Riley-Purgatory-Bluff Creek Watershed District
Board of Managers Regular Meeting
Wednesday, July 11, 2018
7:00 pm Public Hearing and Regular Board Meeting
DISTRICT OFFICE
18681 Lake Drive East
Chanhassen

Tentative Agenda

1. **Call to Order**

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

3. **Public Hearing: RPBCWD Draft Rule Revisions** **Information**

4. **4M Membership** **Information**

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

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

6. **Reading and approval of minutes** **Action**
   Board of Manager Meeting, June 6, 2018

7. **Consent Agenda**
   (The consent agenda is considered as one item of business. It consists of routine administrative items or items not requiring discussion. Any manager may remove an item from the consent agenda for action.)
   a. Accept June Staff Report
   b. Accept June Engineer's Report (with attached Inspection Report)
   c. Approve Payment Application #2 for Scenic Heights Elementary School Forest Restoration Project
   d. Approve 60 day review period extension for permit 2018-026 Culver's of Eden Prairie
   e. Approve staff/CAC recommendations for residential cost-share applications

8. Citizen Advisory Committee **Information**

9. Action Items **Action**
   a. Accept April Treasurer's Report
   b. Approve Paying of the Bills
   c. 4M Fund Membership
   d. Shorewood Water Management Plan
   e. Approve the Riley Purgatory Bluff Creek Watershed District 2018 Water Resources Management Plan **Resolution 2018-004**
   f. 2015-036 Saville West permit extension.
   g. Approve permit 2018-005 Hampton Inn in Eden Prairie with staff recommendations
   h. Approve permit 2018-038 Eden Prairie Senior Living – Variance request and permit with staff recommendations.
   i. Water Conservation - Cost Share

10. Discussion Items **Information**
   a. 2019 Budget Workshop
   b. August Board Meeting

11. Upcoming Events **Information**

- Citizen Advisory Committee monthly meeting, July 16, 6:00 pm, 18681 Lake Drive East, Chanhassen.
- Board Review of Administrator, August 1, 6:00pm, 18681 Lake Drive East, Chanhassen, **Closed Session**
- Public Hearing and Regular Board Meeting, August 1, 7:00 pm, 18681 Lake Drive East, Chanhassen
- Master Water Stewards Informational Session, August 7, 5:30-6:30pm, Smith Coffee and Cafe, Eden Prairie

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

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

TO: RPBCWD Board of Managers
FROM: Terry Jeffery, Scott Sobiech, Michael Welch
RE: Summary of major rule comment topics and draft responses
DATE: July 5, 2018

The 45-day statutory comment period on the proposed amendments to the Riley-Purgatory-Bluff Creek Watershed District rules ended June 25, 2018. RPBCWD received written comments from representatives of six different public entities: The cities of Chanhassen, Eden Prairie, Minnetonka, and Shorewood; Metropolitan Council; and the state Department of Natural Resources. Minnesota Department of Transportation did not send a representative to either of the Technical Advisory Group meetings held on the amendments, but Beth Neuendorf from the agency provided written comments on an initial draft several months ago, and those are also included among the comment matrix attached to this memo. No private individuals or companies (e.g., developers) commented on the draft amendments.

RPBCWD will conduct the statutorily required public hearing on the amendments as part of the July 11 regular meeting, and additional comments on the amendments may be received then. Also, at the July meeting, staff will provide the managers with all of the comments received to date, as well as the minutes of the two Technical Advisory Committee meetings held on the amendments.

In the main, the comments received cover technical specifics and program-management notes that staff, the engineer and counsel can address through responses that will be drafted for the managers' consideration and approval at the August meeting. Several comments raise regulatory policy issues that have already been addressed by the managers and can be addressed by referring to that decision making. A handful of comments broach substantive policy questions for which the managers should provide direction. Following are brief discussions of each of these substantive comments, drafted to allow staff to obtain direction from the managers on next steps after additional comments, if any, are received in the public hearing.

The significant issues raised by comments are as follows:

- **The 2-foot freeboard requirement should not apply to additions to existing homes. (Comment 21.)** Staff does not recommend adoption of an exception that effectively allows flooding as policy matter of additions and other work on existing single-family home properties. Rather, challenges of complying with the freeboard requirement that lead a homeowner to request a variance from the requirement and accept a record designation of the flood risk should be heard by the managers case-by-case.

- **RPBCWD's requirements for stabilization of sites at which construction activity has ceased, permanently or temporarily, should match state general permit requirements. (Comment 24.)** Staff and the engineer concur; construction site owners should not be allowed or encouraged by RPBCWD rules to leave property, at which land-disturbing activities have started, in an unstable condition after work has ceased, creating risk of erosion and sedimentation to nearby water resources and infrastructure. Requiring small projects (that would not be subject to the state requirements) to comply with shorter stabilization times should not impose substantial burden (such sites need to be stabilized anyway) and will mitigate a not-uncommon risk to water resources.

- **Exempt projects eligible for fast-track shoreline and streambank stabilization permits from compliance with buffer requirements. (Comment 25.)** Staff and the engineer concur that the goal of

the fast-track permit option in Rule F – to encourage property owners to maintain stable shorelines and streambanks – is somewhat undermined by requiring that a buffer be established when the work to be undertaken on the shoreline or streambank is maintenance.

• **Consider rule changes and production of guidance to more readily facilitate compliance with stormwater-management requirements for work in areas with predominantly hydrologic soil group D soils (clay) and in areas designated Emergency Response Areas for purposes of city drinking-water purposes. (Comment 45.)** The RPBCWD Stormwater Management Rule as proposed to be amended provides for adequate avenues to compliance for sites with the types of conditions cited, as well as contaminated sites – i.e., places where infiltration may be ineffective and/or threaten groundwater. Rather than a blanket no-infiltration approach for such sites, staff and the engineer determine that case-by-case analysis of specific site conditions remains warranted. The proposed state prohibitions cited in the comment were included in the draft Construction Stormwater general permit issued by the Minnesota Pollution Control Agency several months ago, with a projected finalization date of August. RPBCWD commented that the draft prohibitions too broadly restricted infiltration – a perspective staff understands to be shared with other stormwater professionals. The subjectivity, as the commenter refers to it, of the maximum extent practicable fallback standard in subsection 3.3b of the rule has proven a sturdy provision for the engineer's determinations that infiltration systems are ineffective on certain sites and has allowed for approval of project's deploying non-infiltrative stormwater-management systems without variances, while continuing to strive for the protection of water resource.

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Absent a decision by the managers to change direction, the August meeting packet will include:

- A draft comment matrix, with complete responses for the managers' review, consideration, and approval;
- Memo Supporting and Providing Explanation of Proposed Revisions of the Riley-Purgatory-Bluff Creek Watershed District Rules, updated to reflect changes made to the rules to respond to comments and otherwise;
- Final amendments to the rules;
- A resolution:
    - adopting amendments to the rules,
    - setting an effective date,
    - approving responses to comments;
    - approving the revised memo;
    - directing promulgation of amended rules along with responses to comments memo, and adding the amended rules as an appendix to the watershed management plan.

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Technical Advisory Committee Meeting Notes
Draft Revisions to RPBCWD Rules

February 28, 2018
RPBCWD offices

attendees

Dave Modrow, Rod Rue, Robert Ellis (Eden Prairie), Vanesa Strong (Chanhassen), Steve Segar (Bloomington), Bob Bean (Deephaven), Mike Wanous (Carver County SWCD), Tom Dietrich, Will Manchester (Minnetonka), Jennie Skancke (Department of Natural Resources), Bill Alms (Shorewood/WSB), Joe Mulcahy (Metropolitan Council), Linda Loomis (Lower Minnesota River Watershed District), Dan Edgerton (Chaska), Matt Clark (Chaska), Masha Guzner (Carver County WMO), Matt Lindon (RPBCWD Citizens Advisory Committee member).

Claire Bleser (RPBCWD), Terry Jeffery (RPBCWD), Scott Sobiech (RPBCWD/Barr), Michael Welch (RPBCWD/Smith Partners).

Terry Jeffery welcomed committee members and other attendees and suggested that introductions may be in order. After introductions, Mr. Jeffery noted that RPBCWD called everyone together to discuss its draft regulatory approach to protecting creek channels in the watershed from erosion caused by increased runoff rates and duration. He noted that there would be a couple of other items to review in the rules and in a brief update on RPBCWD's revised plan at the end of the meeting but in the interim called on Scott Sobiech to review the issue and approach RPBCWD is taking to addressing channel erosion.

Mr. Sobiech reviewed the consequences of rates of runoff under existing conditions, including scour and excessive erosion of creek banks, which release sediment into the creek and transport it downstream. He said that the stakeholders who participated in RPBCWD's outreach process for the development of its revised plan identified the creeks as very high-value resources, and the erosion issue is a significant problem for stakeholders in the watershed. He stated that the input received underscored that this is not just a resource-management issue but also an aesthetic and quality-of-life issue. He said that RPBCWD's Creek Restoration Action Strategy study discovered problem areas – some of which are severe – and he displayed a figure showing the nature and extent of the erosion and channel degradation problems in the watershed. He said that the *E. coli* impairment in the creeks can also be linked to this erosion. He moved on to showing flow-duration curves illustrating RPBCWD's conclusion that continued elevated flow from smaller storms is causing a significant portion of the erosion.

Dan Edgerton asked how an applicant would match 10 percent of a two-year peak flow rate, as required in the revised draft rate-control criterion in the Stormwater Management Rule. Mr.

Sobiech said that the applicant could use a P8 model which is commonly submitted with permit application materials. Maintaining a two-year existing curve rate goes a long way toward preventing erosion, he said. Mr. Bean asked about single-family home projects' compliance with the enhanced rate-control criterion. Michael Welch said that the rate criterion will not apply to development or redevelopment of single-family home properties. Vanessa Strong stated that most of the issues with severe erosion she sees are on single-family home properties. Joe Mulcahy said that the curves are for runoff from sites, and noted that rates within sites would be important, too. Dave Modrow asked about the use of the Park Nicolet redevelopment project in Mr. Sobiech's white paper on the channel protection requirements and the example of a property on HSG D soils. He wondered whether it wouldn't be useful to have hypothetical analysis of application of the new criteria to more standard soils. Mr. Sobiech said that the engineering staff looked at the Minimal Impact Design Standards, which considered an array of soil conditions, and also did a sandy-soil version of the assessment of the Park Nicolet project but assuming a higher infiltration rate. The results indicate that abstraction alone does not achieve the goal and additional rate control is needed to meet the flow-duration curves, thus supporting a determination that the revised criterion is feasible and reasonable.

Tom Dietrich asked whether staff had analyzed the effect the new criteria would have on public linear projects. He talked about existing neighborhoods where Minnetonka is reconstructing and repaving roads and wondered whether the presettlement runoff rate could feasibly be met in such circumstances. Mr. Sobiech said that RPBCWD did complete a linear-project analysis and the results are provided in the white paper that was delivered by email to all members of the TAC last week. Mr. Dietrich asked whether the requirements would still apply when there was no added impervious in an established neighborhood and wondered whether perhaps such projects could be exempt from compliance with the new criterion. Mr. Edgerton said that members of the TAC and the regulated community need to understand the impact of the new criteria on the design of stormwater-management features. He stated that it is clear that what is currently being done is not enough, so information on what new elements are needed and details on examples are required. Mr. Sobiech replied that on the Park Nicolet hypothetical example shown in the white paper the rate-control requirement was achieved by changing the size of the outlet structure alone. Mr. Edgerton said that Chaska does not like to go below an 8-inch orifice on any outlet structure. Robert Ellis said that going to a 4-inch orifice on a stormwater facility could be a significant maintenance issue. Mr. Sobiech said that an alternative could be a V-notched weir structure . Jennie Skancke wondered whether there is a water-quality benefit to the extended detention, because if there were there could be Department of Natural Resources funding available to help with retrofits.

The group discussed the methodology by which the required flow-duration curve could be achieved in practical application. Mr. Sobiech cited examples of similar requirements implemented around the country as summarized in the research conducted by Barr, including in California, Washington and other jurisdictions. Mr. Dietrich wondered whether those locations have the same rainfall as the Twin Cities. Mr. Sobiech noted that in some cases the

areas have more rainfall. Mr. Modrow expressed his surprise that the infiltration requirement in the RPBCWD rules does not achieve the necessary rate control.

