTI 1474)

RECOMMENDED PIPE OPENING SPECIFICATION

1. MINIMUM EDGE DISTANCE FOR AN OPENING ON THE OUTSIDE WALL SHALL BE NO LESS THAN 1'-0" FROM THE EDGE OF THE WALL.
2. MAXIMUM OPENING SIZE TO BE DETERMINED BY UNIT HEIGHT. PREFERRED OPENING SIZE 0.38' OR LESS. ANY OPENING NEEDED THAT DOES NOT FIT THIS CRITERIA SHALL BE BROUGHT TO THE ATTENTION OF STORMTRAP FOR REVIEW.
3. CONNECTING PIPES SHALL BE INSTALLED WITH A 1'-0" CONCRETE COLLAR AND A AGGREGATE GROUT WITH AT LEAST ONE INCH MINIMUM SPACING BETWEEN THE PIPES. CONCRETE OR GROUT WITH AT LEAST ONE INCH COMPRESSIVE STRENGTH OF 4000 PSI SHALL BE USED.
4. THE ANNULAR SPACE BETWEEN THE PIPE AND THE HOLE SHALL BE FILLED WITH NON-SHRINK GROUT.

RECOMMENDED PIPE INSTALLATION INSTRUCTIONS

1. CLEAN AND LIGHTLY LUBRICATE ALL OF PIPE TO BE INSERTED INTO STORMTRAP.
2. IF PIPE IS OUT, CARE SHOULD BE TAKEN TO ALLOW NO SHARP EDGES, BEVEL AND LUBRICATE LEAD END OF PIPE.
3. ALIGN CENTER OF PIPE TO CORRECT ELEVATION AND INSERT INTO OPENING.

PRECAST CONCRETE ADJUSTING RINGS, BERRELL OR CONE SECTIONS AS NEEDED SEE RECOMMENDED ACCESS OPENING SPECIFICATIONS (BY OTHERS)

FRAME & COVER AS SPECIFIED BY ENGINEER (BY OTHERS)

NON-SHRINK GROUT

MEETS:
 OPSS: 1351.08.02
 BNO
 ASTM C-478-95a
 ASTM D-4101-95a
 AASHTO M-199
 ASTM A-615

STAIR DETAIL

RISER / STAIR DETAIL

FOUNDATION PIPE CONNECTION

NOTE: PIPE IS PROPOSED AT THE SYSTEM INVERT. NOTCH PIPE TO ALLOW PIPE INVERT TO MEET SYSTEM INVERT

WALL OF STORMTRAP

1'-0" x 1'-0" CONCRETE COLLAR (TYP)

INLET/OUTLET PIPE

NON-SHRINK GROUT

NON-SHRINK GROUT



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Fax: 763-475-2429

EVERGREEN PARK
ROSEVILLE, MN

DATE: 31-OCT-2014

APPROVED BY:

ISSUED FOR:

PRELIMINARY

REV. DATE: DESC. DWG.

REV.	DATE	DESC.	DWG.
1	31-OCT-2014	ISSUED FOR PRELIMINARY	AC

SCALE:

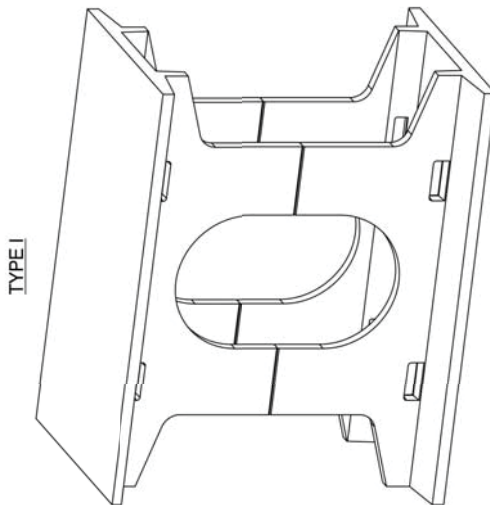
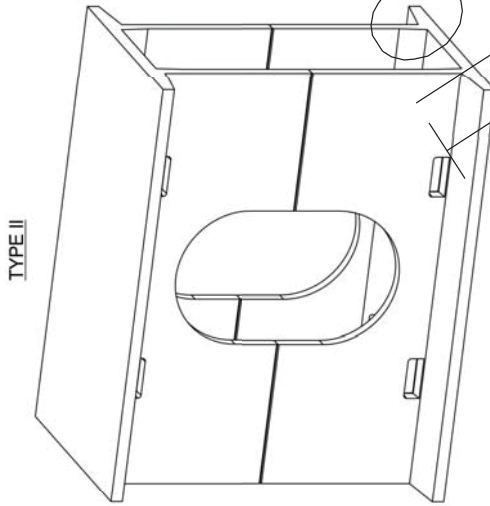
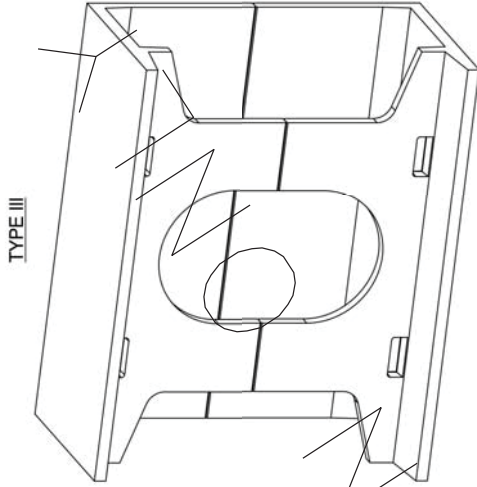
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SHEET TITLE:

11'-4" DOUBLETRAP UNIT TYPES

SHEET NUMBER:

4.0



TYPE VII PANEL



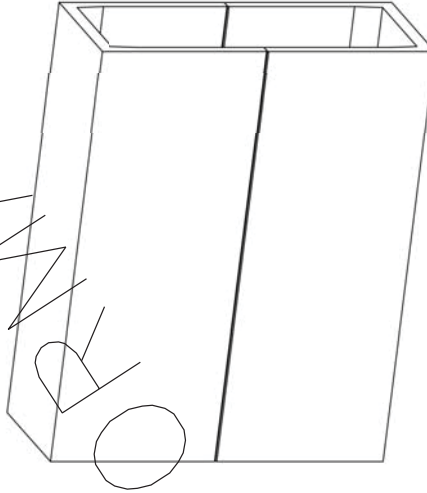
TYPE IV PANEL



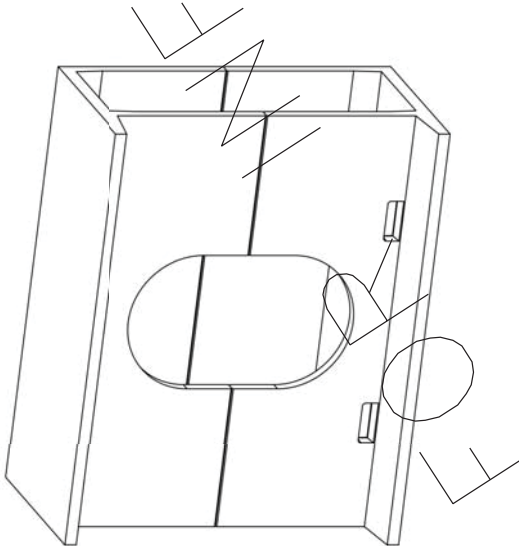
TYPE II PANEL



TYPE VII PANEL



TYPE IV

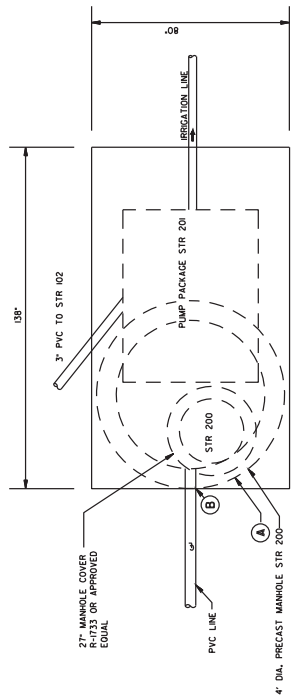


NOTES:

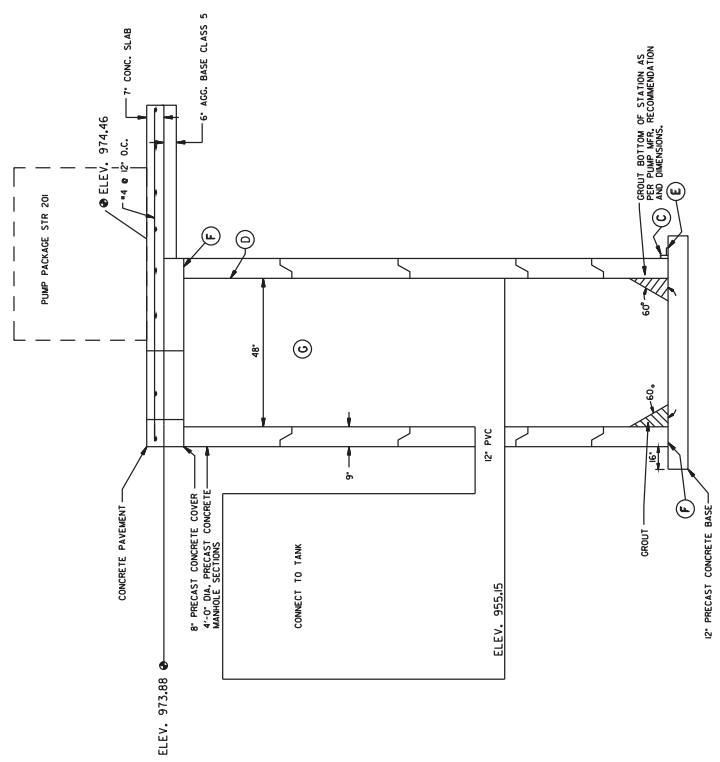
1. OPENING LOCATIONS VARY ON UNIT HEIGHT AND LENGTHS.
2. SP - INDICATES A UNIT WITH MODIFICATIONS.
3. INDICATES A UNIT WITH AN OPENING.
4. POCKET WINDOW OPENINGS ARE OPTIONAL.

DRAWN BY LAB		DESIGNED BY LAB		CITY OF ROSEVILLE	
CHECKED BY DWF		COM. NO. 0438		UNDERGROUND VAULT DETAILS	
				EVERGREEN PARK STORMWATER REUSE	
				SHEET 17 OF 21	





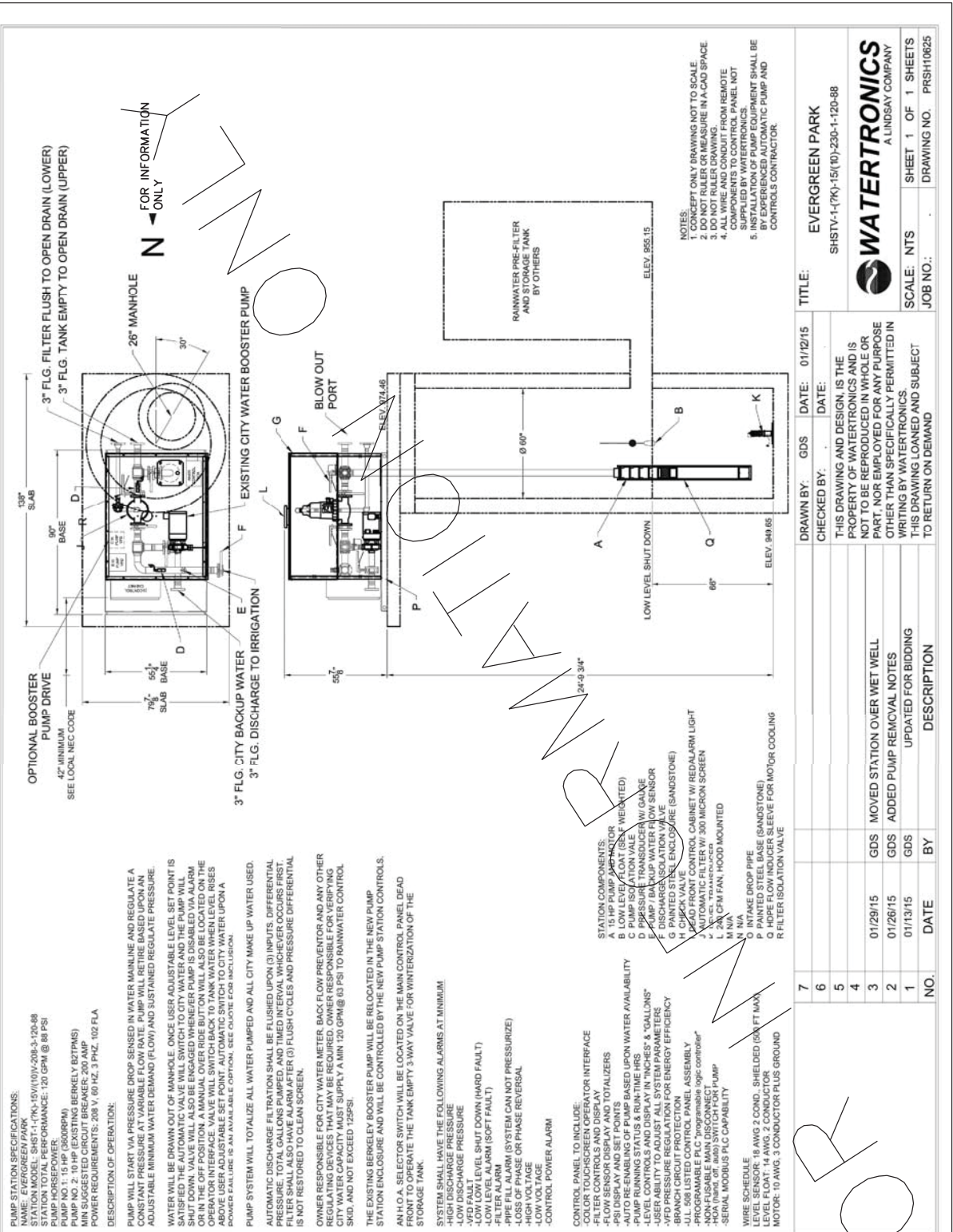
- NOTES:
- (A) RUBBER "O" RING GASKETS ON ALL MANHOLE JOINTS. ALL OUTSIDE JOINTS SHALL HAVE A 6" WIDE STRIP OF BUTYL-RESIN SEALANT PLACED AROUND EACH JOINT. ALL LIFT-HOLES TO BE INSTALLED WITH 6" WIDE STRIP OF BUTYL-RESIN SEALANT.
 - (B) WATER STOP GASKET OR BOOT
 - (C) 4"x4"x3/8" GALVANIZED STEEL ANGLE MOUNTED TO OUTSIDE OF CONCRETE BASE WITH 2" SPACING BETWEEN ANGLES PER JOINT (90° ANGLE). ALL JOINTS VERTICAL SPACING BETWEEN ANGLES ACROSS JOINT SHALL BE A MIN. OF 24".
 - (D) APPLY PROTECTIVE COATING ON INSIDE OF THE BASE, BARREL AND COVER SECTIONS IN ACCORDANCE WITH THE LIFT STATION SPECIFICATIONS.
 - (E) 5/8" - DIA. GALVANIZED STEEL ANCHORS CAST IN BASE SLAB 3 PLACES AROUND BASE (90° ANGLE).
 - (F) APPLY 2 ROWS OF KENT SEAL "2" OR EQUAL.
 - (G) SEE NEXT SHEET FOR PUMP CONFIGURATION DETAIL.



STATION DATA	
PUMP CAPACITY (gpm)	100
PUMP HEAD (FT)	23
MOTOR SPEED	SEE NEXT SHEET
MOTOR HORSEPOWER	SEE NEXT SHEET
ELECTRIC SERVICE	3 PHASE - 208 VOLTS
DISCONNECT SIZE	200 AMP

STORMWATER REUSE WET WELL AND LIFT STATION DETAILS

DRAWN BY LAB		DESIGNED BY LAB		CHECKED BY DWF		DRAWN BY LAB		DESIGNED BY LAB		CHECKED BY DWF		DRAWN BY LAB		DESIGNED BY LAB		CHECKED BY DWF		DRAWN BY LAB		DESIGNED BY LAB		CHECKED BY DWF	
COM. NO. 8438		COM. NO. 8438		COM. NO. 8438		COM. NO. 8438		COM. NO. 8438		COM. NO. 8438		COM. NO. 8438		COM. NO. 8438		COM. NO. 8438		COM. NO. 8438		COM. NO. 8438		COM. NO. 8438	
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.	
Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak		Print Name: David Filipiak	
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EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE		EVERGREEN PARK STORMWATER REUSE	
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PUMP STATION SPECIFICATIONS:

STATION MODEL: SHST-1-(7K)-15V(10V)-208-3-120-88
 STATION TOTAL PERFORMANCE: 120 GPM @ 88 PSI
 PUMP HORSEPOWER:
 PUMP NO. 1: 15 HP (3000RPM)
 PUMP NO. 2: 15 HP (3000RPM)
 MIN SUGGESTED CIRCUIT BREAKER: 200 AMP
 POWER REQUIREMENTS: 208 V, 60 HZ, 3 PHZ, 102 FLA

DESCRIPTION OF OPERATION:

PUMP WILL START VIA PRESSURE DROP-SENSED IN WATER MAINLINE AND REGULATE A CONSTANT PRESSURE AT VARIABLE FLOW RATE. PUMP WILL RETIRE BASED UPON AN ADJUSTABLE MINIMUM WATER DEMAND (FLOW) AND JUSTAINED REGULATE PRESSURE.

WATER WILL BE DRAWN OUT OF MANHOLE. ONCE USER ADJUSTABLE LEVEL SET POINT IS SATISFIED THE AUTOMATIC VALVE WILL SWITCH TO CITY WATER AND THE PUMP WILL STOP. THE AUTOMATIC VALVE WILL SWITCH TO CITY WATER AND THE PUMP WILL STOP. THE AUTOMATIC VALVE WILL SWITCH TO CITY WATER AND THE PUMP WILL STOP. THE AUTOMATIC VALVE WILL SWITCH TO CITY WATER AND THE PUMP WILL STOP.

OWNER RESPONSIBLE FOR CITY WATER METERS, BACKFLOW PREVENTERS AND ANY OTHER REGULATING DEVICES THAT MAY BE REQUIRED. OWNER RESPONSIBLE FOR WATER CONTROL. CITY WATER CAPACITY MUST SUPPLY A MIN 120 GPM @ 60 PSI TO RAINWATER CONTROL. SKID, AND NOT EXCEED 125PSI.

THE EXISTING BERKELEY BOOSTER PUMP WILL BE RELOCATED IN THE NEW PUMP STATION ENCLOSURE AND WILL BE CONTROLLED BY THE NEW PUMP STATION CONTROLS.

AN H.O.A. SELECTOR SWITCH WILL BE LOCATED ON THE MAIN CONTROL PANEL DEAD FRONT TO OPERATE THE TANK EMPTY 3-WAY VALVE FOR WINTERIZATION OF THE STORAGE TANK.

SYSTEM SHALL HAVE THE FOLLOWING ALARMS AT MINIMUM:

- HIGH DISCHARGE PRESSURE
- LOW DISCHARGE PRESSURE
- LOW LEVEL SHUT DOWN (HARD FAULT)
- LOW LEVEL ALARM (SOFT FAULT)
- PIPED FILL ALARM (SYSTEM CAN NOT PRESSURIZE)
- LOSS OF PHASE OR PHASE REVERSAL
- HIGH VOLTAGE
- LOW VOLTAGE
- CONTROL POWER ALARM

CONTROL PANEL TO INCLUDE:

- GALVANIZED STEEL MOTOR INTERFACE
- FILTER CONTROLS AND DISPLAY
- FLOW SENSOR DISPLAY AND TOTALIZERS
- PSI DISPLAY AND SET POINTS
- AUTO RE-ENGAGING OF PUMP BASED UPON WATER AVAILABILITY
- LEVEL CONTROLS AND DISPLAY IN "INCHES" & "GALLONS"
- USER ABILITY TO ADJUST ALL SYSTEM PARAMETERS
- WPD PRESSURE REGULATION FOR ENERGY EFFICIENCY
- WATER CONTROL LOGIC PANEL ASSEMBLY
- 400V LISTED CONTROL PANEL ASSEMBLY
- NON-FUSIBLE MAIN DISCONNECT
- SERIAL MODBUS PLC CAPABILITY
- SERIAL MODBUS PLC CAPABILITY

WIRE SCHEDULE

LEVEL SENSOR: 18 AWG 2 COND., SHIELDED (50 FT MAX)
 FLOW SENSOR: 18 AWG 2 COND., SHIELDED (50 FT MAX)
 MOTOR: 10 AWG, 3 CONDUCTOR PLUS GROUND

NO.	DATE	BY	CHKD	APPR
7				
6				
5				
4				
3	01/29/15	GDS		
2	01/26/15	GDS		
1	01/13/15	GDS		
NO.	DATE	DESCRIPTION	BY	
7				
6				
5				
4				
3	01/29/15	GDS MOVED STATION OVER WET WELL		
2	01/26/15	GDS ADDED PUMP REMOVAL NOTES		
1	01/13/15	GDS UPDATED FOR BIDDING		

DATE: 01/29/15
 TITLE: EVERGREEN PARK
 SHSTV-1-(7K)-15(10)-230-1-120-88
WATERTRONICS
 A LINDSAY COMPANY
 SCALE: NTS
 SHEET 1 OF 1 SHEETS
 JOB NO.: PRSH10625

ENGINEERS
SRP
 CONSULTING GROUP, INC.

DESIGNED BY: LAB
 CHECKED BY: DWF
 COM. NO. 04-38

CITY OF ROSEVILLE
 PUMP STATION DETAILS
 EVERGREEN PARK STORMWATER REUSE

SHEET 19 OF 21

Fairview Trunk Underground Stormwater Project			Engineers Estimate		
Line No.	Description	Units	Quantity	Unit Price	Total Price
1	MOBILIZATION	LS	1	\$24,000.00	\$24,000.00
2	CLEARING	ACRE	0.5	\$6,620.00	\$3,310.00
3	GRUBBING	ACRE	0.5	\$2,210.00	\$1,105.00
4	REMOVE BITUMINOUS PAVEMENT	S Y	300	\$6.45	\$1,935.00
5	REMOVE BITUMINOUS PATHWAY	S Y	635	\$11.10	\$7,048.50
6	SAWING BITUMINOUS PAVEMENT	L F	200	\$4.40	\$880.00
7	SUBSOILING	ACRE	0.1	\$6,650.00	\$665.00
8	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	20	\$196.50	\$3,930.00
9	AGGREGATE BASE (CV) CLASS 5	C Y	100	\$25.50	\$2,550.00
10	BITUMINOUS MATERIAL FOR TACK COAT	GAL	30	\$6.05	\$181.50
11	TYPE SPWEA240B WEARING COURSE MIX PATHWAY	TON	13	\$135.00	\$1,755.00
12	TYPE SPWEB340B WEARING COURSE MIX	TON	117	\$135.00	\$15,795.00
13	12" PVC PIPE SDR 11	L F	10	\$110.00	\$1,100.00
14	24" RC PIPE SEWER CLASS III	L F	155	\$59.75	\$9,261.25
15	24" RC PIPE SEWER CLASS V	L F	43	\$97.75	\$4,203.25
16	12" HDPE PIPE SEWER	L F	104	\$43.50	\$4,524.00
17	24" GATE VALVE	EA	1	\$28,120.00	\$28,120.00
18	3" PVC PIPE SDR 21	L F	55	\$7.40	\$407.00
19	4" PVC PIPE SDR 21	L F	368	\$5.60	\$2,060.80
20	CONST DRAINAGE STRUCTURE DESIGN F	L F	14	\$235.50	\$3,297.00
21	CONST DRAINAGE STRUCTURE DES 48-4020	L F	77	\$292.00	\$22,484.00
22	CONST DRAINAGE STRUCTURE DES 60-4020	L F	11	\$317.50	\$3,492.50
23	CONST DRAINAGE STRUCTURE DES 72-4020	L F	11	\$753.00	\$8,283.00
24	CONSTRUCT SAFL BAFFLE	EACH	1	\$6,180.00	\$6,180.00
25	MANHOLE CASTING R-1733B	EACH	10	\$380.50	\$3,805.00
26	7" CONCRETE WALK-REINFORCED	S F	77	\$30.50	\$2,348.50
27	TRAFFIC CONTROL	LS	1	\$3,800.00	\$3,800.00
28	SALVAGE AND REINSTALL SIGN	EACH	1	\$1,400.00	\$1,400.00
29	TREE PROTECTION	EACH	13	\$193.00	\$2,509.00
30	SILT FENCE, TYPE MACHINE SLICED	L F	110	\$4.40	\$484.00
31	STORM DRAIN INLET PROTECTION	EACH	7	\$237.00	\$1,659.00
32	SEDIMENT CONTROL LOG TYPE COMPOST	L F	215	\$4.40	\$946.00
33	TEMPORARY ROCK CONSTRUCTION ENTRANCE	EACH	1	\$2,920.00	\$2,920.00
34	SEED MIXTURE 22-111	LB	2.1	\$132.50	\$278.25
35	SODDING TYPE MINERAL	S Y	1850	\$4.80	\$8,880.00
36	MULCH MATERIAL TYPE 1	TON	0.14	\$1,100.00	\$154.00
37	4" SOLID LINE WHITE-PAINT	L F	140	\$3.85	\$539.00
38	4" DOUBLE SOLID LINE YELLOW-PAINT	L F	70	\$4.40	\$308.00
39	UNDERGROUND WATER STORAGE VAULT (STORM TRAP)	LS	1	\$358,401.45	\$358,401.45
40	REUSE/PUMP CONTROLS STATION	LS	1	\$105,000.00	\$105,000.00
41	OPTI-RTC	LS	1	\$60,000.00	\$60,000.00
					\$710,000.00

Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of Roseville – 2018 Urban Stormwater
Cost-Share Program Application for Evergreen
Park Underground Filtration and Reuse Project

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of Roseville, we offer the following comments for your use:

- The applicant is proposing to construct an underground filtration and stormwater reuse system to irrigate 4.5 acres within Evergreen Park along the Fairview Trunk System within the drainage area to Little Johanna Lake, which is a Tier I lake and in the SW Urban Lakes Study.
- This project includes volume reduction, which is the highest priority BMP category for the District. The applicant is proposing a water reuse system to be used for ballfield irrigation and flood storage. The City will maintain the BMP.
- The applicant estimated the BMPs would remove 11.5 lbs. of TP annually and 4,055 lbs. of TSS annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$2,058 per pound of TP and \$5.84 per pound of TSS, based on a 30-year capital life of the BMP.
- The effectiveness of the project would be determined by the quantity of water irrigated from the underground storage tanks and the amount of sediment and floatables removed from the pretreatment feature.
- The project has high educational opportunity. The applicant is proposing to use signage in the park to explain the BMP and publish an article in a local publication.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of Saint Anthony
 Street Address: 3301 Silver Lake Road
 City, State, Zip: St. Anthony, MN 55418

II. PROJECT CONTACTS

Project Officer: <u>Jay Hartman</u>	Financial Officer: <u>Shelly Rueckart</u>
Telephone: <u>(612) 782-3314</u>	Telephone: <u>(612) 782-3316</u>
Fax: _____	Fax: _____
Email: <u>jay.hartman@savmn.com</u>	Email: <u>shelly.rueckert@savmn.com</u>
Tax Status: <u>Local Government</u>	Tax ID#: <u>Local Government</u>

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: Central Park Splash Pad Irrigation
 Location(s) of Project: Central Park
 City: St. Anthony Village State: MN County: Hennepin/Ramsey
 Project Start Date: 03/01/2018 Project Completion Date: 11/01/2018

Project Type (check only those that directly apply):

- | | |
|---|---|
| <input type="checkbox"/> Water Quality Treatment Project | <input checked="" type="checkbox"/> Runoff Volume Control / Flood Storage Project |
| <input type="checkbox"/> Peak Runoff Rate Control Project | <input checked="" type="checkbox"/> Stormwater Reuse Irrigation Project <input checked="" type="checkbox"/> Other |

Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN


IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested: \$ 50,000.00
 Local Matching Contributions: \$ 120,000.00
 State/Federal/Other Funds: \$ 0.00 Source(s): _____
 Total Estimated Project Cost: \$ 170,000.00

Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT *(An original signature page must be received with this application)*

I certify that the information contained within this application is true and accurate.

 WCA
 Signature of Project Officer

12-29-2017
 Date

Jay Hartman - Director of Public Works
 Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

In St. Anthony, the Central Park Splash pad is located near the Water Reuse Facility, where stormwater is treated and used to irrigate over 20 acres of Central Park, St. Anthony High School and City Hall campuses. The project proposes to make a new connection from the splash pad to the water reuse facility by constructing a lift station and approximately 800 feet of storm sewer forcemain. The proposed connection has the potential to eliminate 2.4 million gallons of potable water used for Central Park irrigation. The cost of this project is \$170,000 dollars. The City is requesting for the maximum funding of \$50,000 from Rice Creek Watershed District.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Mirror Lake/Prarie DuChain/Jordan Aquifers
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

The goal of the project is to reuse the wasted water from the splash pad as irrigation. The Central Park splash pad uses approximately 6.9 million gallons of water annually. The splash pad equipment consists of a series of tipping buckets and four water jets. The current splash pad flow rate is 166 gallons per minute with a cycle time of four minutes. The existing irrigation demand of Central Park is approximately 7.0 million gallons annually, with 2.4 million gallons coming from potable water. By implementing this water reuse connection, the irrigation system will not use potable water, and instead use the discharge from the splash pad, reusing 34% of the wasted water from the splash pad. This will save the City 2.4 million gallons of potable water. An additional irrigation zone of several acres is also planned, increasing demand for reuse water.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

The proposed connection of the splash pad to the water reuse system will protect groundwater resources within the RCWD. The City of St. Anthony Village will conserve their drinking water sources by reusing the wasted water from the splash pad eliminating the need to use potable water for irrigation in Central Park. This project will prevent the use of 2.4 million gallons of potable water for irrigation of Central Park. This reduction on potable demand also reduces the energy demand necessary to treat the 2.4 million gallons of potable water used for irrigation. The groundwater in St. Anthony requires three treatment process due to the plume of the TCAAP contamination in the aquifer, allowing a large reduction of energy and saving groundwater.

- Describe how long-term operation and maintenance of the project will be accomplished.

The lift station will be inspected every fall to ensure proper steps are complete to keep the pump maintained for winter. The stormwater discharge point will be inspected annually to ensure there is no clogging of the pipes. The St. Anthony Water Reuse system has a operation and maintenance plan already in place and is inspected on a regular basis.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

The discharge of the Central Park splash pad currently drains into existing storm sewer and is sent further downstream to where it discharges into Mirror Lake. The new connection to the City's water reuse tank will allow the splash pad discharge to be sent to the reuse tank and then implemented into the irrigation system of Central Park. The irrigation system discharges water onto approximately 20 acres inside the park, school, and City hall campuses' lawn. The infiltration of the irrigation system allows plants and vegetation to grow and adds visual aesthetics to Central Park. Overflow is rare for the reuse tank, but overflow does drains south via storm sewer to the Mississippi River.

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

This project supports the City of St. Anthony's water reuse system and helps reduce stormwater discharge, and allows for infiltration to occur by the irrigation of Central Park. The RCWD Watershed Management Plan states to discuss projects that that reduce runoff volume by developing volume control requirements of the district. Some of these methods include water reuse through irrigation systems and regional infiltration facilities. The proposed connection will be eliminating runoff volume into Mirror Lake, and creating it as a reuse irrigation system.

- List all project partners and their respective roles in implementing and/or supporting the project.

The City of St. Anthony will be the main project sponsor and be the project manager of the project. Rice Creek Watershed will be a project sponsor and be a support in the project.

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

Pollutant Reduction:

The groundwater that is used for irrigation comes from the city's potable water system. This system has to be filtered three times due to the contamination of TCAP in the aquifer. This project reduces plume of TCAP contamination of the Prairie DuChain/Jordan Aquifers by restricting drawing down the aquifer.

Stormwater Volume Reduction:

The irrigation demand of Central Park is currently 7.0 million gallons annually, and the average potable water augmentation from 2011 to 2015 was 2.4 million gallons per year. The Central Park Splash Pad currently uses approximately 6.9 million gallons of water annually and discharges into storm sewer. The new connection will reduce the stormwater volume entering into the stormwater sewer system. The volume was calculated based on hours of operation of the splash pad and the highest amount of water used per cycle of the splash pad quoted from the manufacturer. Discharge of the splash pad will no longer be going to Mirror Lake, and instead be sent to the reuse tank, which overflows south to West Mississippi Watershed.

Groundwater Withdrawal Reduction:

As stated above, the discharge from the splash pad will eliminate the 2.4 million potable water use for irrigation in Central Park. This relates to 34% of the water used in the splash pad is available for use in irrigation. The city of St. Anthony can save 2.4 million gallons per year of their groundwater withdrawal. This is estimated by the information gathered by the St. Anthony's water meters per year.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

There will be a couple of evaluations of the project results during construction and after.