Mr. Modrow also stated that he thought RPBCWD should run through and produce analysis based on additional scenarios beyond those included in Mr. Sobiech's paper. He cited reconstruction projects and a site that isn't on restricted soils. He said that compliance for city projects could make for a significant headache for the maintenance and engineering departments. He also noted that many people aren't using P8 anymore and therefore may have difficulty in submitting the modeling necessary to show compliance with the flow-duration requirement. Mr. Sobiech said that any model using actual data and computing rainfall amounts could be used, including P8, SWMM, HEC-HMS. However, HydroCAD, which is typically used by developers for rate-control anlaysis, would be very difficult to use with actual rainfall data and does not model snowmelt. Mr. Bean asked why the 1.1-inch abstraction criterion doesn't achieve the necessary curve. Mr. Sobiech restated that without additional extended detention the rate control needed is not achieved as identified in the MIDS work and the white paper. Mr. Dietrich asked whether RPBCWD would consider a regional approach. Mr. Welch said that RPBCWD is establishing a new regional approach to stormwater management in the rule amendments, and that as long as there were no intervening resources in the region that would be degraded by compliance on a regional basis, a regional approach to meeting the flow-duration curve could be taken. Ms. Strong said that existing infrastructure and development is somewhat like existing roads in that it is nonconforming and may be difficult to bring into compliance with the criteria. Mr. Dietrich said that he believes RPBCWD's goal is good but that it will be difficult to fit into reconstruction projects. Mr. Bean said that RPBCWD knows where the rate-control and flow-duration-curve approach is needed, and suggested that RPBCWD try to integrate with capital projects achieving the same results in the same protections into street-reconstruction projects undertaken by cities. Mr. Dietrich stated that such an approach would be consistent with and could integrate into a regional approach. Mr. Edgerton agreed that a regional approach is the way to go and that clogging on individual stormwater facilities otherwise will be a distraction. Mr. Bean reiterated that flow-duration methods could be worked into city capital improvement projects and could be joint ventures of the city and RPBCWD. Mr. Ellis noted that cities have land and could retrofit existing facilities to achieve the necessary results. Rod Rue added that maintenance of large city stormwater facilities would be easier than maintenance on individual sites. Mr. Ellis concurred that maintenance could be a significant concern, and he noted that facilities would have to be subject to a city drainage and utility easements. Mr. Rue said that the City of Eden Prairie is not currently getting drainage and utility easements on stormwater facilities on private property. Ms. Strong and Steve Segar said their cities also do not obtain drainage and utility easements. Mr. Bean said that he would like to take more of a look at the restricted-site options in the RPBCWD rules.

Bill Alm stated that the outlet-control modifications could compound impacts on stormwater facilities that are already overtaxed from the increased rainfall the watershed is experiencing, as documented in the Atlas 14 report. He said that cities are already having issues. Mr. Bean once

again said that it would better to take a capital improvement planning approach rather than a regulatory approach to addressing this issue.

Terry Jeffrey asked whether cities have areas that could be used as test or example sites, and he wondered what the test or pilot analyses would look like. Mr. Bean said that cities absolutely have space if the option were available in lieu of a regulatory approach and could be undertaken in conjunction with reconstruction projects. Mr. Modrow again said that higher-resolution analysis would be valuable for being able to support RPBCWD's effort to regulate in this regard. Ms. Strong wondered whether RPBCWD couldn't give the cities alternative options toward achieving the same results.

Mr. Jeffery summarized the concerns and ideas expressed, namely alternatives to a regulatory approach, more example analysis showing how the flow-duration curve approach could work and consideration of regional approaches. Mr. Welch asked whether other cities had orifice size restrictions. Members noted that Carver County has a 6-inch orifice-size restriction; Deephaven also has a 6-inch restriction, as does Chanhassen, however there's no minimum in Bloomington. Mr. Welch noted that the wetland bounce and inundation requirements in the rule would be removed if RPBCWD adds the flow-duration control requirement. Mr. Modrow noted that it would be important not to choke off flows to wetlands.

Claire Bleser updated the group on the next steps in finalizing RPBCWD's updated plan. At the March 15 meeting there will be a public hearing on the plan and the board will adopt the plan after the completion of the review process. She also noted that RPBCWD is working with other watershed organizations on the idea of targeting watershed-based funding for cost-share projects addressing chlorides in the Minnesota River valley and that the funding would be made available for retrofitting city equipment. She said Technical Advisory Committee members should stay tuned for more on that.

The business of the Technical Advisory Committee being concluded, the meeting adjourned at 1:15 p.m.

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Technical Advisory Committee (TAC) Meeting Notes
Discuss Potential Revisions to RPBCWD Regulatory Program

date: November 15, 2017
time: 11:00-1:15
location: 18681 Lake Dr E, Chanhassen, MN 55317 (RPBCWD offices)

meeting attendees

Claire Bleser (RPBCWD), Jill Crafton (RPBCWD Manager), Terry Jeffery (RPBCWD), Scott Sobiech (RPBCWD/Barr), Michael Welch (RPBCWD/Smith Partners), Dave Modrow (Eden Prairie), Rod Rue (Eden Prairie), Vanesa Strong (Chanhassen), Steve Segar (Bloomington), Bob Bean (Deephaven), Mike Wanous (Carver County), Tom Dietrich (Minnetonka), Jennie Skancke (MnDNR), Alyson Fauske (WSB/Shorewood), Joe Mulcahy (Met Council), Matt Lindon (CAC), Linda Loomis (LMRWD), Dan Edgerton (Chaska)

item description

A Release of Draft 10-year Plan for public Comment

1. Claire Bleser: Highlight the release of the 60-day review draft of the RPBCWD 10-year plan.
    a. Comments can be provide electronically on the RPBCWD web page or traditional methods.
    b. Summarized discussion with MPCA about WLA- MPCA stormwater group can only giver load reduction credit to the MS4 where the BMP is located
        i. Bob Bean: This doesn't seem fair because all contribute dollars to the project via District-wide taxing. How does this impact potential cost share?

B Feedback on Internal Draft of Potential Rule Revisions

1. DEFINITIONS
    a. 100-year flood elevation
        i. Bob Bean: Is TR60 the correct publication?
        ii. Dave Modrow: Can you define stormwater facility more concisely? Does it include pipes? Catch basins?
        iii. Dan Edgerton: Does constructed storm water facility need to be included? Also questioned the need for compensatory storage. "If you manage for rates and volume reduction isn't that enough?
        iv. Dave Modrow: Will the applicant be able to demonstrate a flood elevation that differs from the district model?
    b. Structure
        i. Vanessa Strong: What is "temporary?"
    c. Existing Conditions
        i. Rod Rue: The definition should include "planned for facilities" such as ponds and other storm water BMPs, including existing facilities built before the rules were reinstated (i.e., look at existing condition before the existing facility was built).
    d. Rehabilitation
        i. Rod Rue: Would like to see routine maintenance (e.g, flared end section replacement, riprap repair, etc.) considered rehabilitation and exempted from permit requirements. Expressed concerns about more time in permit preparation than for City crews to do the work.

2. RULE A
    a. Steve Segar: Can a permit be issued for greater than one (1) year?
3. RULE B
    a. Rod Rue: Routine maintenance should be exempted from Rule B.
    b. Bob Bean: Routine maintenance, like pond dredging, should be exempt from Rule B.
    c. Tom Dietrich: What are the unintended consequences of the adding stormwater facility floodplain to the rule?
    d. Bob Bean: The term floodplain is confusing. Are we referring to FEMA? The District should consider a different term.Expressed concern with including underground stormwater facilities in the floodplain rule.
    e. Jennie Skancke: Differentiate between FEMA floodplain and the District's floodplain.
    f. Dan Edgerton: What if pond was put in temporarily and was always intended to be moved? Can features installed with an approved stormwater management plan be exempted? Looking for some flexibility. Chaska's rate control rules exceed the District's requirements.
4. RULE C
    a. Bob Bean: How often must you test decompaction? i.e. spatial distribution of tests? If the homeowner must hire engineer isn't this unduly onerous? The District should consider requiring a topsoil management plan similar to CCWMO.
    b. All City Representatives: 5,000 square feet is too low of a threshold, especially single family homes.
    c. Vanessa Strong: Supports revised decompaction requirement. Look for ways to make it easier.
5. RULE D
    a. Dave Modrow: Buffer requirements should not apply to repair and maintenance (e.g., replacing an FES should not trigger buffer). Turns a simple one-day fix into an encumbering project with significant additional costs resulting from needing to hire a consultant for the delineation, permitting, buffer establishment, etc. Might consider some type of a Fast-Track
    b. Tom Dietrich: The maintenance agreements are onerous.
    c. Steve Segar: Suggested if the LGU determines a "No Loss" then maybe consider Rule D not applying
6. RULE F:
    a. Tom Dietrich: District should develop handouts for education on what is bioengineering.
    b. Bob Bean: How will the District address times when the stones are needed to buttress the toe of soft soils rather than as armoring against scour?
    c. Bob Bean/Dan Edgerton/Jennie Skancke/Steve Segar: All expressed concern with §3.7 Maintenance "was constructed before February 1, 2015."
        i. Does this mean any shoreline restoration done under a District permit needs to get another permit for maintenance even if it meets the other criteria listed in §3.7?
        ii. Jennie Skancke offered to provide some ideas on what the DNR considers maintenance (e.g., minor riprap repair). DNR does not consider moving a flared end section maintenance.
7. RULE G:
    a. Vanessa Strong: Asked as to why the language was changed from "preserve existing" to "provide."
    b. Jennie Skancke: They are often degraded or non-existing. DNR is requiring this of MnDOT as well.
    c. Dave Modrow: The maintenance of an outfall should not trigger buffer rules.

d. Rod Rue: Would like to see outfalls handled administratively.
e. Dave Modrow: Could it be addressed under a general permit for routine maintenance?
f. Jennie Skancke:DNR considers riprap replacement maintenance but does not consider moving a flared end section maintenance.

8. RULE J:
   a. Regulation
      i. Steve Segar: Would a lot line adjustment trigger rule J? If five lots remained five lots but the layout changed would it trigger the rule?
      ii. Rod Rue:Requested clarification of proposed 2.2e, exempting" land-disturbing activities that do not involve creation of new impervious surface, reconstruction of existing impervious surface or grading that materially alters stormwater flow at a site boundary".
      iii. Tom Dietrich: Minnetonka not in favor of explicitly requiring a 5' pervious area downgradient of trails to meet exemption requirement because many of their trails are 8 feet in width and the extra foot could have significant financial and design impacts. Still supportive of the half the trail width for pervious area.
      iv. Rod Rue: Wanted explanation about how 2.5 Common scheme of development.is applied. Scott gave example of the mupltiple permits for the Eden Prairie Mall.
      v. Tom Dietrich: Feels the threshold is too low for linear projects and that a threshold of 1 acre should be adopted.
      vi. Bob Bean: Proposed linear project threshold be consistent with NPDES permit of ¼ mile of road.
   b. Criteria
      i. Bob Bean: District should provide guidance on type of permeability/infiltration testing acceptable as well as the number and location of tests required.
         1. Dave Modrow: Would the district set a cap on infiltration rate that would be allowed in design such as 1.6" per hour?
         2. Bob Bean: Use MN Stormwater Manual for guidance so long as there is guidance.
         3. Vanessa Strong: Supports flexibility in rule as drafted
         4. Rod Rue: Echoed the need for guidance. Private developers will always do the minimum in order to minimize costs.
      ii. Dan Edgerton: What will the plan (chloride management) consist of? What has been accepted?
      iii. Tom Dietrich: Can the Cities submit chloride plan once?
      iv. Bob Bean: Suggests the District should develop guidelines as it pertains to Stromwater Reuse criteria (Rule J, §5.4k.)
         1. How will District monitor for longterm compliance?
         2. Who will be responsible for review of pump design?
         3. Will there be additional guidance for treatment?
         4. Perhaps the District should consider using the Metropolitan Council guidance.
         5. Vanessa Strong: The District should solicit input from public works people as they have strong feelings about these systems.
         6. Tom Dietrich: Will the District author a maintenance template specific to capture and use systems?
         7. Dave Modrow: Agrees that guidelines for reuse need to be developed but emphasizes that it should be kept "simple."
      v. Dave Modrow: Would like low floor criteria (Rule J, §3.6) at least two feet above 100-year high water or one foot above natural … whichever

is higher.

vi. Rod Rue: Section 4 of Rule J. Understands need for accounting but does not feel it should be annual reporting after the availability capacity is consumed.

vii. Vanessa Strong: Consider accounting of the cumulative consumption of resional BMP use.

viii. Vanessa Strong: Look at considering routine maintenance as anything that falls under an existing maintenance agreement with RPBCWD.