- The input of potable water into the water reuse system will be monitored to see how successful the splash pad discharge is in eliminating the 2.4 million gallons of potable water used for the reuse system. If the reuse system eliminates all potable water use for the reuse system then the project will be called highly successful in its main goal.
- The impact of a park user is another aspect for the effectiveness of the project. The new connection will be directionally drilled to have less of an impact in the park, however access will be prohibited few days during construction of the project. The City wants minimal impact to be a priority for the project during construction. This will be measured by the amount of residential complaints from the construction crew and the amount of days that the construction will be out there disrupting park influence. The park will be successful if both of these aspects together are below 15.
- If the project is not delayed or takes longer than what is projected it will be considered a success.
- If the project is on-budget when compared to the probable cost, it will be considered a success.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

While the system itself will be below ground, many residents are aware of the Water Reuse System in St. Anthony. The splash pad has a high consumer experience and is operating for 12 hours of the day, which provides high visibility and educational value. An interpretive sign will be installed by the splash pad to educate users on the new discharge system and the Water Reuse System. There will be graphics displaying the system and demonstrating how the water discharged from the splash pad will ultimately be used for irrigation in Central Park. The sign will publicize the value and benefits that stormwater can provide to the City and the Rice Creek Watershed District.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

WSB as the City Engineer has designed the project to be bid with the Cities 2018 Street and Utility Project. Below is a list of key personnel for the project,

Jay Hartman, Public Works Director, Phone: (612) 782-3314 Email: jay.hartman@savmn.com
Todd Hubmer, City Engineer, Phone: (763) 287-7182 Email: THubmer@wsbeng.com

Opinion of Probable Cost

WSB Project: Central Park Splash Pad Irrigation
 Project Location: City of St. Anthony Village
 City Project Number:
 WSB Project Number: 02170-430

City of St. Anthony (CST)
 Rice Creek Watershed District(RCWD)

Item Number	Description	Unit	Quantity	Unit Cost	Estimated Cost	Contributor	Sources
1	MOBILIZATION	LS	1	\$7,500.00	\$7,500.00	CST	City Budget
3	SALVAGE AND REINSTALL LANDSCAPE	EA	1	\$1,500.00	\$1,500.00	CST	City Budget
3	LIFT STATION AND PUMP	LS	1	\$50,000.00	\$50,000.00	RCWD	--
4	ELECTRICAL SERVICE	LS	1	\$5,000.00	\$5,000.00	CST	City Budget
5	4" HDPE PIPE SEWER (DIRECTIONALLY DRILLED)	LF	300	\$65.00	\$19,500.00	CST	City Budget
6	4" HDPE PIPE SEWER (DIRECTIONALLY DRILLED)	LF	700	\$45.00	\$31,500.00	CST	City Budget
7	CONNECT TO EXISTING STORM SEWER	EA	3	\$750.00	\$2,250.00	CST	City Budget
8	EROSION CONTROL	LS	1	\$750.00	\$750.00	CST	City Budget

Subtotal	\$118,000.00
+25% Contingency	\$29,500.00
Subtotal	\$147,500.00
+15% Indirect Costs	\$22,200.00
Total Splash Pad Irrigation Costs	\$169,700.00
Total Costs from RCWD	\$50,000.00
Total Costs from CST	\$119,700.00

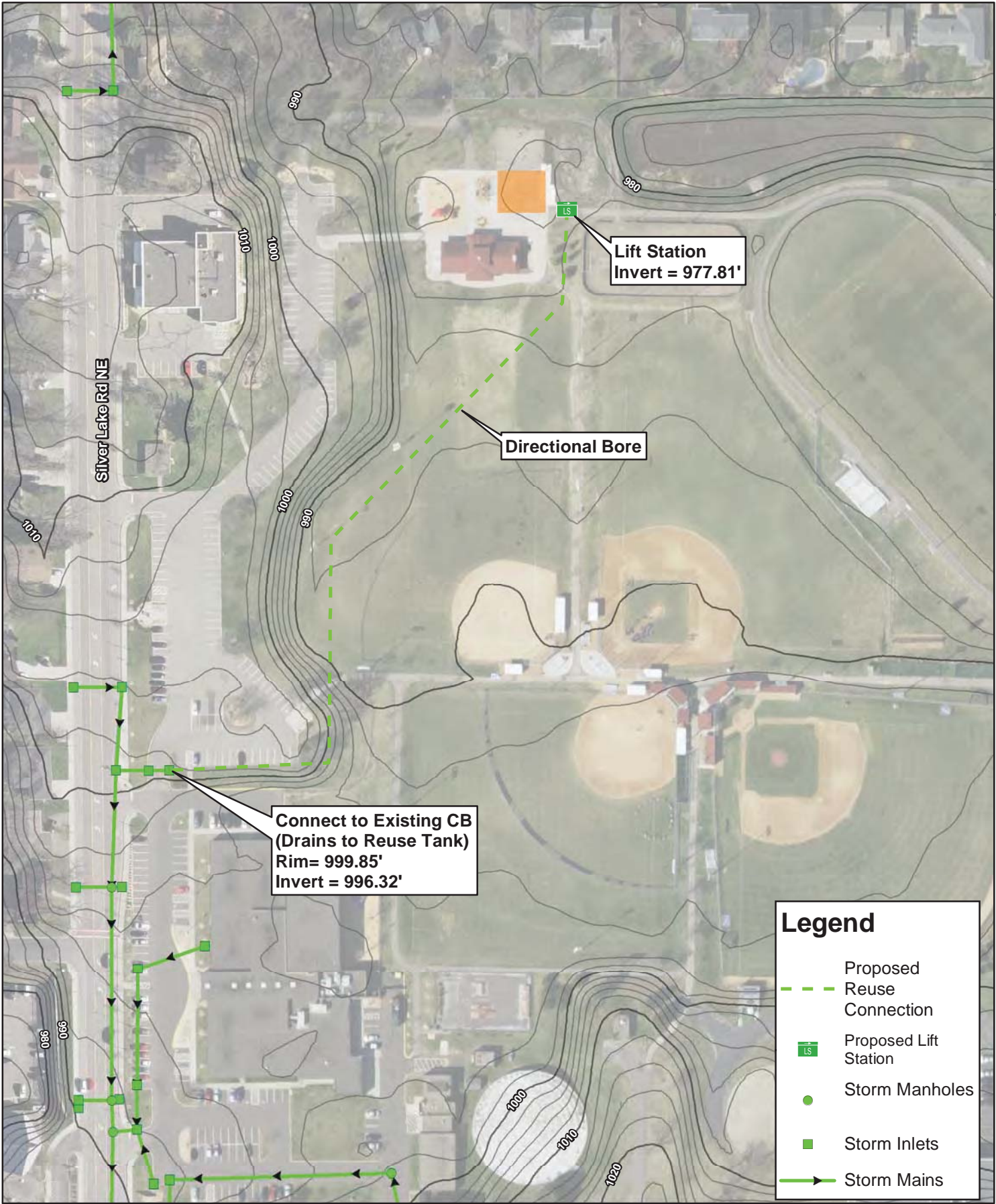
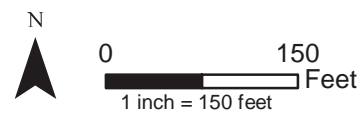


Figure 1 - Central Park
 Proposed Splash Pad Connection
 to Reuse Tank
 City of St. Anthony Village





WSB PROJECT NO.: 010507-400

SCALE: DESIGN BY: AS SHOWN: KAK PLAN BY: CHECK BY: JGH

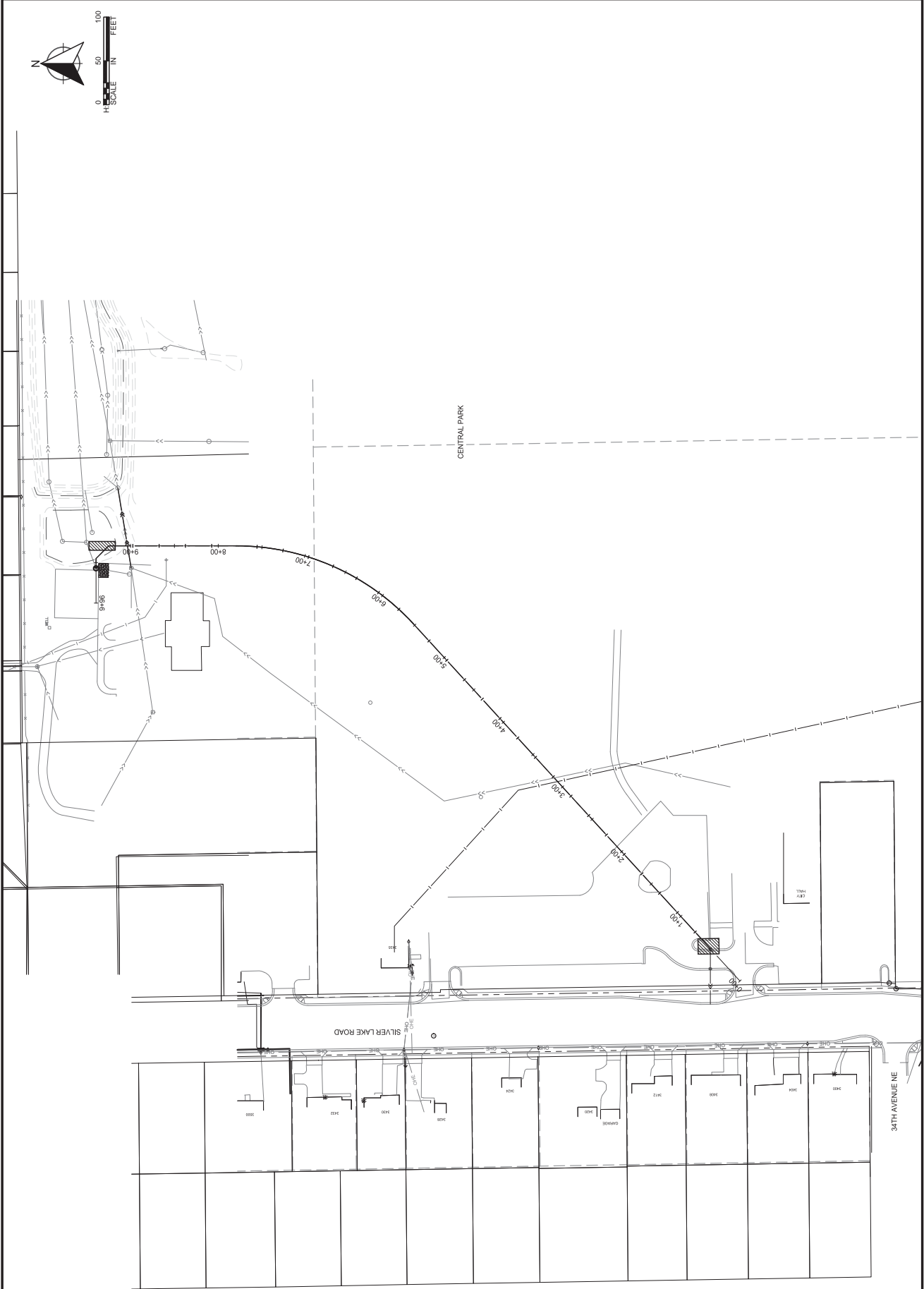
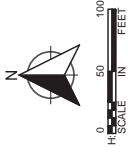
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DATE: 12/12/2017 LIC. NO.: 94301 WILLIAM ALMS, P.E.

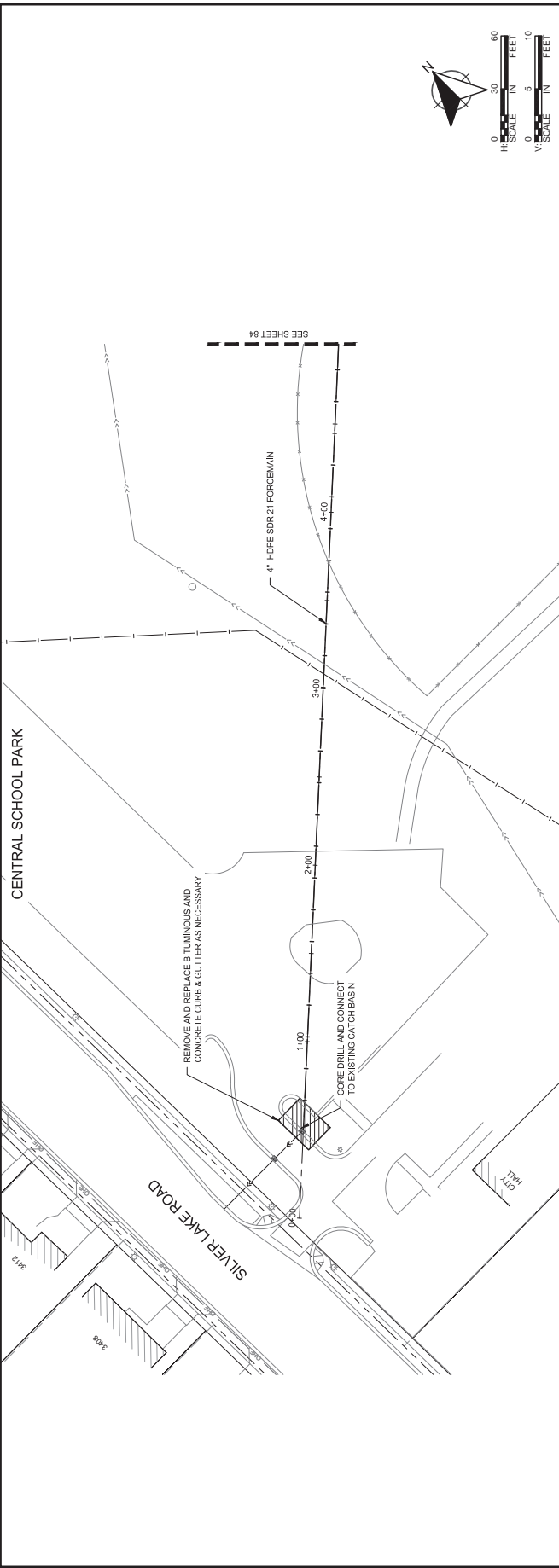
ST. ANTHONY VILLAGE, MINNESOTA 2018 STREET AND UTILITY IMPROVEMENT PROJECT

FORCEMAIN GENERAL LAYOUT

SHEET 82 OF 86



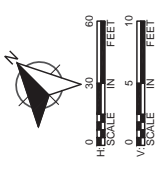
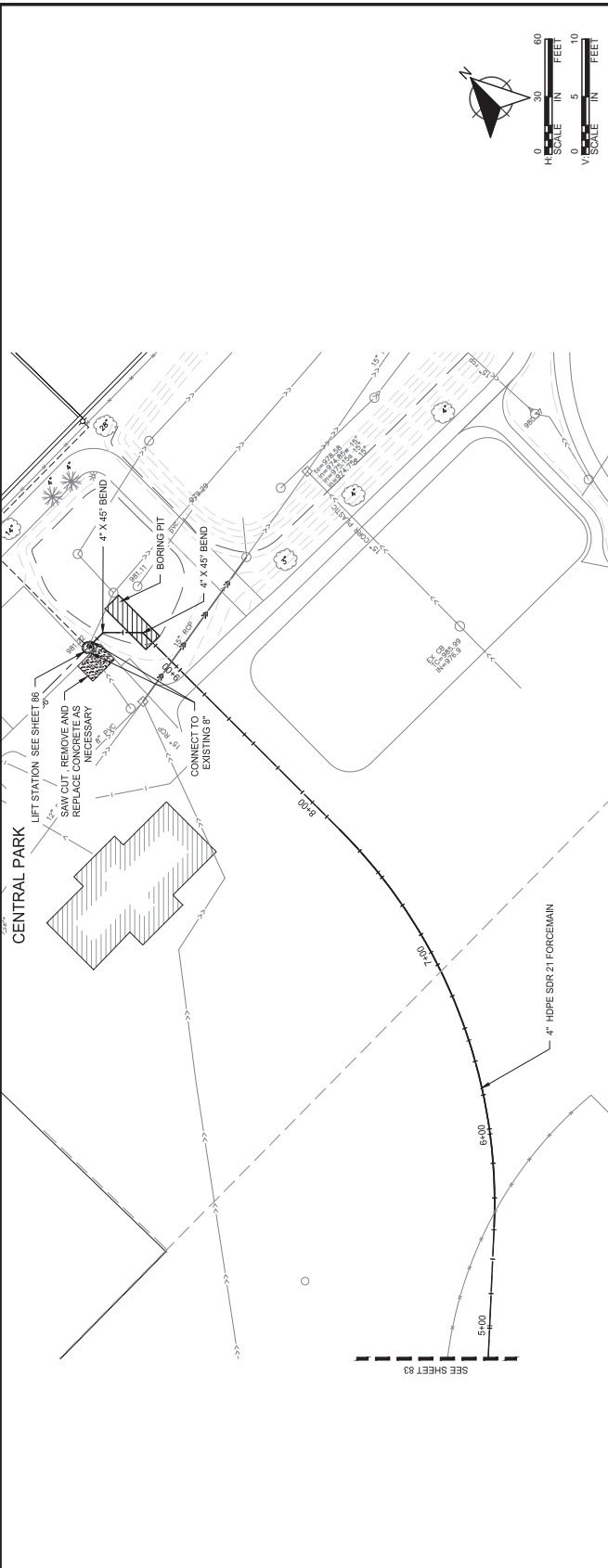
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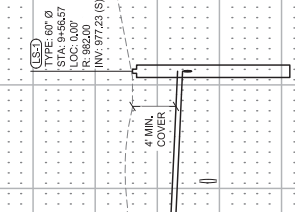
STATION	VERTICAL ELEVATION (FEET)	DESCRIPTION
1010	986.1	NOTE: 4" FORCEMAIN TO BE INSTALLED WITH SLOPE DRAINING FROM THE EXISTING CSB TO THE LIFT STATION.
1005	986.1	
1000	986.1	
995	986.1	
990	986.1	
985	986.1	
980	986.1	
975	986.1	
970	986.1	

REVISIONS

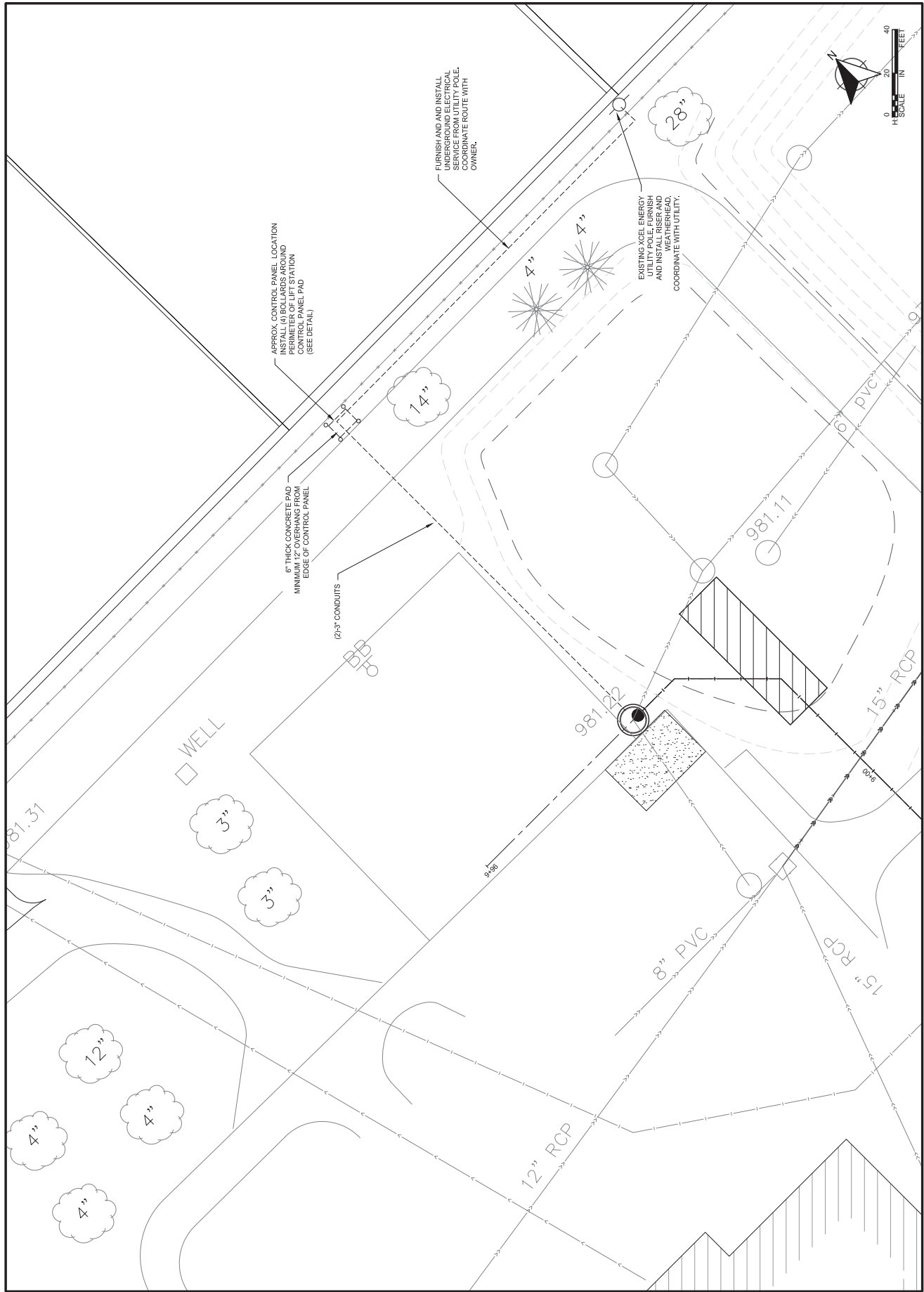
NO.	DATE	DESCRIPTION



Station	Profile	Notes
1000	1000	NOTE: 4" FORCEMAIN TO BE INSTALLED WITH SLOPE DRAINING FROM THE EXISTING CURB TO THE LIFT STATION.
995	995	
990	990	
985	985	
980	980	
975	975	
970	970	
965	965	
960	960	

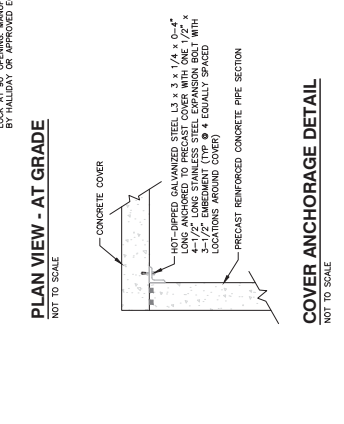
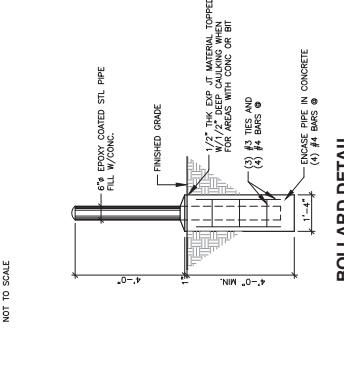
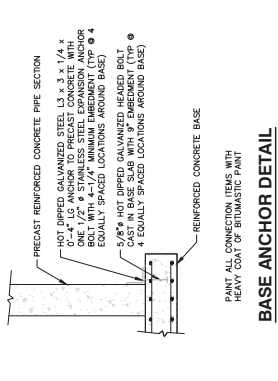
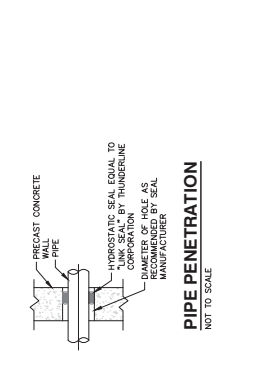
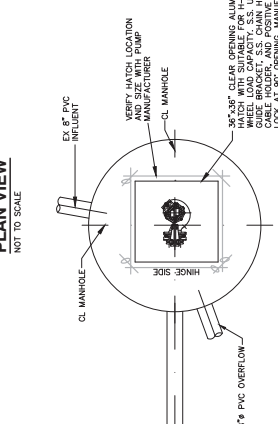
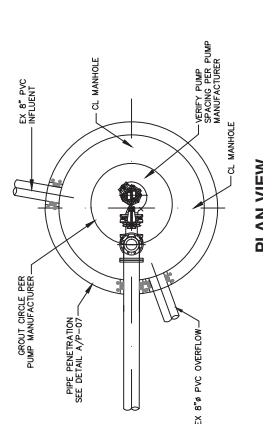
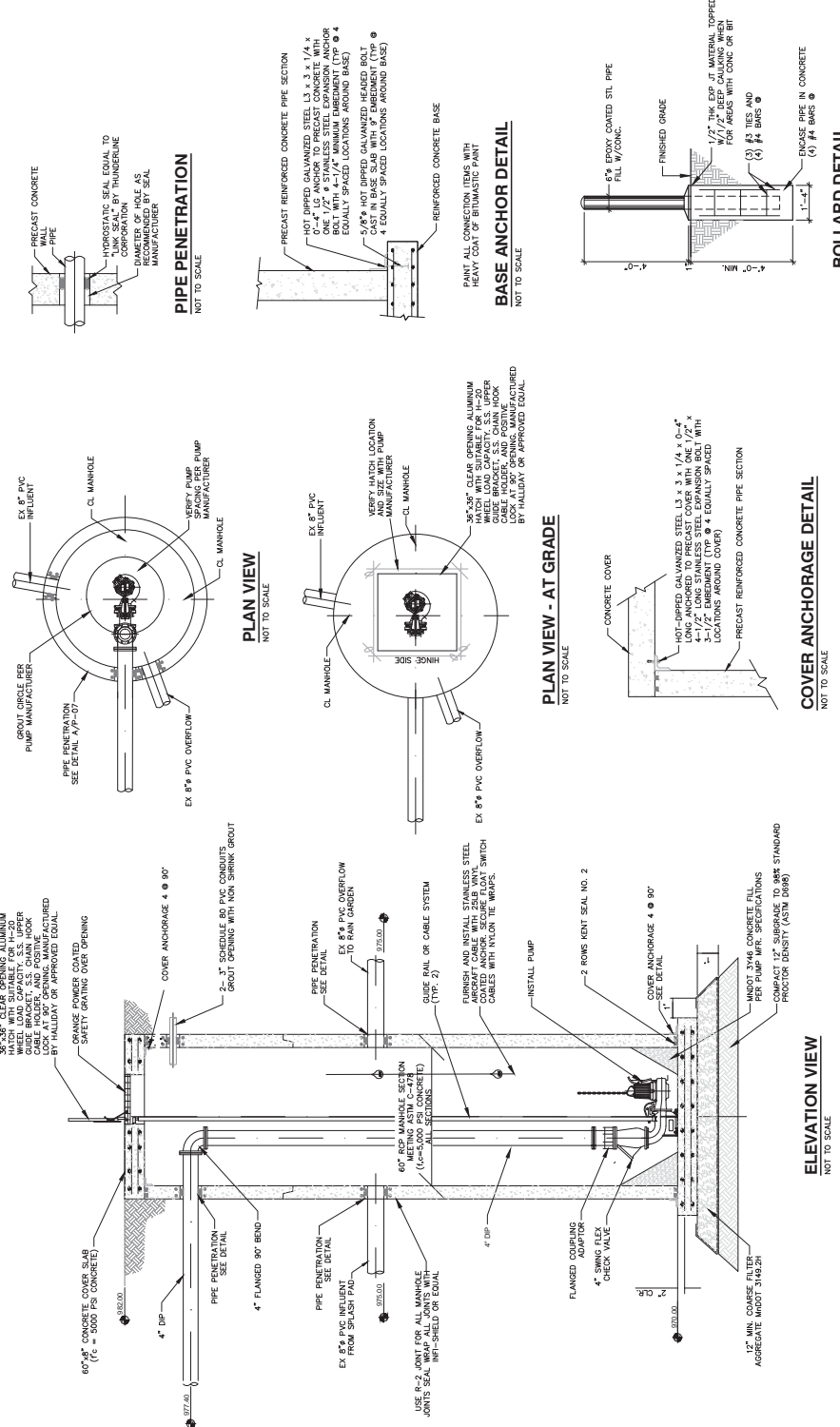


NO.	DATE	DESCRIPTION



NO.	DATE	DESCRIPTION
1		
2		

REVISIONS



Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of Saint Anthony – 2018 Urban
Stormwater Cost-Share Program Application
for Central Park Splash Pad Irrigation

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of Saint Anthony, we offer the following comments for your use:

- The applicant is proposing to connect wastewater from a splash pad to a stormwater reuse system to irrigate over 20 acres within Central Park within the drainage area to Mirror Pond which ultimately drains to Long Lake, which is a Tier II lake.
- This project does include volume reduction, which is the highest priority BMP category for the District. However, the reduced volume is from potable water used to fill the splash pad and not stormwater, thus the applicant will be reducing reliance upon groundwater for irrigation and expand public education in the park. The City will maintain the pump system.
- The applicant estimated the project would reduce the need for 2.4 million gallons of groundwater to supplement irrigation demand.
- The effectiveness of the project would be determined by the quantity of water irrigated from the underground storage tanks.
- The project has moderate/high educational opportunity. The applicant is proposing signage in the park to explain the how the splash pad now supports the existing water reuse BMP.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): City of Shoreview
 Street Address: 4600 Victoria St N
 City, State, Zip: Shoreview, MN 55126

II. PROJECT CONTACTS

Project Officer: <u>Tom Wesolowski, City Engineer</u>	Financial Officer: <u>Fred Espe, Finance Director</u>
Telephone: <u>(651) 490-4652</u>	Telephone: <u>(651) 490-4622</u>
Fax: <u>(651) 490-4696</u>	Fax: <u>(651) 490-4696</u>
Email: <u>twesolowski@shoreviewmn.gov</u>	Email: <u>fespe@shoreviewmn.gov</u>
Tax Status: <u>local government</u>	Tax ID#: <u>41-6008808</u>

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: Shoreview Rice Creek Fields Stormwater Reuse
 Location(s) of Project: Rice Creek Fields- Shoreview City Park
 City: Shoreview State: MN County: Ramsey
 Project Start Date: 03/01/2018 Project Completion Date: 07/31/2018

Project Type (check only those that directly apply):

<input type="checkbox"/> Water Quality Treatment Project	<input type="checkbox"/> Runoff Volume Control / Flood Storage Project
<input type="checkbox"/> Peak Runoff Rate Control Project	<input checked="" type="checkbox"/> Stormwater Reuse Irrigation Project
<input type="checkbox"/> Other	

Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested:	\$ <u>50,000.00</u>	
Local Matching Contributions:	\$ <u>125,000.00</u>	
State/Federal/Other Funds:	\$ <u>150,000.00</u>	Source(s): <u>Metropolitan Council- Stormwater</u>
Total Estimated Project Cost:	\$ <u>325,000.00</u>	<u>Grant Program</u>

Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT (An original signature page must be received with this application)

I certify that the information contained within this application is true and accurate.



 Signature of Project Officer

 City Engineer

 Title

12/20/17

 Date

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

Rice Creek Fields are high-quality fast-pitch fields that attract athletes from around the country. On average, more than 6.0 million gallons of water are applied to the fields each year. This project proposes to retrofit the irrigation system to use water from a nearby stormwater pond rather than potable water, conserving millions of gallons of groundwater annually. This would reduce aquifer demands in an area deemed to be in need of focused, comprehensive water management. Shoreview is requesting a cost share of \$50,000, and plans to contribute \$125,000. Additional funding of \$150,000 was awarded by the Metropolitan Council for this project.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Rice Creek & Long Lake
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

This project proposes a stormwater reuse irrigation system that would use water from an overbuilt stormwater pond south of Rice Creek Fields to irrigate the high-quality fast-pitch fields located in the Anoka Sand Plains. Currently, the Rice Creek Fields irrigate using an average of 6.0 million gallons of potable water a year. This project provides the City with an opportunity to reduce summer water demand on groundwater resources. 11.48 acres will be irrigated by this project.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

This project proposes to retrofit the irrigation system at Rice Creek Fields to use water from a nearby stormwater pond rather than potable water, thereby conserving an average of 6.0 million gallons of groundwater annually in the North and East Metro Groundwater Management Area. Using stormwater for irrigation reduces the demands put on the aquifer in an area the Department of Natural Resources has deemed to be in need of proactive water management.

- Describe how long-term operation and maintenance of the project will be accomplished.

The City will own and maintain all aspects of the project including the stormwater intake, the filter and UV units, pumps, controls and valves. The system will be operated according to a plan that will be agreed upon during project construction. Additionally, prior to each irrigation season the storage area is to be tested for water quality and the results compared to the MPCA guidelines. The intake filter will significantly reduce turbidity and TSS, and the pumping station is equipped with a chlorides probe that will automatically switch the station off if chloride levels are high.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

This project does not directly impact impervious surfaces at Rice Creek Fields as it is not proposing to change impervious surface ratios in the project area. The project is also not directly maximizing infiltration, but it is using stormwater collected in a storm pond to irrigate high-quality turf grass in a high-traffic City park. This re-use of storm water increases infiltration by spreading the water over a larger area of land.

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

This project is highlighted in Shoreview's 2018 Surface Water Management Plan update, in the Capital Improvement Plan, and in the Rice Creek Watershed District's Watershed Management Plan update. The project also meets the parameters of the Metropolitan Council's Stormwater Grant Program.