9. RULE N
    a. Vanessa Strong: What is "reasonable notice?"

Riley Purgatory Bluff Creek Watershed District *draft* Rule Revision 45-Day Review Comments and Responses

#	Rule	Comment Synopsis	From	Response
1	General	The City sees and appreciates the great deal of effort that was put forth into listening to the TAC concerns related to the rules and permitting program. We appreciate the addition of administrative fast track permits, emergency repair language, utility buffer exemptions and the approach to permitting regional facilities. I look forward to working with the District on potential general permits and programmatic maintenance agreements. Thank you again for the opportunity to provide input and official comments. Please let me know if you have any questions.	Dave Modrow/ Eden Prairie	
2	General	The Metropolitan Council has finished its review of the Riley-Purgatory Bluff Creek Watershed District's draft rules. In our opinion, the District has drafted an excellent set of rules that will be a valuable tool for managing the district's water resources. The Metropolitan Council has no further comments on the draft rules.	Joe Mulcahy/ MCES	
3	General	How does the District intend to provide support for inspections related to rule enforcement? The City requests the District consider adding inspection staff, developing and hosting electronic field inspection tools, and reporting technology to assist municipalities within the District.	Vanessa Strong/ Chanhassen	
4	General	"Existing Single Family Residences" is a term used throughout the Rules. Does this include single family lots of record?	Vanessa Strong/ Chanhassen	
5	General	Please continue to work with LMRWD for a consistent definition of steep slopes.	Vanessa Strong/ Chanhassen	
6	Definitions	You might consider a more extended bioengineering definition pulled from MN rule 6115.0216 Subp. 3.	Jennie Skancke/DNR	
7	Definitions	it's not clear to me whether, under the definition of Impervious surface, this would include pervious pavers, since the surface of pavers is "compacted".	Jennie Skancke/DNR	
8	Definitions	100-year Flood Elevation: Including constructed stormwater	Dave	

#	Rule	Comment Synopsis	From	Response
		facilities could be unintentionally restrictive. Constructed Stormwater Facility is not defined and could be interpreted very widely (Ditch, storm sewer, etc.).	Modrow/Eden Prairie	
9	Definitions	"100-year flood elevation" for stormwater facilities. The City requests the District consider working with municipalities to obtain 100-year flood elevations for constructed stormwater facilities rather than rely entirely upon District studies. Many constructed facilities have this design information included in their site plans. The City would like to inquire if District funding may be available for any analysis or any required improvements as a result of this rule? The City would like to inquire how this rule may impact a property owners' ability to make an expansion to their structure? Would they need a variance? How will we or a property owner know whether the National Weather Service or Natural Resources Conservation Service Technical Release should be used?	Vanessa Strong/ Chanhassen	
10	Definitions	Emergency Work: The City would like the District to evaluate this exception to be available to private property owners as well as public entities. With more and more private stormwater infrastructure, this may be an important exception to multiple property owners.	Vanessa Strong/ Chanhassen	
11	Definitions	Low Floor: Please consider being consistent with State Building Code definition for lowest floor.	Vanessa Strong/ Chanhassen	
12	Definitions	Outfall: Please consider being consistent with MN Stormwater Manual definition: "Outfall" means the point source where a municipal separate storm sewer system discharges to a receiving water, **or the stormwater discharge permanently leaves the permittee's MS4**. It does not include diffuse runoff or conveyances that connect segments of the same stream or water systems (e.g., when a conveyance temporarily leaves an MS4 at a road crossing)." https://stormwater.pca.state.mn.us/index.php?title=MS4_APPENDIX_B:_DEFINITIONS_AND_ABBREVIATIONS	Vanessa Strong/ Chanhassen	

#	Rule	Comment Synopsis	From	Response
13	Definitions	Topsoil: Will any testing be required? What if in-situ topsoil does not meet this standard?	Dave Modrow/Eden Prairie	
14	Rule B: Floodplain Management and Drainage Alterations	2.1 - Is it also watercourse or only waterbody?	Jennie Skancke/DNR	
15	Rule B: Floodplain Management and Drainage Alterations	In general, the City has ran into many instances where the District's current model does not have the resolution necessary to accurately model and enforce regional ponding issues. We have seen significant differences when compared to the original design 100-yr levels, even after adjusting for Atlas 14 rainfall depths. The proposed language could cause issues with the regulation of constructed stormwater feature's high water levels.	Dave Modrow/ Eden Prairie	
16	Rule B: Floodplain Management and Drainage Alterations	2.1 (5.1) – Exceptions need to be put in place for the filling/repairs of obvious erosion and displaced rip-rap. Many variances/permits could be avoided with this language.	Dave Modrow/ Eden Prairie	
17	Rule B: Floodplain Management and Drainage Alterations	3.2 – Expanding the floodplain rule to constructed facilities will hinder redevelopment where small, site specific BMPs have been sited to meet previous stormwater requirements. Variances would be required for BMP's taking in site drainage that may need to be relocated and elevated as a site redevelops. Many of these site specific BMP's do not take in drainage from upstream facilities.	Dave Modrow/ Eden Prairie	
18	Rule B: Floodplain Management and Drainage Alterations	3.4.b. - Creekside impervious restrictions and replacement. Currently the structure setback from creeks is 50 feet within the City. Has the District assessed the number of non-conformities that will be created by this rule update and the process for non-conforming properties (eg. rebuilding a garage)?	Vanessa Strong/ Chanhassen	
19	Rule B:	4.9 – The City does not currently obtain easements for privately	Dave Modrow/	

#	Rule	Comment Synopsis	From	Response
	Floodplain Management and Drainage Alterations	maintained, constructed stormwater facilities. This causes long term confusion and misunderstandings related to maintenance and ownership.	Eden Prairie	
20	Rule B: Floodplain Management and Drainage Alterations	5.1 – Add exception for utility repair and work completed under a fast-track permit for sediment removal.	Dave Modrow/ Eden Prairie	
21	Rule B: Floodplain Management and Drainage Alterations	3.1 - Please clarify if this applies to additions to existing homes. If so, the city requests that this section be revised to allow the low floors of additions to existing homes be consistent with the rest of the principal structure. Raising the low-floor elevation of an addition if the rest of the structure is non-conforming is overly burdensome to the homeowner and does not provide added flood resiliency to the overall structure.	Tom Dietrich/ Minnetonka	
22	Rule C: Erosion Prevention and Sediment Control	3 - The City appreciates the addition of topsoil standards.	Vanessa Strong/ Chanhassen	
23	Rule C: Erosion Prevention and Sediment Control	3.2c – How will this be enforced and at what point of the permit process?	Dave Modrow/ Eden Prairie	
24	Rule C: Erosion Prevention and Sediment Control	3.2d – Consider aligning with the MPCA CSW permit language so people are not waiting 7-14 days to stabilize their site. "Stabilization must be initiated immediately to limit soil erosion whenever any construction activity has permanently or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days."	Dave Modrow/ Eden Prairie	
25	Rule D Wetland and	2.2 – This is a great addition to the rule. Is the intent to include creek buffer exemptions for simple repairs or improvements of	Dave Modrow/	

#	Rule	Comment Synopsis	From	Response
	Creek Buffers	utilities falling under the provisions of Rule F?	Eden Prairie	
26	Rule D Wetland and Creek Buffers	2.2 - The City of Minnetonka is extremely supportive of this modification, and appreciates the District's efforts in including this provision.	Tom Dietrich/ Minnetonka	
27	Rule D Wetland and Creek Buffers	3.1.b - How far up gradient from the existing wetland does the land disturbing activity regulation and the need to create a non-temporary wetland buffer apply? Is this distance the same as the buffer width that we would be required to create? If the wetland is not on the landowner's property, then the buffer is not required, right?	Beth Nuendorf/ MNDOT (11/2017)	
28	Rule D Wetland and Creek Buffers	3.1.c. - appears to require buffers 50 feet upstream and downstream of the disturbance. How is this executed if the applicant is not the property owner 50 feet from the disturbance?	Vanessa Strong/ Chanhassen	
29	Rule D Wetland and Creek Buffers	3.2.vi – There is some confusion in the development community about how the High Risk Erosion Area buffer should be applied. Are applicants allowed to grade and develop in these areas, or are they restricted to pre-project conditions?	Dave Modrow/ Eden Prairie	
30	Rule D Wetland and Creek Buffers	3.3.d: Where is the 3.1.e reference or is that meant to refer to section 3.3.e?	Beth Nuendorf/ MNDOT (11/2017)	
31	Rule E: Dredging and Sediment Removal	5.0 Language should clarify that work under this fast track permit does not trigger permit requirements for any of the other rules (Floodplain and Buffers).	Dave Modrow/ Eden Prairie	
32	Rule F: Shoreline and Streambank Improvements	Please look for additional opportunities to use plain language and develop additional outreach material for residents. This is a very technical rule where the primary audience within the City is single family homeowners. The City is concerned the majority of homeowners would not be able to understand or interpret this rule as currently written.	Vanessa Strong/ Chanhassen	
33	Rule F: Shoreline and	3.3.a.i - Consider adding "emergent" to the requirement	Vanessa Strong/	

#	Rule	Comment Synopsis	From	Response
	Streambank Improvements		Chanhassen	
34	Rule F: Shoreline and Streambank Improvements	3.3.b.iii - Consider removing the need for graded gravel below riprap when a geotextile filter is used. Graded gravel can be hard to furnish and is not easily installed in areas of active erosion or in conditions subject to constant flow.	Dave Modrow/ Eden Prairie	
35	Rule F: Shoreline and Streambank Improvements	3.7 - What is the timeframe for obtaining a fast track maintenance permit for shoreline and streambank stabilization? Is it the same as the other fast track permits?	Beth Nuendorf/ MNDOT (11/2017)	
36	Rule G: Waterbody Crossings and Structures	2 - Would this requirement apply to water oriented structures?	Vanessa Strong/ Chanhassen	
37	Rule G: Waterbody Crossings and Structures	3.2.d: What does providing a wildlife passage along each bank and riparian area look like? What is involved with this and what do we need to do to provide it?	Beth Nuendorf/ MNDOT (11/2017)	
38	Rule G: Waterbody Crossings and Structures	Under the proposed rule revision, "*Construction, replacement or improvement of a waterbody crossing in contact with the bed or bank of a waterbody_will provide wildlife passage along each bank and riparian area and fish passage in the waterbody by means that account for wildlife that are native to the area or may be present*" (3.2.d). The unrevised rule states that existing wildlife passage will be preserved, rather than provided. If the proposed rule were to be enacted, we foresee challenges in situations of redevelopment. Providing wildlife and fish passage at crossings that don't currently allow it may require changing existing structures in ways that could alter the intended functions of the structures and waterbodies.	Bill Alms & Alyson Fauske/ Shorewood	
39	Rule G: Waterbody Crossings and	3.2.e - Public entities must be able to undertake the work. The no build option may not be reasonable. Can there be an exemption to the no build for public entities? The minimal	Beth Nuendorf/ MNDOT (11/2017)	

#	Rule	Comment Synopsis	From	Response
	Structures	impact option will be selected, but we must be able to build.		
40	Rule G: Waterbody Crossings and Structures	6.2 – Is it the intent of the District to permit the repair and maintenance of existing inlets and outlets within WCA regulated wetlands? As currently stated, a Waterbody seems to encompass wetlands being they are a natural depression (Water Basin). Given the amount of outfalls into WCA wetlands the City currently manages in the City, obtaining permits for this work isn't feasible, nor is it was has been practiced by the District to date. The City suggests you add similar language related to no-loss and incidental wetlands found in Rule D, 2.2.	Dave Modrow/ Eden Prairie	
41	Rule J: Stormwater Management	The City would like the District to consider adding a tree preservation credit, and other credits similar to MCWD. The improvement of one natural resource at the cost of another is a significant concern.	Vanessa Strong/ Chanhassen	
42	Rule J: Stormwater Management	3.1.a – Consider allowing applicants to model the critical rate control events using an MSE-3 rainfall distribution with site specific Atlas 14 rainfall depths. The MSE-3 distribution is more widely accessible to consultants and was constructed to mimic regional nested distributions. I've found the MSE-3 distribution to be more conservative than the District's posted distribution in nearly every scenario as it relates to peak flow rates. Often times in HydroCAD models, the District's distribution results in lower peak flow rates than the MSE-3 and the dated Type II distributions.	Dave Modrow/ Eden Prairie	
43	Rule J: Stormwater Management	3.1.b.ii.C – When does the site-specific infiltration capacity need to be provided? Consider aligning with the MPCA's proposed CSW permit language 16.11 "For design purposes, permittees must divide field measured infiltration rates by 2 as a safety factor or permittees can use soil-boring results with the infiltration rate chart in the Minnesota Stormwater Manual to determine design infiltration rates. When soil borings indicate type A soils, permittees should perform field measurements to verify the rate is not above 8.3 inches per hour. This permit prohibits infiltration if the field measured infiltration rate is above 8.3 inches per hour." Consider adding the safety factor and capping design infiltration rates to the maximum MPCA	Dave Modrow/ Eden Prairie	

#	Rule	Comment Synopsis	From	Response
		design rate of 1.63 inch/hour.		
44	Rule J: Stormwater Management	3.2a – The water quality requirement threshold for linear reconstruction projects should match the abstraction threshold of 3.2b. Right of way is typically limited in neighborhood reconstructs forcing costly proprietary structural BMPs that have high short term capital expenditures and carry long term maintenance concerns. The City's water quality improvement efforts and funding should be aimed at regional solutions for undertreated areas based on MPCA Waste Load Allocations and other water quality studies that are aimed at strategic implementation plans.	Dave Modrow/ Eden Prairie	
45	Rule J: Stormwater Management	3.3 – The MPCA has proposed significant prohibitions to infiltration within its current draft of the Construction Stormwater Permit that will become effective August 1st, 2018. In particular, these prohibitions include all areas with Type D soils and all areas within an Emergency Response Area. Both of these prohibitions will widely restrict the use of infiltration to meet the District's abstraction requirements. Consider adding more guidance for restricted sites to allow for more feasible alternatives outside of capture and reuse to avoid the subjectivity of the "Maximum Extent Practicable." Consider allowing enhanced filtration as an alternative where infiltration is prohibited.	Dave Modrow/ Eden Prairie	
46	Rule J: Stormwater Management	3.6.a and c – Consider revising to read "At least two feet above the 100-year high water elevation and one foot above the ..."	Dave Modrow/ Eden Prairie	
47	Rule J: Stormwater Management	3.7 – The City does not currently obtain easements for privately maintained, constructed stormwater facilities. This causes long term confusion and misunderstandings related to maintenance and ownership.	Dave Modrow/ Eden Prairie	
48	Rule J: Stormwater Management	3.8 - The City requests that this provision of the rule not apply to public agencies, as chloride use and reduction documentation is already a component of the MS4 permit,	Tom Dietrich/ Minnetonka	