- List all project partners and their respective roles in implementing and/or supporting the project.

City of Shoreview- managing the project and overseeing consultant work
WSB Engineering- design and construction consultants for the project
Rice Creek Watershed District- funding partners and project collaborators
Metropolitan Council- funding partners through their Stormwater Grant Program

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

In addition to conserving an average of 6.0 million gallons of potable water a year, the project will have the additional benefit of removing phosphorus from the watershed, ultimately improving water quality in Rice Creek and Long Lake, which are listed as impaired by the Minnesota Pollution Control Agency for aquatic life and nutrients, respectively. A P8 model produced in 2017 estimated that 45 pounds of total phosphorus enter the pond each year, a significant portion of which will be removed by this project.

Using estimates for the volumes of runoff, irrigation, and discharge, together with average pollutant concentrations and removal rates from the Minnesota Stormwater Manual MIDS Calculator, it is estimated that the City can divert approximately 5.8 pounds of total phosphorus per year from Rice Creek that otherwise would have entered through discharge from the stormwater pond.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

The City will evaluate the effectiveness of the project by observing the reduction in the use of potable water being used for irrigation. While the system will be set up to allow, if necessary, the use of potable water during low water or high chloride periods at the pond, the default will be to reuse stormwater for the irrigation of Rice Creek Fields. The flows will be metered and data collected for comparison against pre-project conditions.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

The project offers an exceptional opportunity for public education due to the high volume of foot traffic through the fields in the summer. It is estimated that over 60,000 people visit the fields each summer. The City will erect several permanent educational signs to teach users about the benefits of water reuse and conservation. Upon completion, the City will offer tours to residents and interested parties to showcase the project.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

Tom Wesolowski, City Engineer, City of Shoreview, MN (651-490-4652) twesolowski@shoreviewmn.gov

Ellen Brenna, Natural Resources Specialist, City of Shoreview, MN (651-490-4665) ebrenna@shoreviewmn.gov

Lauren Sampedro, Water Resource Specialist, Rice Creek Watershed District (763-398-3078) lsampedro@ricecreek.org

Richard Parr, Senior Project Manager, WSB & Associates (651-286-8457) RParr@wsbeng.com

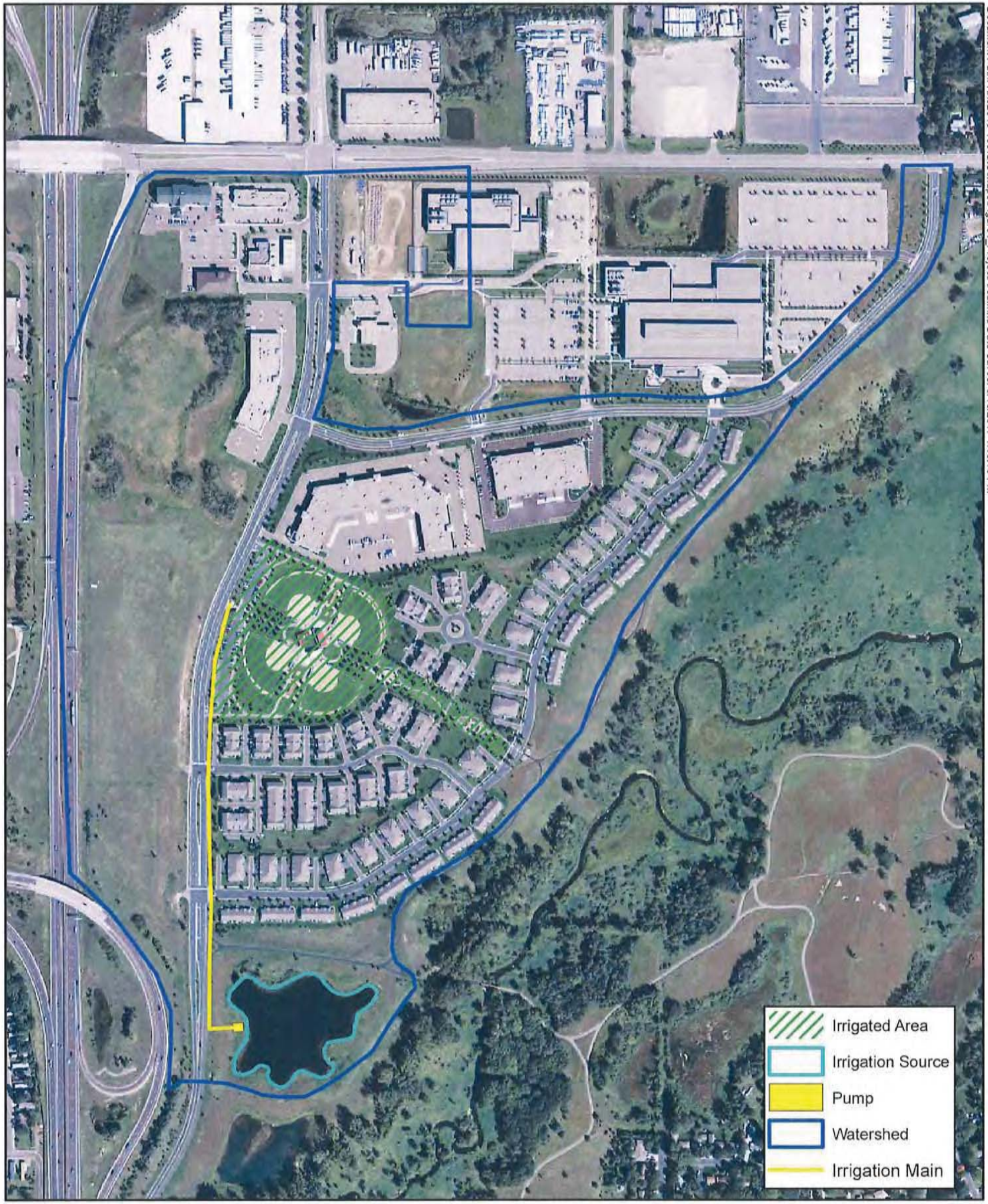


Figure 1 - Stormwater Irrigation System
Rice Creek Park Stormwater Reuse
City of Shoreview





Rice Creek Fields Stormwater Irrigation
Estimated Costs
City of Shoreview, MN



Task	Estimated Cost
Feasibility Total	\$14,500
Pumping System, Forcemain Distribution, and Irrigation Retrofit	\$235,000
Educational Signing	\$7,500
Mobilization, Erosion Control, and Site Restoration	\$23,500
Construction Subtotal	\$266,000
10% Contingency	\$26,600
Construction Total	\$292,600
20% Indirect	\$58,520
Total	\$365,600

Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: City of Shoreview – 2018 Urban Stormwater
Cost-Share Program Application for Rice Creek
Fields Stormwater Reuse

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the City of Shoreview, we offer the following comments for your use:

- The applicant is proposing to construct a stormwater reuse system to irrigate 11.48 acres within the Rice Creek Fields ball park within the drainage area to Long Lake, which is a Tier II lake.
- This project includes volume reduction, which is the highest priority BMP category for the District. The applicant is proposing a water reuse system to be used with an existing NURP pond for ball field irrigation. The City will maintain the BMP.
- The applicant estimated the BMPs would remove at least an additional 5.8 lbs. of TP annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$1,868 per pound of TP, based on a 30-year capital life of the BMP.
- The effectiveness of the project would be determined by the reduction in quantity of potable water used to irrigate the ball fields.
- The project has moderate/high educational opportunity. The applicant is proposing signage in the park to explain the BMP and will provide tours to the community.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.



Rice Creek Watershed District 2018 Urban Stormwater Remediation Cost-Share Program Application Form

Incomplete applications will be returned to the applicant.

I. APPLICANT INFORMATION

Organization (to be named as Grantee): White Bear Township

Street Address: 1281 Hammond Road

City, State, Zip: White Bear Township, MN 55110

II. PROJECT CONTACTS

Project Officer: Dale Reed

Financial Officer: Tom Kelly

Telephone: (651) 747-2777

Telephone: (651) 747-2760

Fax: _____

Fax: _____

Email: dale.reed@whitebeartownship.org

Email: tom.kelly@whitebeartownship.org

Tax Status: local government

Tax ID#: 41-6005642

(e.g., local government, non-profit 501(c)(3), private business, etc.)

III. PROJECT INFORMATION

Project Name: Outfall Improvements to Bald Eagle Lake

Location(s) of Project: Bald Eagle Lake at Park Avenue and St. Anthony Avenue

City: White Bear Township

State: MN

County: Ramsey

Project Start Date: 05/01/2018

Project Completion Date: 10/01/2018

Project Type (check only those that directly apply):

Water Quality Treatment Project

Runoff Volume Control / Flood Storage Project

Peak Runoff Rate Control Project

Stormwater Reuse Irrigation Project

Other

Is a RCWD Rule C permit from the RCWD required for this project? YES NO UNKNOWN

IV. COST-SHARE REQUEST

RCWD Cost-Share Funds Requested: \$ 37,000.00

Local Matching Contributions: \$ 37,000.00

State/Federal/Other Funds: \$ 0.00

Source(s): _____

Total Estimated Project Cost: \$ 74,000.00

Would you be willing to accept cost-share funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT (An original signature page must be received with this application)

I certify that the information contained within this application is true and accurate.

Dale B Reed
Signature of Project Officer

12/19/2017
Date

Public Works Director

Title

VI. Executive Summary

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match must be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

Bald Eagle Lake is impaired for nutrients and has a TMDL in place. The improvements will help White Bear Township work toward meeting the designated Waste Load Allocation.

The project would involve installing sumped manholes with SAFL Baffles to capture sediment and debris at Park Avenue and St. Anthony Avenue at Bald Eagle Lake before entering the lake. The project would include stabilizing the outfall discharge with riprap.

White Bear Township is requesting \$37,000 out of a total project cost of \$74,000.

VII. Project Description & Justification

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD Tier I or II lake (see Figure 4.2 in the RCWD's Watershed Management Plan), or a waterbody with an approved Total Maximum Daily Load (TMDL) study. Flood storage and runoff rate control projects should focus on reducing flood peaks in known regional flood hazard and problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

- Name the target waterbody benefitting from this project: Bald Eagle Lake
- List and describe the Best Management Practices (BMPs) that will be incorporated into this project, including any stormwater reuse components.

As summarized in the Bald Eagle Subwatershed: Urban Stormwater Retrofit Analysis report in June 2016, Bald Eagle Lake was classified as impaired by the DNR in 2002 for nutrients and eutrophication. The state standards for the lake are 40ug/L for phosphorus, and greater than 1.4m for secchi depth transparency. The Bald Eagle Lake Nutrient TMDL reports that during the years of 1990-2007, the average phosphorus has been 76 ug/L and the average secchi depth has been 1.7m. To help reduce nutrients and solids entering the lake, a SAFL Baffle will be installed at two locations to capture sediment and debris before entering the lake. The project would also include shoreline stabilization of the outfall discharge with riprap.

- If applicable, describe how the project impacts or protects groundwater resources within the RCWD.

N/A

- Describe how long-term operation and maintenance of the project will be accomplished.

White Bear Township will maintain the SAFL baffles and will remove debris 1-3 times a year, as necessary.

- If applicable, describe how the project minimizes impervious surface and/or maximizes infiltration.

N/A

- Address how the project relates to and supports existing regional planning such as the RCWD Watershed Management Plan, municipal local surface water management plans, and/or others.

This project would implement the BMPs outlined for these two outfalls and a shoreline restoration outlined in the South Bald Eagle Lake Subwatershed Assessment. They are recommendation IDs 5-3, 6-4, and 6-5 in the assessment.

- List all project partners and their respective roles in implementing and/or supporting the project.

Ramsey County Conservation District for education materials and recommendations for the signs posted at each location.

RCWD for continued water quality monitoring of Bald Eagle Lake to help evaluate the success of the project.

VIII. Conceptual Design

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

IX. Pollutant Reduction Estimates & Other Benefits

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions. **(NOTE: Mandatory for RCWD to consider your proposal!)**

The Park Avenue SAFL baffle is estimated to reduce Total Phosphorus (TP) by 0.79 lb/yr and Total Suspended Solids (TSS) by 319 lb/yr according to the Bald Eagle Lake Subwatershed Assessment prepared by Ramsey Conservation District using the WinSLAMM model. A SHSAM model estimates TSS removal to be 1,467 lb/yr for a 66" structure and 1,893 lb/yr for a 84" structure.

The St. Anthony SAFL baffle and shoreline restoration is estimated to reduce TP by 0.73 and 2.21 lb/yr and TSS by 301 and 2,760 lb/yr, respectively, according to the Bald Eagle Lake Subwatershed Assessment prepared by Ramsey Conservation District using the WinSLAMM model. A SHSAM model estimates TSS removal to be 1,265 lb/yr for a 66" structure and 1,598 lb/yr for a 84" structure.

X. Detailed Cost Estimate

Provide a detailed and reasonable budget that lists each item for which funding is being requested. You must also list the required local matching contributions and their sources. **(Attach separate sheets.)**

XI. Evaluation

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

Monitor Secchi disk depth for water clarity. White Bear Township will be responsible for the long-term maintenance and will estimate the TSS removal annually based on of volume removed when the sumps are vacuumed and cleaned out.

XII. Education & Demonstration

Demonstrate any potential for education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. **(Applicants must include a public education component into the project.)**

Education materials will be posted on the White Bear Township website, topics will include, erosion control and phosphorus and sediment transport to surface waters. Signs will be posted at each site outlining the benefits of the improvements.

XIII. Key Personnel

List the lead personnel on the project including any known contractors that will be working on the project. Please include contact information.

Dale Reed, White Bear Township, Public Works Director, 651-747-2777

Jim Studenski, TKDA, White Bear Township Engineer, 651-292-4503

Leigh Severson, TKDA, Project Engineer, 651-726-7945



WHITE BEAR TOWNSHIP

STORM SEWER SYSTEM



TKDA

ENGINEERING • ARCHITECTURE • PLANNING

LEGEND

- TOWNSHIP STORM SEWER
 - MISC. STORM SEWER
- NOTE: ALL SEWERS 12" UNLESS OTHERWISE SPECIFIED



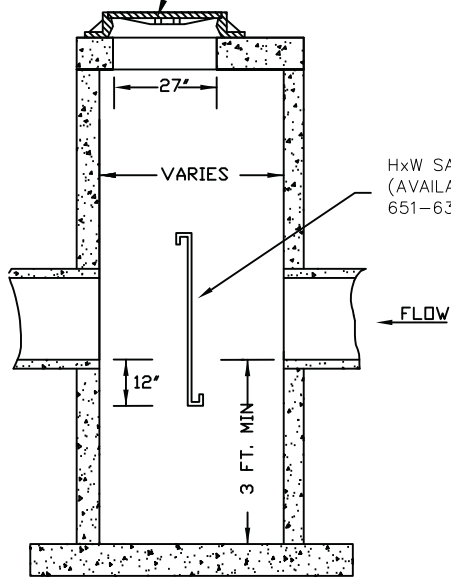
Bald Eagle Lake

PROJECT LOCATION

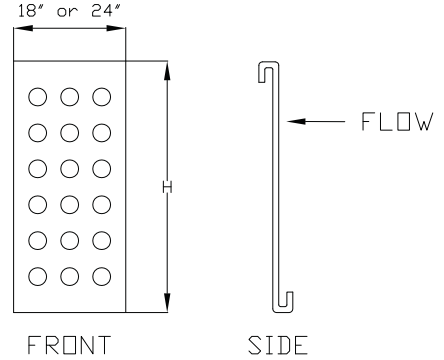


20. CON
21. GAS

MANHOLE/CATBASIN COVER AND FRAME – 27" MIN. CLEAR OPENING
 SMALLER OPENING MAY REQUIRE BAFFLE INSTALLATION PRIOR TO PLACING CASTING
 STRUCTURES GREATER THAN 60" DIA. MAY REQUIRE SECOND CASTING FOR CLEANING SUMP



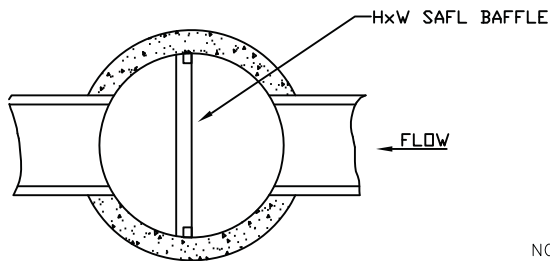
**SAFL BAFFLE INSTALLATION
 Detail**



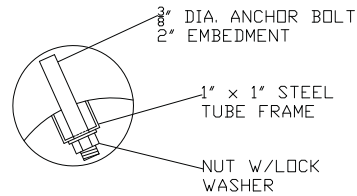
WIDTH ADJUSTMENT FOR PANEL SIZES

2- 18" PANELS	32"MIN	36"MAX	4"TOTAL
2- 24" PANELS	44"MIN	48"MAX	4"TOTAL
3- 18" PANELS	46"MIN	54"MAX	8"TOTAL
3- 24" PANELS	64"MIN	72"MAX	8"TOTAL

**SAFL BAFFLE PANEL
 Detail**



**SAFL BAFFLE INSTALLATION
 Plan**



**SAFL BAFFLE ATTACHMENT BOLT
 Detail**

NOTES:

- 1) UPSTREAM TECHNOLOGIES INC. IS THE EXCLUSIVE LICENSEE OF THE SAFL BAFFLE
- 2) CONTRACTOR MUST VERIFY LOCATION OF CASTING AND STEPS PRIOR TO INSTALLATION OF STRUCTURE.
- 3) CONTRACTOR STRUCTURES GREATER THAN 72" REQUIRE SECOND CASTING FOR MAINTENANCE
- 4) THIS GENERIC DETAIL DOES NOT ENCOMPASS THE SIZING, FIT, AND APPLICABILITY OF THE SAFL BAFFLE FOR THIS SPECIFIC PROJECT. IT IS THE ULTIMATE RESPONSIBILITY OF THE DESIGN ENGINEER TO ASSURE THAT THE DESIGN IS IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. THE SAFL BAFFLE IS PATENT PENDING TECHNOLOGY OF THE UNIVERSITY OF MINNESOTA AND UPSTREAM TECHNOLOGIES, INC. NEITHER THE UNIVERSITY OF MINNESOTA NOR UPSTREAM TECHNOLOGIES APPROVES PLANS, SIZING, OR SYSTEM DESIGNS.

THROUGH PIPE CONFIGURATION

SAFL BAFFLE STANDARD DETAIL
 UPSTREAM TECHNOLOGIES
 NEW BRIGHTON, MN
 651-633-6921



**BALD EAGLE LAKE OUTFALL IMPROVEMENTS
WHITE BEAR TOWNSHIP
ENGINEER'S PRELIMINARY ESTIMATE OF COST**

STORM SEWER IMPROVEMENTS

2	EA	STRUCTURE & SAFL BAFFLE	\$	25,000
4	EA	CASTING	\$	3,600
32	LF	REMOVE & DISPOSE OF EXISTING PIPE	\$	3,520
2	EA	REMOVE EXISTING FLARED END SECTION	\$	2,000
2	EA	INSTALL FLARED END SECTION	\$	5,500
2	LS	OUTFALL STABILIZATION	\$	4,350
30	CY	DITCH EXCAVATION / MATERIAL REMOVAL	\$	450
2	LS	SITE RESTORATION	\$	7,500
2	EA	MOBILIZATION	\$	5,000
CONSTRUCTION COST			\$	56,920
+10% CONTINGENCIES			\$	5,692
SUBTOTAL WITH CONTINGENCIES			\$	62,612
+20% ENGINEERING, LEGAL, FISCAL, AND ADMINISTRATION			\$	11,384
SUBTOTAL WITH +20% ENGINEERING, LEGAL, FISCAL, AND ADMINISTRATION			\$	73,996
TOTAL ESTIMATED PROJECT COST			\$	74,000
RCWD COST-SHARE FUNDS REQUESTED			\$	37,000

The estimated costs are according to average prices received on similar projects in other areas. The actual costs for this project will be determined through a bidding process and can vary with market conditions at the time of the bid.

Memorandum

To: Kyle Axtell
Rice Creek Watershed District

From: Garrett Monson, P.E., Greg Bowles, P.E.

Through: Chris Otterness, P.E.

Subject: White Bear Township – 2018 Urban
Stormwater Cost-Share Program Application
for Outfall Improvements to Bald Eagle Lake

Date: January 25, 2018

Project: File 5555-061

By task order 2017-023 dated December 1, 2017, HEI is providing the Rice Creek Watershed District (District) a technical review for the 2018 Urban Stormwater Remediation Cost Share grant applications. The review includes not only evaluating consistency with the goals of the Urban Stormwater Remediation Program, but the technical merits and feasibility of the proposed project and cost for reducing runoff volumes and loads. Based upon our review of the application by the White Bear Township, we offer the following comments for your use:

- The applicant is proposing to construct two SAFL Baffle BMPs and stabilize the shoreline at two outfalls into Bald Eagle Lake, which is a Tier I lake.
- This project does not include volume reduction, which is the highest priority BMP category for the District. The applicant is proposing a SAFL Baffles mounted in sump manholes. These are BMPs that are typically recommended as pre-treatment by the District, but they are providing treatment in a previous untreated area. The City will maintain the BMPs.
- The applicant estimated the BMPs would remove 3.7 lbs. of TP annually and 3,380 lbs. of TSS annually.
- Based on the nutrient removal estimates provided by the applicant, the average annual cost is approximately \$661 per pound of TP and \$1 per pound of TSS, based on a 30-year capital life of the BMP.
- The effectiveness of the project would be determined by the sediment removed during maintenance of the BMPs.
- The project has moderate educational opportunity. The applicant is proposing signage near the BMP and publishing information on the Township website.

Please call me at 763-493-4522 if I may be of further assistance with regard to this matter.

RCMD 2018 Urban Stormwater Remediation Cost-Share Program
Assessment Matrix of Proposals

Proposed Project	Consistency with Program Criteria	Consistent with Water Quality Goals	Provide Regional Rate Control or Volume Reduction	Substantial Requirements	Proportion Cost-Share by RCMD (RCMD - Other Sponsor)	Potential for Education and/or Demonstration	Long-term Maintenance/ Viability	Monitoring Data/ Effectiveness measure of the project	Effectiveness of meeting RCMD goals	Estimated Annual lbs. of TP removed	Annual cost per lb. TP removed assuming 30 year capital life of BMP	Estimated Annual lbs. of TSS removed	Annual cost per lb. TSS removed assuming 30 year capital life of BMP	Calculation Method	Comments	Consistent with Water Quality Goals	Provide Regional Rate Control or Volume Reduction	Total Score	
																			Consistency with Program Criteria
City of Flowate City of Flowate Underground Infiltration and Reuse Project	Yes Yes Yes	High High High	High High High	Partially complete Removal estimates submitted but not sufficient for evaluation purposes. Also, no storage chamber with flowage.	1.2-5 \$200,000 - \$500,000	High The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	Moderate Success is dependent on the BMP. Will require ongoing maintenance.	High Measures will be implemented through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	High Measures will be implemented through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	4,005	\$1,208	4,005	\$1,208	Per application, MPCA Calculator (calculations not provided)	Based on data from the applicant. No calculations submitted for review.	5	5	15	
City of Redwood City of Redwood Water Treatment Plant	Yes Yes Yes	High High High	High High High	Complete Removal estimates submitted but were lower than the submitted calculations.	1.3-3 \$50,000 - \$100,000	Moderate/High The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	High BMP is low maintenance and will be maintained by the City.	High Runoff rates and concentrations from the site will be tracked on a semi-annual basis.	High Infiltration is effective for volume reduction and will be tracked on a semi-annual basis.	960	\$2,191	960	\$2,191	Per application, MPCA Calculator (calculations not provided)	Based on data from the applicant and calculations submitted for review. These estimates are higher than those submitted in the application text.	5	5	15	
City of Mankato City of Mankato Street Improvement Project	Yes Yes Yes	Moderate/High Infiltration is a volume reduction and does not require a pump. In an area of known loading.	Moderate/High Infiltration is a volume reduction and does not require a pump. In an area of known loading.	Partially complete Removal estimates submitted but not sufficient for evaluation purposes. In an area of known loading.	1.4-6 \$50,000 - \$250,000	High The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	High Success is dependent on the BMP. Will require ongoing maintenance.	High Effectiveness will be measured through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	Moderate/High Infiltration is effective for volume reduction and will be tracked on a semi-annual basis.	568	\$3,392	568	\$3,392	Per application, MPCA Calculator (calculations not provided)	Based on data from the applicant. No calculations submitted for review.	4	4	12	
City of New Brighton City of New Brighton Lower Park Stormwater Reuse	Yes Yes Yes	Moderate Stormwater reuse is a volume reduction and does not require a pump. In an area of known loading.	Moderate Stormwater reuse is a volume reduction and does not require a pump. In an area of known loading.	Partially complete Removal estimates submitted but not sufficient for evaluation purposes. In an area of known loading.	1 \$50,000 - \$100,000	Moderate/High The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	High City maintenance of the BMP will be the responsibility of the City.	High Effectiveness will be measured through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	High Water reuse is effective for volume reduction and will be tracked on a semi-annual basis.	1,266	\$1,208	1,266	\$1,208	Per application, MPCA Calculator (calculations not provided)	Based on data from the applicant and calculations submitted for review.	4	3	5	12
City of Shoreview City of Shoreview Stormwater Reuse	Yes Yes Yes	Moderate/High Stormwater reuse is a volume reduction and does not require a pump. In an area of known loading.	Moderate/High Stormwater reuse is a volume reduction and does not require a pump. In an area of known loading.	Partially complete Removal estimates submitted but not sufficient for evaluation purposes. In an area of known loading.	1.5-5 \$50,000 - \$250,000	Moderate/High The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	High City maintenance of the BMP will be the responsibility of the City.	High Effectiveness will be measured through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	High Water reuse is effective for volume reduction and will be tracked on a semi-annual basis.	Not submitted	\$1,868	Not submitted	\$1,868	Per application, MPCA Calculator (calculations not provided)	Based on data from the applicant. No calculations submitted for review.	4	3	5	12
City of Columbia Heights City of Columbia Heights Stormwater Reuse	Yes Yes Yes	Low/Moderate Proposing a BMP retrofit in an area of known loading.	Low/Moderate Proposing a BMP retrofit in an area of known loading.	Partially complete Removal estimates submitted but not sufficient for evaluation purposes. In an area of known loading.	1.5-8 \$50,000 - \$250,000	Moderate The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	High City maintenance of the BMP will be the responsibility of the City.	High Effectiveness will be measured through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	Moderate/High Effective TP removal and TSS reduction will be tracked on a semi-annual basis.	5,000	\$1,406	5,000	\$1,406	Per application, MPCA Calculator (calculations not provided)	Based on data from the applicant. No calculations submitted for review.	4	2	4	10
City of Uptown City of Uptown Stormwater Reuse	Yes Yes Yes	Moderate/High No volume reduction, provides a slight reduction in a previously unimproved area.	Moderate/High No volume reduction, provides a slight reduction in a previously unimproved area.	Complete Removal estimates submitted but were lower than the submitted calculations.	1.1 \$10,000 - \$50,000	Moderate/High The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	High City maintenance of the BMP will be the responsibility of the City.	High Effectiveness will be measured through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	High BMP treatment is effective for volume reduction and will be tracked on a semi-annual basis.	660	\$879	660	\$879	Per application, MPCA Calculator (calculations not provided)	Based on data from the applicant and calculations submitted for review.	4	2	3	9
City of Uptown City of Uptown Stormwater Reuse	Yes Yes Yes	High Not a stormwater BMP. Just a stormwater reuse system.	High Not a stormwater BMP. Just a stormwater reuse system.	Complete Removal estimates submitted in accordance with the guidance.	1.6-9 \$50,000 - \$250,000	Low The project will continue to be maintained by the City.	High City maintenance of the BMP will be the responsibility of the City.	High Effectiveness will be measured through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	Moderate Prevents stormwater from entering the stormwater system.	Not submitted	\$151	Not submitted	\$151	Per application and Memo citing MPCA guidance.	Based on data from the applicant and a memo submitted for review.	5	1	3	9
Minnesota Commercial Minnesota Commercial Stormwater Reuse	Yes Yes Yes	Moderate/High Stormwater reuse is a volume reduction and does not require a pump. In an area of known loading.	Moderate/High Stormwater reuse is a volume reduction and does not require a pump. In an area of known loading.	Incomplete Removal estimates submitted but not sufficient for evaluation purposes. In an area of known loading.	1.3-0 \$27,000 - \$8,660	Low The project will continue to be maintained by the City.	High City maintenance of the BMP will be the responsibility of the City.	High Effectiveness will be determined by the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	Moderate Stormwater reuse is effective for volume reduction and will be tracked on a semi-annual basis.	6,200	\$1	6,200	\$1	65% of stabilized, per application, MPCA guidance.	Based on data from the applicant. No calculations submitted for review.	4	1	4	9
White Bear Township White Bear Township Stormwater Reuse	Yes Yes Yes	Low Proposing a BMP retrofit in an area of known loading.	Low Proposing a BMP retrofit in an area of known loading.	Partially complete Removal estimates submitted but not sufficient for evaluation purposes. In an area of known loading.	1.1 \$70,000 - \$170,000	Moderate The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	High City maintenance of the BMP will be the responsibility of the City.	High Effectiveness will be measured through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	Moderate Stormwater reuse is effective for volume reduction and will be tracked on a semi-annual basis.	3,380	\$661	3,380	\$661	Per application, MPCA Calculator (calculations not provided)	Based on data from the applicant. No calculations submitted for review.	3	1	3	7
City of Mankato City of Mankato Stormwater Reuse	Yes Yes Yes	Low Proposing a BMP retrofit in an area of known loading.	Low Proposing a BMP retrofit in an area of known loading.	Partially complete Removal estimates submitted but not sufficient for evaluation purposes. In an area of known loading.	1.6-2 \$50,000 - \$250,000	Moderate The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	High City maintenance of the BMP will be the responsibility of the City.	High Effectiveness will be measured through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	Moderate Stormwater reuse is effective for volume reduction and will be tracked on a semi-annual basis.	798	\$4,876	798	\$4,876	Leading from 198, removals based on 30-year.	Based on data from the applicant. No calculations submitted for review.	3	1	3	7
City of Saint Anthony City of Saint Anthony Stormwater Reuse	Yes Yes Yes	Low Stormwater reuse is a volume reduction and does not require a pump. In an area of known loading.	Low Stormwater reuse is a volume reduction and does not require a pump. In an area of known loading.	Incomplete Removal estimates submitted but not sufficient for evaluation purposes. In an area of known loading.	1.2-4 \$50,000 - \$100,000	Moderate/High The project is located in a residential area. The applicant has provided signage to explain the BMP and to publish an article in a local publication.	Moderate City maintenance of the BMP will be the responsibility of the City.	High Effectiveness will be measured through the quantity of water irrigated through the system and trash removal. The amount of trash removal will be tracked on a semi-annual basis.	Low/Moderate Stormwater reuse is effective for volume reduction and will be tracked on a semi-annual basis.	Not submitted	Not submitted	Not submitted	Not submitted	2.4 Million Gallons of possible water irrigated.	Based on data from the applicant. No calculations submitted for review.	1	1	2	4

ITEMS REQUIRING BOARD ACTION

3. Consider Funding Agreement with City of Forest Lake for Enhanced Street Sweeping Implementation-2018 BWSR Clean Water Fund Grant. (Kyle Axtell)

MEMORANDUM
Rice Creek Watershed District

Date: February 15, 2018

To: RCWD Board of Managers

From: Kyle Axtell, Water Resource Specialist

Subject: Funding Agreement with City of Forest Lake for Enhanced Street Sweeping Implementation – 2018 BWSR Clean Water Fund Grant

BACKGROUND

In 2017 The City of Forest Lake began working with Emmons & Olivier Resources, Inc. to develop an Enhanced Street Sweeping Management Plan for subwatersheds within the City, both in the RCWD and CLFLWD. The preliminary results of that plan were used to support a Clean Water Fund Grant application to BWSR for \$220,000 to purchase enhanced street sweeping equipment and implement of the plan. The RCWD and CLFLWD were approached last fall to provide, on a lane-mile prorated basis, 50% of the required grant match funding for the project, should it be selected by BWSR. The City would provide the remaining 50% of local match. ***Under this scenario, the RCWD's share of cost would be 14.7% of the required match, not to exceed \$8,085.***

RCWD Staff discussed this proposal with the Board of Managers during its September 11, 2017 workshop and received concurrence that the approach was sound and the proposal had merit. The application was subsequently approved by BWSR and the City is now in the process of completing its grant work plan and coordinating the financial partnerships necessary to undertake the project. A funding agreement has been prepared by RCWD counsel and is attached for the Board's consideration. The City is expected to take action on the agreement either on February 26 or March 12, 2018.

RECOMMENDED ACTION

District staff recommends that the Board of Managers approve the funding agreement as presented.

Proposed motion: Manager _____ moves to approve the funding agreement between the City of Forest Lake and the Rice Creek Watershed District for Forest Lake Enhanced Street Sweeping Implementation, as presented, authorizing the Board President to execute the agreement, seconded by Manager _____.

Attachments: Draft Funding Agreement
Forest Lake Street Sweeping Plan Excerpts

FUNDING AGREEMENT
CITY of FOREST LAKE and the RICE CREEK WATERSHED DISTRICT
FOREST LAKE ENHANCED STREET SWEEPING IMPLEMENTATION

A. THIS FUNDING AGREEMENT (“Agreement”) is entered into by the City of Forest Lake, Minnesota, a municipal corporation (“City”) and the Rice Creek Watershed District, a special purpose unit of local government under Minnesota Statutes Chapters 103B and 103D (RCWD).

B. The RCWD’s duly adopted Watershed Management Plan (2010, amended Nov. 2016) identifies water quality treatment projects and activities in the Clear Lake watershed, including increased street sweeping and other projects within the TH61 corridor; its Clear Lake Diagnostic Study and Management Plan (Feb. 2012) identifies actions to protect and improve water quality in Clear Lake;

C. The City’s TH61 Aesthetics and Water Quality Improvements Planning Study (April 2012) identifies priority projects within the corridor to improve water quality in Clear Lake; its capital improvement program in its duly adopted Local Water Management Plan (Sept. 2013) incorporates this study;

D. In February 2018, Emmons and Olivier Resources, Inc. completed the final City of Forest Lake Enhanced Street Sweeping Management Plan which detailed the benefits and costs of purchasing advanced street sweeping equipment and implementing an advanced street sweeping program within various drainage areas in the City of Forest Lake, including the Clear Lake watershed (the “Program”);

E. The Board of Water and Soil Resources (BWSR) has awarded a Clean Water Fund (CWF) grant to the City for the Program, pursuant to which it has executed an agreement (“Grant Agreement”).

Based on the foregoing recitals, each incorporated into this Agreement, the City and the RCWD, each duly authorized by its governing body, agree as follows, intending to be legally bound:

OPERATION

1. The City will procure all equipment, materials and labor necessary or convenient to implement the Program.
2. The City will prepare a final enhanced street sweeping management plan for watersheds located in the RCWD, subject to RCWD concurrence, not to be unreasonably withheld (“Plan”). At a minimum, the number of sweepings in the Plan for those watersheds will meet the Enhanced (Recommended) option as described on pages 24 and 25 of the February 2018 City of Forest Lake Street Sweeping Management Plan, as referenced in paragraph D above. The City will conduct that part of the Program within RCWD boundaries in accordance with the Plan until three full years of sweeping operations have been completed, or for the length of time prescribed by BWSR, whichever is longer.

MONITORING and EDUCATION

3. The City will develop a report format and content for RCWD concurrence, not to be unreasonably withheld, that reviews sweeping locations and frequencies and provides useful data on both sediment and phosphorus removals. The City will report on its Program activity annually to the RCWD.
4. The City will prepare and implement education and community outreach elements of the Program as required by the Grant Agreement.

FUNDING

5. The Program will be funded as follows:

- a. The RCWD will contribute 14.7 percent of the local match required by the Grant Agreement, not to exceed \$8,085.
- b. All remaining Program costs are the responsibility of the City. The City may defray its costs by means of its CWF grant and any other source of funds it may arrange.
- c. Otherwise, each party will bear its own administrative costs and its costs for those actions it is responsible to take under this Agreement.

6. The RCWD will provide its funds under paragraph 5.a, above, on a reimbursement basis within 30 days of City invoice of its sweeper purchase. If the City does not fulfill its obligations to the RCWD under this Agreement for a period of three full years of sweeping operations the District, after notice and a reasonable opportunity to cure, is entitled to a return of its funds.

GRANT ADMINISTRATION and COMPLIANCE

7. The City, as CWF grantee, is solely responsible for conformance to all terms of the Grant Agreement.

GENERAL TERMS

8. Any RCWD right of approval under this Agreement is solely for the purpose of ensuring the proper use of its public funds. The City is entirely responsible for the means, manner and method of performing the Program. This Agreement is not a joint powers agreement under Minnesota Statutes §471.59. Nothing herein constitutes one party’s agreement to be responsible for the acts or omissions of another party pursuant to subdivision 1(a) of that statute. The City will hold the RCWD, its managers, staff and representatives, harmless and indemnify them against any claim, expense or damage, including attorney fees, arising from the City’s conduct of the Program.

9. Notwithstanding any other term of this Agreement, nothing herein creates a right in any third party or waives an immunity, defense or liability limit of either party with respect to any third party. As between the parties, only contractual remedies are available for a party’s failure to fulfill the terms of this Agreement.

10. The following will be used for any communication under this Agreement:

- | | |
|-------|--|
| City: | City of Forest Lake
1408 Lake Street South
Forest Lake, MN 55025
ATTN: City Administrator |
| RCWD: | Rice Creek Watershed District
4325 Pheasant Ridge Dr. NE #611
Blaine, MN 55449-4539
ATTN: Administrator |

or at such other address of which a party may, from time to time, notify the other party in writing.

11. If any party waives any default or non-performance by another party, the waiver will apply only to the cited instance and will not waive any other prior or later default.

12. This Agreement is the entire agreement between the parties as to the Program and supersedes all other prior agreements and understandings, written or oral, between the parties.

13. An alteration, variation, modification, or waiver of any provision of this Agreement is valid only when reduced to writing as an amendment to this Agreement signed by the parties hereto or their successors.

14. A party may not assign or transfer this Agreement or any right or obligation hereunder without the written consent of the other party.

15. In participating in this Agreement, each party will act in accordance with the Minnesota Data Practices Act, Minnesota Statutes chapter 13. Each party will consult with the other as appropriate with respect to any data request it may receive. Data and documents of any kind produced by the Program, and any new information or technology developed, are subject to the intellectual property terms of the Grant Agreement and otherwise may not be copyrighted, patented, trademarked or designated as trade secret by a party.

16. This Agreement is effective on full execution by the parties and terminates four years thereafter. Notwithstanding, the terms of this Agreement will survive termination as necessary until all matters relating to performance hereunder and arising before termination are resolved.

IN TESTIMONY WHEREOF, the City of Forest Lake and the Rice Creek Watershed District have caused this Agreement to be executed.

CITY OF FOREST LAKE

By: _____
Ben Winnick, Mayor

Date:

By: _____
Bailey Fencil, Clerk

Date:

Approved for form and execution

RCWD Counsel

RICE CREEK WATERSHED DISTRICT

By: _____
Patricia Preiner, President, Board of Managers

Date:

City of Forest Lake Street Sweeping Management Plan 2018



EXECUTIVE SUMMARY

Street sweeping is the practice of removing particulates (salt, sand, and soil) and organic matter (leaves, seeds, flowers) from streets using mechanical broom or vacuum street sweeping vehicles to reduce the amount of pollutants and sediment discharged to stormwater conveyance systems. Traditional municipal street sweeping programs typically involve mechanically sweeping all City streets once in the spring and once in the fall. Enhanced municipal street sweeping programs typically involve sweeping street with high efficiency sweepers (vacuum type or similar) sweeping streets at higher frequency, based on the variable generation of particulates and organic matter to streets. This Plan identifies road-specific street sweeping timing and frequency, quantified expected phosphorus load reductions, itemized costs of enhanced street sweeping (including purchase and subcontract options), and recommended funding options for an enhanced street sweeping program in the City of Forest Lake, MN.

The City currently sweeps approximately 240 curb miles twice annually (according to the City's 2016 sweeping contract). Current sweeping practices improve road safety and appearance, recovers approximately 127 lb of phosphorus (TP) and 148,188 lb of solids (TS) from road surfaces each year, and removes approximately 51 lb of TP and 61,402 lb of TS loads each year to Clear, Comfort, Shields, Keewahtin (formerly Sylvan/Halfbreed), and Forest Lakes. Key findings from this Street Sweeping Management Plan indicate that twice monthly sweeping in the City of Forest Lake with regenerative air (or similar) technology has the potential to reduce loading to Clear, Comfort, Shields, Keewahtin, and Forest Lakes by an additional 137 lb of TP and 169,793 lb of TS compared to the reductions achieved through current contract sweeping practices.

For the purpose of this study, streets were aggregated into sweeping zones (Figure 4-6) based on connectivity to downstream water resources, storm water management type, and tree canopy cover characteristics (Table 4-2). In zones where streets drain directly to a downstream resource, the primary benefit of street sweeping is pollutant reduction to downstream resources and improved water quality. In zones where street runoff is intercepted by structural best management practices (BMPs), the primary benefit of street sweeping is increased longevity of BMP treatment efficiency.

Guidelines for sweeping based on the sweeping priorities for each zone are outlined in Section 7 of this report. It is recommended that streets located within zones identified as high priority for water quality be swept monthly to bi-weekly throughout the sweeping season. Enhanced sweeping at a frequency of 4-7 times per season is recommended for streets located in areas designated as high priority for BMP longevity. It is also recommended that the City maintain an observation log during sweeping operations and adjust sweeping frequency as needed to address conditions that may arise due to construction activity, storms, traffic patterns, or other unique considerations.

Based on the findings from the Plan, the City of Forest Lake is pursuing purchase of a regenerative air street sweeper so that an Enhanced Street Sweeping program can be adopted as part of the City's regular street maintenance program. Using an in-house sweeping program, sweeping zones that are a high priority for water quality could be swept up to 12 times per year and sweeping zones that are a high priority for BMP longevity could be swept up to 7 times per year, for about the same cost as spring and fall only sweeping contract services.

7. RECOMMENDATIONS

The City of Forest Lake can reduce the cost of, and increase the pollutant recovery achieved during spring and fall, street sweeping through purchase of a high efficiency street sweeper. Based on an amortization period of 10-years (vehicle purchase), the cost of spring and fall sweeping can be reduced by approximately 45% using an in-house program compared to a contract sweeping service (Section 6). Use of a high efficiency sweeper is also expected to increase pollutant recovery by approximately 20% for fall sweeping compared to contract service sweeping which uses a mechanical broom sweeper for fall sweepings (2016 contract service).

Guidelines for sweeping by zone are shown in Table 7-1 for three levels of effort:

- 1) Base Priority number of sweepings based on the sweeping priorities for each zone
 - a. Water quality benefit zones: 7 times per year
 - b. Maintenance benefit zones: 4 times per year
- 2) Recommended number of sweepings based on the sweeping priorities for each zone
 - a. Water quality benefit zones: 12 times per year
 - b. Maintenance benefit zones: 7 times per year
- 3) Maximum number of sweepings based on sweeping full time (including expected maintenance activities) using one sweeper every 4 of 5 week days during the sweeping season.

Each sweeping zone was assigned a street sweeping priority based on the zone characteristics (Table 4-2 and Figure 4-7). Zones comprised primarily of streets that drain directly to a downstream resource, the primary benefit of street sweeping is improving lake water quality. In areas where street runoff is intercepted by structural BMPs, the primary benefit of street sweeping is preservation of BMP efficiency.

Total costs for each of the scenarios are outlined in Table 7-1. Detailed load recovery, load reduction, and cost estimates are summarized by sweeping zone in Table 11-6 through Table 11-8 (see Appendix C). Using an in-house sweeping program without grant funding for purchase of a regenerative air sweeper: sweeping zones swept primarily for water quality benefit could be swept up to 12 times per year and sweeping zones swept primarily for maintenance benefit could be swept up to 7 times per year, for about the same total annual cost as the City's existing spring/fall only contract sweeping total annual cost (Recommended number of sweepings scenario in Table 7-1 and Table 11-1).

In August of 2017, the City of Forest Lake submitted a BWSR FY18 Clean Water Fund Projects & Practices grant application to purchase a regenerative air sweeper. In December 2017, the full proposal amount was approved, contributing \$220,000 in grant funding towards the purchase of a regenerative air sweeper. With this grant funding and using an in-house sweeping program: the Maximum Number of Sweepings scenario in Table 7-1 can be achieved for a total annual cost similar to the City's existing spring/fall only contract sweeping total annual cost.

Specific recommendations for an enhanced street sweeping program in the City of Forest Lake:

1. Purchase a regenerative air, or similar high efficiency sweeper, and develop an in-house sweeping program for regular street sweeping.
 - To maximize the water quality and maintenance reduction benefits, use a high efficiency sweeper for all regular sweepings.
 - Consider using the mechanical broom style sweeper owned by the City for targeted, tandem sweeping in areas susceptible to sediment and debris, or during times of high sediment and debris loading. Tandem sweeping consists of sweeping first with a mechanical broom sweeper followed shortly thereafter by a high efficiency sweeper to maximize the pick-up of both large and small debris and sediment.
 - Consider grant or cost-sharing opportunities (Watershed Districts or other partners) to assist with the purchase of a new street sweeper or sweeping program.
2. Increase sweeping frequency in sweeping zones that are high priority for water quality (CL1, FL1, FL2, FL3, Shields, and SR/C1) to 12 times per snow-free season.
 - Sweeping zones that are high priority for water quality are comprised mainly of streets that drain directly to a downstream resource. In these areas, street sweeping is one of the few BMPs that can be readily implemented.
 - For waterbodies with approved TMDLs (Shields Lake, Comfort Lake), total phosphorus reduction achieved through street sweeping can be estimated and tracked by interpolation using the load reduction estimates outline Table 5-5 - Table 11-5.
3. Increase sweeping frequency in sweeping zones that are high priority for BMP preservation and maintenance reduction (CL2, CL3, FL4, FL5, FL6, Keewahtin, SR/C2, and SR/C3) to 7 times per snow-free season
 - Regional street sweeping studies indicate that sediment loading on street surfaces remains relatively intense throughout the spring season (Kalinovsky, 2015). Additional sweepings in the spring may help to maximize recovery winter residuals and sediment deposited during spring runoff events.
 - Additional sweepings in late spring and in the fall may also help to maximize recovery of organic litter/nutrients in areas with mature canopy cover (Kalinovsky, 2015).
4. Considering using an observation log to track areas of high loading. Modify street sweeping frequency to address observations.
5. Sweep as needed to address other concerns such as:
 - Keeping storm inlets free of debris
 - Sweeping regularly in areas of active construction
 - Sweeping regularly for debris removal/aesthetics in high profile areas of the City

Table 7-1. Cost-benefit of recommended street sweeping scenarios based on sweeping zone characteristics

Waterbody	Sweeping Zone	Sweeping Priority ¹	Curb-miles	Number of Sweepings		
				Base Priority	Enhanced (Recommended)	Maximum
Clear Lake	CL1	WQ	13.5	7	12	28
	CL2	P/M	9.2	4	7	7
	CL3	P/M	47.4	4	7	7
Forest Lake	FL1	WQ	17.3	7	12	28
	FL2	WQ	12.9	7	12	28
	FL3	WQ	18.7	7	12	14
	FL4	P/M	27.2	4	7	7
	FL5	P/M	11.0	4	7	7
	FL6	P/M	28.8	4	7	7
Shields Lake	Shields	WQ ²	5.4	7	12	14
Keewahtin Lake	Keewahtin	P/M	5.4	4	7	7
Sunrise River/Comfort Lake	SR/C1	WQ ²	20.3	7	12	14
	SR/C2	P/M	8.6	4	7	7
	SR/C3	P/M	12.9	4	7	7
Total Curb-miles				1,220	2,085	2,900
Solids Reduction Compared to Baseline (20 tons/yr)				+26	+48	+66
Phosphorus Reduction Compared to Baseline (57 lb/yr)				+54	+110	+140
Estimated Annual Cost				\$53,810	\$68,301	\$82,296
Estimated Annual Cost – Reduced Sweeper Purchase Price³				\$32,232	\$46,294	\$60,394

¹WQ = Water quality benefit (direct drainage areas of lakes), P/M = BMP preservation and maintenance benefit (indirect water quality benefit to lakes)

²TMDL watershed

³With grant funding of \$220,000 towards the cost of a regenerative air sweeper

Table 7-2. Total sediment reductions to receiving waterbody by sweeping scenario

Waterbody	Total Sediment Reduction (ton/yr)							
	Existing Baseline (2 times per year)	Enhanced Baseline (4 times per year)	Monthly (7 times per year)	Twice Monthly (14 times per year)	Weekly (28 times per year)	Base Priority (4-7 times per year)	Enhanced/Recommended (7-12 times per year)	Maximum (7-28 times per year)
Clear Lake	2,210	3,572	5,536	8,812	11,164	4,637	6,909	8,589
Forest Lake	34,015	55,341	85,201	130,449	232,517	82,395	120,554	153,658
Shields Lake	254	410	635	1,012	4,272	635	635	1,012
Keewahtin Lake	240	387	600	955	6,073	387	600	600
Comfort Lake	2,405	3,887	6,024	9,589	41,858	3,887	8,209	8,851
ALL	39,123	63,597	97,996	150,816	295,882	91,942	136,908	172,710

Table 7-3. Total phosphorus reductions to receiving waterbody by sweeping scenario

Waterbody	Total Phosphorus Reduction (lb/yr)							
	Existing Baseline (2 times per year)	Enhanced Baseline (4 times per year)	Monthly (7 times per year)	Twice Monthly (14 times per year)	Weekly (28 times per year)	Base Priority (4-7 times per year)	Enhanced/Recommended (7-12 times per year)	Maximum (7-28 times per year)
Clear Lake	7	11	16	25	31	13	20	23
Forest Lake	41	64	91	137	180	83	122	146
Shields Lake	0.7	1.1	1.6	2.6	3.2	1.6	1.6	2.6
Keewahtin Lake	1.0	1.6	2.3	3.7	4.6	1.6	2.3	2.3
Comfort Lake	7	11	16	25	31	11	22	23
ALL	57	89	127	194	251	111	167	197

ITEMS REQUIRING BOARD ACTION

4. Consider Pay Request #12 from Rachel Contracting, Inc. for Hansen Park Project. (Kyle Axtell)

MEMORANDUM
Rice Creek Watershed District

Date: February 12, 2018
To: RCWD Board of Managers
From: Kyle Axtell, Water Resource Specialist
Subject: Hansen Park Comprehensive Water Management Project
Rachel Contracting, Inc. Pay Request #12

BACKGROUND

Rachel Contracting has completed all pond dredging and sediment removal associated with this project. The site will be idled again until spring when revegetation activities will swing into action again. Staff concurs with the District Engineer's opinion (attached) that the pay request is ready for approval, including settlement of Change Order #5 which primarily balances the quantities related to dredging and covered costs associated with raising the south footbridge over RCD2.

RECOMMENDED ACTION

District staff recommends that \$447,888.56 be issued to Rachel Contracting, Inc. as detailed in Pay Request #12.

Proposed motion: Manager _____ moves to approve Rachel Contracting, Inc.'s pay request as submitted and certified by the District Engineer, and directs staff to issue a payment in the amount of \$447,888.56, seconded by Manager _____.

Attachments: HEI Technical Memorandum (02-08-2018)
Partial Payment Documentation

Technical Memorandum

To: Kyle Axtell
Phil Belfiori

From: Dennis McAlpine (PE)
Chris Otterness (PE)

Subject: Hansen Park Comprehensive Water Management Project Partial Payment #12

Date: February 8, 2018

Project: 145555-240

The purpose of this memorandum is to recommend Partial Payment #12 to Rachel Contracting, Inc. for the Hansen Park Comprehensive Water Management Project.

Project Update

Rachel Contracting, Inc. has completed the all excavation and removal of sediment materials from the pond as required by the project plans. This includes the placement of DML-1 materials onsite to maximize the available stockpile volume. Concurrent with excavation operations, Rachel Contracting, Inc. has also constructed the west side trail. The trail was finished with a gravel surface in anticipation of paving operations scheduled to be completed this summer. Work associated with raising the grade of the south pedestrian bridge has also been completed. Operations on site will resume in the Spring to conduct vegetation restoration activities.

Please note that this pay request includes contract modifications detailed in Change Order #5.

Payment Application Review

We have reviewed the completed quantities submitted by Rachel Contracting, Inc.

The following is a summary of payment:

Work completed to date:	\$ 2,605,951.10
Less 2.5% retainage:	\$ 65,148.78
<u>Less previous payments:</u>	<u>\$ 2,092,913.76</u>
Pay Request for this estimate:	\$ 447,888.56

A detailed summary of work completed, partial payment certification, and Rachel Contracting Inc's pay request are attached.

Recommendation

We recommend authorization of Partial Payment #12 in the amount of \$447,888.56 to Rachel Contracting, Inc. for work completed under this pay request.

PARTIAL PAYMENT CERTIFICATION

OWNER: Rice Creek Watershed District
ENGINEER: Houston Engineering Inc.

PROJECT: Hansen Park Comprehensive
Water Management Project
CONTRACTOR: Rachel Contracting, Inc.

PARTIAL PAYMENT: 12
PERIOD OF ESTIMATE: Work Thru 2/1/2018

CONTRACT CHANGE ORDER SUMMARY

No.	Deduction	Additions
1		\$21,522.25
2		\$73,500.00
3		\$50,750.00
4	\$47,895.30	
5		\$13,620.92
Totals	\$47,895.30	\$159,393.17
Net Change to Contract		\$111,497.87

CONTRACT TIME: Fall 2016 – Fall 2018
Original Days: 791
Revisions: 0
Days Remaining: 272
On Schedule (y/n): y
Starting Date: September 1, 2016
Projected Completion: October 31, 2018

ESTIMATE

Original Contract Amount.....	\$ 2,768,480.12
Change Orders.....	\$ 111,497.87
Revised Contract Amount.....	\$ 2,879,977.99
Completed to Date Amount.....	\$ 2,605,951.10
Materials On-Site.....	\$ 0.00
Subtotal.....	\$ 2,605,951.10
Retainage.....	\$ 65,148.78
Previous Payments.....	\$ 2,092,913.76
Amount Due This Payment.....	\$ 447,888.56

(see attached breakdown)

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that to the best of their knowledge, information and belief, the work covered by this payment estimate has been completed in accordance with the contract documents, that all amounts have been paid by the Contractor for work for which previous payment estimates were issued and for which payments were received from the Owner, and that current payment shown herein is now due.

Contractor: Rachel Contracting, Inc.

By: 

Date: 2/7/18

ENGINEER'S CERTIFICATION

The undersigned certifies that the work has been carefully inspected and to the best of their knowledge and belief, the quantities shown in this estimate are correct and the work has been performed in accordance with the contract documents.

Engineer: Houston Engineering, Inc.

By: 

Date: 2/7/18

OWNER'S APPROVAL

Owner: Rice Creek Watershed District

By: _____

Date: _____

Partial Payment #12
Hansen Park Comprehensive Water Management Project
7 Feb-18

Pay App #12
Work Thru 2/1/18

Item	Item Description	Unit	Contract Quantity	Unit Cost	Rachel Contracting Extension	Quantity	Amount	Total Complete	% Complete	Retainage (2.5%)
1	Mobilization	Lump Sum	1	\$105,000.00	\$105,000.00	0.10	\$10,500.00	\$99,750.00	95.0%	\$2,493.75
2	Clearing (P)	Acre	5.0	\$2,300.00	\$11,500.00		\$0.00	\$11,500.00	100.0%	\$287.50
3	Gubbing (P)	Acres	4.5	\$2,300.00	\$10,350.00		\$0.00	\$12,650.00	122.2%	\$316.25
4	Salvage & Reinstall Existing Bridge Structure	Lump Sum	1	\$51,000.00	\$51,000.00		\$0.00	\$51,000.00	100.0%	\$1,275.00
5	Demolition and Removals	Lump Sum	1	\$15,000.00	\$15,000.00		\$0.00	\$15,000.00	100.0%	\$375.00
6	Common Excavation and Dredging (CV) (P)	Cubic Yard	71,482	\$5.60	\$400,299.20	15182.00	\$85,019.20	\$400,299.20	100.0%	\$10,007.48
7	Dewatering & Control of Water	Lump Sum	1	\$35,000.00	\$35,000.00	0.15	\$5,250.00	\$35,000.00	100.0%	\$875.00
8	Haul & Disposal of Dredge Mgmt. Level 1	Cubic Yard	13,482	\$10.15	\$136,842.30		\$0.00	\$136,842.30	100.0%	\$3,421.06
9	Haul & Disposal of Dredge Mgmt. Level 2	Ton	21,260	\$21.30	\$452,838.00	16000.20	\$340,804.26	\$452,838.00	100.0%	\$11,320.95
10	Haul & Disposal of Dredge Mgmt. Level 3	Ton	20,012	\$21.30	\$426,255.60		\$0.00	\$426,255.60	100.0%	\$10,656.39
11	Stockpile Dewatering Pipe	Linear Foot	1,000	\$3.00	\$3,000.00		\$0.00	\$1,500.00	50.0%	\$37.50
12	Stockpile Re-grade	Each	1	\$3,000.00	\$3,000.00		\$0.00	\$0.00	0.0%	\$0.00
13	Compacted Clay Core Berm (CV) (P)	Cubic Yard	5,000	\$22.00	\$110,000.00		\$0.00	\$110,000.00	100.0%	\$2,750.00
14	Steel Sheet Piling	Square Yard	180	\$550.00	\$99,000.00		\$0.00	\$99,000.00	100.0%	\$2,475.00
15	30" RCP Flared End Section (minor reinforcement)	Each	1	\$11,000.00	\$11,000.00		\$0.00	\$11,000.00	100.0%	\$275.00
16	30" RCP Flared End Section (major reinforcement)	Each	1	\$42,000.00	\$42,000.00		\$0.00	\$42,000.00	100.0%	\$1,050.00
17	Flap Gate For 15" HDPE	Each	3	\$460.00	\$1,380.00		\$0.00	\$1,380.00	100.0%	\$34.50
18	Flap Gate For 24" HDPE	Each	1	\$620.00	\$620.00		\$0.00	\$620.00	100.0%	\$15.50
19	Flap Gate For 30" HDPE	Each	1	\$1,100.00	\$1,100.00		\$0.00	\$1,100.00	100.0%	\$27.50
20	IESF 15" RC pipe Apron	Each	2	\$710.01	\$1,420.02		\$0.00	\$1,420.02	100.0%	\$35.50
21	15" GS Pipe Apron	Each	10	\$680.00	\$6,800.00		\$0.00	\$6,800.00	100.0%	\$170.00
22	24" GS Pipe Apron	Each	1	\$470.00	\$470.00		\$0.00	\$470.00	100.0%	\$11.75
23	48" Storm MH, w/casting	Each	1	\$2,100.00	\$2,100.00		\$0.00	\$2,100.00	100.0%	\$52.50
24	Outlet Water Control Structure 84" Precast MH	Each	1	\$35,000.00	\$35,000.00		\$0.00	\$35,000.00	100.0%	\$875.00
25	Outlet Control Structure Piping	Linear Foot	114	\$125.00	\$14,250.00		\$0.00	\$14,250.00	100.0%	\$356.25
26	15" HDPE Pipe Culvert	Linear Foot	294	\$36.00	\$10,584.00		\$0.00	\$10,764.00	101.7%	\$269.10
27	24" HDPE Pipe Culvert	Linear Foot	78	\$49.00	\$3,822.00		\$0.00	\$3,822.00	100.0%	\$95.55
28	30" HDPE Pipe Culvert	Linear Foot	95	\$65.00	\$6,175.00		\$0.00	\$6,175.00	100.0%	\$154.38
29	Random Riprap Class IV	Cubic Yard	99	\$115.00	\$11,385.00		\$0.00	\$11,385.00	100.0%	\$284.63
30	Random Riprap Class III	Cubic Yard	249	\$115.00	\$28,635.00		\$0.00	\$28,635.00	100.0%	\$715.88
31	8" Bituminous Trail	Linear Foot	2,045	\$66.00	\$134,970.00		\$0.00	\$0.00	0.0%	\$0.00
32	Bituminous Drive Restoration	Square Yard	470	\$25.00	\$11,750.00		\$0.00	\$0.00	0.0%	\$0.00
33	8" Gravel Trail	Linear Foot	980	\$14.00	\$13,720.00		\$0.00	\$13,720.00	100.0%	\$343.00
34	IESF Coarse Filter Aggregate	Cubic Yard	300	\$78.00	\$23,400.00		\$0.00	\$23,400.00	100.0%	\$585.00
35	IESF Fine Filter Aggregate	Cubic Yard	370	\$46.00	\$17,020.00		\$0.00	\$17,020.00	100.0%	\$425.50
36	IESF Medium Filter Aggregate	Cubic Yard	130	\$85.00	\$11,050.00		\$0.00	\$11,050.00	100.0%	\$276.25
37	IESF Iron Filings	Ton	37	\$1,300.00	\$48,100.00		\$0.00	\$48,750.00	101.4%	\$1,218.75
38	IESF System 48" Drop Manhole	Each	1	\$10,500.00	\$10,500.00		\$0.00	\$10,500.00	100.0%	\$262.50
39	IESF System 48" Lift Station Manhole	Each	1	\$12,000.00	\$12,000.00		\$0.00	\$12,000.00	100.0%	\$300.00
40	IESF System Pump & Controls	Lump Sum	1	\$69,000.00	\$69,000.00		\$0.00	\$69,000.00	100.0%	\$1,725.00
41	IESF 4" PVC IESF Distribution Pipe	Linear Foot	445	\$17.00	\$7,565.00		\$0.00	\$7,565.00	100.0%	\$189.13
42	IESF 15" RCP IESF Distribution Pipe & Drain Pipe	Linear Foot	139	\$38.00	\$5,282.00		\$0.00	\$5,282.00	100.0%	\$132.05
43	IESF 6" PVC IESF Drain Pipe	Linear Foot	387	\$23.00	\$8,901.00		\$0.00	\$8,901.00	100.0%	\$222.53
44	IESF 6" PVC IESF Perforated Pipe Drain	Linear Foot	233	\$16.00	\$3,728.00		\$0.00	\$3,728.00	100.0%	\$93.20
45	6" HDPE IESF Drain Pipe Cleanout	Each	8	\$400.00	\$3,200.00		\$0.00	\$3,200.00	100.0%	\$80.00
46	IESF System Bubbler	Each	8	\$420.00	\$3,360.00		\$0.00	\$3,360.00	100.0%	\$84.00
47	IESF System Automated Valve Vault	Lump Sum	1	\$28,900.00	\$28,900.00		\$0.00	\$28,900.00	100.0%	\$722.50
48	IESF System Manual Valve Vault	Lump Sum	1	\$35,700.00	\$35,700.00		\$0.00	\$35,700.00	100.0%	\$892.50
49	IESF Electrical - System Distribution	Lump Sum	1	\$7,000.00	\$7,000.00		\$0.00	\$7,000.00	100.0%	\$175.00
50	IESF Electrical - Permanent Service from Xcel Energy (RESERVE)	Lump Sum	1	\$20,000.00	\$20,000.00		\$0.00	\$20,000.00	100.0%	\$500.00
51	Catch Basin Inlet Protection	Each	2	\$280.00	\$560.00		\$0.00	\$1,120.00	200.0%	\$28.00
52	Ditch Check (Temporary Riprap Class 3)	Cubic Yard	16	\$150.00	\$2,400.00		\$0.00	\$6,300.00	262.5%	\$157.50
53	Slit Fence	Linear Foot	1,800	\$3.00	\$5,400.00		\$0.00	\$3,135.00	58.1%	\$78.38