#	Rule	Comment Synopsis	From	Response
		which does not apply to private entities.		
49	Rule J: Stormwater Management	3.8 - Under the proposed rule revision, applicants (other than single-family home sites) must provide a plan for post-project chloride management. To enable this rule revision to have the desired effect, we would like to see the District issue guidance regarding the development of chloride management plans and set up a framework for enforcement of submitted plans.	Bill Alms & Alyson Fauske/ Shorewood	
50	Rule J: Stormwater Management	4 - The City is very supportive of the new section 4 of Rule J. The City prioritizes regional stormwater management in its draft LWMP, and tends to pursue opportunities for regional stormwater management.	Vanessa Strong/ Chanhassen	
51	Rule J: Stormwater Management	Appendix J1 – The City appreciates this very useful document	Vanessa Strong/ Chanhassen	
52	Rule J: Stormwater Management	Chloride management: Can public entities use their MS4 SWPPP to comply with the chloride post project management plan? Can this be written into the Rules?	Beth Nuendorf/ MNDOT (11/2017)	

Comments Received from:

City of Chanhassen
City of Eden Prairie
City of Shorewood
City of Minnetonka
Metropolitan Council
MN Department of Natural Resources
MN Department of Transportation

Safety. Service. Performance.
These are the three primary tenets of the 4M Fund. For detailed information on 4M, such as investment policies and governance, please see the 4M Information Statement available at www.4mfund.com., or contact:

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- *PMA Financial Network, Inc. serves as the Administrator to 4M*
- *PMA Securities, Inc. serves as the marketer to 4M*
- *Prudent Man Advisors, Inc. serves as the investment advisor to 4M*
- *RBC Global Asset Management (U.S.) Inc. serves as the sub-advisor responsible for the day-to-day management to 4M*

About 4M

Sponsored and governed by the League of Minnesota Cities, the 4M Fund is a customized cash management and investment program for Minnesota public funds and is designed to address the daily and long term investment needs of Minnesota cities and other municipal entities.

The 4M Fund offers Participants many unique benefits, including checking, customized accounting, web transactions and reporting, direct wire of state aid and a number of additional investment services. The 4M Fund also provides a wide range of fixed term investments through our Fixed Rate Program.

Managed in accordance with Minnesota Statutes and customized specifically for public entities, the 4M Fund seeks to provide safety, daily liquidity, and highly competitive yields. As cities and other public entities look to sensible options for the investment of public funds, the 4M Fund is a trusted investment choice.

Investment Options

4M Liquid Asset Fund

An overnight money market portfolio providing access to reduced-cost banking services.

4M PLUS Fund

A slightly longer-term money market portfolio with an enhanced yield.

4M Term Series Investment Pools

A short-term investment option that seeks higher yields and provides a fixed rate and a specific date to meet investment needs. *Offered by PMA Financial Network, Inc.*

Fixed Income Investments

A Fixed Income Investment Program that allows investors to purchase investment instruments including FDIC insured or collateralized certificates of deposit of banks and thrift institutions ("CDs"), government securities and municipal securities. *Offered by PMA Financial Network, Inc. and PMA Securities, Inc.*

MINNESOTA MUNICIPAL MONEY MARKET FUND

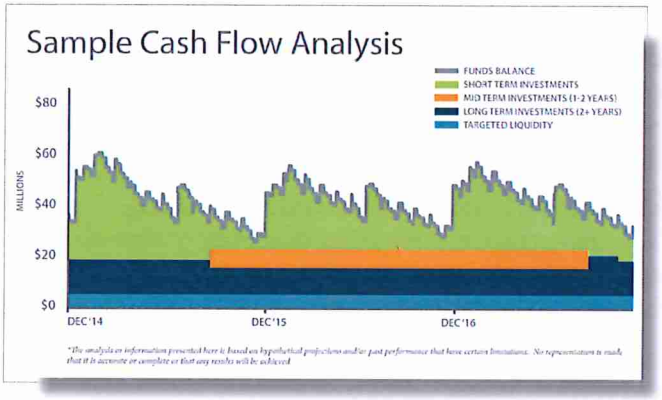
Additional 4M Services

Bond Proceeds Management Program

Bringing your project to life with a comprehensive investment and arbitrage management program for bond proceeds. *Offered through PMA Securities, Inc.*

Cash Flow Management Program

A complete and accurate picture of your entity's cash flow so you can put your money to work sooner... and longer. *Offered by PMA Financial Network, Inc.*

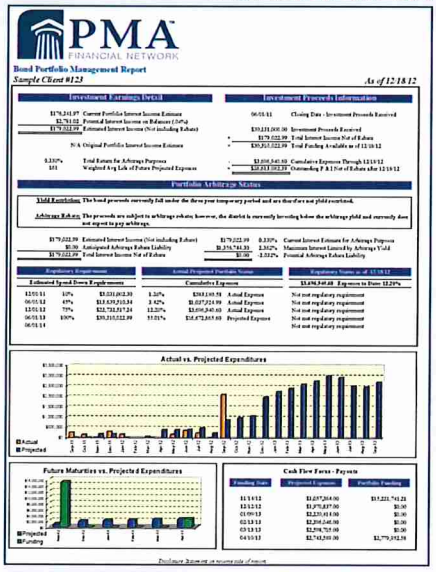


MONTHLY REPORTING

PMA provides each of its clients with a monthly report detailing interest earnings projections, arbitrage spend down status, potential payments and comprehensive portfolio information.

BOND PROCEEDS ILLUSTRATION

SAMPLE BPM REPORT



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MINNESOTA MUNICIPAL MONEY MARKET FUND
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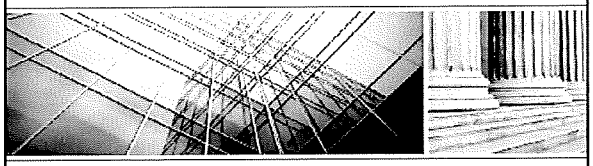


RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

LEAGUE OF MN CITIES 4M FUND

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

COREY BOYER, MUNICIPAL ADVISOR
PMA FINANCIAL NETWORK

JULY 11, 2018

PMA

What is the 4M Fund?

4M FUND

- Cash/Investment Management Program designed specifically for municipal entities in Minnesota
- Focused on short-term liquidity needs of public entities
- Low-risk option providing competitive yields for public funds

PMA

4M Fund Program Overview

- Cash/Investment Management program started by the League of MN Cities (LMC) in 1987 under MN Statute, "Joint Powers Act" – LMC Board governs the Fund.
- PMA Financial Network, Inc. was hired by LMC in 2007 to administer the 4M Fund. Administration activities include:
  - Processing Daily activity for participants
  - Daily, Weekly, and Monthly Accounting processes
  - Fund reporting – confirmations/statements
  - Cash flow services – comprehensive cash flow services allowing a city to invest reserves based on sound, reliable data
- Bond Proceeds Management *(PMA Securities, Inc.)*
  - Additional service offered to all 4M participants – registered municipal advisors
- Currently over 400 participants in the 4M Fund.
- Online Access to 4M Accounts providing access to move funds, view statements or investment confirmations, and to view account activity.

PMA

4M Fund Program Overview (cont.)

- Two Separate Money Market Pools
  - 4M Liquid Fund
    - Daily liquidity
    - Full set of banking services available
    - $1 share price every day
    - Interest earnings paid monthly
  - 4M Plus Fund
    - Potential for higher yield
    - 14-day aging for new deposits
    - $1 share price every day
    - Interest earnings paid monthly
- Term Series Investment Pools
  - Pooled vehicle for intermediate-term investment funds (90-397 days)
  - Fixed maturity date, fixed rate, interest earnings paid at maturity

PMA

4M Fund Program Overview (cont.)

- Fixed Rate Investment Program *(PMA Financial Network, Inc., PMA Securities, Inc.)*
  - Investment options:
    - Agencies, Treasuries
    - Municipal Securities
    - Variety of CD products – 1,000+ bank relationships
      - DTC-eligible CDs
      - Non-negotiable
      - Collateralized - Secured by Pledged Securities or Letters of Credit (LOC)
      - CDARS – Secured by FDIC Insurance
    - Savings Deposit Accounts *(Same-day liquidity)*
      - MMA & ICS - Secured through a Letter of Credit (LOC) Issued by FHLB and/or Collateralized by Pledged Securities or FDIC Insurance (ICS)

PMA

PMA Overview

- The PMA companies *(operate under common ownership)*
  - PMA Financial Network, Inc. *(LGIP administrative services)*
  - PMA Securities, Inc. *(SEC and MSRB registered broker-dealer and member of FINRA, SIPC)*
  - Prudent Man Advisors, Inc. *(SEC registered investment advisor)*
- Headquartered in Naperville, IL – 120+ employees – 14 employees in PMA's MN offices in Albertville and St. Louis Park
- PMA's focuses solely on the public sector, currently servicing over 2,400 public entities in FL, IA, IL, MI, MN, MO, NY, OK, PA, SD, WI
- More than $22.4 billion of assets under administration as of December 31, 2017*

* *Total assets under administration include both money market pool assets for which the PMA Companies serve as fund administrator/accountant, marketer/distributer, fixed income program provider (brokerage services), and/or investment advisory, or separate institutional accounts.*

MEETING MINUTES

Riley-Purgatory-Bluff Creek Watershed District

June 6, 2018, Board of Managers Monthly Meeting

PRESENT:

Managers:	Richard Chadwick, Secretary
	Jill Crafton, Treasurer
	Dorothy Pedersen, Vice President
	Dick Ward
	Leslie Yetka, President
Staff:	Claire Bleser, District Administrator
	Zach Dickhausen, Water Resources Technician
	Michelle Jordan, Community Outreach Coordinator
	Joshua Maxwell, Water Resources Coordinator
	Louis Smith, Attorney (Smith Partners)
	Scott Sobiech, Engineer (Barr Engineering Company)
Other attendees:	Greg Hawks, Chanhassen Environmental Commission
	Larry Koch, Chanhassen Resident
	David Ziegler, CAC; Eden Prairie Resident

1. Call to Order

President Yetka called to order the Wednesday, June 6, 2018, Board of Managers Meeting at 7:05 p.m. at the District Office, 18681 Lake Drive East, Chanhassen, MN 55317.

2. Approval of the Agenda

President Yetka announced the addition of item 8e - Resolution 2018-003 to Adopt a Record of Decision for the Environmental Review of the Lower Riley Creek Stabilization Project: Reach E and Site D3 and Making a Negative Declaration on the Need for an Environmental Impact Statement. Manager Ward requested that Consent Agenda items 6d – Permit 2018-015 – and 6f – Permit 2018-027 – be moved off the Consent and added to Action Items. President Yetka added them as agenda items 8f and 8g. Manager Chadwick requested that items 6a – Accept Staff Report – and 6b – Accept May Engineer's Report with Attached Inspection Report - be removed from the Consent Agenda and added to Action Items. President Yetka added them as items 8h and 8i. Manager Crafton moved to approve the agenda as amended. Manager Ward seconded the motion. Upon a vote, the motion carried 5-0.

3. Rules Public Hearing: To Be Held on July 11

The Rules Public Hearing is scheduled for July 11, 2018.

4. Matters of General Public Interest

No Matters of General Public Interest were raised.

5. Reading and Approval of Minutes

a. May 2, 2018, RPBCWD Board of Managers Monthly Meeting

Manager Pedersen noted that in the meeting attendee record Pete Iverson should be identified as a CAC member. She also requested the correction of the spelling on page 4 of the Toyota RAV and on page 3 the spelling of her last name. Manager Crafton noted that the word "rules" needed to be added after the word "District" in two places under item 8h. She also requested that the minutes clarify under item 8c what work will be undertaken in phase 1 of the storm water pond project with the University of Minnesota. Administrator Bleser noted that the core sampling will take place in Phase 1. Manager Ward requested that the managers receive the draft minutes each month as soon as they are available. Administrator Bleser commented that she could send them to the Board when she sends them to the CAC. Manager Crafton moved to accept the minutes as amended. Manager Ward seconded the motion. Upon a vote, the motion carried 5-0.

6. Consent Agenda

President Yetka read aloud the Consent Agenda: 6c – Approve 60-day Review Period Extension for Permit 2018-005 Hampton Inn in Eden Prairie; 6e – Approve Permit 2018-022 Sunrise Park Athletic Court Improvements in Bloomington with Staff Recommendations; 6g – Approve 60-day Review Period Extension for Permit 2018-028 Oak Point Elementary Parking Lot in Eden Prairie; 6h – Approve Permit 2018-029 98th Street Reconstruction in Bloomington with Staff Recommendations; 6i - Approve Permit 2018-030 Dakota Road Reconstruction in Bloomington with Staff Recommendations; 6j – Approve Permit 2018-031 Ridgeview Elementary School Improvements in Bloomington with Staff Recommendations; 6k – Approve Permit 2018-034 Basin 05-11-A Cleanout in Eden Prairie with Staff Recommendations.