Partial Payment #12
Hansen Park Comprehensive Water Management Project
7 Feb-18

Pay App #12
Work Thru 2/1/18

Item	Item Description	Unit	Contract Quantity	Unit Cost	Rachel Contracting Extension	Quantity	Amount	Total Complete	% Complete	Retainage (2.5%)
54	Silt Fence - Heavy Duty Installation	Linear Foot	2,800	\$3.70	\$10,360.00		\$0.00	\$10,360.00	100.0%	\$259.00
55	Sediment Control Fiber Roll	Linear Foot	500	\$4.50	\$2,250.00		\$0.00	\$2,295.00	102.0%	\$57.38
56	Sediment Control Fiber Roll - Heavy Duty Installation	Linear Foot	5,000	\$5.40	\$27,000.00		\$0.00	\$8,964.00	33.2%	\$224.10
57	Erosion Control Blanket	Square Yard	3,780	\$7.00	\$26,460.00		\$0.00	\$28,665.00	108.3%	\$716.63
58	Hydro Mulch	Acre	8.8	\$5,600.00	\$49,280.00		\$0.00	\$49,280.00	100.0%	\$1,232.00
59	Seed Mixture 25-151 (High Maintenance Turf)	Acre	3.5	\$1,500.00	\$5,250.00		\$0.00	\$0.00	0.0%	\$0.00
60	Seed Mixture 34-181 (Emergent Wetland)	Acre	2.6	\$1,410.00	\$3,666.00		\$0.00	\$2,749.50	75.0%	\$68.74
61	Seed Mixture 34-261 (Riparian South & West)	Acre	2.0	\$1,860.00	\$3,720.00		\$0.00	\$2,790.00	75.0%	\$69.75
62	Seed Mixture 34-271 (Wet Meadow South & West)	Acre	1.7	\$2,200.00	\$3,740.00		\$0.00	\$3,872.00	103.5%	\$96.80
63	Seed Mixture 35-221 (Dry Prairie General)	Acre	1.7	\$1,750.00	\$2,975.00		\$0.00	\$2,625.00	88.2%	\$65.63
64	Seed Mixture 36-211 (Woodland Edge South & West)	Acre	0.6	\$1,790.00	\$1,074.00		\$0.00	\$1,074.00	100.0%	\$26.85
65	Temporary Seeding	Acre	8.8	\$900.00	\$7,920.00		\$0.00	\$0.00	0.0%	\$0.00
66	Native Aquatic: 2" Plug	Each	1,440	\$4.00	\$5,760.00		\$0.00	\$0.00	0.0%	\$0.00
67	Native Shrub: 2 Gallon	Each	275	\$43.00	\$11,825.00		\$0.00	\$0.00	0.0%	\$0.00
68	Native Tree: #7 Container	Each	8	\$197.00	\$1,576.00		\$0.00	\$0.00	0.0%	\$0.00
69	Native Tree: #25 Container	Each	14	\$480.00	\$6,720.00		\$0.00	\$0.00	0.0%	\$0.00
70	Herbivore - Exclusive Fence	Linear Foot	1,440	\$4.00	\$5,760.00		\$0.00	\$0.00	0.0%	\$0.00
71	Relocate and Transplant Existing Trees	Each	5	\$800.00	\$4,000.00		\$0.00	\$4,000.00	100.0%	\$100.00
72	2017 Annual Maintenance	Lump Sum	1	\$7,000.00	\$7,000.00		\$0.00	\$7,000.00	100.0%	\$175.00
73	2018 Annual Maintenance	Lump Sum	1	\$16,000.00	\$16,000.00		\$0.00	\$0.00	0.0%	\$0.00
74	Traffic Control	Lump Sum	1	\$2,500.00	\$2,500.00	0.50	\$1,250.00	\$2,500.00	100.0%	\$62.50
75	Temporary Orange Construction Fence	Linear Foot	4,180	\$3.40	\$14,212.00		\$0.00	\$16,320.00	114.8%	\$408.00
76	Stabilized Construction Entrance/Exit	Lump Sum	2	\$2,800.00	\$5,600.00		\$0.00	\$5,600.00	100.0%	\$140.00
77	SWPPP Documentation and Management	Lump Sum	1	\$10,000.00	\$10,000.00	0.10	\$1,000.00	\$6,000.00	60.0%	\$150.00
78	Street Sweeping	Hour	100	\$145.00	\$14,500.00		\$0.00	\$11,310.00	78.0%	\$282.75
Change Order #1										
1	Relocation of Pedestrian Bridge	Each	2	\$2,000.00	\$4,000.00		\$0.00	\$4,000.00	100.0%	\$100.00
2	Removal of Hydro Mulch Line Item	Acres	8.8	-\$5,600.00	-\$49,280.00		\$0.00	-\$49,280.00	100.0%	-\$1,232.00
3	Load, Haul, & Store Belton 700 ECB to City	Lump Sum	1	\$1,500.00	\$1,500.00		\$0.00	\$1,500.00	100.0%	\$37.50
4	Load & Haul 700 ECB to Site	Lump Sum	1	\$1,500.00	\$1,500.00		\$0.00	\$1,500.00	100.0%	\$37.50
5	Installation of Owner Furnished Belton 700 ECB	Square Yard	5,500	\$4.31	\$23,705.00		\$0.00	\$9,753.53	41.1%	\$243.84
6	Furnish and Install SC1508N	Square Yard	7,400	\$3.57	\$26,418.00		\$0.00	\$26,418.00	100.0%	\$660.45
7	MinDOT Type 3 Weed Free Mulch	Ton	12.2	\$1,121.25	\$13,679.25		\$0.00	\$0.00	0.0%	\$0.00
Subtotal										
Change Order #2										
1	Furnish, Install, and Maintain Composite Mats	Week	6.0	\$12,250.00	\$73,500.00		\$0.00	\$73,500.00	100.0%	\$1,837.50
2	Storage of Composite Mats (Not Used)	Week	0	\$6,600.00	\$0.00		\$0.00	\$0.00	0.0%	\$0.00
Subtotal										
Change Order #3										
1	Haul & Dispose of Additional DML-1	Cubic Yard	5,000	\$10.15	\$50,750.00		\$0.00	\$50,750.00	100.0%	\$1,268.75
Subtotal										
Change Order #4										
1	Stockpile Re-grade per FO-010	Lump Sum	1	\$18,829.20	\$18,829.20		\$0.00	\$18,829.20	100.0%	\$470.73
2	Additional Haul-off of DML-1 Material (5,000 CY)	Cubic Yard	5,000	\$10.15	\$50,750.00	190.00	\$1,928.50	\$50,750.00	100.0%	\$1,268.75
3	Revision to use of Composite Matting System	Week	4	-\$12,250.00	-\$49,000.00		\$0.00	-\$49,000.00	100.0%	-\$1,225.00
4	Temporary Seeding per project shutdown per FO-011	Lump Sum	1	\$2,386.10	\$2,386.10		\$0.00	\$2,386.10	100.0%	\$59.65
5	Additional Construction Fence to delineate no-excavated areas within	Linear Foot	1,650	\$3.40	\$5,610.00		\$0.00	\$5,610.00	100.0%	\$140.25
6	Additional seeding to restore interim grades on stockpile per project	Acres	3	\$3,581.60	\$10,744.80		\$0.00	\$5,909.64	55.0%	\$147.74
7	Additional common excavation volume per post draw-down survey check	Cubic Yard	2,152	\$5.60	\$12,051.20		\$0.00	\$12,051.20	100.0%	\$301.28
8	Removal of excess DML-3 tonnage from contract as result of changed	Ton	7,897	-\$21.30	-\$168,211.85		\$0.00	-\$168,211.85	100.0%	-\$4,205.30
9	Revised Unit price of DML-3 adjusted actual density	Ton	12,115	\$6.67	\$80,805.25		\$0.00	\$80,805.25	100.0%	\$2,020.13
10	Remove contract item #54 - Silt Fence - Heavy Duty Installation	Linear Foot	2,800	-\$3.70	-\$10,360.00		\$0.00	-\$10,360.00	100.0%	-\$259.00
11	Remove portion (50% of contract item #11 - Stockpile Dewatering Pipe	Linear Foot	500	-\$3.00	-\$1,500.00		\$0.00	-\$1,500.00	100.0%	-\$37.50

Partial Payment #12
Hansen Park Comprehensive Water Management Project
7-Feb-18

Pay App #12
 Work Thru 2/1/18

Rachel Contracting

Item	Item Description	Unit	Contract Quantity	Unit Cost	Subtotal	Extension	Quantity	Amount	Total Complete	% Complete	Retainage (2.5%)
Change Order #5											
1	Removal of excess DMI=2 tonnage from contract as result of changed	Ton	11,402.75	-\$21.30	-\$242,878.58		11,402.75	-\$242,878.58	-\$242,878.58	100.0%	-\$6,071.96
2	Revised Unit price of DMI=2 adjusted actual density	Ton	9,857.25	\$6.67	\$65,747.86		9,857.25	\$65,747.86	\$65,747.86	100.0%	\$1,643.70
3	Haul & Dispose of Additional DMI-1	Cubic Yard	8,217	\$10.65	\$87,511.05		8,217.00	\$87,511.05	\$87,511.05	100.0%	\$2,187.78
4	Additional Erosion Control Blanket in IESF Area	Square Yard	9,062	\$3.57	\$32,351.34		9,062.00	\$32,351.34	\$32,351.34	100.0%	\$808.78
5	Additional Gravel Mat"lin West Side Trail	Cubic Yard	520	\$32.25	\$16,770.00		520.00	\$16,770.00	\$16,770.00	100.0%	\$419.25
6	Locking Hespis for IESF System Vaults	Lump Sum	1	\$800.00	\$800.00		1.00	\$800.00	\$800.00	100.0%	\$20.00
7	South Pedestrian Bridge Raise	Lump Sum	1	\$53,319.25	\$53,319.25		1.00	\$53,319.25	\$53,319.25	100.0%	\$1,332.98
				Subtotal	\$13,620.92						
				Subtotals	\$2,879,977.99				\$2,605,951.10	90.49%	\$65,148.78
				Retainage (2.5%)	\$71,999.45				\$473.19		

Retainage this period
 Retainage (2.5%)

Amount Due This Period

\$18,454.30

Payments to date

PPH1	\$181,511.99
PPH2	\$27,198.50
PPH3	\$23,522.00
PPH4	\$173,929.80
PPH5	\$606,173.10
PPH6	\$692,912.36
PPH7	\$58,721.58
PPH8	\$65,267.00
PPH9	\$23,589.88
PPH10	\$221,633.26
PPH11	\$18,454.30
	\$2,092,913.76

Total Payments to Date
\$2,092,913.76

2.5% Retainage
\$65,148.78

Amount Due This Period
\$447,888.56

***Note: Rounding error has resulted in \$0.01 difference between contractor and engineer calculations**

Bold/Italics = REVISED PER HEI REVIEW

Dennis McAlpine

From: Chelsea Fobbe <crachel@rachelcontracting.com>
Sent: Wednesday, February 07, 2018 8:18 AM
To: Dennis McAlpine
Cc: Drew Tuomisto
Subject: Hansen Park Comprehensive Water Management
Attachments: Pay Application 12.pdf; Hansen Park_Change Order 5_Fully Executed.pdf

[External Email]

Good Morning Dennis,

Please see attached for Pay Application 12 and an executed Change Order #5.

Thanks.

Sincerely,

Chelsea Fobbe
Project Coordinator



Rachel Contracting, Inc.

4125 Napier Court NE | St. Michael, MN 55376

D: 763-424-1538 | CFobbe@rachelcontracting.com

APPLICATION AND CERTIFICATE FOR PAYMENT

AIA DOCUMENT G702

PAGE ONE OF

TO OWNER: Rice Creek Watershed District PROJECT: Hansen Park Comp. Water Mgt APPLICATION NO: 16074.12 Distribution to: OWNER CONTRACTOR OTHER
 Kyle Axtel
 4325 Pheasant Ridge Dr NE #611
 Blaine, MN 55449
FROM: Rachel Contracting, Inc
CONTRACTOR: 4125 Napier Court NE
 St Michael, MN 55376

PERIOD FROM: 12/31/2017 PERIOD TO: 2/1/2018
 APPLICATION DATE: 2/6/2018 CONTRACT DATE: 7/27/2016

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract Continuation Sheet, AIA Document G703, is attached.

- 1. ORIGINAL CONTRACT SUM..... \$2,768,480.12
- 2. Net change by Change Orders..... \$ 111,497.87
- 3. CONTRACT SUM TO DATE (Line 1+2)..... \$2,879,977.99
- 4. TOTAL COMPLETED & STORED TO DATE..... \$2,605,951.10
 (Column G on G703)
- 5. RETAINAGE:
 - a. 2.5% of Completed Work \$65,148.78
 (Columns D + E on G703)
 - b. _____ % of Stored Material \$ -
 (Columns F on G703)

Total Retainage (line 5a + 5b or Total in Column I of G703)..... \$ 65,148.78

6. TOTAL EARNED LESS RETAINAGE..... \$2,540,802.32
 (Line 4 less Line 5 Total)

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT..... \$2,092,913.76
 (Line 6 from prior Certificate).....

8. CURRENT PAYMENT DUE..... \$ 447,888.56

9. BALANCE TO FINISH, INCLUDING RETAINAGE..... \$ 339,175.67
 (Line 3 less Line 6).....

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
TOTAL CHANGES APPROVED IN PREVIOUS MONTHS BY OWNER	\$ 145,772.25	\$ 47,895.30
TOTAL APPROVED THIS MONTH	\$ 13,620.92	
TOTALS	\$ 159,393.17	\$ 47,895.30
NET CHANGES BY CHANGE ORDER	\$ 111,497.87	

The undersigned Contractor certifies that to the best of the Contractor's Knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for payment were issued and payments received from Owner, and that current payment shown herein is now due.

CONTRACTOR: Rachel Contracting, Inc

By: Date: 2/6/2018

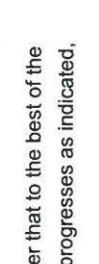
State of: MN

County of: Wright

Described and sworn to before me this 6th day of February, 2018

Notary Public Chelsea Marie Rachel

My Commission Expires: January 31, 2022



ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Document, based on on-site observation and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's Knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.
 AMOUNT CERTIFIED.....
 (Attach explanation if the amount certified differs from the amount applied for.
 Initial all figures on this Application and on the Continuation Sheet that are changed to conform to the AMOUNT CERTIFIED)
 ARCHITECT:
 By: _____ Date: _____
 This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

A ITEM NO.	B DESCRIPTION OF WORK	UNIT	EST QTY	QTY TO DATE	UNIT PRICE	C SCHEDULED VALUE	D		E WORK COMPLETED THIS PERIOD	F MATERIALS PRESENTLY STORED (NOT IN DOR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H BALANCE TO FINISH (C-G)	I RETAINAGE (IF VARIABLE RATE)
							FROM PREVIOUS APPLICATION (D+E)	% (G+C)					
10	Mobilization	LS	1.00	0.85	\$ 105,000.00	\$105,000.00	\$89,250.00	\$10,500.00	\$0.00	\$99,750.00	\$5,250.00	95.00%	\$2,493.75
20	Clearing (P)	AC	5.00	5.00	\$ 2,300.00	\$11,500.00	\$11,500.00	\$0.00	\$0.00	\$11,500.00	\$0.00	100.00%	\$287.50
30	Grubbing (P)	AC	4.50	5.50	\$ 2,300.00	\$10,350.00	\$12,650.00	\$0.00	\$0.00	\$12,650.00	(\$2,300.00)	122.22%	\$316.25
40	Salvage & Reinstall Existing Bridge Structure	LS	1.00	1.00	\$ 51,000.00	\$51,000.00	\$51,000.00	\$0.00	\$0.00	\$51,000.00	\$0.00	100.00%	\$1,275.00
50	Demo & Removals	LS	1.00	1.00	\$ 15,000.00	\$15,000.00	\$15,000.00	\$0.00	\$0.00	\$15,000.00	\$0.00	100.00%	\$375.00
60	Common Excavation & Dredging	CY	71,482.00	56,300.00	\$ 5.60	\$400,299.20	\$315,280.00	\$85,019.20	\$0.00	\$400,299.20	\$0.00	100.00%	\$10,007.48
70	Dewatering & Control of Water	LS	1.00	0.85	\$ 35,000.00	\$35,000.00	\$29,750.00	\$5,250.00	\$0.00	\$35,000.00	\$0.00	100.00%	\$875.00
80	Haul & Dispose of Dredge Mgt Level 1	CY	13,482.00	13,482.00	\$ 10.15	\$136,842.30	\$136,842.30	\$0.00	\$0.00	\$136,842.30	\$0.00	100.00%	\$3,421.06
90	Haul & Dispose of Dredge Mgt Level 2	TON	21,260.00	5,259.80	\$ 21.30	\$452,838.00	\$112,033.74	\$340,804.26	\$0.00	\$452,838.00	\$0.00	100.00%	\$11,320.95
100	Haul & Dispose of Dredge Mgt Level 3	TON	20,012.00	20,012.00	\$ 21.30	\$426,255.60	\$426,255.60	\$0.00	\$0.00	\$426,255.60	\$0.00	100.00%	\$10,656.39
110	Stockpile Dewatering Pipe	LF	1,000.00	500.00	\$ 3.00	\$3,000.00	\$1,500.00	\$0.00	\$0.00	\$1,500.00	\$0.00	50.00%	\$37.50
120	Stockpile Re-Grade	EA	1.00	1.00	\$ 3,000.00	\$3,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,000.00	0.00%	\$0.00
130	Compacted Clay Core Berm	CY	5,000.00	5,000.00	\$ 22.00	\$110,000.00	\$110,000.00	\$0.00	\$0.00	\$110,000.00	\$0.00	100.00%	\$2,750.00
140	Steel Sheet Piling	SY	180.00	180.00	\$ 550.00	\$99,000.00	\$99,000.00	\$0.00	\$0.00	\$99,000.00	\$0.00	100.00%	\$2,475.00
150	30" RCP Flared End Section (minor)	EA	1.00	1.00	\$ 11,000.00	\$11,000.00	\$11,000.00	\$0.00	\$0.00	\$11,000.00	\$0.00	100.00%	\$275.00
160	30" RCP Flared End Section (major)	EA	1.00	1.00	\$ 42,000.00	\$42,000.00	\$42,000.00	\$0.00	\$0.00	\$42,000.00	\$0.00	100.00%	\$1,050.00
170	Flap Gate for 15" HDPE	EA	3.00	3.00	\$ 460.00	\$1,380.00	\$1,380.00	\$0.00	\$0.00	\$1,380.00	\$0.00	100.00%	\$34.50
180	Flap Gate for 24" HDPE	EA	1.00	1.00	\$ 620.00	\$620.00	\$620.00	\$0.00	\$0.00	\$620.00	\$0.00	100.00%	\$15.50
190	Flap Gate for 30" HDPE	EA	1.00	1.00	\$ 1,100.00	\$1,100.00	\$1,100.00	\$0.00	\$0.00	\$1,100.00	\$0.00	100.00%	\$27.50
200	IESF 15" RC Pipe Apron	EA	2.00	2.00	\$ 710.01	\$1,420.02	\$1,420.02	\$0.00	\$0.00	\$1,420.02	\$0.00	100.00%	\$35.50
210	15" GS Pipe Apron	EA	10.00	10.00	\$ 680.00	\$6,800.00	\$6,800.00	\$0.00	\$0.00	\$6,800.00	\$0.00	100.00%	\$170.00
220	24" GS Pipe Apron	EA	1.00	1.00	\$ 470.00	\$470.00	\$470.00	\$0.00	\$0.00	\$470.00	\$0.00	100.00%	\$11.75
230	48" Storm MH W/casting	EA	1.00	1.00	\$ 2,100.00	\$2,100.00	\$2,100.00	\$0.00	\$0.00	\$2,100.00	\$0.00	100.00%	\$52.50
240	Outlet Water Control Structure 84" Precast MH	EA	1.00	1.00	\$ 35,000.00	\$35,000.00	\$35,000.00	\$0.00	\$0.00	\$35,000.00	\$0.00	100.00%	\$875.00
250	Outlet Control Structure Piping	LF	114.00	114.00	\$ 125.00	\$14,250.00	\$14,250.00	\$0.00	\$0.00	\$14,250.00	\$0.00	100.00%	\$356.25
260	15" HDPE Pipe Culvert	LF	294.00	299.00	\$ 36.00	\$10,584.00	\$10,764.00	\$0.00	\$0.00	\$10,764.00	(\$180.00)	101.70%	\$269.10
270	24" HDPE Pipe Culvert	LF	78.00	78.00	\$ 49.00	\$3,822.00	\$3,822.00	\$0.00	\$0.00	\$3,822.00	\$0.00	100.00%	\$95.55
280	30" HDPE Pipe Culvert	LF	95.00	95.00	\$ 65.00	\$6,175.00	\$6,175.00	\$0.00	\$0.00	\$6,175.00	\$0.00	100.00%	\$154.38
290	Random Rip Rap Class IV	CY	99.00	99.00	\$ 115.00	\$11,385.00	\$11,385.00	\$0.00	\$0.00	\$11,385.00	\$0.00	100.00%	\$284.63
300	Random Rip Rap Class III	CY	249.00	249.00	\$ 115.00	\$28,635.00	\$28,635.00	\$0.00	\$0.00	\$28,635.00	\$0.00	100.00%	\$715.88
310	8" Bituminous Trail	LF	2,045.00	2,045.00	\$ 66.00	\$134,970.00	\$134,970.00	\$0.00	\$0.00	\$0.00	\$134,970.00	0.00%	\$0.00
320	Bituminous Drive Restoration	SY	470.00	470.00	\$ 25.00	\$11,750.00	\$11,750.00	\$0.00	\$0.00	\$0.00	\$11,750.00	0.00%	\$0.00
330	8" Gravel Trail	LF	980.00	980.00	\$ 14.00	\$13,720.00	\$13,720.00	\$0.00	\$0.00	\$0.00	\$13,720.00	0.00%	\$343.00
340	IESF Coarse Filter Agg	CY	300.00	300.00	\$ 78.00	\$23,400.00	\$23,400.00	\$0.00	\$0.00	\$0.00	\$23,400.00	0.00%	\$585.00
350	IESF Fine Filter Agg	CY	370.00	370.00	\$ 46.00	\$17,020.00	\$17,020.00	\$0.00	\$0.00	\$0.00	\$17,020.00	0.00%	\$425.50
360	IESF Medium Filter Agg	CY	130.00	130.00	\$ 85.00	\$11,050.00	\$11,050.00	\$0.00	\$0.00	\$0.00	\$11,050.00	0.00%	\$276.25
370	IESF Iron Filings	TON	37.50	37.50	\$ 1,300.00	\$48,750.00	\$48,750.00	\$0.00	\$0.00	\$48,750.00	(\$650.00)	101.35%	\$1,218.75
380	IESF System 48" Drop Manhole	EA	1.00	1.00	\$ 10,500.00	\$10,500.00	\$10,500.00	\$0.00	\$0.00	\$10,500.00	\$0.00	100.00%	\$262.50
390	IESF System 48" Lift Station Manhole	EA	1.00	1.00	\$ 12,000.00	\$12,000.00	\$12,000.00	\$0.00	\$0.00	\$12,000.00	\$0.00	100.00%	\$300.00
400	IESF System Pump Controls	LS	1.00	1.00	\$ 69,000.00	\$69,000.00	\$69,000.00	\$0.00	\$0.00	\$0.00	\$69,000.00	0.00%	\$1,725.00
410	IESF 4" PVC IESF Distribution Pipe	LF	445.00	445.00	\$ 17.00	\$7,565.00	\$7,565.00	\$0.00	\$0.00	\$0.00	\$7,565.00	0.00%	\$189.13
420	IESF 15" RCP IESF Distribution Pipe & Drain	LF	139.00	139.00	\$ 38.00	\$5,282.00	\$5,282.00	\$0.00	\$0.00	\$0.00	\$5,282.00	0.00%	\$132.05
430	IESF 6" PVC IESF Drain Pipe	LF	387.00	387.00	\$ 23.00	\$8,901.00	\$8,901.00	\$0.00	\$0.00	\$0.00	\$8,901.00	0.00%	\$222.53
440	IESF 6" PVC IESF Perf. Pipe Drain	LF	233.00	233.00	\$ 16.00	\$3,728.00	\$3,728.00	\$0.00	\$0.00	\$0.00	\$3,728.00	0.00%	\$93.20
450	6" HDPE IESF Pipe Cleanout	EA	8.00	8.00	\$ 400.00	\$3,200.00	\$3,200.00	\$0.00	\$0.00	\$0.00	\$3,200.00	0.00%	\$80.00
460	IESF System Bubblers	EA	8.00	8.00	\$ 420.00	\$3,360.00	\$3,360.00	\$0.00	\$0.00	\$0.00	\$3,360.00	0.00%	\$84.00
470	IESF System Automated Valve Vault	LS	1.00	1.00	\$ 28,900.00	\$28,900.00	\$28,900.00	\$0.00	\$0.00	\$0.00	\$28,900.00	0.00%	\$722.50
480	IESF System Manual Valve Vault	LS	1.00	1.00	\$ 35,700.00	\$35,700.00	\$35,700.00	\$0.00	\$0.00	\$0.00	\$35,700.00	0.00%	\$892.50
490	IESF Electrical System Distribution	LS	1.00	1.00	\$ 7,000.00	\$7,000.00	\$7,000.00	\$0.00	\$0.00	\$0.00	\$7,000.00	0.00%	\$175.00
500	IESF Electrical - Perm. Service from Xcel	LS	1.00	0.67	\$ 20,000.00	\$20,000.00	\$13,327.49	\$0.00	\$0.00	\$0.00	\$13,327.49	66.64%	\$333.19

510	Catch Basin Inlet Protection	EA	2.00	4.00	\$	280.00	\$560.00	\$1,120.00	\$0.00	\$0.00	\$1,120.00	\$0.00	200.00%	\$560.00	(\$560.00)	\$28.00
520	Ditch Check	CY	16.00	42.00	\$	150.00	\$2,400.00	\$6,300.00	\$0.00	\$0.00	\$6,300.00	\$0.00	262.50%	(\$3,900.00)	(\$3,900.00)	\$157.50
530	Silt Fence	LF	1,800.00	1,045.00	\$	3.00	\$5,400.00	\$3,135.00	\$0.00	\$0.00	\$3,135.00	\$0.00	58.06%	\$2,265.00	\$2,265.00	\$78.38
540	Silt Fence Heavy Duty	LF	2,800.00	2,800.00	\$	3.70	\$10,360.00	\$10,360.00	\$0.00	\$0.00	\$10,360.00	\$0.00	100.00%	\$0.00	\$0.00	\$259.00
550	Sediment Control Fiber Roll	LF	5,000.00	510.00	\$	4.50	\$2,250.00	\$2,295.00	\$0.00	\$0.00	\$2,295.00	\$0.00	102.00%	(\$45.00)	(\$45.00)	\$57.38
560	Sediment Control Fiber Roll Heavy Duty	LF	5,000.00	1,660.00	\$	5.40	\$27,000.00	\$8,964.00	\$0.00	\$0.00	\$8,964.00	\$0.00	33.20%	\$18,036.00	\$18,036.00	\$224.10
570	Erosion Control Blanket Heavy Duty	SY	3,780.00	4,095.00	\$	7.00	\$26,460.00	\$28,665.00	\$0.00	\$0.00	\$28,665.00	\$0.00	108.33%	(\$2,205.00)	(\$2,205.00)	\$716.63
580	Hydro Mulch	AC	8.80	8.80	\$	5,600.00	\$49,280.00	\$49,280.00	\$0.00	\$0.00	\$49,280.00	\$0.00	100.00%	\$0.00	\$0.00	\$1,232.00
590	Seed Mix 25-151	AC	3.50		\$	1,500.00	\$5,250.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,250.00	\$5,250.00	\$0.00
600	Seed Mix 34-181	AC	2.60	1.95	\$	1,410.00	\$3,666.00	\$2,749.50	\$0.00	\$0.00	\$2,749.50	\$0.00	75.00%	\$916.50	\$916.50	\$68.74
610	Seed Mix 34-261	AC	2.00	1.50	\$	1,860.00	\$3,720.00	\$2,790.00	\$0.00	\$0.00	\$2,790.00	\$0.00	75.00%	\$930.00	\$930.00	\$69.75
620	Seed Mix 34-271	AC	1.70	1.76	\$	2,200.00	\$3,740.00	\$3,872.00	\$0.00	\$0.00	\$3,872.00	\$0.00	103.53%	(\$132.00)	(\$132.00)	\$96.80
630	Seed Mix 35-221	AC	1.70	1.50	\$	1,750.00	\$2,975.00	\$2,625.00	\$0.00	\$0.00	\$2,625.00	\$0.00	88.24%	\$350.00	\$350.00	\$65.63
640	Seed Mix 36-211	AC	0.60	0.60	\$	1,790.00	\$1,074.00	\$1,074.00	\$0.00	\$0.00	\$1,074.00	\$0.00	100.00%	\$0.00	\$0.00	\$26.85
650	Temp Seeding	AC	8.80		\$	900.00	\$7,920.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$7,920.00	\$7,920.00	\$0.00
660	Native Aquatic 2" Plug	EA	1,440.00		\$	4.00	\$5,760.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,760.00	\$5,760.00	\$0.00
670	Native Shrub 2 gallon	EA	275.00		\$	43.00	\$11,825.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$11,825.00	\$11,825.00	\$0.00
680	Native Tree #7 Container	EA	8.00		\$	197.00	\$1,576.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,576.00	\$1,576.00	\$0.00
690	Native Tree #25 Container	EA	14.00		\$	480.00	\$6,720.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,720.00	\$6,720.00	\$0.00
700	Herbore Exclusive Fence	LF	1,440.00		\$	4.00	\$5,760.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,760.00	\$5,760.00	\$0.00
710	Relocate and Transplant Existing Trees	EA	5.00	5.00	\$	800.00	\$4,000.00	\$4,000.00	\$0.00	\$0.00	\$4,000.00	\$0.00	100.00%	\$0.00	\$0.00	\$100.00
720	2017 Annual Maintenance	LS	1.00	1.00	\$	7,000.00	\$7,000.00	\$7,000.00	\$0.00	\$0.00	\$7,000.00	\$0.00	100.00%	\$0.00	\$0.00	\$175.00
730	2018 Annual Maintenance	LS	1.00		\$	16,000.00	\$16,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$16,000.00	\$16,000.00	\$0.00
740	Traffic Control	LS	1.00	0.50	\$	2,500.00	\$2,500.00	\$1,250.00	\$0.00	\$1,250.00	\$2,500.00	\$0.00	100.00%	\$0.00	\$0.00	\$62.50
750	Temp Orange Construction Fence	LF	4,180.00	4,800.00	\$	3.40	\$14,212.00	\$16,320.00	\$0.00	\$0.00	\$16,320.00	\$0.00	114.83%	(\$2,108.00)	(\$2,108.00)	\$408.00
760	Stabilized Construction Entrance/Exit	LS	2.00	2.00	\$	2,800.00	\$5,600.00	\$5,600.00	\$0.00	\$0.00	\$5,600.00	\$0.00	100.00%	\$0.00	\$0.00	\$140.00
770	SWPPP Documentation and Mgt	LS	1.00	0.50	\$	10,000.00	\$10,000.00	\$1,000.00	\$0.00	\$1,000.00	\$6,000.00	\$0.00	60.00%	\$4,000.00	\$4,000.00	\$150.00
780	Street Sweeping	HR	100.00	78.00	\$	145.00	\$14,500.00	\$11,310.00	\$0.00	\$0.00	\$11,310.00	\$0.00	78.00%	\$3,190.00	\$3,190.00	\$282.75
	CHANGE ORDER 1															
	Crane Mob and Demob	EA	2.00	2.00	\$	2,000.00	\$4,000.00	\$4,000.00	\$0.00	\$0.00	\$4,000.00	\$0.00	100.00%	\$0.00	\$0.00	\$100.00
a	Hydro Mulch Line Item Removed	AC	8.80	8.80	\$	(5,600.00)	(\$49,280.00)	(\$49,280.00)	\$0.00	\$0.00	(\$49,280.00)	\$0.00	100.00%	\$0.00	\$0.00	(\$1,232.00)
b	RCWD provided erorion control balmket	LS	1.00	1.00	\$	1,500.00	\$1,500.00	\$1,500.00	\$0.00	\$0.00	\$1,500.00	\$0.00	100.00%	\$0.00	\$0.00	\$37.50
c	RCWD provided erorion control balmket (stored)	LS	1.00	1.00	\$	1,500.00	\$1,500.00	\$1,500.00	\$0.00	\$0.00	\$1,500.00	\$0.00	100.00%	\$0.00	\$0.00	\$37.50
d	RCWD Provided Materials install	SY	5,500.00	2,263.00	\$	4.31	\$23,705.00	\$9,753.53	\$0.00	\$0.00	\$9,753.53	\$0.00	41.15%	\$13,951.47	\$13,951.47	\$243.84
e	F&I Erosion Control Blanket (type SC1508N)	SY	7,400.00	7,400.00	\$	3.57	\$26,418.00	\$26,418.00	\$0.00	\$0.00	\$26,418.00	\$0.00	100.00%	\$0.00	\$0.00	\$660.45
f	F&I MINDOT Type 3 (weed free) Mulch	TON	12.20		\$	1,121.25	\$13,679.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$13,679.25	\$13,679.25	\$0.00
	CHANGE ORDER 2															
1	F&I and Maintain a composite mat system	WK	6.00	6.00	\$	12,250.00	\$73,500.00	\$73,500.00	\$0.00	\$0.00	\$73,500.00	\$0.00	100.00%	\$0.00	\$0.00	\$1,837.50
	CHANGE ORDER 3															
1	Haul & Dispose of Additional DML-1	CY	5,000.00	5,000.00	\$	10.15	\$50,750.00	\$50,750.00	\$0.00	\$0.00	\$50,750.00	\$0.00	100.00%	\$0.00	\$0.00	\$1,268.75
	CHANGE ORDER 4															
1	Stockpile Re-grade per FO-010	LS	1.00	1.00	\$	18,829.20	\$18,829.20	\$18,829.20	\$0.00	\$0.00	\$18,829.20	\$0.00	100.00%	\$0.00	\$0.00	\$470.73
2	Additional Haul Off of DML-1 Material	CY	5,000.00	4,810.00	\$	10.15	\$50,750.00	\$48,821.50	\$1,928.50	\$1,928.50	\$50,750.00	\$0.00	100.00%	\$0.00	\$0.00	\$1,268.75
3	Revision to use of Composite Matting System	WK	4.00	4.00	\$	(12,250.00)	(\$49,000.00)	(\$49,000.00)	\$0.00	\$0.00	(\$49,000.00)	\$0.00	100.00%	\$0.00	\$0.00	(\$1,225.00)
4	Temp Seeding per project shutdown per FO-011	LS	1.00	1.00	\$	2,386.10	\$2,386.10	\$2,386.10	\$0.00	\$0.00	\$2,386.10	\$0.00	100.00%	\$0.00	\$0.00	\$59.65
	Additional Construction Fence to delineate no-excavated areas within existing pond limits to accommodate perfect shutdown															
5	Additional Seeding to restore interim grades on stockpile per project shutdown	LF	1,650.00	1,650.00	\$	3.40	\$5,610.00	\$5,610.00	\$0.00	\$0.00	\$5,610.00	\$0.00	100.00%	\$0.00	\$0.00	\$140.25
6	Additional Seeding to restore interim grades on stockpile per project shutdown	AC	3.00	1.65	\$	3,581.60	\$10,744.80	\$5,909.64	\$0.00	\$0.00	\$5,909.64	\$0.00	55.00%	\$4,835.16	\$4,835.16	\$147.74

ITEMS REQUIRING BOARD ACTION

5. Consider Final Order Directing the Repair of Branches 1 and 2 of Washington Judicial Ditch 2.
(Phil Belfiori)

MEMORANDUM
Rice Creek Watershed District

To: Board of Managers **Date:** February 20, 2018
From: Phil Belfiori, Administrator
Subject: Consideration of Final Findings And Order Directing The Repair Of Washington Judicial Ditch (WJD) 2 Branches 1 and 2

Background / Discussion

At the December 13, 2017 Board meeting, the Board of Managers approved RCWD Resolution 2017-32 accepting the Engineer's final Repair Report for the repair of Washington Judicial Ditch (WJD) 2 Branches 1 and 2; concurring with the Engineer's Recommended Repair Alternative; directing further proceedings for the repair of WJD 2 Branches 1 and 2 to occur; and setting a hearing for January 30, 2018 at Hugo City Hall. At the January 30 public hearing the Board approved to recess the hearing to the Board's regular meeting on February 28, 2018.