Manager Ward moved to approve the Consent Agenda as read. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

7. Citizen Advisory Committee (CAC)

Mr. Zielger, CAC president, reviewed with the Board the items in the CAC meeting minutes as included in the Board packet. He highlighted that the CAC would like to monitor the storm water ponds selected for the study with the University of Minnesota while the project is ongoing. He said the CAC would like to document if there are negative impacts to the wildlife during the project. Mr. Ziegler reported that the CAC has seen the District's launch proposal for its website and has a few suggestions about it for staff. He talked about the CAC's idea for leading a groundwater conservation challenge in the watershed to incentivize homeowners to reduce summer water usage, which tends to be 50% higher than during the rest of the year.

Administrator Bleser addressed the idea of monitoring the storm water ponds included in the iron-filings study. She suggested the CAC investigate undertaking a Compare and Impact Study by studying five ponds that are not

included in the project but are similar to the five in the project and comparing the data to the data the CAC collects about the five ponds included in the project. The Board discussed the idea of the groundwater conservation challenge and offered suggestions on what additional information the Board would like about such a possible project and where the CAC could go for more information.

8. Action Items

a. Accept April Treasurer's Report

Manager Crafton noted a few transfers of funds that were made as approved by previous Board action. Manager Crafton moved to accept the April Treasurer's report as submitted. Manager Ward seconded the motion. Upon a vote, the motion carried 5-0. Manager Chadwick commented that he appreciated the letter from Treasurer Crafton that communicated the review she and the Administrator undertook in accordance with the District's internal controls and procedures. He asked a few questions about specific disbursements and Administrator Bleser responded.

b. Approve Paying of Bills

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

c. 4M Fund Membership

Administrator Bleser described the Minnesota Municipal Money Market Fund (4M Fund) and explained why she has brought this option of 4M Fund membership to the Board. She said that if the Board is interested in learning more about the Fund, she could bring more information to the Board for the next monthly meeting and could arrange a presentation to the Board. The manager agreed that they would like to receive the information and the presentation.

Attorney Welch recommended that the District Administrator and Counsel cross-reference the District's investments policies with the 4M Fund program and to review the Declaration of Trust.

The managers discussed its KleinBank accounts and agreed that its two accounts could be merged into one.

Manager Ward moved to authorize the Treasurer with the assistance of the Administrator to merge the District's two KleinBank accounts into one account. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

d. Shorewood Local Surface Water Management Plan

Administrator Bleser reported that the District has been granted a review extension to July 13. She described staff's concerns with the Plan. Administrator Bleser said that staff feels the most constructive next step is for staff to meet with the City of Shorewood to discuss the Plan and to bring this item back in front of the Board in July with some of the issues worked through. Administrator Bleser noted that no Board action is required tonight on this item.

e. Resolution 2018-003: Riley Purgatory Bluff Creek Watershed District Board of Managers Adopting a Record of Decision for the Environmental Review of the Lower Riley Creek Stabilization Project: Reach E and Site D3 and Making a Negative Declaration on the Need for an Environmental Impact Statement

Engineer Sobiech reminded the Board that in December 2016 the Board authorized the Lower Riley Creek Stabilization Project. He said that subsequently the Board authorized the Engineer to design the

project, including conducting an environmental assessment. He explained that the Environmental Assessment Worksheet (EAW) is required for this project because it proposes to change the cross section of a public water. Engineer Sobiech noted that the EAW was completed and went out for public comment on April 16 and the comment period closed on May 16.

Engineer Sobiech went on to discuss the Finding of Facts that was handed out at tonight's meeting. He noted that the handout is a revised version from the copy in the Board meeting packet. He provided background on the project and described the project's purpose. He stated that the District received comments on the EAW from the Metropolitan Council, the Minnesota Pollution Control Agency (MPCA), the State Historical Preservation Office, and the U.S. Army Corps of Engineers. Engineer Sobiech went through the received comments, which were generally supportive of the project, and talked about how District staff addressed the comments. He stated that the project does not create significant environmental issues and that the long-term effects of the project are beneficial to both the natural and the human environments. He responded to questions.

Attorney Welch explained Resolution 2018-003 and the action that the Board would be taking by adopting the Resolution. He added that in the fourth recital on the first page of the Resolution, the only way the District is triggering this EAW process is that the project would change one acre or more of a public water and so he recommended the Board strike from that paragraph "...or diminish the course, current or..."

President Yetka read aloud the resolving paragraph of the resolution.

Manager Crafton moved Resolution 2018-003 with the change as recommended by Attorney Welch. Manager Pedersen seconded the motion. By call of roll, the motion carried 5-0.

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

f. Approve Permit 2018-015 Starbucks Coffee Store in Shorewood with Staff Recommendations

Manager Ward said that he requested this item be moved off the Consent Agenda because he believes that commercial development, re-development, in-fill projects, and new residential development should come in front of the Board instead of just going through Administrative review. He stated that an application for a hold on a platted lot could be an administrative review. Manager Ward noted that he thinks that the Board would benefit from Mr. Jeffery providing a short, five-minute review of the more detailed permit applications such as the types he previously listed.

Mr. Jeffery described how staff currently determines which applications are handled administratively,

placed on the Consent Agenda, or placed as an action item. There was discussion about the review process. Attorney Welch said he thinks it would be helpful for the Board to set review category guidelines for staff. He noted that staff could discuss and come back to the Board with recommendations.

Manager Chadwick moved that the Board approve Permit 2018-015 with the two conditions recommended by staff and the one-day review extension. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

g. Approve Permit 2018-027 MAMAC Addition in Chanhassen with Staff Recommendations

Manager Chadwick moved to approve Permit 2018-027 with the conditions recommended by staff. Manager Ward seconded the motion. Upon a vote, the motion carried 5-0.

h. Accept Staff Report

Manager Chadwick noted that he would like a copy of the Performance Review Scale for staff as referenced in the staff report. Administrator Bleser commented that it is the same scale as is used for the Administrator and she can send it to the Board again.

Manager Chadwick commented that he would like the staff report to include the date of the previous TAC meeting and the date of the next TAC meeting at the time of the staff report or for the report to state that no upcoming TAC meeting is set.

Manager Chadwick asked when staff anticipates the launch of the District's updated website. Ms. Jordan responded that the goal is by early July or if that timeframe is not met then by the end of August.

Manager Ward moved to accept the staff report. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

i. Accept May Engineer's Report (with Attached Inspection Report)

Manager Chadwick asked a few questions to clarify information in the Engineer's Report. He talked about the MPCA's draft construction storm water permit and the fact that the proposed prohibitions would affect roughly 41% of the land area in this watershed district. Manager Chadwick asked for more details on the land area that would be affected. Engineer Sobiech responded. Attorney Smith explained that the permit presents some new ways of addressing both groundwater and contaminated sites that are viewed as problematic in that it takes some of the discretion away from the cities. He added that Smith Partners independently commented on it. Attorney Smith stated that this issue is something that the District will need to react to in its rules.

Manager Ward moved to accept the Engineer's Report with the attached inspection report. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0

9. Discussion Items

No Discussion Items

10. Upcoming Events

- Junior Master Water Steward Action Project, Eden Prairie High School, Monday and Tuesday, July 11 and 12
- Citizen Advisory Committee Meeting, Monday, June 18, 6, 6:00 p.m., District Office, 18681 Lake Drive East,

Chanhassen.

- RPBCWD Board of Managers Public Hearing and Regular Monthly Meeting, Wednesday, July 11, 7:00 p.m., District Office, 18681 Lake Drive East, Chanhassen

11. Adjourn

Manager Ward moved to adjourn the meeting. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0. The meeting adjourned at 8:54 p.m.

Respectfully submitted,

_____

Richard Chadwick, Secretary

RPBCWD Staff Report
July 11, 2018

Administrative

10-Year Plan
Timeline
November 15 – release of the plan out for comments
December 6 – 6:00pm Informational session
January 15 – end of written comment period
February 7 - response to comments to board for approval (we need 10 days in between response to comments and public hearing)
March 15 – Public Hearing
April 4 – release for 90 day
June 27 - BWSR Board Approval
July 11 - RPBCWD Adoption

Administrator Bleser presented to the BWSR Central Regional Committee on June 7, 2018. Central Regional Committee recommended approval of the plan the BWSR Board.

50th Anniversary Celebration: Come explore with us!

Staff has fine tuned events to include activities in all 4 seasons.

Winter: Lake Ann Winter Festival, Snow shoeing family event
Spring: Get out and explore, walking challenge
Summer: Celebrating our community, Lake Riley
Jacques Barn
Fall: Half Century Bike Ride
December: Discover our community through your lens (Annual communication will include photos from photo contest engaging our community to capture the beauty of our natural resources). This will wrap up our 50th anniversary.

50 YEARS 1969 - 2019
RILEY PURGATORY BLUFF CREEK
WATERSHED DISTRICT
come explore with us!

Administration
Administrator Bleser completed summer hire paperwork.

Aquatic Invasive Species
No updates

Annual Report
No Updates

Budget
No updates

Data Requests and Research Extension

Multiple community members contacted staff Maxwell and were sent information about the common carp management occuring within the District. One resident requested and was sent bathymetry data for the Upper Purgatory Creek Recreational Area.

Grants
RPBCWD will be managing a chloride grant initiative for all of Hennepin County that is approximately $100,000. The aim of the initiative is to identify barriers in needs to reducing chloride application while still keeping hard surfaces safe, and identifying solutions. Pending dollars, the collaborative would then implement strategies.

MAWD/ Local Leaders Tours
Our final numbers include: 180 local leaders/ watershed managers participated on the boat tour, 120 on the bus tour, 28 in the District's technical session on managing and restoring creeks.




Citizens Advisory Committee

June meeting

The Citizens Advisory Committee met Monday, June 18, for their regular monthly meeting. Draft minutes are included in the board packet. The CAC reviewed residential cost-share applications and made funding recommendations. See the cost-share section for details.

Technical Advisory Committee

No new updates

Programs and Projects

District-Wide

Cost-share program

Residential

Seven residential cost-share applications were received for the second-round deadline. Four of the applications were recommended for funding by both the Citizen Advisory Committee and staff technical review. These are included as an item on the agenda and in the board packet. The other three were determined to require additional information. Applicants were invited to provide that additional information and resubmit their applications for consideration at the July CAC meeting.

HOA

One new Homeowner's Association Application was received. The application is for retrofitting the association's irrigation system with new controllers that incorporate weather station data. The funding request is substantiona ($20,000) and above the $10,000 threshold that requires a public hearing and so will not go to the board for review at this meeting. The application is included at the end of the staff report for the managers information. It is anticipated that the application will go to the board at the August meeting.

MPCA Community Resiliency Grant

Regulatory Program

Permitting

Eight (8) applications were submitted to the District's online permitting system since the June 6, 2018 Board Meeting. One of the eight has not followed up with submittal information. Of the eight applications, two were approved administratively. The remaining five (5) applications are in various stages of review.

PERMIT #	ADDRESS	PROJECT DESCRIPTION
2018-040	Rindahl Court R/W Minnetonka	The installation of a receiver apparatus for the in-line inspection of the existing gas pipeline.
2018-045	MN TH5 R/W west of Audubon in Chanhassen	Replacement of 100 lineal feet of gas pipeline.

Rules Update
The comment period for the District draft rules ended June 25, 2018. A matrix of the comments received is included in the board packet. A public hearing to take comment on the draft rule revisions is scheduled for tonight's meeting. Staff will compile responses to the comments received and provide to the Board of Managers at the August meeting along with any suggested revisions based upon the comments received. Pending Manager's instruction, the rules could be approved at the August meeting with an adoption date set at that time.

Stormwater Research (Gulliver)
Researchers from the University have been visiting the potential ponds to identify final candidates.

Data Collection (J. Maxwell)

Rice Marsh Aeration
No new updates. Staff will pulse the unit once a month and remove the aeration stones this summer to ensure the lines are clear.

Summer Field Season
Staff received the spent lime monitoring equipment this month from ISCO and installed the unit at the end of June. Three water quality samples were collected this month from the inlet, outlet, cleanout, and at the two current sampling ports that are buried in the spent lime, to assure the unit is working. Total phosphorus, calcium, and iron are only being collected to assess if the unit is working (waiting for results). Staff conducted three lake and stream sampling events this past month. All lake level sensors were checked in June and were working well. Staff purchased, assembled, had Limnotech program, and installed two additional EnviroDIY lake level units on Lake Riley and Rice Marsh Lake. They have been working excellent. Staff will be working with Limnotech within the upcoming months to learn to program the Enviro DIY units which are significantly less expensive than other products available. Staff have collected multiple water quality samples from the two automated water sampling stations in June: stormwater inlet to the pond at the northwest corner of Rice Marsh Lake and Riley Creek in the culvert running under Powers Blvd upstream of Lake Susan. These stations are programed to trigger and take water samples when the water level rises during/after rain events. These samples will be used to analyze nutrient loading at these sites and determine whether these sites would benefit from stormwater BMPs.