The attached resolution 2018-07 which (in summary) orders implementation of the repair of WJD 2 Branches 1 and 2. The resolution also directs the District staff to proceed with actions necessary to proceed with the repair the system.

Consistent with the previous Board resolution and the language in the approved Watershed Management Plan, Branches 1 and 2 are part of WJD 2 system and are designated as a "Trunk System" which would specify repair of this system to be paid for by ad valorem funds.

The following is a brief status report and tentative timeline for previous /remaining tasks related to the WJD 2 Branches 1 and 2 Repair Proceedings:

1. The Board by majority consensus agreed to move forward with the process of Board consideration of the Washington Judicial Ditch (WJD) 2 Branch 1 Repair report (April 10, 2017)- Done
2. The Board by consensus agreed to move forward with the process of Board consideration of the Washington Judicial Ditch (WJD) 2 Branch 2 Repair report. The Board also reached consensus to forego a landowner information meeting for the repair reports at this time unless it is deemed necessary in the future. (November 6, 2017)- Done
2. Board considered accepting and filing the final repair reports. Notice was giving that final report is on file and available for review. The Board set final hearing on repair report. The public hearing on the Repair Report was scheduled. (December 13, 2017)- Done
3. Began 30 day notice for review and comment period on accepted engineers recommended alternative for the repair – Done
4. Ended of 30 day review and comment period (Jan. 2018)- Done
5. Held public hearing (January 30, 2018.)- Done

MEMORANDUM

Rice Creek Watershed District

6. Adopt findings and order directing repair (or dismissing proceedings) (February 28, 2018 Board meeting)
7. Implement repair (2018/2019)

At this time, staff requests that the Board consider Resolution 2018-07.

Attachments:

Resolution 2018-07

RESOLUTION NO. 2018-07

**RICE CREEK WATERSHED DISTRICT BOARD OF MANAGERS
FINAL ORDER DIRECTING THE REPAIR OF BRANCHES 1 AND 2 OF WASHINGTON COUNTY
JUDICIAL DITCH 2**

Manager _____ offered the following Resolution and moved its adoption, seconded by Manager _____:

WHEREAS, the Rice Creek Watershed District Board of Managers (“Board”), Drainage Authority for Washington Judicial Ditch (WJD) 2, by resolution 2015-34, adopted findings and an order initiating the repair of WJD 2, Branch 1; and

WHEREAS, resolution 2015-34 directed the engineer to investigate the condition of Branch 1 and to prepare a report recommending a scope of repair; and

WHEREAS, during the investigation of repair for Branch 1, upon request of local residents and the City of Hugo, the Board expanded its direction to its engineer to also investigate and prepare a repair report for Branch 2 of WJD 2; and

WHEREAS, the Engineer has provided, after consultation with the Board, a repair plan to implement the recommended repair alternative for Branch 2 of WJD 2; and

WHEREAS, the Engineer provided a repair report for Branch 1 dated April 24, 2017, and a repair report for Branch 2 dated December 4, 2017; and

WHEREAS, the engineer’s recommended scope of repair for each Branch of WJD 2, contained in the repair reports, provides for the restoration of beneficial drainage within the drainage area of the Branches and minimize adverse environmental impacts; and

WHEREAS, repairs, consistent with the engineer’s recommendations, will restore predictable drainage efficiency to the Branches in order to support current beneficial land uses and future stormwater management demands; and

WHEREAS, the engineer’s recommendations are consistent with the Watershed Management Plan and District rules; and

WHEREAS, by Resolution 2017-32, the Board accepted the engineer’s final repair reports for the repair of Branches 1 and 2 of WJD 2 and concurred with the Engineer’s recommended scope of repair for each Branch; and

WHEREAS, by that same resolution the Board directed further action including noticing and holding a final hearing on January 30, 2018 at Hugo City Hall to gather public testimony on the proposed repairs; and

WHEREAS, the Board provided notice of the hearing as follows:

By Publication:

- Pioneer Press newspaper January 12, 19, and 26, 2018.
- The Citizen Newspaper January 18, 2018.
- The District's webpage January 8, 2018, through the date of the final hearing.

By Electronic Mail:

- District email notice January 8, 2018 to those on the District's email distribution list and those requesting of email notice of hearings and special meetings.

By Posting:

- District office commencing on January 8, 2018 and through the date of the hearing.

By Mail:

- Postcard mailing to the owners of property within the drainage area affected by the proposed repairs on January 8, 2018.
- To the City of Hugo, BWSR, DNR, ACOE, MCES, MPCA, MnDOT, Washington County, Washington County Public Works Dept., and Washington Conservation District January 8, 2018; and

WHEREAS, at the January 30, 2018 Public hearing, the President called for and accepted public comment on the proposed repair; and

WHEREAS, no substantive oral comments were received; and

WHEREAS, at the close of public comment, Manager Bradley moved, seconded by Manager Waller to leave the comment period open for written comments through 5:00 p.m. on Tuesday, February 6, 2018. The motion passed by unanimous vote of the managers; and

WHEREAS, subject to any further written comment, Manager Bradley moved, seconded by Manager Waller to direct staff to prepare findings and an order for the repair of Branches 1 and 2 of Washington JD 2 according to the engineer's recommendations; that the findings and order be consistent with the proceedings including any comments and evidence presented; and that the hearing be continued to the Board's regular meeting on February 28, 2018 for the purpose

of considering and adopting findings and an order for the repair of Branches 1 and 2 of WJD 2. The motion passed by unanimous vote of the managers; and

WHEREAS, no written comments were received during the extension period; and

WHEREAS, statutory notices throughout these proceedings, as required by Statutes Chapters 103B, 103D and 103E, as well as notices required by local rule were provided and are contained within the record of proceedings maintained by the District; and

WHEREAS, the proposed repair of Branches 1 and 2 of WJD 2, according to the engineer's recommendation, will be conducive to public health, will promote the general welfare of the District and within the drainage area of the system, complies with the Watershed Management Plan, and otherwise complies with the requirements of state statute; and

WHEREAS, the repair of Branches 1 and 2 of WJD 2, according to the engineer's recommendation, is necessary and in the best interest of owners of property benefitted by the drainage system.

THEREFORE, the Rice Creek Watershed District Board of Managers makes the following:

ORDER

- A. The Board of Managers orders implementation of the repair of Branches 1 and 2 of WJD 2 consistent with the engineer's recommended repair alternative, and consistent with the capital improvement program contained in the District's Watershed Management Plan.
- B. Because WJD 2 is designated as a "Trunk Drainage System" in the District's Watershed Management Plan, repairs of the drainage system are funded by the District rather than by assessment to benefitted landowners or by water management district charges within the drainage area of the drainage system.
- C. The Board of Managers directs its administrator to coordinate and take all subsequent actions necessary for implementation of the repair in a manner consistent and compliant with existing law. The Board reserves to itself, however, all subsequent actions required by law to proceed upon Board approval.
- D. The Board of Managers Authorizes the bidding of the repairs in separate components and under separate contracts distinguished by both branch and construction method.
- E. The Board of Managers further authorizes expenditures for the repair of Branches 1 and 2 of WJD 2.

The question was on the adoption of the Resolution and there were ___ yeas and ___ nays as follows:

	<u>Yea</u>	<u>Nay</u>	<u>Absent</u>	<u>Abstain</u>
WALLER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HAAKE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRADLEY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WAGAMON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREINER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upon vote, the Chair declared Resolution 2018-07 _____.

Michael Bradley, Secretary

Dated: February 28, 2018

* * * * *

I, Michael Bradley, Secretary of the Rice Creek Watershed District, do hereby certify that I have compared the above Resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I hereunto set my hand this 28th day of February, 2018.

Michael Bradley, Secretary

ITEMS REQUIRING BOARD ACTION

6. Consider Initiating Boundary Change Process between RCWD and Brown's Creek Watershed District. (Phil Belfiori)

MEMORANDUM
Rice Creek Watershed District

To: Board of Managers **Date:** February 20, 2018
From: Phil Belfiori, Administrator
Catherine Nester, District Technician/Inspector
Subject: Consideration to Initiate Boundary Change Process– RCWD and BCWD

Background/Discussion

In response to a landowner inquiry and per Board direction, a hydrologic boundary field investigation was conducted by HEI in January 2018. The District Engineer’s investigation identified that the subject property does flow to BCWD. Based on the findings of the field review, consensus was reached at the February 12, 2018 workshop to bring forward for Board consideration a request to begin the process of watershed boundary change per Minnesota Statutes Chapter 103B.215 (Attachment 1) for the entire common boundary between Brown’s Creek Watershed District (BCWD) and the RCWD. The initial technical boundary analysis needed to complete this task has already been completed for Washington County (see Attachment 2). Because of the staff time commitment and cost associated with the correction process, it is most efficient to make corrections along the entire common boundary with BCWD at the same time. A boundary change with BCWD was completed in 2013-2014 for orphaned parcels only (not the entire common boundary with BCWD). If the request is approved, the first step in the process would be to begin discussions with BCWD to reach agreement on the proposed hydrologic boundary. A summary of the full boundary change process is provided in Attachment 3. If approved, staff would anticipate that the earliest likely implementation date for this boundary change process would be for the 2020 tax year (pending concurrence from BCWD and/or other unforeseen developments).

The February Board workshop discussion also included concurrence to begin looking at options to undertake a more systematic process to align the District’s political boundary to its hydrologic boundary. The board will discuss this issue further as part of the 2019 budget process.

Recommendation

Staff recommends that the Board authorize the initiation of the process of watershed boundary change along the entire common boundary between BCWD and the RCWD pursuant to MS 103B.215 and directs staff and consultants to coordinate and take all subsequent actions necessary for implementation of the process.

Proposed motion: Manager _____ moves to authorize the initiation of the process of watershed boundary change along the entire common boundary between BCWD and the RCWD pursuant to MS 103B.215 and directs staff and consultants to coordinate and take all subsequent actions necessary for implementation of the process.

Attachments:

1. MS 103B.215 Boundary Change of Watershed Districts
2. Map of proposed project area
3. Boundary change process summary

103B.215 BOUNDARY CHANGE OF WATERSHED DISTRICTS.

Subdivision 1. **Procedure.** The boundaries of a watershed district wholly within the metropolitan area may be changed pursuant to this section or chapter 103D.

Subd. 2. **Petition.** (a) The governing board of a watershed management organization may petition the Board of Water and Soil resources for an order changing the boundaries of a watershed district wholly within the metropolitan area, by adding new territory to the district or by transferring territory that is within the district to the jurisdiction of another watershed management organization.

(b) The petition must:

(1) describe with particularity the change in boundary requested, the territory affected, and the reasons for the change;

(2) show that the change is consistent with the purposes and requirements of sections 103B.205 to 103B.255; and

(3) identify property subject to section 103B.225.

(c) The petition must be accompanied by a written statement of concurrence in the petition from the governing body of each statutory or home rule charter city and town and each watershed management organization having jurisdiction over the territory proposed to be added or transferred.

Subd. 3. **Notice.** (a) Upon the filing of a sufficient petition, the board shall give notice of the filing of the petition by publication once each week for two successive weeks in a legal newspaper in each county affected and by mail to the county auditor of each county affected and to the chief official of each statutory or home rule charter city and township affected.

(b) The notice must describe the action proposed by the petition and invite written comments on the petition for consideration by the board. The notice must announce that any person who objects to the action proposed in the petition may submit a written request for hearing to the board within 20 days of the last publication of the notice of the filing of the petition, and that if no timely request for hearing is received the board will make a decision on the petition pursuant to this subdivision without conducting the public hearing required under chapter 103D.

Subd. 4. **Decision on petition.** (a) If a timely request for hearing is not received, the board shall make a decision on the petition without a hearing within 30 days after the last publication of the notice.

(b) If one or more timely requests for hearing are received the board shall hold a hearing on the petition and shall follow the procedures in chapter 103D regarding notice and conduct of hearings.

(c) After completing the procedures required by this subdivision, the board shall, by its findings and order, make the boundary change requested if the board determines that:

(1) the governing body of each statutory or home rule charter city and town and each watershed management organization having jurisdiction over the territory proposed to be added or transferred concurs in the petition;

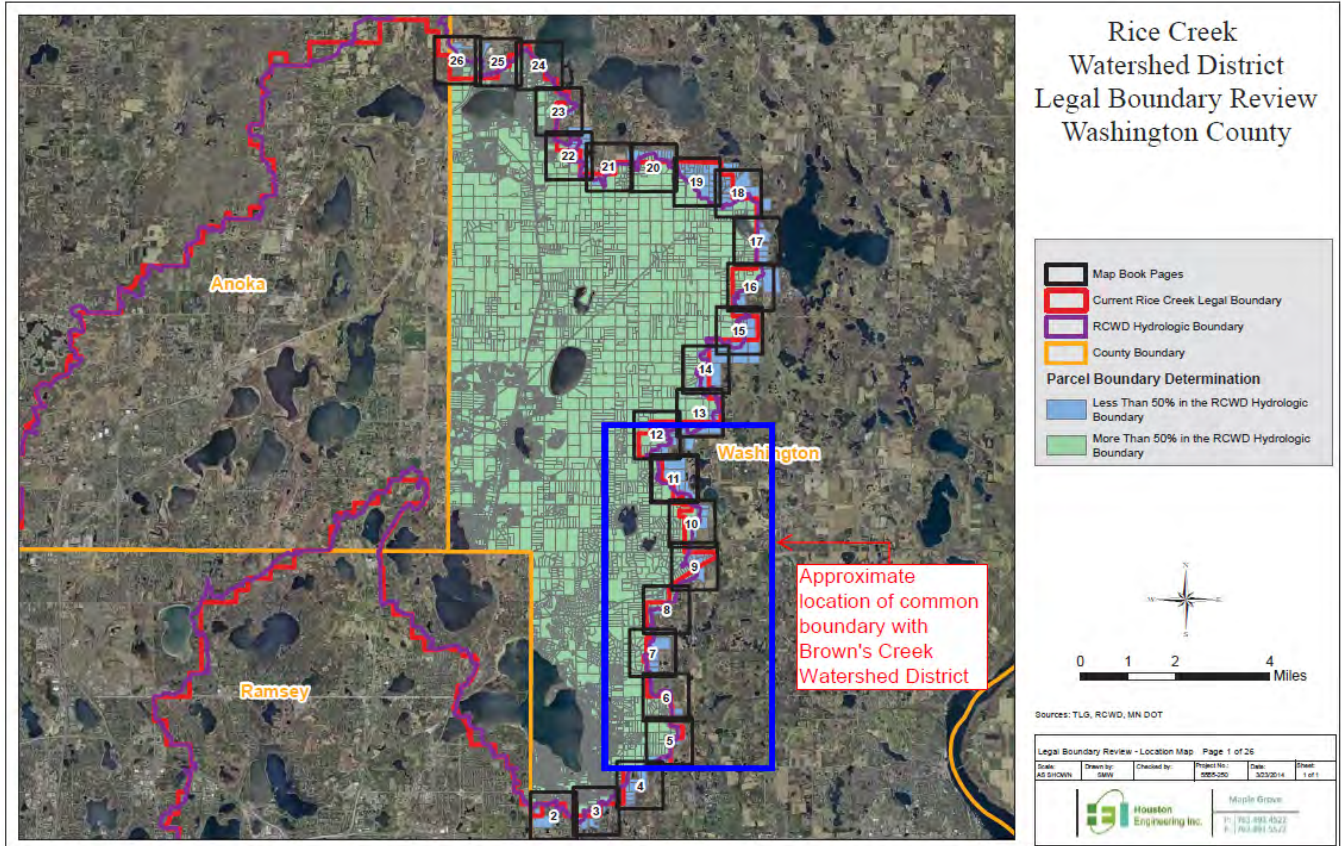
(2) the change is consistent with the purposes and requirements of sections 103B.205 to 103B.255; and

(3) the change can be accomplished in conformance with section 103B.225.

(d) The board shall file a certified copy of the findings and order with the secretary of state. The order making the change must conform to section 103B.225. The order making the change may amend the order prescribing the distribution of managers of the district.

History: 1990 c 391 art 2 s 8

Attachment 2: Map of proposed project area



Attachment 3: Boundary change process summary

Boundary Change Steps			
Step	Action	Status	Who leads
1.	Agree on the hydrologic boundary	Not initiated	RCWD and adjacent WMOs
2.	Use agreed-upon hydrologic boundary to agree on the legal boundary	Not initiated	RCWD and adjacent WMOs
3.	Create exhibits listing the parcel transfers	Not initiated	RCWD with concurrence of adjacent WMOs
4.	Prepare resolutions/letters of concurrence (103B.215 req't)*	Not initiated	RCWD to prepare draft letters and resolutions for presentation to adjacent and affected WMOs, Cities and Towns
* The petition must be accompanied by a written statement of concurrence in the petition from the governing body of each statutory or home rule charter city and town and each watershed management organization having jurisdiction over the territory proposed to be added or transferred.			
5.	Pass resolutions/approve letters of concurrence	Not initiated	Each WMO, City and Town
6.	Draft and file petition	Not initiated	RCWD
7.	Request property owner information and prepare mailing list to facilitate notice to affected property owners	Not initiated	RCWD. May be derived from County tax system based on parcel data developed in step 3. Information to be provided to BWSR for its noticing requirements (unless RCWD is requested to provide the statutory notice)
8.	BWSR follows statutory process.	Follows step 6	BWSR, with assistance from RCWD as requested

ITEMS REQUIRING BOARD ACTION

7. Consideration of Treatment of Metro Shooting and Trost Settlements in District Financial Reports. (Phil Belfiori)

MEMORANDUM

Rice Creek Watershed District

To: RCWD Board of Managers
From: Phil Belfiori, Administrator
Date: February 22, 2018
Subject: Consideration of Treatment of Metro Shooting and Trost Settlements in District Financial Reports

Background

At the March 9, 2016 Board meeting the Board passed a motion to annually review the liability of the Metro Shooting/Trost contingent liability in February of every year and take a formal vote at the Board meeting as to the remoteness of the liability. This item was discussed at the at the February 12, 2018 Board workshop and upon further discussion the Board reached consensus to place this item on the February 28, 2018 Board meeting for consideration.

District Staff and the District Engineer have confirmed that there has been no change in the facts or circumstances relevant to this issue since the Board's last consideration of this item approximately one year ago.

Board Workshop Discussion

The consensus recommendation from the February 12 Board workshop is to continue with the second option (below) for the 2017 annual financial report.

Possible Board Action

In consultation with District legal counsel, the following are three possible motion options for the boards consideration regarding treatment of the Trost/Metro Shooting liability in the 2017 financial report:

Proposed Motion: Manager _____ moves:

OPTION (*liability remote*): That the Board of Managers finds the triggering of the potential contingent future liability to be remote, and therefore not a matter to be disclosed in the 2017 financial report.

OPTION (*liability remote*): That the Board of Managers finds the triggering of the potential contingent future liability to be remote, but nevertheless concludes that it should be referenced in the 2017 financial report as follows, or as modified in the auditor's judgment:

In settlement agreements approved in 2005, the District committed that when development occurs on two tracts then owned by the Metro Shooting Center and Trost, the application of the District's wetland rules will not have the result of affording the owner for the Metro Shooting parcel fewer than 100 contiguous upland acres for development, and the owner of the Trost parcel no fewer than 45 such acres. If additional wetland replacement is required to allow for consolidation of the stated acreage, the District will bear the cost of that replacement. The District is unable either to determine at this time the likelihood of this potential future contingent liability, or to estimate the

District expense if and when the liability should arise.

OPTION (*liability not remote*): That the Board of Managers finds that it is reasonably possible that one or more events will occur so as to cause the District to incur what is now a potential contingent future liability, and therefore that this liability should be referenced in the 2017 financial report as follows, or as modified in the auditor's judgment:

In settlement agreements approved in 2005, the District committed that when development occurs on two tracts then owned by the Metro Shooting Center and Trost, the application of the District's wetland rules will not have the result of affording the owner for the Metro Shooting parcel fewer than 100 contiguous upland acres for development, and the owner of the Trost parcel no fewer than 45 such acres. If additional wetland replacement is required to allow for consolidation of the stated acreage, the District will bear the cost of that replacement. The District is unable at this time to estimate the District expense if and when the liability should arise.

ITEMS REQUIRING BOARD ACTION

8. Consider Additional Direction to Staff Regarding Legislative Communication. (Phil Belfiori)

MEMORANDUM

Rice Creek Watershed District

Date: February 21, 2018
To: RCWD Board of Managers
From: Phil Belfiori, Administrator
Beth Carreño, Communications and Outreach Coordinator
Subject: RCWD Legislative Initiative 2018 –
Legislative Update

The RCWD Board of Managers approved a legislative strategy for communicating with District legislative representatives at their February 14, 2018 Board Meeting. This approval included requesting legislative support of two issues: the **amendment of the Watershed Law to allow electronic meeting participation consistent with the Open Meeting Law and House File 2687 and Senate Companion File 2419 related to clarifying Minnesota Department of Natural Resources jurisdiction and permitting authority over the repair of existing public drainage systems.**

The approved communication also invited legislators to the MAWD Legislative Reception (Wednesday, March 7th from 5:00pm – 7:30pm) and/or Legislative Breakfast (Thursday, March 8th from 7:00am – 9:00am). Three legislators had confirmed their attendance for these events as of Wednesday, February 21, 2018.

Phil Belfiori and Beth Carreño participated in a call with Ray Bohn of MAWD on Wednesday, February 21, 2018. Mr. Bohn requested RCWD's assistance to find potential authors for an amendment to the Watershed Law (to allow for electronic meeting participation) and to encourage support of such an amendment by our District legislators.

Based on the previous discussion of the MAWD resolutions provided by the Middle Fork Crow River WD, this proposed bill would not require a watershed to implement electronic meeting participation. The bill seeks to provide watershed districts with the option.

Requested Board Action

Staff recommends that the Board approve Phil Belfiori, District Administrator, and staff to assist MAWD (if /when requested by Ray Bohn) in efforts to find authors and support for legislation to amend the Watershed Law to allow electronic meeting participation consistent with the Open Meeting Law.

PROPOSED MOTION:

Manager _____ moves to authorize Phil Belfiori, District Administrator, and staff to assist MAWD (if /when requested by Ray Bohn) in efforts to find authors and support for legislation to amend the Watershed Law to allow electronic meeting participation consistent with the Open Meeting Law.

ITEMS REQUIRING BOARD ACTION

9. Consider Check Register dated February 28, 2018, in the amount of \$396,928.84 prepared by Redpath and Company.

Rice Creek Watershed District
Check Register
February 15, 2018 - February 28, 2018
To Be Approved at the February 28, 2018 Board Meeting

Check #	Date	Payee	Description	Amount
22072	02/28/18	Allstream	Telecommunications	\$814.74
22073	02/28/18	Anoka County Property Records	Contracted Services	4,403.62
22074	02/28/18	Kyle Axtell	Employee Reimbursement	14.17
22075	02/28/18	Philip Belfiori	Employee Reimbursement	99.19
22076	02/28/18	Samantha Berger	Employee Reimbursement	16.35
22077	02/28/18	Blaine Associates, LLC	Rent	6,338.75
22078	02/28/18	Michael J. Bradley	Manager Per Diem/Expense	319.02
22079	02/28/18	Elizabeth H. Carreno	Employee Reimbursement	137.34
22080	02/28/18	Terrence Chastan-Davis	Employee Reimbursement	137.99
22081	02/28/18	City of Shoreview	Training & Education	100.00
22082	02/28/18	City of White Bear Lake	Computer Software	701.58
22083	02/28/18	Computer Revolution	Professional Services	1,282.50
22084	02/28/18	Dellwood Hills Golf Club	Permit Refund	100.00
22085	02/28/18	Delta Dental	Employee Benefits	979.65
22086	02/28/18	ECM Publishers, Inc.	Legal Notices	303.46
22087	02/28/18	Emmons & Olivier Resources, Inc.	January Engineering Expense	769.75
22088	02/28/18	Finance & Commerce	Legal Notices	50.20
22089	02/28/18	Freshwater Society	Contracted Services	500.00
22090	02/28/18	HealthPartners	Employee Benefits	8,154.58
22091	02/28/18	Holiday Credit	Vehicle Expense	397.35
22092	02/28/18	Houston Engineering, Inc.	January Engineering Expense	138,752.19
22093	02/28/18	Iron Mountain	Professional Services	55.94
22094	02/28/18	Matthew J. Kocian	Employee Reimbursement	180.22
22095	02/28/18	Marlin Business Bank	Equipment-Computer	378.98
22096	02/28/18	MN Association of Watershed Dist.	2018 Dues	7,500.00
22097	02/28/18	Metro Watershed Partners	Contracted Services	5,000.00
22098	02/28/18	Metro Conservation Districts	Training & Education	500.00
22099	02/28/19	Catherine Nester	Employee Reimbursement	2,854.44
22100	02/28/18	Office Depot	Office Supplies	276.63
22101	02/28/18	Oneka Ridge Golf Course	Construction Expense	110.10
22102	02/28/18	Premium Waters, Inc.	Meeting Supplies	96.22
22103	02/28/18	Press Publications	Legal Notices	25.86
22104	02/28/18	Patricia Preiner	Manager Per Diem/Expense	562.18
22105	02/28/18	Redpath & Company, LTD	January Accounting	6,135.28
22106	02/28/18	Regents of the University of MN	Professional Services	52,500.00
22107	02/28/18	Rinke Noonan	January Legal Fees	7,258.00
22108	02/28/18	Scandia Trucking & Excavating	Contracted Services	1,250.00
22109	02/28/18	Doug Setley	Professional Services	150.00
22110	02/28/18	Smith Partners	January Legal Fees	13,870.55
22111	02/28/18	Theresa M. Stasica	Employee Reimbursement	146.25
22112	02/28/18	Sun Life Financial	Employee Benefits	857.08
22113	02/28/18	Timesavers, Inc.	Professional Services	142.00
22114	02/28/18	Nicholas A Tomczik	Employee Reimbursement	57.63

Rice Creek Watershed District
Check Register
February 15, 2018 - February 28, 2018
To Be Approved at the February 28, 2018 Board Meeting

Check #	Date	Payee	Description	Amount
22115	02/28/18	Uline	Vehicle Expense	155.35
22116	02/28/18	United Parcel Service	Repairs & Maintenance	15.85
22117	02/28/18	Joel or Jenny Vananneyt	BMP Cost Share	16,500.00
22118	02/28/18	Verizon Wireless	Cell Phone Expense	751.49
22119	02/28/18	Vetter's Electric, Inc.	Construction Expense	3,382.00
22120	02/28/18	Steven P. Wagamon	Manager Per Diem/Expense	395.36
22121	02/28/18	Wenck Associates, Inc.	January Engineering Expense	16,882.00
22122	02/28/18	YSI, Inc.	Equipment	2,061.70
---	02/28/18	Liberty Mutual Ins.Co.- Performance Bond	Surety Release - #17-006	35,700.00
10935	02/28/18	API Group, Inc.	Surety Release - #14-067	4,100.00
10936	02/28/18	Landmark of Arden Hills, LLC	Surety Release - #14-105	5,700.00
10937	02/28/18	North Pine Aggregate, Inc.	Surety Release - #07-031	2,500.00
Dir.Dep.	02/28/18	February 28th Direct Deposits	February 28th Direct Deposits	24,609.15
Dir.Dep.	02/28/18	John Waller	Manager Per Diem/Expense	546.83
EFT	02/28/18	Card Services - Anchor Bank	January/February Credit Card	2,913.65
EFT	02/28/18	Internal Revenue Service	02/28 Federal Withholding	8,383.10
EFT	02/28/18	Minnesota Dept. of Revenue	02/28 State Withholding	1,458.46
EFT	02/28/18	Empower Retirement	02/28 Deferred Compensation	783.00
EFT	02/28/18	Empower Retirement	02/28 Health Care Savings Plan	798.24
EFT	02/28/18	PERA	02/28 PERA	5,012.87
Total				<u><u>\$396,928.84</u></u>

Rice Creek Watershed District Budget Status Report
Administrative & Program Budget
Fiscal Year 2018
2/28/2018

Combined General & Administrative	Budget Item	Account Number	Original Budget	Budget Adjustment	Current Month Expenses	Year-to-Date Expenses	Current Budget Balance	Percent of Budget
Manager	Per diems	4000	\$15,000.00	-	\$1,650.00	\$2,325.00	\$12,675.00	15.50%
	Manager expenses	4010	4,500.00	-	333.01	440.93	4,059.07	9.80%
Committees	Committee/Bd Mtg. Exp.	4800	-	-	-	-	-	-
Employees	Staff salary/taxes/benefits	4100-4140	167,383.00	-	14,409.70	28,807.70	138,575.30	17.21%
	District training & education	4265	2,649.00	-	100.00	200.00	2,449.00	7.55%
	Employee expenses	4320-4321	1,683.00	-	116.63	182.58	1,500.42	10.85%
Administration/ Office	Office/Meeting/Software	4200-4205	3,272.00	-	265.86	277.80	2,994.20	8.49%
	Printing	4208	525.00	-	-	0.00	525.00	0.00%
	Rent/Office	4210	18,146.00	-	1,418.61	2,837.22	15,308.78	15.64%
	Telecommunications	4240	4,020.00	-	285.86	571.72	3,448.28	14.22%
	Dues	4245	9,471.00	-	7,500.00	7,500.00	1,971.00	79.19%
	Publications	4250	210.00	-	0.00	35.00	175.00	16.67%
	Insurance	4270	4,795.00	-	-	0.00	4,795.00	0.00%
	Postage	4280	1,155.00	-	-	0.00	1,155.00	0.00%
	Legal Notices	4290	2,000.00	-	-	0.00	2,000.00	0.00%
	Office Equipment/Lease	4635	2,187.00	-	55.95	111.90	2,075.10	5.12%
	Bank Charges	4910	-	-	-	0.00	0.00	-
	Sub-Total-Administration:			236,996.00	-	26,135.62	43,289.85	193,706.15
Consultants	Auditor/Accounting	4330	66,880.00	-	6,135.28	6,135.28	60,744.72	9.17%
	Legal	4410	30,161.00	-	1,685.24	1,685.24	28,475.76	5.59%
	Consultants/Professional Serv.	4420	22,000.00	-	292.00	648.00	21,352.00	2.95%
	Engineering-General	4500	60,000.00	-	3,250.00	3,250.00	56,750.00	5.42%
Sub-Total-Consultants:			179,041.00	-	11,362.52	11,718.52	167,322.48	6.55%
TOTAL			\$416,037.00	-	\$37,498.14	\$55,008.37	\$361,028.63	13.22%

Rice Creek Watershed District Budget Status Report
Administrative & Program Budget
Fiscal Year 2018
2/28/2018

Revenue/Expenditures By Project	2018 Budget	2018 Year to date Revenue	2018 Current Month Expense	2018 Year to date Expense	Current Budget Balance	Percent of Budget
10 - General and Administrative	\$416,037.00	\$68,361.57	\$37,498.14	\$55,008.37	\$361,028.63	13.22%
30 - Environmental Education	136,007.00	22,605.30	13,797.23	23,741.19	112,265.81	17.46%
35 - Information Management	117,016.00	19,446.08	7,814.84	12,654.18	104,361.82	10.81%
60 - Restoration Projects	3,415,259.00	300,371.18	75,735.69	85,834.16	3,329,424.84	2.51%
70 - Regulatory	1,023,928.00	170,467.92	86,148.86	111,752.94	912,175.06	10.91%
80 - Ditch & Creek Maintenance	912,659.00	164,093.66	42,762.49	85,774.73	826,884.27	9.40%
90 - Lake & Stream Management	1,334,145.00	55,067.11	119,279.47	142,264.64	1,191,880.36	10.66%
95 - District Facilities	200,000.00	33,236.67	862.75	862.75	199,137.25	0.43%
Total District Revenue/Expenditures	\$7,555,051.00	\$833,649.49	\$383,899.47	\$517,892.96	\$7,037,158.04	6.85%

Current Fund Balances:

Fund:	Unaudited Fund Balance @ 12/31/2017	2018 Fund Balance Transfers	2018 Year to date Revenue	2018 Current Month Expense	2018 Year to date Expense	Unaudited Fund Balance @ 2/28/2018
10 - General Fund	\$123,719.58	-	\$68,361.57	\$37,498.14	\$55,008.37	\$137,072.78
30 - Environmental Education	91,565.02	-	22,605.30	13,797.23	23,741.19	90,429.13
35 - Information Management	135,691.72	-	19,446.08	7,814.84	12,654.18	142,483.62
60 - Restoration Projects	1,962,220.60	-	300,371.18	75,735.69	85,834.16	2,176,757.62
70 - Regulatory	553,067.73	-	170,467.92	86,148.86	111,752.94	611,782.71
80 - Ditch & Creek Maintenance	82,749.94	-	164,093.66	42,762.49	85,774.73	161,068.87
90 - Lake & Stream Management	3,151,491.36	-	55,067.11	119,279.47	142,264.64	3,064,293.83
95 - District Facilities	794,597.75	-	33,236.67	862.75	862.75	826,971.67
Total District Fund Balance:	\$6,895,103.70	-	\$833,649.49	\$383,899.47	\$517,892.96	\$7,210,860.23

Rice Creek Watershed District
Statement of Revenue and Expenditures - General Fund - 10
For the One Month and Two Months Ending February 28, 2018
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	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>GENERAL FUND</u>				
Revenues				
General Property Tax	\$ 33,702.25	\$ 67,404.50	404,427.00	(337,022.50)
Interest Revenue	0.00	217.74	2,513.00	(2,295.26)
Investment Interest-Surety	0.00	739.33	9,097.00	(8,357.67)
Total Revenues	33,702.25	68,361.57	416,037.00	(347,675.43)
Expenses				
Manager Per Diem	1,650.00	2,325.00	15,000.00	(12,675.00)
Manager Expense	0.00	0.00	2,000.00	(2,000.00)
Manager Travel	333.01	440.93	2,500.00	(2,059.07)
Wages-General	10,045.80	20,091.60	120,591.00	(100,499.40)
Benefits	1,950.82	3,894.12	17,406.00	(13,511.88)
PERA Expense	753.43	1,506.86	9,045.00	(7,538.14)
HSA Contributions	798.24	1,666.88	9,116.00	(7,449.12)
Payroll Taxes	861.41	1,648.24	9,225.00	(7,576.76)
Payroll Taxes-Unemployment	0.00	0.00	2,000.00	(2,000.00)
Office Supplies	103.60	103.60	2,022.00	(1,918.40)
Supplies-Field	0.00	0.00	250.00	(250.00)
Meeting Supplies/Expense	162.26	174.20	1,000.00	(825.80)
Printing	0.00	0.00	525.00	(525.00)
Rent	1,418.61	2,837.22	18,146.00	(15,308.78)
Telecommunications	285.86	571.72	4,020.00	(3,448.28)
Dues	7,500.00	7,500.00	9,471.00	(1,971.00)
Publications	0.00	35.00	210.00	(175.00)
Training & Education	100.00	200.00	2,649.00	(2,449.00)
Insurance & Bonds	0.00	0.00	4,795.00	(4,795.00)
Postage	0.00	0.00	1,155.00	(1,155.00)
Legal Notices-General	0.00	0.00	2,000.00	(2,000.00)
Staff Travel	116.63	182.58	1,683.00	(1,500.42)
Audit & Accounting	6,135.28	6,135.28	66,880.00	(60,744.72)
Professional Services-General	292.00	648.00	22,000.00	(21,352.00)
Legal Fees-General	1,685.24	1,685.24	30,161.00	(28,475.76)
Engineering-General	3,250.00	3,250.00	60,000.00	(56,750.00)
Equipment Lease	55.95	111.90	2,187.00	(2,075.10)
Total Expenses	37,498.14	55,008.37	416,037.00	(361,028.63)
Total Revenues Over/(Under) Expenditures - General Fund	(3,795.89)	13,353.20	0.00	13,353.20
Total Revenue Over/(Under) Expenditure	\$ (3,795.89)	13,353.20	0.00	13,353.20

Rice Creek Watershed District
Statement of Revenue and Expenditures - Environmental Education - 30
For the One Month and Two Months Ending February 28, 2018
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	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>ENVIRONMENTAL EDUCATION MANAGEMENT - 30-00</u>				
Revenues				
General Property Tax	\$ 7,927.83	\$ 15,855.66	95,134.00	(79,278.34)
Interest Income	0.00	71.14	822.00	(750.86)
Miscellaneous Income	0.00	3.50	0.00	3.50
Total Revenues	7,927.83	15,930.30	95,956.00	(80,025.70)
Expenses				
Wages-Environmental	4,997.58	9,995.15	59,384.00	(49,388.85)
Benefits-Environmental	938.19	1,873.22	7,879.00	(6,005.78)
PERA-Environmental	374.82	749.64	4,454.00	(3,704.36)
Payroll Taxes-Environmental	381.35	762.71	4,544.00	(3,781.29)
Office Supplies	25.98	25.98	867.00	(841.02)
Printing	0.00	0.00	225.00	(225.00)
Rent	595.21	1,190.42	7,777.00	(6,586.58)
Telecommunications	209.03	298.66	1,723.00	(1,424.34)
Publications	0.00	0.00	90.00	(90.00)
Training & Education	9.67	9.67	1,135.00	(1,125.33)
Insurance and Bonds	0.00	0.00	2,055.00	(2,055.00)
Postage	0.00	0.00	495.00	(495.00)
Staff Travel	137.34	184.21	721.00	(536.79)
Professional Services	0.00	0.00	825.00	(825.00)
Legal Fees	0.00	0.00	600.00	(600.00)
Engineering-Environ.	0.00	0.00	1,245.00	(1,245.00)
Equipment-Environmental	0.00	0.00	1,000.00	(1,000.00)
Equipment-Lease	23.47	46.94	937.00	(890.06)
Total Expenses	7,692.64	15,136.60	95,956.00	(80,819.40)
Total Revenues Over/(Under)				
Expenditures - Environmental Education	235.19	793.70	0.00	793.70
<u>WATER EDUCATION & OUTREACH - 30-02</u>				
Revenues				
General Property Tax	2,504.17	5,008.34	30,050.00	(25,041.66)
Total Revenues	2,504.17	5,008.34	30,050.00	(25,041.66)
Expenses				
Meeting Supplies/Expense	0.00	0.00	2,000.00	(2,000.00)
Printing	0.00	0.00	3,000.00	(3,000.00)
Training & Education	104.59	2,604.59	20,000.00	(17,395.41)
Contracted Services	5,000.00	5,000.00	4,000.00	1,000.00
Legal Fees	0.00	0.00	1,050.00	(1,050.00)
Total expenses	5,104.59	7,604.59	30,050.00	(22,445.41)
Total Revenues Over/(Under)				
Expenditures - Water Educ. & Outreach	(2,600.42)	(2,596.25)	0.00	(2,596.25)

Rice Creek Watershed District
Statement of Revenue and Expenditures - Environmental Education - 30
For the One Month and Two Months Ending February 28, 2018
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	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>OUTREACH PARTNERSHIP - 30-04</u>				
Revenues				
General Property Tax	833.33	1,666.66	10,000.00	(8,333.34)
Total Revenues	833.33	1,666.66	10,000.00	(8,333.34)
Expenses				
Meeting Supplies	0.00	0.00	3,000.00	(3,000.00)
Training & Education	500.00	500.00	3,000.00	(2,500.00)
Contracted Services	500.00	500.00	4,000.00	(3,500.00)
Total expenses	1,000.00	1,000.00	10,000.00	(9,000.00)
Total Revenues Over/(Under)				
Expenditures - Outreach	(166.67)	666.66	0.00	666.66
Total Revenue Over/(Under) Expenditure	\$ (2,531.90)	\$ (1,135.89)	0.00	(1,135.89)

Rice Creek Watershed District
Statement of Revenue and Expenditures - Information & Technology Management - 35
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>INFORMATION MANAGEMENT - 35-00</u>				
Revenues				
General Property Tax	\$ 7,184.08	\$ 14,368.16	86,209.00	(71,840.84)
Interest Revenue	0.00	61.26	707.00	(645.74)
Total Revenues	7,184.08	14,429.42	86,916.00	(72,486.58)
Expenses				
Wages-Information Mgmt.	2,661.53	5,289.90	31,505.00	(26,215.10)
Benefits-Information Mgmt.	66.18	131.96	4,509.00	(4,377.04)
PERA-Information Mgmt.	199.61	396.74	2,365.00	(1,968.26)
Payroll Taxes-Information Mgmt	199.41	396.23	2,410.00	(2,013.77)
Office Supplies	3.29	3.29	96.00	(92.71)
Computer Software	701.58	701.58	1,800.00	(1,098.42)
Printing	0.00	0.00	25.00	(25.00)
Rent	75.43	150.86	864.00	(713.14)
Telecommunications	11.36	22.72	191.00	(168.28)
Publications	0.00	0.00	10.00	(10.00)
Training & Education	0.00	0.00	126.00	(126.00)
Insurance and Bonds	0.00	0.00	228.00	(228.00)
Postage	0.00	0.00	55.00	(55.00)
Staff Travel	0.00	0.00	80.00	(80.00)
Professional Services	1,282.50	2,565.00	25,000.00	(22,435.00)
Equipment-Computer	378.98	757.96	17,548.00	(16,790.04)
Equipment Lease	2.97	5.94	104.00	(98.06)
Total Expenses	5,582.84	10,422.18	86,916.00	(76,493.82)
Total Revenues Over/(Under)				
Expenditures - Information Management	1,601.24	4,007.24	0.00	4,007.24
<u>INFORMATION MANAGEMENT - 35-05</u>				
Revenues				
General Property Tax	2,508.33	5,016.66	30,100.00	(25,083.34)
Total Revenues	2,508.33	5,016.66	30,100.00	(25,083.34)
Expenses				
Engineering	2,232.00	2,232.00	30,100.00	(27,868.00)
Total expenses	2,232.00	2,232.00	30,100.00	(27,868.00)
Total Revenues Over/(Under)				
Expenditures - Information Mgmt.	276.33	2,784.66	0.00	2,784.66
Total Revenue Over/(Under) Expenditure	\$ 1,877.57	\$ 6,791.90	0.00	6,791.90

Rice Creek Watershed District
Statement of Revenue and Expenditures - Restoration Projects - 60
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>RESTORATION PROJECT MANAGEMENT - 60-00</u>				
Revenues				
General Property Tax	\$ 11,886.25	\$ 23,772.50	142,635.00	(118,862.50)
Interest Revenue	0.00	1,787.02	20,624.00	(18,836.98)
Total Revenues	11,886.25	25,559.52	163,259.00	(137,699.48)
Expenses				
Wages-Restoration Projects	8,625.25	16,423.86	100,482.00	(84,058.14)
Benefits-Restoration Projects	473.65	945.03	12,864.00	(11,918.97)
PERA-Restoration Projects	646.90	1,265.58	7,505.00	(6,239.42)
Payroll Taxes-Restoration	640.03	1,251.33	7,688.00	(6,436.67)
Office Supplies	79.05	79.05	770.00	(690.95)
Printing	0.00	0.00	200.00	(200.00)
Rent	428.50	857.00	6,913.00	(6,056.00)
Telecommunications	119.73	239.46	1,531.00	(1,291.54)
Publications	0.00	0.00	80.00	(80.00)
Training & Education	0.00	0.00	1,009.00	(1,009.00)
Insurance and Bonds	0.00	0.00	1,827.00	(1,827.00)
Postage	0.00	0.00	440.00	(440.00)
Staff Travel	14.17	30.52	641.00	(610.48)
Vehciel Expense	0.00	0.00	8,437.00	(8,437.00)
Professional Services	0.00	0.00	2,000.00	(2,000.00)
Education & Communication	0.00	0.00	2,500.00	(2,500.00)
Legal Fees	0.00	0.00	1,000.00	(1,000.00)
Engineering	0.00	0.00	6,039.00	(6,039.00)
Equipment	0.00	0.00	500.00	(500.00)
Equipment Lease	16.90	33.80	833.00	(799.20)
Total Expenses	11,044.18	21,125.63	163,259.00	(142,133.37)
Total Revenues Over/(Under)				
Expenditures - Restoration Management	842.07	4,433.89	0.00	4,433.89
<u>RICE CREEK MEANDER RESTORATION - 60-03</u>				
Revenues				
General Property Tax	25,000.00	50,000.00	300,000.00	(250,000.00)
Total Revenues	25,000.00	50,000.00	300,000.00	(250,000.00)
Expenses				
Legal Fees	635.91	635.91	5,000.00	(4,364.09)
Engineering-Rice Creek Meander	769.75	769.75	10,000.00	(9,230.25)
Construction-Rice Crk. Meander	0.00	0.00	285,000.00	(285,000.00)
Total expenses	1,405.66	1,405.66	300,000.00	(298,594.34)
Total Revenues Over/(Under)				
Expenditures - Rice Creek Meander	23,594.34	48,594.34	0.00	48,594.34

Rice Creek Watershed District
Statement of Revenue and Expenditures - Restoration Projects - 60
For the One Month and Two Months Ending February 28, 2018
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	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>STORMWATER REMEDIATION - 60-15</u>				
Revenues				
General Property Tax	25,000.00	50,000.00	300,000.00	(250,000.00)
Total Revenues	25,000.00	50,000.00	300,000.00	(250,000.00)
Expenses				
Legal Notices	1,257.06	1,257.06	2,000.00	(742.94)
Legal Fees	0.00	0.00	500.00	(500.00)
Engineering	6,710.75	6,710.75	22,500.00	(15,789.25)
Construction	0.00	0.00	275,000.00	(275,000.00)
Total expenses	7,967.81	7,967.81	300,000.00	(292,032.19)
Total Revenues Over/(Under)				
Expenditures - Stormwater Redmediatio	17,032.19	42,032.19	0.00	42,032.19
<u>COLUMBUS RMP - 60-17</u>				
Revenues				
General Property Tax	833.33	1,666.66	10,000.00	(8,333.34)
Total Revenues	833.33	1,666.66	10,000.00	(8,333.34)
Expenses				
Legal Fees	0.00	0.00	1,000.00	(1,000.00)
Engineering	151.75	151.75	9,000.00	(8,848.25)
Total expenses	151.75	151.75	10,000.00	(9,848.25)
Total Revenues Over/(Under)				
Expenditures - Columbus RMP	681.58	1,514.91	0.00	1,514.91
<u>JD4 RMP IMPLEMENTATION - 60-18</u>				
Revenues				
General Property Tax	9,333.33	18,666.66	112,000.00	(93,333.34)
Total Revenues	9,333.33	18,666.66	112,000.00	(93,333.34)
Expenses				
Telecommunications	17.02	34.04	1,000.00	(965.96)
Contracted Services-JD4 RMP	0.00	0.00	40,000.00	(40,000.00)
Legal Fees	0.00	0.00	4,000.00	(4,000.00)
Engineering	2,444.48	2,444.48	67,000.00	(64,555.52)
Total expenses	2,461.50	2,478.52	112,000.00	(109,521.48)
Total Revenues Over/(Under)				
Expenditures - JD4 RMP Implement.	6,871.83	16,188.14	0.00	16,188.14

Rice Creek Watershed District
Statement of Revenue and Expenditures - Restoration Projects - 60
For the One Month and Two Months Ending February 28, 2018
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	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>DISTRICT-WIDE SWMM MODEL-PHASE 2 - 60-19</u>				
Revenues				
General Property Tax	4,833.33	9,666.66	58,000.00	(48,333.34)
Total Revenues	4,833.33	9,666.66	58,000.00	(48,333.34)
Expenses				
Legal Fees	0.00	0.00	2,000.00	(2,000.00)
Engineering-SWMM	3,263.79	3,263.79	56,000.00	(52,736.21)
Total expenses	3,263.79	3,263.79	58,000.00	(54,736.21)
Total Revenues Over/(Under)				
Expenditures - District-Wide SWMM	1,569.54	6,402.87	0.00	6,402.87
 <u>ACD 53/62 RMP IMPLEMENTATION - 60-21</u>				
Revenues				
General Property Tax	1,666.67	3,333.34	20,000.00	(16,666.66)
Total Revenues	1,666.67	3,333.34	20,000.00	(16,666.66)
Expenses				
Legal Notices	0.00	0.00	500.00	(500.00)
Legal Fees	1,962.75	1,962.75	1,500.00	462.75
Engineering	4,293.52	4,293.52	18,000.00	(13,706.48)
Total expenses	6,256.27	6,256.27	20,000.00	(13,743.73)
Total Revenues Over/(Under)				
Expenditures - ACD 53/62 RMP Impleme	(4,589.60)	(2,922.93)	0.00	(2,922.93)
 <u>LINO LAKES RMP IMPLEMENTATION - 60-22</u>				
Revenues				
General Property Tax	1,666.67	3,333.34	20,000.00	(16,666.66)
Total Revenues	1,666.67	3,333.34	20,000.00	(16,666.66)
Expenses				
Legal Fees	1,962.75	1,962.75	3,000.00	(1,037.25)
Engineering	0.00	0.00	17,000.00	(17,000.00)
Total expenses	1,962.75	1,962.75	20,000.00	(18,037.25)
Total Revenues Over/(Under)				
Expenditures - Lino Lakes RMP	(296.08)	1,370.59	0.00	1,370.59

Rice Creek Watershed District
Statement of Revenue and Expenditures - Restoration Projects - 60
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	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>SW URBAN LAKE FLOOD MGMT. IMPLEMENTATION - 60-24</u>				
Revenues				
General Property Tax	34,005.83	68,011.66	408,070.00	(340,058.34)
Total Revenues	34,005.83	68,011.66	408,070.00	(340,058.34)
Expenses				
Postage	0.00	0.00	500.00	(500.00)
Legal Notices	0.00	0.00	2,000.00	(2,000.00)
Legal Fees	1,271.28	1,271.28	27,500.00	(26,228.72)
Engineering	4,265.50	4,265.50	150,000.00	(145,734.50)
Construction	0.00	0.00	350,000.00	(350,000.00)
Total expenses	5,536.78	5,536.78	530,000.00	(524,463.22)
Total Revenues Over/(Under)				
Expenditures - Southwest Urban Lake	28,469.05	62,474.88	(121,930.00)	184,404.88
<u>JD 4/ACD 15 WMD - 60-25</u>				
Revenues				
JD 4-Special Assessments	2,083.33	4,166.66	25,000.00	(20,833.34)
Income-ROW Charges	0.00	650.42	0.00	650.42
Total Revenues	2,083.33	4,817.08	25,000.00	(20,182.92)
Expenses				
Contracted Services	0.00	0.00	15,000.00	(15,000.00)
Engineering Expense	0.00	0.00	5,000.00	(5,000.00)
Construction-JD4	0.00	0.00	5,000.00	(5,000.00)
Total expenses	0.00	0.00	25,000.00	(25,000.00)
Total Revenues Over/(Under)				
Expenditures - JD 4/ACD 15 WMD	2,083.33	4,817.08	0.00	4,817.08
<u>PURCHASE OF WETLAND CREDITS - 60-27</u>				
Revenues				
General Property Tax	4,166.67	8,333.34	50,000.00	(41,666.66)
Total Revenues	4,166.67	8,333.34	50,000.00	(41,666.66)
Expenses				
Legal Fees	1,964.19	1,964.19	3,000.00	(1,035.81)
Engineering	10,135.75	10,135.75	37,000.00	(26,864.25)
Wetland Credits	0.00	0.00	10,000.00	(10,000.00)
Total expenses	12,099.94	12,099.94	50,000.00	(37,900.06)
Total Revenues Over/(Under)				
Expenditures - Wetland Credits	(7,933.27)	(3,766.60)	0.00	(3,766.60)

Rice Creek Watershed District
Statement of Revenue and Expenditures - Restoration Projects - 60
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	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>ACD 53-62 WMD - 60-28</u>				
Revenues				
General Property Tax	23,916.67	47,833.34	287,000.00	(239,166.66)
Income-ROW Charges	0.00	816.24	0.00	816.24
Total Revenues	23,916.67	48,649.58	287,000.00	(238,350.42)
Expenses				
Legal Fees	86.00	86.00	3,000.00	(2,914.00)
Engineering Expense	686.00	686.00	35,000.00	(34,314.00)
Construction Expense	0.00	0.00	249,000.00	(249,000.00)
Total expenses	772.00	772.00	287,000.00	(286,228.00)
Total Revenues Over/(Under)				
Expenditures - ACD 53-62 WMD	23,144.67	47,877.58	0.00	47,877.58
<u>CLEAR LAKE WATER QUALITY - 60-29</u>				
Revenues				
General Property Tax	4,166.67	8,333.34	50,000.00	(41,666.66)
Total Revenues	4,166.67	8,333.34	50,000.00	(41,666.66)
Expenses				
Contracted Services	0.00	0.00	10,000.00	(10,000.00)
Construction Expense	0.00	0.00	40,000.00	(40,000.00)
Total expenses	0.00	0.00	50,000.00	(50,000.00)
Total Revenues Over/(Under)				
Expenditures - Clear Lake	4,166.67	8,333.34	0.00	8,333.34
<u>HANSEN PARK - 60-30</u>				
Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Supplies-Field	0.00	0.00	1,000.00	(1,000.00)
Printing	0.00	0.00	500.00	(500.00)
Training & Education	0.00	0.00	20,000.00	(20,000.00)
Professional Services	0.00	0.00	3,500.00	(3,500.00)
Legal Fees	0.00	0.00	5,000.00	(5,000.00)
Engineering Expense	16,372.97	16,372.97	60,000.00	(43,627.03)
Construction Expense	0.00	0.00	910,000.00	(910,000.00)
Total expenses	16,372.97	16,372.97	1,000,000.00	(983,627.03)
Total Revenues Over/(Under)				
Expenditures - Hanson Park	(16,372.97)	(16,372.97)	(1,000,000.00)	983,627.03

Rice Creek Watershed District
Statement of Revenue and Expenditures - Restoration Projects - 60
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>MIRROR POND - 60-31</u>				
Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Legal Fees	0.00	0.00	2,500.00	(2,500.00)
Engineering Expense	0.00	0.00	32,500.00	(32,500.00)
Construction Expense	0.00	0.00	265,000.00	(265,000.00)
Total expenses	0.00	0.00	300,000.00	(300,000.00)
Total Revenues Over/(Under)				
Expenditures - Mirror Pond	0.00	0.00	(300,000.00)	300,000.00
 <u>ACD 53/62 BRANCH 2 REPAIR - 60-32</u>				
Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Legal Expense	0.00	0.00	5,000.00	(5,000.00)
Engineering Expense	6,440.29	6,440.29	20,000.00	(13,559.71)
Construction Expense	0.00	0.00	165,000.00	(165,000.00)
Total expenses	6,440.29	6,440.29	190,000.00	(183,559.71)
Total Revenues Over/(Under)				
Expenditures - ACD 53/62	(6,440.29)	(6,440.29)	(190,000.00)	183,559.71
Total Revenue Over/(Under) Expenditure	\$ 72,823.06	\$ 214,537.02	(1,611,930.00)	1,826,467.02

Rice Creek Watershed District
Statement of Revenue and Expenditures - Regulatory Projects - 70
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>REGULATORY PROJECT MANAGEMENT - 70-00</u>				
Revenues				
General Property Tax	\$ 31,020.42	\$ 62,040.84	372,245.00	(310,204.16)
Interest Revenue	0.00	535.74	6,183.00	(5,647.26)
Total Revenues	31,020.42	62,576.58	378,428.00	(315,851.42)
Expenses				
Wages-Regulatory	16,999.03	34,173.61	203,327.00	(169,153.39)
Wages - Interns	0.00	0.00	2,904.00	(2,904.00)
Benefits-Regulatory	3,151.91	6,292.59	24,856.00	(18,563.41)
PERA-Regulatory	1,274.93	2,529.24	15,250.00	(12,720.76)
Payroll Taxes-Regulatory	1,257.68	2,494.38	15,777.00	(13,282.62)
Office Supplies	92.39	92.39	2,985.00	(2,892.61)
Supplies-Field	17.99	17.99	0.00	17.99
Printing	0.00	0.00	775.00	(775.00)
Rent	2,117.14	4,234.28	26,787.00	(22,552.72)
Telecommunications	501.06	1,002.12	5,934.00	(4,931.88)
Publications	0.00	0.00	310.00	(310.00)
Training & Education	390.00	390.00	3,911.00	(3,521.00)
Insurance and Bonds	0.00	0.00	7,078.00	(7,078.00)
Postage	0.00	0.00	1,705.00	(1,705.00)
Staff Travel-Regulatory	36.84	45.02	2,485.00	(2,439.98)
Vehicle Expense	49.67	81.67	3,437.00	(3,355.33)
Professional Services	55.94	111.88	50,000.00	(49,888.12)
Legal Fees	0.00	0.00	1,500.00	(1,500.00)
Engineering-Regulatory	0.00	0.00	5,678.00	(5,678.00)
Equipment	0.00	0.00	500.00	(500.00)
Equipment Lease	83.49	166.98	3,229.00	(3,062.02)
Total Expenses	26,028.07	51,632.15	378,428.00	(326,795.85)
Total Revenues Over/(Under)				
Expenditures - Regulatory Management	4,992.35	10,944.43	0.00	10,944.43
 <u>RULE/PLAN REVISIONS - PERMIT GUIDANCE - 70-01</u>				
Revenues				
General Property Tax	4,791.67	9,583.34	57,500.00	(47,916.66)
Total Revenues	4,791.67	9,583.34	57,500.00	(47,916.66)
Expenses				
Legal Fees	0.00	0.00	7,000.00	(7,000.00)
Engineering	0.00	0.00	50,500.00	(50,500.00)
Total expenses	0.00	0.00	57,500.00	(57,500.00)
Total Revenues Over/(Under)				
Expenditures - Rule/Plan Revisions	4,791.67	9,583.34	0.00	9,583.34

Rice Creek Watershed District
Statement of Revenue and Expenditures - Regulatory Projects - 70
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>PERMIT REVIEW - 70-03</u>				
Revenues				
General Property Tax	20,854.00	41,708.00	250,248.00	(208,540.00)
Permit Fees	50.00	26,600.00	157,752.00	(131,152.00)
Total Revenues	20,904.00	68,308.00	408,000.00	(339,692.00)
Expenses				
Legal Notice	0.00	0.00	1,000.00	(1,000.00)
Legal Fees	3,254.82	3,254.82	36,000.00	(32,745.18)
Engineering-Permit Review	42,665.98	42,665.98	371,000.00	(328,334.02)
Total expenses	45,920.80	45,920.80	408,000.00	(362,079.20)
Total Revenues Over/(Under)				
Expenditures - Permit Review	(25,016.80)	22,387.20	0.00	22,387.20
<u>EARLY COORDINATION/ROAD AUTHORITY - 70-07</u>				
Revenues				
General Property Tax	6,666.67	13,333.34	80,000.00	(66,666.66)
Total Revenues	6,666.67	13,333.34	80,000.00	(66,666.66)
Expenses				
Legal Fees	0.00	0.00	5,000.00	(5,000.00)
Engineering-Road Auth.	8,317.25	8,317.25	75,000.00	(66,682.75)
Total expenses	8,317.25	8,317.25	80,000.00	(71,682.75)
Total Revenues Over/(Under)				
Expenditures - Early Coordination	(1,650.58)	5,016.09	0.00	5,016.09
<u>WATERSHED MANAGEMENT - 70-08</u>				
Revenues				
General Property Tax	8,333.33	16,666.66	100,000.00	(83,333.34)
Total Revenues	8,333.33	16,666.66	100,000.00	(83,333.34)
Expenses				
Legal Fees	0.00	0.00	7,000.00	(7,000.00)
Engineering-Watershed Mgmt.	5,882.74	5,882.74	93,000.00	(87,117.26)
Total expenses	5,882.74	5,882.74	100,000.00	(94,117.26)
Total Revenues Over/(Under)				
Expenditures - Watershed Mgmt.	2,450.59	10,783.92	0.00	10,783.92
Total Revenue Over/(Under) Expenditure	\$ (14,432.77)	\$ 58,714.98	0.00	58,714.98

Rice Creek Watershed District
Statement of Revenue and Expenditures - Ditch & Creek Maintenance - 80
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

DITCH & CREEK MANAGEMENT - 80-00

Revenues				
General Property Tax	\$ 17,943.75	\$ 35,887.50	215,325.00	(179,437.50)
Interest Revenue	0.00	477.51	5,512.00	(5,034.49)
Miscellaneous Income	0.00	0.00	5,000.00	(5,000.00)
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Total Revenues	17,943.75	36,365.01	225,837.00	(189,471.99)
Expenses				
Wages-Ditch & Creek Maint.	10,934.20	21,812.91	129,132.00	(107,319.09)
Benefits-Ditch & Creek Maint.	1,085.58	2,165.63	20,715.00	(18,549.37)
PERA-Ditch & Creek Maint.	820.07	1,635.98	9,664.00	(8,028.02)
Payroll Taxes-Ditch & Creek	787.18	1,570.11	9,879.00	(8,308.89)
Office Supplies	69.15	69.15	1,830.00	(1,760.85)
Printing	0.00	0.00	475.00	(475.00)
Rent	1,041.46	2,082.92	16,418.00	(14,335.08)
Telecommunications	455.63	751.28	3,637.00	(2,885.72)
Publications	0.00	0.00	190.00	(190.00)
Training & Education	0.00	0.00	2,397.00	(2,397.00)
Insurance and Bonds	0.00	0.00	4,338.00	(4,338.00)
Postage	0.00	0.00	1,045.00	(1,045.00)
Staff Travel	0.00	0.00	1,523.00	(1,523.00)
Vehicle Expense	298.01	588.07	8,437.00	(7,848.93)
Professional Services	0.00	0.00	8,000.00	(8,000.00)
Legal Fees-Ditch & Creek	0.00	0.00	5,000.00	(5,000.00)
Engineering-Ditch & Creek	0.00	0.00	10,000.00	(10,000.00)
Equipment	0.00	0.00	2,000.00	(2,000.00)
Equipment Lease	41.07	82.14	1,979.00	(1,896.86)
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Total Expenses	15,532.35	30,758.19	236,659.00	(205,900.81)
Total Revenues Over/(Under)				
Expenditures - Ditch & Creek Mgmt.	2,411.40	5,606.82	(10,822.00)	16,428.82

DITCHES - GENERAL - 80-02

Revenues				
General Property Tax	26,421.92	52,843.84	317,063.00	(264,219.16)
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Total Revenues	26,421.92	52,843.84	317,063.00	(264,219.16)
Expenses				
Supplies-Field	378.54	378.54	5,000.00	(4,621.46)
Vehicle Expense	155.35	155.35	30,000.00	(29,844.65)
Professional Services	0.00	0.00	1,000.00	(1,000.00)
Contracted Services-General	1,250.00	1,250.00	247,000.00	(245,750.00)
Legal Fees	2,102.19	2,102.19	10,000.00	(7,897.81)
Engineering Fees	3,649.00	3,649.00	20,000.00	(16,351.00)
Construction Expense	0.00	0.00	20,000.00	(20,000.00)
Equipment	0.00	27,561.05	0.00	27,561.05
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Total expenses	7,535.08	35,096.13	333,000.00	(297,903.87)
Total Revenues Over/(Under)				
Expenditures - Ditches - General	18,886.84	17,747.71	(15,937.00)	33,684.71

Rice Creek Watershed District
Statement of Revenue and Expenditures - Ditch & Creek Maintenance - 80
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

REPAIR REPORTS - 80-03

Revenues				
General Propety Tax	6,585.67	13,171.34	79,028.00	(65,856.66)
Total Revenues	6,585.67	13,171.34	79,028.00	(65,856.66)
Expenses				
Legal Notices	0.00	0.00	3,000.00	(3,000.00)
Legal Fees	709.50	709.50	15,000.00	(14,290.50)
Engineering	1,762.75	1,762.75	65,000.00	(63,237.25)
Total expenses	2,472.25	2,472.25	83,000.00	(80,527.75)
Total Revenues Over/(Under)				
Expenditures - Repair Reports	4,113.42	10,699.09	(3,972.00)	14,671.09

JD-2/Hugo - 80-15

Revenues				
General Property Tax	3,173.83	6,347.66	38,086.00	(31,738.34)
Total Revenues	3,173.83	6,347.66	38,086.00	(31,738.34)
Expenses				
Contracted Services	0.00	0.00	40,000.00	(40,000.00)
Total expenses	0.00	0.00	40,000.00	(40,000.00)
Total Revenues Over/(Under)				
Expenditures - JD-2/Hugo	3,173.83	6,347.66	(1,914.00)	8,261.66

ACD 10-22-32 WMD - 80-17

Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Engineering Expense	65.00	65.00	0.00	65.00
Total expenses	65.00	65.00	0.00	65.00
Total Revenues Over/(Under)				
Expenditures - 10-22-32	(65.00)	(65.00)	0.00	(65.00)

Rice Creek Watershed District
Statement of Revenue and Expenditures - Ditch & Creek Maintenance - 80
For the One Month and Two Months Ending February 28, 2018
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ACD 31 WMD - 80-18