Common Carp Management
Carp Removed: 1,693 - Lower Purgatory Creek Recreational Area
Staff installed the barrier trap net on May 7th and Eden Prairie staff installed the barrier on May 4th. Staff have checked the net and barrier daily and have been coordinating cleaning the barrier with city of Eden Prairie staff. The barrier has been working well this year as we have not received many large rain events and have experienced little clogging. A majority of the fish captured this year were removed via backpack electrofishing at the breached berm between Upper Purgatory Creek Recreational Area and Lower Purgatory Creek Recreational Area. Numbers of carp captured and removed has dwindled as the main spawning run has ended. Staff will now be on the lookout for fish concentrating above the barrier after the spawn as they try to return to Staring. Staff will soon order tags for tracking common carp this winter (approximately 14). Staff would like to recognize and thank the Shakopee Mdewakanton Sioux Community Organics Recycling Facility for allowing the District to drop off captured carp to be composted at no charge.

Creek Restoration Action Strategy
Staff will be replacing "lost" bank pins at our regular stream monitoring sites, as well as at an additional site on the southwest side of Silver Lake, to assess erosion rates in 2018. Joshua Maxwell is working to submit the third revised CRAS to the Center for Watershed Protection for publication.

WOMP Station - Metropolitan Council
Staff visited the WOMP stations twice this month for baseline sample collection.

Education and Outreach (M. Jordan)
Volunteer program

Service Learners
Service learner volunteers were highlighted during the MAWD/Local Leaders Water Institute bus tour, along with other district volunteers. See the section on the tour for details.

Adopt a Dock Program
Adopt a Dock volunteers were highlighted during the MAWD/Local Leaders Water Institute bus tour, along with other district volunteers. See the section on the tour for details.

Master Water Stewards Program
2017 cohort steward, Beth Kutina, installed her capstone project on June 18th and 19th. Four other Master Water Steward volunteers came together to help. The capstone is a raingarden at Eden Prairie High School. A small sign will be installed at the garden to educate students on its purpose. Beth will create the sign this summer. Beth is working to get the school environmental club involved with taking care of the raingarden long-term.

Citizen Advisory Committee
See CAC section above.

Minnetonka High School Capstone Mentorship
Aimi's work was highlighted in the local paper. Follow this link for the full article:
https://www.hometownsource.com/sun_sailor/community/minnetonka/minnetonka-high-graduate-aimi-dickel-uses-art-for-environmental-education/article_6effb098-7070-11e8-95d1-ff3b1b207686.html

FEATURED

Minnetonka High graduate Aimi Dickel uses art for environmental education project at Scenic Heights Elementary

Riley Purgatory Bluff Creek Watershed District project a part of senior capstone

Paige Kieffer Jun 16, 2018 0

SUN SAILOR SECTION

MOST POPULAR REGI

Articles

• Sheriff's Department sear

Communication Program

Speakers Bureau
No new updates

Tabling at community events
District staff will be tabling at the upcoming Chanhassen Splash Bash on July 21st. They will be bringing the Watershed Sandbox to educate about watersheds and watershed protection.

Water Resources Report
Fact sheets continue to be distributed in print form and accessed through the district website.

Watershed Sandbox interactive display
The watershed sandbox was showcased during the MAWD/LocaL Leaders Water Institute bus tour. There was substantial interest in the sandbox and how others can create their own. Staff referred attendees to the UC Davis website that houses the open-source software and specifications for the sandbox, (https://arsandbox.ucdavis.edu/) and provided details on the equipement the district purchased for the project.

Website & Newsletter
Final content for the website is being generated. The June newsletter was released.

Youth Outreach
Earth Day Mini-Grants
All recipients have completed their projects and submitted for reimbursement. Applications for 2019 will open late winter of next year.

Scenic Heights School Forest Restoration
The nurse stump sign has been finalized. Staff are working to print and install the sign.

Continuing Education Program
Winter & Turf Maintenance Training
The district isl hosting a Winter Parking Lots & Sidewalks Maintenance workshop August 30th.

Sustainable and no-mow lawns workshops
Both workshops (June 25th and 27th) were well attended. This was a pilot of a new program and feedback was solicited from participants. Feedback from the June 25th workshop was used to further refine the June 27th program. All information will be used to improve on the workshops for the next time they are used.

Local Leaders Program
Summer Tour
The Local Leaders Water Institute/MAWD Summer Tour was a great success. Approximately 180 individuals attended the Minnesota River Boat Tour, 120 the CCWMO/RPBCWD Bus Tour, and 28 the stream restoration technical session.

Businesses and Professionals Program
Professional luncheon series
The final luncheon in the series will be on July 18th, and is for Property Managers. The topic will be winter maintenance practices and chloride pollution. Staff are promoting the workshop within the property managers community.

Bluff Creek One Water

Chanhassen High School

The District has been working with the City, the contractor (Peterson Construction), and the High School to make sure all is in place for building of the project. Further detail can be found in the Engineer's Report.

Bluff Creek Tributary Restoration

Manager Crafton attended the Bluff Creek Tributary Restoration meeting. Cooperative agreement is being drafted and will be submitted to the City. The District is also working with the City Forester on the project to ensure that desirable trees are protected.

Riley Creek One Water

Lake Susan Park Pond

Another pre-construction meeting was held to address further questions from the City of Chanhassen. Project is slated to start after July 4th celebration.

Riley Creek

The District is drafting the cooperative agreement for Lower Riley Creek. City and District will be bringing the cooperative agreement for execution for their August meetings.

Purgatory Creek One Water

Fire Station 2

Some minor modifications needed to happen in order for the reuse system to work accurately. The City of Eden Prairie is working on the last final details.

Purgatory Creek at 101

The District started the process of closing out this project.

Scenic Heights School Forest

Management of herbaceous invasive species such as garlic mustard and re-sprouts of tartarian honeysuckle and buckthorn continues. Spot mowing and herbicide treatment are the main methods. There have been three management visits to date. The wet spring, followed by very hot weather delayed seeding, which planned now for late August.

(Purple prairie clover in the school forest)

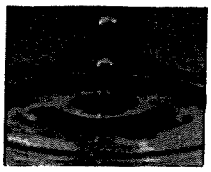
Professional Workgroups and Continuing Education

Staff Maxwell led the Technical Session workshop the day after the MAWD tour which was held by the RPBCWD. Other speakers included Jeff Weiss and Scott Sobiech from Barr Engineering and Claire Bleser of RPBCWD. The audience for this professional workshop (about 26 people) included water resource managers, data collection staff, and city staff. The workshop included presentations on techniques to assess creeks, explained common solutions and their design, and information on how to inspect the creek post-restoration. The in office presentations were then followed by a creek walk along the proposed creek restoration site on lower Riley Creek.

Administrator Bleser and staff Jordan both gave presentations at the World Environmental & Water Resources Congress June 3-7. The administrator's talk was titled: Planning the next 10 years in water resources projects using a prioritization tool. Jordan's talk was titled: Everyone's water, everyone's work: engaging the community from day one for robust watershed management planning.

Staff Jeffery and staff Dickhausen both attended Critical Connections Ecological Services' sedge identification workshop held at the University of Minnesota St. Paul campus on June 14-15. This workshop provided staff with valuable knowledge about and skills for identifying native Minnesota sedges while conducting District wetland evaluations.

Administrator Bleser's workshop proposal was accepted for the American Water Resources Association Annual Meeting. She will be co-leading a 3 hour workshop on planning and public participation.



Minnesota Association of Watershed Administrators

June 27, 2018

Riley Purgatory Watershed District
Attn: Claire Bleser, District Administrator
18681 Lake Drive East
Chanhassen, MN 55317

Re: MAWD Summer Tour

Claire,

On behalf of the Minnesota Association of Watershed Administrators, I would like to commend you on a fantastic summer tour. Riley Purgatory, along with Carver County Water Management Organization, Carver County SWCD, Nine Mile Creek Watershed District and MAWD, put on a great tour. There was a lot of valuable information and wide array of water quality projects/programs that highlight an area that is balancing rural and urban issues. Please forward our sincere thanks to your staff, Carver County WMO and Carver County SWCD.

Thank you again,

Sincerely,

Scott Henderson

Scott Henderson, President
Minnesota Association of Watershed Administrators

cc Randy Anhorn, Nine Mile Creek Watershed District
Carver County SWCD
Carver County Water Management Organization

Cost share grant application
2018

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Do not fill in gray boxes. District use only.

Applicant type (check one) ☐Homeowner ☒Non-profit - 501(c)(4) (Homeowner Assn)
☐Business or corporation ☐Public agency or local government unit ☐School

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

Applicant information (PRAIRIE EAST FIFTH ASSOCIATION)

Works or resides in district?

Name Cory Miller, Board President Address 10357 Balsam Lane
City/State/Zip Eden Prairie MN 55347
Phone (952) 484-5602 Alt phone Email cmillerx7982@hotmail.com

Primary contact ☒ Contractor/Consultant

Name Mary Davy - No-Stress Gardening and Landscapes LLC Address 16526 W 78th Street #342
City/State/Zip Eden Prairie MN 55346
Phone Cell 612-267-0525 Alt phone 612-250-2048 Email mdavy@nostressgardening.com

Project location: Homeowners Assn Located in the NE Quadrant of Pioneer Trail & Franlo Road

Address 10320 Balsam Lane*** City/State/Zip Eden Prairie MN 55347
Property Identification Number (PID) 80 Residences
Property owner(s) Each Residence is Individually Owned, but included in the HOA for Landscape Maintenance.

Project located in district?

*** This is also the address for the Property Manager: Lori Waltzer, CCAM - Waltzer Management.
Phone: (952) 513-4709 E-Mail: info@waltzermanagement.com

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

Project summary

Title Irrigation System Controller Upgrade to Solar, SMART Weather-Based System

Total project cost $41,317.71 Grant amount requested $20,000.00
Estimated start date 15 July 2018 Estimated completion date 01 November 2018
Sub-watershed Purgatory Creek

Project located in priority drainage area?

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

2-3 sentence project description

Upgrade current irrigation controller system to improve efficiency, efficacy and sustainability. Project is one part of a comprehensive plan to develop and implement sustainable management & cultural practices to improve overall landscape performance. Performance objectives include, but are not limited to, reduction of water use, stormwater management (increased infiltration), and pollution reduction (less sediment run-off , elimination of manufactured fertilizer use and reduction in use of herbicides & pesticides).

Is this work required as a part of a permit? ☒No ☐Yes
(If yes: describe how the project provides water quality treatment beyond permit requirements on the next page.)

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

Have you had a site visit? ☐No ☒Yes Met with Seth Ristow on Thursday, 07 June 2018 at 2:00 pm.
(If you answered no, please contact staff to schedule one: 952-607-6512)

Project details

SEE SUPLEMENT for Checklist Items EXCEPT "Proof of Ownership" which is APPENDIX D

Do not fill in gray boxes. District use only.

Is time-line reasonable?

Is budget reasonable?

Is plan comprehensive?

Does plant list conform to district's approved plant list?

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

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

DESCRIPTION:

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

SEE SUPLEMENT: "Site Plan & Design Schematics

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

SEE SUPPLEMENT: "Project Benefits & Expected Outcomes" for further discussion.

Are there multiple objectives?

Does the project have well-defined, measurable results?

List other key participants and their roles

1) Lori Waltzer, Property Manger: Participates in system management and facilitates updates to the Board and Residents. Participates in the development in a Comprehensive Master Plan for the Association.
2) No-Stress Gardening and Landscapes: Provides project management, on-going system maintenance, operations & reporting. NSGL also assists in the development of the Association's Comprehensive Master Plan.
3) Irrigation Management will install the new equipment and provide on-going irrigation technician support.

Does the project demonstrate strong partnerships & support?

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

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

How does the project support the goals you checked?

This project has the benefit of being undertaken by a large group of property owners who are ACTIVELY demonstrating a commitment to developing and implementing sustainable and effective landscape maintenance strategies. This is being undertaken in a thoughtful, comprehensive and on-going manner with substantial financial resources being invested.
The process involves a high degree of interaction on a frequent basis, i.e. the project manager and property manager provide monthly reports to the Board. There is an active, on-going forum for educating and reporting to the residents.
This project has both qualified and quantified impacts of which the residents are highly invested . . . including FINANCIAL.
All of these conditions support the single most important component necessary to achieving all of the Cost Share Goals . . . POSITIVE AND SUSTAINED BEHAVIOR CHANGE.

Project details (continued)

Do not fill in gray boxes. District use only.

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

In consultation with the district's technical consultant, Seth Ristow, we determined that the most *"quantifiable"* benefit of this project would be in the **significant reduction of water usage** based on readily available monitoring tools.

Does the project provide water quality treatment?

Does the project provide restoration?

Additional benefits are substantial, but more difficult to quantify with the tools and resources available. "Qualified" benefits resulting from this project and other coordinated changes in cultural practices include reduction of sediment run-off, increased infiltration of stormwater, reduction in the use of herbicides & pesticides and elimination of the use of manufactured fertilizers.

SEE SUPPLEMENT: "Project Benefits & Expected Outcomes" for further discussion.