Revenues				
Special Assessments	3,023.08	6,046.16	36,277.00	(30,230.84)
Income-ROW Charges	0.00	5,970.00	0.00	5,970.00
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Total Revenues	3,023.08	12,016.16	36,277.00	(24,260.84)
Expenses				
Contracted Services	2,201.81	2,201.81	5,000.00	(2,798.19)
Engineer Expense	65.00	65.00	1,000.00	(935.00)
Construction Expense	3,382.00	3,382.00	4,000.00	(618.00)
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Total expenses	5,648.81	5,648.81	10,000.00	(4,351.19)
Total Revenues Over/(Under)				
Expenditures - ACD 31 WMD	(2,625.73)	6,367.35	26,277.00	(19,909.65)
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ACD 46 WMD - 80-19

Revenues				
Special Assessments	4,135.58	15,343.16	49,627.00	(34,283.84)
Income-ROW Charges	216.33	216.33	0.00	216.33
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Total Revenues	4,351.91	15,559.49	49,627.00	(34,067.51)
Expenses				
Contracted Services	2,201.81	2,201.81	0.00	2,201.81
Legal Fees	0.00	0.00	1,000.00	(1,000.00)
Engineering Expense	0.00	0.00	1,000.00	(1,000.00)
Construction Expense	0.00	0.00	8,000.00	(8,000.00)
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Total expenses	2,201.81	2,201.81	10,000.00	(7,798.19)
Total Revenues Over/(Under)				
Expenditures - ACD 46 WMD	2,150.10	13,357.68	39,627.00	(26,269.32)
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WJD 2 BRANCH 1/2 REPAIR - 80-20

Revenues				
Special Assessments	13,895.08	27,790.16	166,741.00	(138,950.84)
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Total Revenues	13,895.08	27,790.16	166,741.00	(138,950.84)
Expenses				
Legal Notices	25.86	251.21	0.00	251.21
Legal Fees	2,107.00	2,107.00	8,000.00	(5,893.00)
Engineering Expense	7,174.33	7,174.33	40,000.00	(32,825.67)
Construction Expense	0.00	0.00	102,000.00	(102,000.00)
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Total expenses	9,307.19	9,532.54	150,000.00	(140,467.46)
Total Revenues Over/(Under)				
Expenditures - WJD 2	4,587.89	18,257.62	16,741.00	1,516.62
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Rice Creek Watershed District
Statement of Revenue and Expenditures - Ditch & Creek Maintenance - 80
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AWJD 3 MT BR 3 REPAIR - 80-21

Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Legal Fees	0.00	0.00	5,000.00	(5,000.00)
Engineering Expense	0.00	0.00	45,000.00	(45,000.00)
Total expenses	0.00	0.00	50,000.00	(50,000.00)
Total Revenues Over/(Under)				
Expenditures - AWJD 3	0.00	0.00	(50,000.00)	50,000.00
Total Revenue Over/(Under) Expenditure	\$ 32,632.75	\$ 78,318.93	0.00	78,318.93

Rice Creek Watershed District
Statement of Revenue and Expenditures - Lake & Stream - 90
For the One Month and Two Months Ending February 28, 2018
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LAKE & STREAM MANAGEMENT - 90-00

Revenues				
General Property Tax	\$ 21,757.33	\$ 43,514.66	261,088.00	(217,573.34)
Interest Income	0.00	698.12	8,057.00	(7,358.88)
Miscellaneous Income	0.00	0.97	0.00	0.97
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Total Revenues	21,757.33	44,213.75	269,145.00	(224,931.25)
Expenses				
Wages-Lake & Stream Mgmt.	15,330.75	29,954.61	178,094.00	(148,139.39)
Wages-Interns	0.00	0.00	5,896.00	(5,896.00)
Benefits-Lake & Stream Mgmt.	857.28	1,711.04	21,273.00	(19,561.96)
PERA-Lake & Stream Mgmt.	1,149.78	2,246.54	13,306.00	(11,059.46)
Payroll Taxes-Lake & Stream	1,142.61	2,231.13	14,075.00	(11,843.87)
Office Supplies	50.77	50.77	1,059.00	(1,008.23)
Printing-Lake & Stream	0.00	0.00	275.00	(275.00)
Rent	662.40	1,324.80	9,505.00	(8,180.20)
Telecommunications	168.52	337.06	2,106.00	(1,768.94)
Publications	0.00	0.00	110.00	(110.00)
Training & Education	0.00	0.00	1,388.00	(1,388.00)
Insurance and Bonds	0.00	0.00	2,512.00	(2,512.00)
Postage	0.00	0.00	605.00	(605.00)
Staff Travel	14.72	14.72	882.00	(867.28)
Vehicle Expense	0.00	32.00	8,437.00	(8,405.00)
Education & Communication	0.00	0.00	10,000.00	(10,000.00)
Legal Fees	0.00	0.00	1,000.00	(1,000.00)
Engineering	0.00	0.00	5,000.00	(5,000.00)
Equipment	0.00	0.00	1,500.00	(1,500.00)
Equipment Lease	26.13	52.26	1,146.00	(1,093.74)
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Total Expenses	19,402.96	37,954.93	278,169.00	(240,214.07)
Total Revenues Over/(Under)				
Expenditures - Lake & Stream Mgmt.	2,354.37	6,258.82	(9,024.00)	15,282.82

BMP COST-SHARE PROGRAM - 90-01

Revenues				
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Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Contracted Services	0.00	0.00	55,000.00	(55,000.00)
Engineering-BMP Cost-Share	0.00	0.00	5,000.00	(5,000.00)
Construction-BMP Costshare	16,500.00	16,500.00	102,000.00	(85,500.00)
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Total expenses	16,500.00	16,500.00	162,000.00	(145,500.00)
Total Revenues Over/(Under)				
Expenditures - BMP Cost-Share Program	(16,500.00)	(16,500.00)	(162,000.00)	145,500.00

Rice Creek Watershed District
Statement of Revenue and Expenditures - Lake & Stream - 90
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LAKE & STREAM MONITORING - 90-04

Revenues				
Miscellaneous Income	20.00	20.00	0.00	20.00
Total Revenues	20.00	20.00	0.00	20.00
Expenses				
Supplies-Field	0.00	0.00	2,500.00	(2,500.00)
Computer Software	0.00	0.00	400.00	(400.00)
Telecommunications	57.27	114.54	300.00	(185.46)
Publications	0.00	0.00	200.00	(200.00)
Training & Education	0.00	0.00	2,000.00	(2,000.00)
Staff Travel	67.04	67.04	300.00	(232.96)
Vehicle Expense	100.17	131.69	1,800.00	(1,668.31)
Professional Services	0.00	0.00	27,500.00	(27,500.00)
Contracted Services	0.00	2,944.41	135,000.00	(132,055.59)
Legal Fees	1,271.28	1,271.28	500.00	771.28
Engineering	16,882.00	16,882.00	19,000.00	(2,118.00)
Equipment	2,061.70	2,061.70	25,000.00	(22,938.30)
Repairs & Maintenance	150.72	150.72	500.00	(349.28)
Lab Expense	0.00	0.00	35,000.00	(35,000.00)
Total expenses	20,590.18	23,623.38	250,000.00	(226,376.62)
Total Revenues Over/(Under)				
Expenditures - Lake & Stream Montr.	(20,570.18)	(23,603.38)	(250,000.00)	226,396.62

BALD EAGLE LAKE TMDL - 90-06

Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Engineering Expense	0.00	0.00	25,000.00	(25,000.00)
Construction Expense	0.00	0.00	10,000.00	(10,000.00)
Total expenses	0.00	0.00	35,000.00	(35,000.00)
Total Revenues Over/(Under)				
Expenditures - Bald Eagle Lake TMDL	0.00	0.00	(35,000.00)	35,000.00

ANOKA CHAIN OF LAKES - 90-16

Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Legal Fees	0.00	0.00	20,000.00	(20,000.00)
Engineering	0.00	0.00	25,000.00	(25,000.00)
Construction Expense	0.00	0.00	25,000.00	(25,000.00)
Total expenses	0.00	0.00	70,000.00	(70,000.00)
Total Revenues Over/(Under)				
Expenditures - Anoka Chain of Lakes	0.00	0.00	(70,000.00)	70,000.00

Rice Creek Watershed District
Statement of Revenue and Expenditures - Lake & Stream - 90
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TMDL IMPLEMENTATION - 90-23

Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Contracted Services	0.00	0.00	5,000.00	(5,000.00)
Legal Fees	1,820.24	1,820.24	2,500.00	(679.76)
Engineering	7,717.34	7,717.34	70,000.00	(62,282.66)
Construction	0.00	0.00	42,500.00	(42,500.00)
Total expenses	9,537.58	9,537.58	120,000.00	(110,462.42)
Total Revenues Over/(Under)				
Expenditures - TMDL Implementation	(9,537.58)	(9,537.58)	(120,000.00)	110,462.42

BALD EAGLE LAKE WMD - 90-24

Revenues				
Bald Eagle-Special Assessment	5,416.68	10,833.36	65,000.00	(54,166.64)
Total Revenues	5,416.68	10,833.36	65,000.00	(54,166.64)
Expenses				
Professional Services	0.00	0.00	1,000.00	(1,000.00)
Contracted Services	0.00	0.00	54,476.00	(54,476.00)
Legal Fees	0.00	0.00	500.00	(500.00)
Engineering Expense	343.25	343.25	3,000.00	(2,656.75)
Total expenses	343.25	343.25	58,976.00	(58,632.75)
Total Revenues Over/(Under)				
Expenditures - Bald Eagle Lake WMD	5,073.43	10,490.11	6,024.00	4,466.11

BALD EAGLE LAKE STORMWATER REUSE PROJECT - 90-25

Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Expenses				
Legal Fees	0.00	0.00	1,000.00	(1,000.00)
Engineering	0.00	0.00	1,000.00	(1,000.00)
Construction Expense	110.10	110.10	8,000.00	(7,889.90)
Total expenses	110.10	110.10	10,000.00	(9,889.90)
Total Revenues Over/(Under)				
Expenditures - Bald Eagle Lake WMD	(110.10)	(110.10)	(10,000.00)	9,889.90

Rice Creek Watershed District
Statement of Revenue and Expenditures - Lake & Stream - 90
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

CARP MANAGEMENT PROJECT - 90-26

Revenues				
Total Revenues	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
Expenses				
Professional Services	52,500.00	53,900.00	75,000.00	(21,100.00)
Legal Fees	295.40	295.40	8,000.00	(7,704.60)
Engineering Expense	0.00	0.00	17,000.00	(17,000.00)
Construction Expense	<u>0.00</u>	<u>0.00</u>	<u>250,000.00</u>	<u>(250,000.00)</u>
Total expenses	<u>52,795.40</u>	<u>54,195.40</u>	<u>350,000.00</u>	<u>(295,804.60)</u>
Total Revenues Over/(Under)				
Expenditures - Carp Management	<u>(52,795.40)</u>	<u>(54,195.40)</u>	<u>(350,000.00)</u>	<u>295,804.60</u>
Total Revenue Over/(Under) Expenditure	<u>\$ (92,085.46)</u>	<u>\$ (87,197.53)</u>	<u>(1,000,000.00)</u>	<u>912,802.47</u>

Rice Creek Watershed District
Statement of Revenue and Expenditures - District Facilities - 95
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>LONG LAKE SEDIMENT BASIN - 95-01</u>				
Revenues				
General Propety Tax	\$ 8,232.67	\$ 16,465.34	98,792.00	(82,326.66)
Interest	0.00	104.67	1,208.00	(1,103.33)
Total Revenues	8,232.67	16,570.01	100,000.00	(83,429.99)
Expenses				
Contracted Services	0.00	0.00	60,000.00	(60,000.00)
Engineering	0.00	0.00	40,000.00	(40,000.00)
Total Expenses	0.00	0.00	100,000.00	(100,000.00)
Total Revenues Over/(Under)				
Expenditures - Long Lake Sediment Basi	8,232.67	16,570.01	0.00	16,570.01
<u>OUTFALL & STRUCTURE ASSESSMENT& REPAIR - 95-03</u>				
Revenues				
General Propety Tax	6,666.67	13,333.34	80,000.00	(66,666.66)
Total Revenues	6,666.67	13,333.34	80,000.00	(66,666.66)
Expenses				
Legal Notices	0.00	0.00	1,000.00	(1,000.00)
Legal Fees	0.00	0.00	2,000.00	(2,000.00)
Engineering	277.75	277.75	30,000.00	(29,722.25)
Construction	0.00	0.00	47,000.00	(47,000.00)
Total expenses	277.75	277.75	80,000.00	(79,722.25)
Total Revenues Over/(Under)				
Expenditures - Outfall & Structure	6,388.92	13,055.59	0.00	13,055.59

Rice Creek Watershed District
Statement of Revenue and Expenditures - District Facilities - 95
For the One Month and Two Months Ending February 28, 2018
See Accountant's Compilation Report

	Current Month	Year to Date	Annual Budget	Over/(Under) Budget
<u>EASEMENT OPERATION & MAINTENANCE - 95-04</u>				
Revenues				
General Propety Tax	1,666.66	3,333.32	20,000.00	(16,666.68)
Total Revenues	1,666.66	3,333.32	20,000.00	(16,666.68)
Expenses				
Supplies-Field	0.00	0.00	2,000.00	(2,000.00)
Vehicle Expense	0.00	0.00	1,000.00	(1,000.00)
Contracted Services	0.00	0.00	8,000.00	(8,000.00)
Engineering	585.00	585.00	1,000.00	(415.00)
Construction Expense	0.00	0.00	6,000.00	(6,000.00)
Equipment	0.00	0.00	2,000.00	(2,000.00)
Total expenses	585.00	585.00	20,000.00	(19,415.00)
Total Revenues Over/(Under)				
Expenditures - Wall Wetland Restoration	1,081.66	2,748.32	0.00	2,748.32
Total Revenue Over/(Under) Expenditure	\$ 15,703.25	\$ 32,373.92	0.00	32,373.92

ITEMS FOR DISCUSSION AND INFORMATION

3. Staff Reports

MEMORANDUM

Rice Creek Watershed District

To: Board of Managers

Date: February 22, 2018

From: Beth Carreño

Subject: Communications and Outreach Efforts – (1/19/18 – 2/22/18)

The year is off to a busy start. I'm working with staff on some new initiatives as well as supporting many of our traditional projects.

- Assisting staff with MS4 & Illicit Discharge education / outreach / communication requirements
- Assisting District Administrator with 2018 Legislative efforts
 - Coordinating communication strategy to District representatives
- Assisting District Administrator with communication strategy and approach to BWSR's Watershed Based Funding Pilot Program
 - Developed guidance document and Board communications
- Coordinating City County Partner Meeting (2/28/18) with District Administrator
 - Developing presentation
- Attended volunteer management training at Riley Purgatory Bluff Creek Watershed District with other metro area and greater MN WMOs (1/25 & 1/26)
- Coordinating Winter Salting Level II (Fortin) Workshop (3/29)
- Working on Outstanding Permittee Recognition; will bring the nominees to a future board meeting for recognition
- Assisting White Bear Lake partners promoting BMPs and raingardens to public during road reconstruction
- Researching regional Adopt a Drain program at request of Circle Pines representative
- Represented RCWD at North Metro Home & Garden Show
 - Partnered with Fridley, Blaine, Anoka Conservation District, MWMO, & Coon Creek WD
- Continued administration & implementation of mini-grants program
- Provided materials & assistance to partners for their outreach/education efforts
- Continued to promote District (and partner) projects and activities on social media and other communications platforms, including partner publications and newsletters
 - RCWD project updates & web management
 - Partners: Circle Pines; Metro Watershed Partners; Blue Thumb; Winter Salting Symposium
- Assisted staff with development of materials
 - Worked with contractor on new display and companion materials
 - Ensured consistency with RCWD brand and Blue Thumb brand
 - Assisted with signage development for Hanson Park project
- Continuing work and use of an image library (photography assistance of a CAC member)
- Ongoing communication with partners

- **Forest Lake Area Schools / Stormwater Reuse Project (BWSR grant)** – education component ongoing

- **Master Water Steward Activities**
 - Continue to work with staff and partners to support, facilitate, and promote the work of MWS
 - Hosted MWS group at RCWD and Led RCWD components of class (1/23); attended meeting at RWMWD (2/20)
 - Working with local master naturalist to discuss cross-over / stormwater pond education tool

- **Citizens Advisory Committee**
 - Attended meetings (2/7) and completed support work related to facilitating and documenting the meetings

MEMORANDUM

Rice Creek Watershed District

- **Participation in partner meetings and activities** (*most of these organizations meet quarterly or monthly*)
 - Blue Thumb
 - Completing activities related to role on Blue Thumb steering committee (RCWD's contract); the Declaration of Trademark (and Patent); communicating with other watersheds and partners
 - Attended Partner Planning Summit (2/9)
 - Metro Communicators Connect (2/13)
 - Metro Watershed Partners
 - Metro Children's Water Festival - evaluating lottery process for class selection

- **Meetings with watershed partners:**
 - EMWREP (Angie Hong) (1/24)
 - Houston Engineering (Suzy Lindberg) (2/8)

MEMORANDUM

Rice Creek Watershed District

Date: February 22, 2018
To: RCWD Board of Managers
From: Kyle Axtell, Water Resource Specialist
Subject: Staff Activity Report for 01/14/18 – 02/17/18

Tasks completed during preceding period:

- **Continued coordination of the Hansen Park Comprehensive Water Management Project.**
 - All dredging and other winter work is complete.
 - The site has idled for now; work will begin again in the spring.
 - Processed pay request #12 for Rachel Contracting.
- **Continued oversight of the Mirror Lake Improvements Project.**
 - All dredging is complete; the new outlet control structure has been installed.
 - The site has idled for now; the project will be complete in the spring.
 - Authorized an extension of RCWD Permit No. 16-012 (City of Saint Anthony) for this project.
- **Continued coordination of the Oasis Pond IESF Project.**
 - Peterson Companies, Inc. has been awarded the construction contract, which has been executed.
- **Completed reviews of thirteen (13) Urban Stormwater Remediation Cost-Share Applications.**
 - Additional input from the District Engineer and Citizen Advisory Committee have been rolled into a final recommendation that will be presented to the Board at its 02-28-2018 regular meeting.
- **Continued coordination of the District's "Strategic Direction" process for its upcoming WMP update.**
 - Plan initiation notices have been sent as required by MN Rules Chapter 8410.0045, providing for a 60-day input period for State agencies, local partners and stakeholders.
 - Completed the Board's first "Strategic Direction" workshop on 01-22-2018.
 - With P. Belfiori on 01-26-2018, met with Capitol Region WD staff to share WMP update notes.
 - Began coordination of a RCWD partner meeting on 02-28-2018 (will serve as TAC for WMP update).
- **Other important tasks completed include:**
 - Provided Columbia Heights with a support letter for an MN Public Facilities Authority grant application.
 - Reviewed Circle Pines' Wellhead Protection Plan, Part II. RCWD had no comments to provide.
 - Assisted T. Stasica and Redpath auditors with the annual District audit on 02-12-2018.
 - Assisted Forest Lake with its annual report to BWSR for the Forest Lake HS Reuse Irrigation Project.
 - Worked with counsel to develop a draft funding agreement with Forest Lake for its Enhanced Street Sweeping Program (BWSR Clean Water Fund Grant).
 - Assisted a few landowners with floodplain, erosion control, and/or RCWD Rule and WCA questions.
 - Submitted a quarterly report to Met Council for the Water's Edge Reuse Irrigation Project (Hugo).
 - Completed a review of New Brighton's Local Water Plan Update.
 - Attended RCWD Staff meetings on 01-16-2018 and 01-29-2018.
 - Attended a RCWD Board meeting on 01-24-2018.
 - Attended a RCWD Citizen Advisory Committee meeting on 02-07-2018.
 - Attended a RCWD Board workshop on 02-12-2018.

MEMORANDUM
Rice Creek Watershed District

To: Board of Managers **Date:** February 21, 2018
From: Catherine Nester
Subject: District Technician/Inspector Report (January 16, 2018 – February 20, 2018)

Highlights from Preceding Months

- ✓ Coordinated routine stream monitoring field equipment repair/maintenance.
- ✓ Finished entering all 2017 lake and stream monitoring data into our internal database.
- ✓ Analyzed monitoring data and assembled a draft technical memo for the Oneka Ridge Golf Course water reuse project.
- ✓ Began analyzing 2017 lake monitoring data in preparation for upcoming State of the Lakes report.
- ✓ Attended third meeting with Ramsey County, City of Arden Hills, and developer on February 2 for the stormwater reuse/green infrastructure feasibility study for the TCAAP/Rice Creek Commons site in coordination with District Administrator.
- ✓ Attended Ramsey County meeting relating to the BWSR Watershed-Based Funding Pilot Program on January 25.
- ✓ Performed 7 regulatory inspections.
- ✓ Ongoing routine permit management, including on-site meetings, as-built survey reviews, etc.

MEMORANDUM
Rice Creek Watershed District

To: Board of Managers

Date: 2/22/2018

From: Matthew Kocian

Subject: Lake and Stream Report for January 16 – February 22, 2018

Highlights for Preceding Month

Bold items required significant time

- Monitoring
 - Data entry and analysis
 - Equipment maintenance, inventory, and 2018 planning
 - Dissolved oxygen measurement on Sunset Lake (winterkill concern)
- BWSR Targeted Watershed Project
 - **Middle Rice Creek project**
 - **Phase 2 construction ongoing**
 - **Maintain site cameras**
 - Carp Management project
 - Project management (invoices, insurance, scheduling, etc)
 - 2018 spring planning
- **Carp Management (not related to TWP)**
 - **Clear Lake – carp tracking and commercial removal (attempt)**
 - **U of M Whooshh planning and contracting**
- Peltier Lake Drawdown
 - Monitor drawdown progress
- Metro Monitoring Group steering committee meeting
- GIS
 - Manage GIS data and prepare maps for various projects and RCWD staff
 - Update GIS software
- Summer intern
 - Develop position description and post on job websites
 - Attend U of M environmental career fair
- Round Lake (Arden Hills) management coordination with USFWS

To: Board of Managers

Date: February 21, 2018

From: Lauren Sampedro

Subject: District Technician Report (January 17, 2018-February 21, 2018)

Highlights from Preceding Month

- ✓ Attended staff inspector meeting on January 18, 2018.
- ✓ Met with Beth Carreno to discuss MS4 Permit tracking for education and outreach efforts on January 19, 2018.
- ✓ Reviewed MPCA's new MS4 document library webpage and provided comments to the MPCA on January 25, 2018.
- ✓ Submitted quarterly reports from the Cities of New Brighton, Shoreview, and Fridley to the Met. Council for the Stormwater Grant.
- ✓ Attended all staff meeting on January 29, 2018.
- ✓ Completed review of the City of New Brighton's draft local water management plan and submitted comments on February 1, 2018.
- ✓ Completed review of the City of Fridley's informal draft local water management plan and submitted preliminary comments on January 29, 2018.
- ✓ Continued reviewing the City of Dellwood's draft local water management plan.
- ✓ Continued reviewing the City of Shoreview's draft local water management plan.
- ✓ Sent reminder letters for cities that have missed their RCWD local water management plan submittal schedule to the cities of Birchwood Village, Lauderdale, Lexington, Scandia, St. Anthony, and White Bear Lake.
- ✓ Received a draft local water management plan for formal agency review from the City of Arden Hills. Began the RCWD 60-day review process on January 31, 2018.
- ✓ Received a draft local water management plan for formal agency review from the City of Circle Pines. Began the RCWD 60-day review process on January 31, 2018.
- ✓ Received a draft local water management plan for formal agency review from the City of Blaine. Began the RCWD 60-day review process on February 9, 2018.
- ✓ Presented with Terrence Chastan-Davis to the City of Fridley Public Works staff on Erosion Control and Illicit Discharge Detection Elimination on February 20, 2018.
- ✓ Met with the City of Columbus on local water planning on February 21, 2018.

MEMORANDUM
Rice Creek Watershed District

To: Board of Managers
From: Tom Schmidt, Public Drainage Inspector
Subject: Staff Report for January/February 2018

Date: February 22nd, 2018

Highlights for Preceding Month(s)

- ✓ Continued setup of Mobitrac unit for field season and participated in training session given by manufacturer (complete/ongoing);
- ✓ Attended Forest Lake Council meeting concerning AWJD 4 corridor future management planning (complete);
- ✓ Attended WJD #2 Branch #1 and #2 repair report public hearing (complete);
- ✓ Attended meetings with Forest Lake and Columbus city staffs regarding future stormwater management studies (on-going);
- ✓ Continued contracting with various trappers for beaver trapping on several ditch systems (on-going);
- ✓ Continued assisting HEI with coordination of ACD #53-62, Branch #2 project (on-going);
- ✓ Continued collating drainage system maintenance data utilizing Drainage DB (in-progress);
- ✓ Assisted HEI staff on Brown's preserve/Hair wetland restoration monitoring and survey (ongoing);
- ✓ Assisted staff with technical questions/data collection (ongoing);
- ✓ Continued to meet and talk with landowners concerning repair reports as well as other landowners on various drainage systems regarding drainage concerns (ongoing);

Upcoming Activities

- ✓ Investigation of drain tile issues on WJD #5 (Husfeld's) (weather dependent);
- ✓ Continued assistance for ACD 53-62 Branch #2 project coordination;
- ✓ Re-route of AWJD #4, Branch #4 in Forest Lake (weather dependent);
- ✓ Tile replacement work on AWJD #4 branch #3, Lateral #1 and WJD #7 (weather dependent);
- ✓ Begin preparations for 2018 field/construction season (on-going).

MEMORANDUM
Rice Creek Watershed District

To: Board of Managers

Date: 2/20/2018

From: Theresa Stasica

Subject: Office Manager 1/18-2/20

- Coded invoices for payment this month which were reviewed by Administrator Phil Belfiori and sent to our accountant Nancy Martinson via an excel spreadsheet.
- Track Accounts Receivable for District.
- Track and invoice (if needed) for numerous grants.
- Deposited checks.
- Send out/process/track ROW payments for several special assessment.
- Provide workshop minutes and reviewed and edited regular Board minutes.
- Provide appropriate notices and postcard mailings for landowner information meetings, public hearings, special meetings, and meeting changes
- Provide information, assembled and distributed board packets. Organize the board packet as a pdf format for Internet distribution.
- Updated materials on the website.
- Attended board meetings.
- Attended staff meetings.
- Placed orders for supplies as needed.
- Assisted staff in their daily activities.
- Scanning documents that District receives into Laserfiche.
- Maintain filing system.
- Answered phones and assist public.
- Prepared information for auditor.

MEMORANDUM
Rice Creek Watershed District

To: Board of Managers

Date: February 21, 2018

From: Terrence Chastan-Davis

Subject: District Inspector Report (January 18-February 21, 2018)

Highlights from Preceding Month

- ✓ Completed 16 inspections of projects and review files to confirm rule compliance.
 - Met with site supervisors 4 separate times to discuss corrective actions on site.
 - Sent out inspection reports with specified corrective actions and requested updates when corrective actions were complete.

- ✓ Inspected #16-109 MnDot design build project during bi-weekly walk throughs in collaboration with multiple organizations.
- ✓ Issued a 10-day notice for a project without RCWD permit coverage.
- ✓ Recommended 4 permits for permit closure (some with surety return).
- ✓ Recommended permit extensions for 3 unfinished projects.
- ✓ Recommended 2 permits for surety reduction due to project completeness.
- ✓ Reviewed 2 separate as-built surveys to confirm compliance with approved plans.
- ✓ Amended 1 permit for minor changes to the approved plan.
- ✓ Organized and participated in the inspector's and 2 inspection team meetings to discuss program efficiencies and projects with inspection and permitting staff.
- ✓ Attended the monthly permit triage regulatory meeting to update the group on MnDot design build progress.
- ✓ Attended the annual MECA Conference to discuss Erosion Control topics and learn about new products in the field.
- ✓ Created 1 new review file for new projects/complaints.
- ✓ Assisted in giving a presentation on Erosion Control & Illicit Discharge to City of Fridley public works staff with Lauren Sampedro.
- ✓ Assisted in responding to questions concerns from the public.

MEMORANDUM
Rice Creek Watershed District

To: Board of Managers **Date:** 2/21/2018
From: Ashlee Ricci
Subject: District Technical Assistant Report (01/16/2018 – 2/20/2018)

Highlights from Preceding Months

- ✓ Performed routine equipment maintenance for lake sampling; PIT station-batteries
- ✓ Assisted permit applicants in submitting correct “incomplete” and “CAPROC” items
- ✓ Created new review files and permit files in the online database and in Laserfiche
- ✓ Responded to various landowners about permit requirements
- ✓ Attended regular staff, Inspection Team, and Inspectors meetings
- ✓ Completed initial review of permit applications
- ✓ Responded to potential land buyers regarding rules
- ✓ Continue reviewing presence/absence of easements for CWPMP
- ✓ Discuss Special Assessment Charges for ACD 53-62 Branch 2 with District Drainage Engineer and landowners
- ✓ Attend site meeting for pre-application in Dellwood
- ✓ Draft and issue CAPROC notice for 18-001
- ✓ Draft letter to landowners on AWJD 4 Branch 2
- ✓ Performed site inspections in Mounds View

MEMORANDUM

Rice Creek Watershed District

To: Board of Managers

Date: February 21, 2018

From: Nick Tomczik

Subject: Permit Coordinator/Wetland Specialist's Report for January- February 2018

Highlights for Preceding Month

- ✓ Meetings and Assistance to parties in need of pre-application/application assistance
 - Mortenson Site Blaine
 - Park Place Construction Blaine
 - Whitewater Properties Blaine
 - Site 75 Blaine proposed development
 - Mill Pond Blaine
 - MnDOT SE quadrant of the County Road F and I-35W intersection
 - Peterson Construction Site - Blaine RCWD 17-156R
 - Southeast corner of the Fairview Avenue/CR B2 Intersection
 - Blaine - Lever Street Improvements
 - South Shore Blvd Trail
 - City Arden Hills Old Snelling Avenue Trail
 - Hy-Vee SLP
- ✓ Wetland Delineation, Replacement, Exemption Applications
 - Oakwood Ponds Replacement plan, Blaine
 - Nature's Refuge, Lino Lakes
 - Saddle Club 4th, Lino Lakes
 - Capra Properties RCWD 17-159R
 - Parkshore Villas RCWD 17-188R
 - Sanctuary Preserve – Kimley Horn mitigation update
 - Dellwood Golf Replacement Plan
 - Site 75 Blaine Delineation
- ✓ Training
- ✓ Meetings / Administration
- Mn Commercial Railroad
- CSAH 23 and CSAH 54
- Coates RV
- WaterMark Project ACD 55
- Lever St.
- Design Build 35s North
- Interstate Trucking Compliance
- RCWD Guidance Forms
- Hy-Vee ER 17-072
- Dellwood Golf Course ATF Issues
- Design Build Frame Work Erosion Control
- Database Discussion
- Brown's Preserve Management /Monitoring
- RCWD Old Permit Issues
- Permit Triage
- Inspection Team Meeting
- HEI/Smith Partners/RCWD Communication Board Meetings & Workshops (agenda items, participation)

MEMORANDUM

Rice Creek Watershed District

To: Board of Managers **Date:** 02/21/2018

From: Patrick Hughes

Subject: Regulatory Assistant 01/17/2018 - 02/21/2018

- Created new permit files for the online database
- Created new review files for the online database
- Sent notices of wetland boundary decisions – 17-194R, 17-234R, 18-002R
- Sent notices of no-loss decisions – 17-234R, 17-241R, 18-008
- Sent notice of exemption decision – 18-008
- Sent notices of replacement plan decisions – 13-087, 17-037, 17-088, 17-099
- Sent notices of replacement plan applications – 17-072, 18-003
- Sent notices of wetland sequencing applications – 17-034, 17-122
- Sent out multiple CAPROC (board) notices
- Issued multiple permits
- Responded to various landowners about permit requirements (general inquiries)
- Noticed Board of Managers for application status – 16-072, 17-036, 18-007
- Sent out administrative CAPROC notices – 17-036, 18-007
- Issued administrative permit – 16-072
- Generated incomplete receipts for permit applications – 18-003, 18-017
- Submitted District-wide 2017 Annual WCA Report
- Sent notice of monitoring report – 10-083 (Woolan’s Park)
- Authored WCA TEP Findings of Fact for 17-037
- Created working incomplete ER - 18-006
- Provided wetland comments for HEI ERs - 17-037, 17-099

ITEMS FOR DISCUSSION AND INFORMATION

4. March Calendar.

FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30
31													

To: RCWD Board of Managers

From: Theresa

Date: February 20, 2018

Subject: Significant Dates during Month of March

Wednesday, March 7, 5-7 p.m. MAWD legislative reception at Embassy Suites (175 10th Street E, St. Paul).

Thursday, March 8, 7-9 a.m. MAWD legislative breakfast at Embassy Suites (175 10th Street E, St. Paul).

Wednesday, March 7, 5:30 p.m. Advisory Committee Meeting, RCWD conference room, Board Liaison Manager Preiner.

Monday, March 12, 1 p.m. Board Workshop
RCWD District Conference Room

Wednesday, March 14, 9:00 a.m. Regular Board of Managers Meeting at Shoreview City Hall Council Chambers.

Wednesday, March 28th, 9:00 a.m. Regular Board of Managers Meeting at Shoreview City Hall Council Chambers.

Deadline for submission of per diem claims is March 19, 2018.