How will you share the project results with your community?

Is there educational value to the project?

Will the project be visible to the public?

1) Property Manager and Project Manager will make frequent, ongoing reports to the Board.
2) The Association has a quarterly newsletter where project progress and benefits will be shared with the residents on an ongoing basis (at least twice annually).
3) Article showcasing the project will be submitted for publication in local newspapers covering the watershed district, i.e. Eden Prairie Sun Current, Chaska Herald, Chanhassen Villager, and Shakopee Valley News.
4) Project Case Study will be developed on offered to watershed, conservation district and MN Extension staff for use in public education programs.

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

A Comprehensive Association Master Plan is in on-going development and implementation. Components may include, but are not limited to:

1) Renovation of areas experiencing water erosion.
2) Master Tree & Large Shrub Inventory focusing on Plant Health Evaluation & Preservation Strategies
3) Soil Building & Rejuvenation to support the elimination of manufactured fertilizer use, increase water retention & infiltration and reduce sediment run-off.
4) Develop and implement comprehensive improvements to turf management cultural practices.

Evaluation

How will the project be monitored and evaluated?

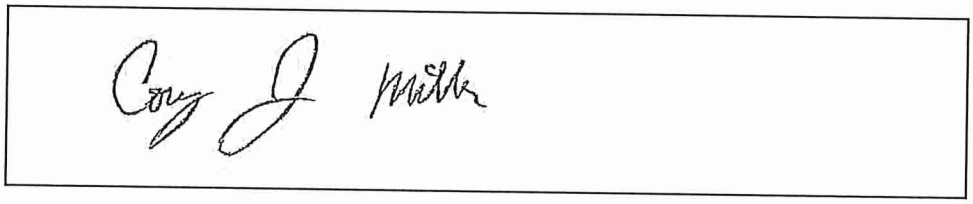
System will be monitored via the web-based interface by the Project Manager, the Property Manger and Irrigation Tech.
Minimum monthly field assessments will be conducted by Project Manager and will make all appropriate adjustments.
System performance quantified by ongoing measurement of water usage.
System performance will be qualified based on ability to support thriving plant material.
Exploration of infiltration testing to evaluate performance is being explored with Sam Bauer, UMN Extension Turf Specialist.

Maintenance agreement

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

Authorization

Name of landowner or responsible party Cory Miller, Board President - Prairie East Fifth Association

SIGNATURE 

DATE: 13 June 2018

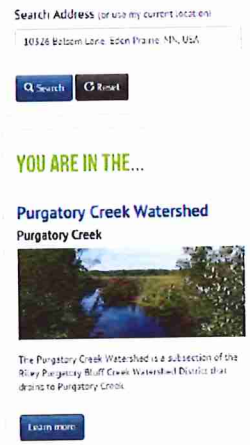
LOCATION MAP

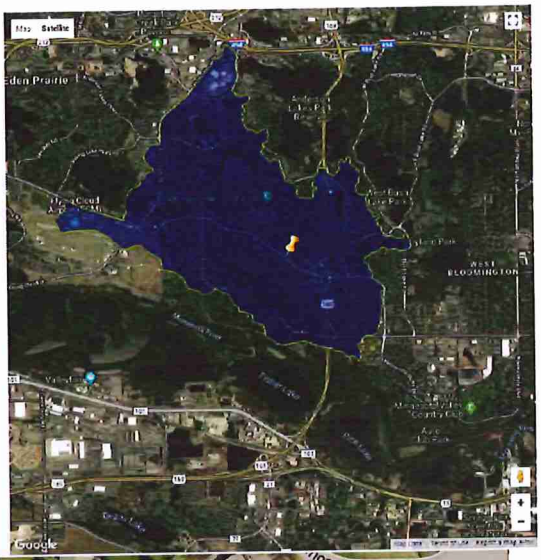
The Prairie East Fifth Association is in the heart of the Purgatory Creek Watershed. It is in the NW quadrant of Pioneer Trail and Franlo Road in Eden Prairie.

The Association has 20 multi-family (4-plexes) properties for a total of 80 private residences. It covers a total of 15 acres including 7.5 acres of turf.

PRAIRIE EAST FIFTH ASSOCIATION

Established in 1979





SITE PLAN & DESIGN SCHEMATICS

Prior to 2016, Prairie East Fifth did not have any Association-managed, in-ground irrigation. Lawn watering was conducted by individual residents via hose and sprinklers. This resulted in areas of severe over-watering and irregular watering contributing to stressed, poorly performing turf grass. Without a way to apply and manage supplemental water, it would be increasingly difficult to implement a renovation process to repair the problem as the turf continued to decline. In addition, the ability to provide supplemental water for new plant establishment (turf, trees, shrubs and/or perennials) would be needed.

Due to the size of the property (15 Total Acres including 7.5 Acres of Turf), the Association decided to install an in-ground irrigation system. The map shows the current configuration of the Irrigation System that was installed in 2016. This system utilized 4 separate battery-powered controllers with minimal management capabilities.

The map below shows the EXISTING Irrigation Layout.

PROPOSED LAYOUT CHANGES:

The IRRIGATION CONTROLLER UPGRADE will leave the same fundamental layout EXCEPT FOR combining Controllers A &B into a single zone managed by 1 Controller.

The PLANNED UPGRADE will utilize new solar powered Controllers which will have access to much greater power (electric) sources.

This change to Solar Power will provide the additional electricity needed to support the more efficient ET (Evapotranspiration) based Controllers without extensive construction to install direct power from electrical transformers.

Prairie East Fifth Association
PROJECT BUDGET:

LABOR COSTS (Contractors, Consultants, In-Kind Labor):

SERVICE PROVIDER	DESCRIPTION	FUNDS Requested from RPBCWD	Matching and/or In-Kind FUNDS	TOTAL LABOR COST
No-Stress Gardening and Landscapes LLC	Planning, Design & Project Management	$0.00	$1,500.00	$1,500.00
No-Stress Gardening and Landscapes LLC	Site Preparation (3). Install of 3 Concrete Pads per Specification. Includes complete mobilization, labor & materials necessary to meet specifications. Manage start-up, testing and system programming. Provide system management in cooperation with Irrigation Tech and Property Manager.	$0.00	$6,000.00	$6,000.00
Irrigation Management LLC	Remove 3 existing battery operated controlllers. Change-out existing solanoids with 24VAC valves. Install 3 Stainless Steel Pedestals, 3 Weathermatic SL4800 Contollers, 6 SmartLink Flow Sensors, 3 Smartline Weather Stations, and 3 Smartline Solar Assemblies. Start-up and fully test system.	$0.00	$4,500.00	$4,500.00
	SUB-TOTAL LABOR COSTS	**$0.00**	**$12,000.00**	**$12,000.00**

PROJECT MATERIAL COSTS:

MATERIALS DESCRIPTION	FUNDS Requested from RPBCWD	Matching and/or In-Kind FUNDS	TOTAL MATERIAL COST
3 Weathermatic SmartLine Controller SL4800 SOLAR PACKAGES**	$20,000.00	$4,934.71	$24,934.71
Shipping, Handling and Site Delivery for 3 Controller Packages	$0.00	$1,500.00	$1,500.00
Estimated Applicable Taxes	$0.00	$3,600.00	$2,883.00
****EACH Weathermatic PACKAGE INCLUDES:** 1 SL4800 SmartLine Controller 1 SLW5 SmartLine Wireless Weather Station 1 SmarkLink Wireless Network - SL AIRCARD 2 SLFSI-T SmartLink Flow Sensors 1 SLSOLAR48 SmartLIne Solar Assembly (Batteries, Panels, etc.) 1 SLPED-4800 Stainless Steel Pedestal EACH COMPLETE PACKAGE IS $8,311.57			
SUB-TOTAL MATERIAL COSTS	**$20,000.00**	**$10,034.71**	**$29,317.71**
PROJECT TOTALS	**$20,000.00**	**$22,034.71**	**$41,317.71**
Percent of Total Costs	**48.41%**	**53.33%**	**100.00%**

PROJECT TIME LINE

If approved, the plan is to implement the project this year (2018 Season) before the shut-down/winterization of the irrigation system.

Process would include:

1) Order Equipment and Materials (Custom Order requires between 4 and 8 weeks). Order would be submitted upon receipt of Grant Approval.
2) Perform Site Preparation and Install Concrete Pads. Elapsed time approximately 1 week.
3) Receive new equipment, transfer to site(s) and complete assembly and install on concrete pads. Elapsed time approximately 3 days.
4) Remove Existing Controllers and complete installation of New Controller System by transitioning electrical and water connections per specification. Elapsed time 3 to 4 days.
5) Test New System & Program Controllers. Approximately 1 day.
6) Monitor & Mange System to Fine-Tune Programs for the Balance of the Season.

The goal is to complete transition, so system is completely ready for operation during the ENTIRE 2019 Season.

"SMART" Weather-Based Irrigation Controllers (WBICs) - See APPENDIX A

The Environmental Protection Agency (EPA) selected smart irrigation controllers as one of the first technologies to endorse as a part of the WaterSense Program, the water equivalent of the Energy Star Program.

"SMART" Weather-Based Irrigation Controllers (WBICs) act like a thermostat for your sprinkler system telling it when to turn on and off. They use local weather and landscape conditions to tailor watering schedules to actual conditions on the site instead of irrigating using a controller with a clock and a preset schedule. "SMART" controllers allow watering schedules to better match plants' water needs, optimizing both water use and plant performance.

Tests by the Irrigation Association (IA) and the International Center for Water Technology at California State University – Fresno, have shown smart irrigation controllers to save up to 20% more water than traditional irrigation controllers.

APPENDIX A contains 3 EPA Fact Sheets which provide further background.

IRRIGATION ASSOCIATION TECHNICAL PAPER: A NEW GENERATION OF SMART CONTROLLERS - See APPENDIX B

The 2017 Irrigation Association Education Conference featured a paper on the use of SMART Controller Technology presented by Parry Webb, CLIA of Weathermatic. While this work was developed for the education of the industry, you will find that it is a very pragmatic and enlightening discussion of SMART Controller Technology in specific and the state of landscape irrigation practices in general.

APPENDIX B presents a comprehensive discussion in an easy-to-read, engaging way.

TECHNICAL SPECIFICATIONS of the PRAIRIE EAST PROJECT - See APPENDIX C

The system we have selected is a solar-powered, weather-based irrigation controller. This is combined with a cellular communication system that supports a remote, internet/web-based interface. It is manufactured and supported by Weathermatic.

This system is a custom specification that will provide the most comprehensive set of water management tools available. It is a well-established, proven technology that is efficient and easy to use. In addition to it's water control capabilities, it also a produces comprehensive data stream which allows for continual improvement of management and programming strategies.

APPENDIX C: TECHNICAL SPECIFICATIONS of the PRAIRIE EAST PROJECT provides detailed supporting documentation.

PROOF OF PROPERTY OWNERSHIP - See APPENDIX C

Proof of Ownership is the Prairie East Fifth Articles of Incorporation filed on 25 July 1979.

PROJECT BENEFITS & EXPECTED OUTCOMES

In consultation with the district's technical consultant, Seth Ristow, we determined that the most "quantifiable" benefit of this project would be in the reduction of water usage based on readily available monitoring tools.

Since the system was installed in late 2016, there is only 1 complete season (2017) of water usage information. While we have all the monthly data resulting in a total irrigation water usage of approximately 3,269,000 gallons, this is ONLY 1 year of data for a brand-new system. This should NOT be considered a hard base-line, but rather a relative reference point for illustration purposes only.

There are several new system capabilities that will greatly increase our ability to utilize irrigation water in an extremely efficient and effective manner. However, the addition of Evapotranspiration (ET) control capabilities is reported to provide significant reductions in water usage. Documented results range from conservative reductions of 20% to feasible 50% reductions. ***Utilizing a conservative estimate of a 20% reduction in water usage applied to our limited historical data would yield an annual savings of more than 653,000 gallons of water.***

Additional benefits are substantial, but more difficult to quantify with the tools and resources available. "Qualified" benefits resulting from this project and other coordinated changes in cultural practices include reduction of sediment run-off, increased infiltration of stormwater, reduction in the use of herbicides & pesticides and elimination of the use of manufactured fertilizers.

SmartLine SOLAR

CONTROLLERS

SOLAR CONTROLLER

Water, Power, and Wire Savings

The SmartLine® Solar irrigation control system features the industry's first hybrid solar to AC power supply, allowing the SmartLine® weather based irrigation control system to operate in locations with no power. SmartLine® Solar uses proven SmartLine® controllers and industry standard 24VAC valves for greatly enhanced operational life and reduced equipment cost.

FEATURES

- SmartLink® Aircard compatible
- Converts SmartLine® to a totally "portable" water management system by using proven solar technology
- SmartLine® is a SWAT tested ET system
- Green power source using 100% renewable energy
- Easy installation for both Conventional and 2-Wire systems
- SmartLine® Solar uses industry standard 24VAC valves, which out perform debris-prone latching solenoids required with battery operated systems
- System Diagnostics include Volt meter, Amp meter and Valve Locator
- 2-Wire SmartWire compatible
- LCD display indicates battery and solar power condition
- Dual deep cycle batteries provide up to 7 days of operation with no solar charge
- State of the art Solar Charge Technology (SCT) prolongs battery life and protects batteries from over charge and assures a full charge
- Using standard AC power components makes for easy conversion from solar to grid power and allows early stage construction of landscape in new construction projects

SmartLink® COMPATIBLE

SLSOLAR48

SmartLine® Solar Specifications

Model	Description
SLSOLAR48	SmartLine® Solar System, 48 Zones
SLSOLAR48TW	SmartLine® Solar System, 48 Zones 2-Wire
SLSOLAR96TW	SmartLine® Solar System, 96 Zones 2-Wire

Weathermatic®
Water Conserving Innovation

SmartLine®

The Smart Irrigation Controller

With over 360,000 SmartLine Controllers saving vast amounts of water around the world, your next project will be added to the growing list.

The SmartLine feature set exceeds that of most high-end controllers, yet was engineered to make ET-Based Water Management affordable for any sized project.

weathermatic.com

1 TWO CONTROLLERS IN ONE

The "Basic" mode programs exactly like the conventional controllers used by most manufacturers. There's no need to learn a new method. The "Smart" mode is where the power lies. Combined with our SLW Series Weather Stations, SmartLine becomes an ET-Based water-saving controller that automatically adjusts watering times 365 days a year.

2 SMART MODE

ET Watering adjusts the duration, frequency, and soak time by several factors. Weather Data combined with geographical location, sprinkler type, plant type, soil type, and a fine tuning option, enables your SmartLine controller to make precise watering decisions.

3 ACCESS YOUR SMARTLINE CONTROLLERS FROM VIRTUALLY ANYWHERE

The days of irrigation controllers being programmed once, and left alone for months, is over. Adding the SmartLink Network gives you access to your SmartLine controllers via your Computer, Tablet, or Smartphone. Irrigation Management made simple, affordable, and packed with features.

4 BACKLIT LCD / REAL TIME CLOCK / CALENDAR & NON-VOLATILE PROGRAM MEMORY

No flashlight required in dark basements and garages. No battery required! On board memory chip retains time, date and program information even during a power outage

5 OMIT TIMES/DAYS/DATES SEASONAL % ADJUST BY MONTH BY PROGRAM

Automatically comply with local water restrictions; eliminate irrigated water lost to evaporation in the heat of the day; stop irrigation on lawn maintenance days; never water on the date of an annual event (ex: July 4th). A monthly watering budget % can be set up by program to automatically adjust zone run times for seasonal changes.

6-10 ADVANCED MENU

The Advanced Menu contains 17 tools, ranging from diagnostics, troubleshooting, and advanced water management tools. Below only scratches the surface.

6 BUILT-IN VALVE LOCATOR

Locate hidden valves by simply listening for the audible chatter of the solenoid created by a unique electrical frequency. (U.S. Pat #7406363)

7 ON-BOARD MULTI-METER

Displays the electrical current reading of each zone for quick troubleshooting and a proactive approach to maintenance.

8 MASTER VALVE/PUMP SETTINGS

Achieve hydraulic control with settings for zone-to-zone delays, master valve timing, and master valve On/Off by zone

9 BACKTRACK STORED PROGRAM GROW-IN PROGRAM FEATURE

Allows you to easily store a default program and retrieve the saved program in the event someone improperly reprograms the controller. Allows you to set up a temporary program to grow in new plant material then automatically switch to a day to day program when you decide.

10 RUNOFF ELIMINATOR

Eliminate runoff by setting the maximum allowable run time and minimum soak time by program

SmartLink®
Wireless Landscape Network

IRRIGATE FROM ANYWHERE

AFFORDABLE, WEB-BASED IRRIGATION CONTROL HAS ARRIVED.

For years, landscape professionals, like you, have been demanding that irrigation controllers would enter the 21ST century. Weathermatic has engineered the solution. Finally, affordable web-based irrigation control is available to everyone. With SmartLink™, you can manage all of your sites from any computer, or mobile device, and a web-browser. No software to install. No expensive hardware needed. You'll be up and running in minutes.

SmartLink is a web application that provides you the tools to be one step ahead. Make controller program changes, manage flow, use the on-site inspection tools, receive email alerts, send global commands, the list goes on and on. SmartLink becomes an indispensable part of your work-flow.

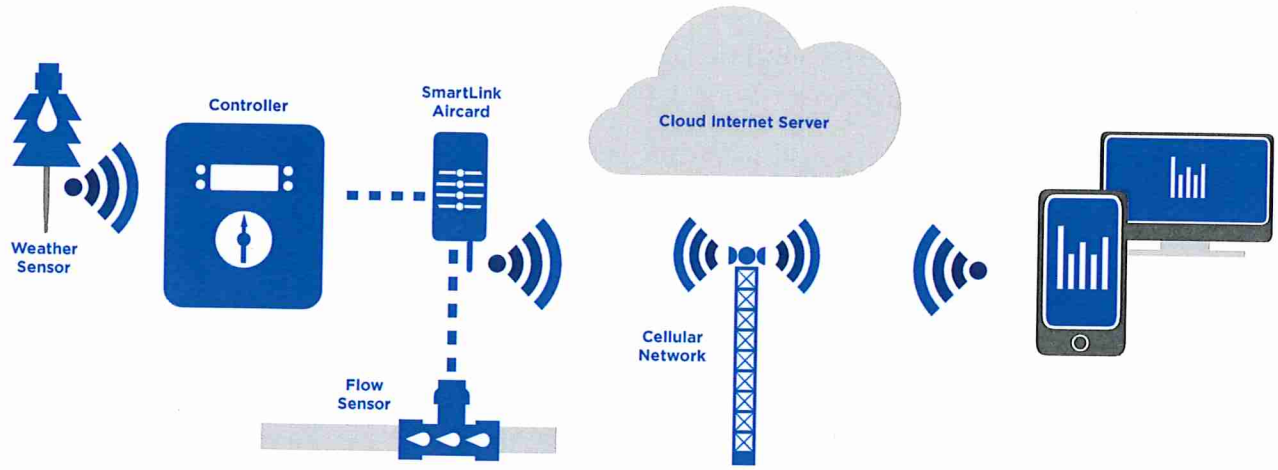
Having mobile access using your tablets or smartphones means you're able to respond faster than before. Customers appreciate it, and water is saved in the process.

Reliable cellular networks ensure the connection is stable and our hosted cloud-servers ensure that your controllers are available when you need it.

Weathermatic®
Water Conserving Innovation

weathermatic.com

HOW IT WORKS



Irrigate from **Anywhere** with SmartLink™

Affordable Web-Based Control

Unlimited data and accounts for pennies a day.

Mobile Access

Available on tablets or smartphones. Change controller setting off site.

Automatic Updates

New features are automatically added as they become available.

Inspection Reporting

Evaluate, record, and export a report for your customers.

Powerful Flow Management

The SmartLink Flow Sensor enables high and low flow shutdowns, email notification, and water use reports.

Unlimited Sites

Manage sites with multiple controllers, from anywhere.

Cloud Back-up

Retains time, date and program and does not require batteries. Complies with city ordinances.

Reports & Alerts

Know before they do. Receive alerts via email. Web-Based reporting provides historical water use and overlays high and low temperature.

Labor Saver

Eliminating the need to send someone to a property.

SmartLine Controller

- Installed at more than 350,000 properties, water savings averaging 38%
- Weather-based watering option that auto-adjusts every day, based on temperature, and precipitation
- Accounts for location, soil type, plant type, sprinkler type, and degree of slope, to optimize water efficiency, resulting in beautiful landscapes
- Complies with local water restrictions by enabling you to Omit Days

SLW5 Weather Sensor

- Records and processes weather data to establish auto-adjust run times
- Installs quickly, no wires, communicates to the controller from up to 1,500ft away
- Extended rain delay feature prevents system from watering after rain, waiting until there is a moisture deficit
- Prevents watering in freezing conditions. No more icy parking lots

SmartLink Flow Sensors

- Consistent measurement and performance
- Web-based control means you can learn, measure, monitor, and manage flow
- Smart electronics provides better signal filtering and conditioning

SmartLink Aircards

- The SmartLink Aircard and SmartLink Aircard Flow are the gateway to the SmartLink Network
- Manages communication between your SmartLine Controller and the Internet using reliable cellular connections
- Securely links your SmartLine controller to our cloud-based servers for web-enabled control and connectivity

SmartLink Web Application

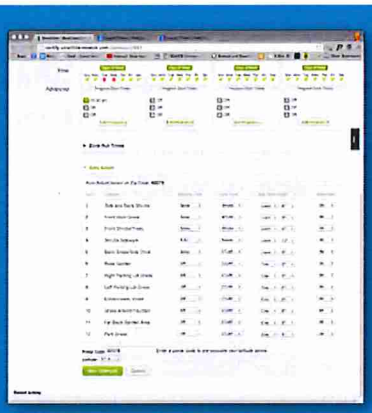
- Program your SmartLine or ProLine controller with a simple web interface
- Turn on and off multiple controllers remotely from any Internet connection
- Receive water savings reports and system alerts
- Manage your system from any computer, web-enabled tablet or smartphone

SmartLink®
Wireless Landscape Network

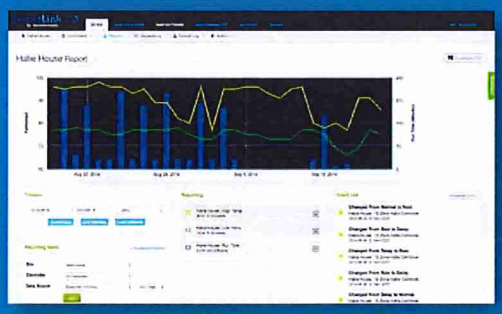
SmartLink WEB USER EXPERIENCE

Accessing your Controller is as Easy as Accessing the Web

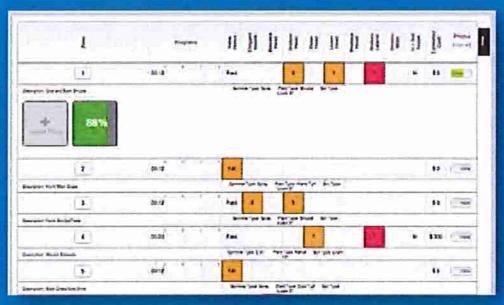
The SmartLink user interface is intended to make activating and programming your irrigation controllers incredibly simple. Appreciate the ease of use that saves time on programming and helps respond to customer requests or weather related events. Manage hundreds of sites, send global commands and copy programs to save significant time and expense.



Advanced programming features at your finger tips.



Powerful reporting features for flow and weather by zone so you can share with your customers.



The inspection reporting feature enables you to record repairs needed and share with customers.

"Customers don't hesitate when they find out they'll save 20 to 50 percent on their water bills and that the system will pay for itself in 12 to 18 months."

Tom Raden
Irrigation Professional
Las Vegas, Nevada

Weathermatic Headquarters
3301 W. Kingsley Rd.
Garland, TX 75041
1-888-484-3776

www.smartlinknetwork.com

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Technical Specifications
SMARTLINE SOLAR48

FEATURES

- Converts SmartLine to a totally "portable" water management system using proven solar technology
- The SmartLine controller paired with the SLW weather station is SWAT tested and EPA Watersense certified: Smart Irrigation, Smart Power
- Green power source using 100% renewable energy
- SmartLine Solar uses industry standard 24VAC valves, which outperform debris-prone latching solenoids required with battery operated systems
- Patented system diagnostics include Volt meter, Amp meter and Valve Locator
- LCD display indicates battery and solar power condition
- Dual deep cycle solar batteries provide up to 7 days of operation with no solar charge
- State of the art Solar Charge Technology (SCT) prolongs battery life and protects batteries from over charge and assures a full charge
- Heavy-duty 16-gauge stainless steel enclosure for secure installation
- Easy conversion from solar to standard AC grid power allowing for early stage construction of landscape in new or phased-in projects
- Comes pre-wired and ready to install with:
  - SmartLine controller with all modules
  - Stainless steel enclosure
  - Two industrial-grade solar panels
  - Two solar batteries
  - Four-digit digital meter
  - Circuit breakers
  - Wiring harnesses and cables

SmartLine Solar Controller	
Model	**Description**
SLSOLAR48	48 Zone Solar Conventional-Wire Controller

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Water Conserving Innovation
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www.weathermatic.com

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Water Conserving Innovation

Technical Specifications
SMARTLINE SOLAR48

SMARTLINE CONTROLLER

- Large backlit LCD display
- Nonvolatile memory and real time clock/calendar to retain programs and current date and time even if solar batteries lose their charge
- 2 run modes: Standard mode runs user input zone run times; Auto Adjust mode requires SLW Series On-Site Weather Station to calculate weather based run times
- 4 programs: A, B, C; program D can operate concurrently
- 8 start times per program
- Zone run times from 1 min. to 9 hrs. 55 min. with operation countdown displayed in hours, minutes, and seconds
- Watering day selections of custom days of the week, odd/even, or interval days (1 – 30 days)
- Omit settings: omit time of day window, omit day(s) of week, and omit up to 7 calendar dates

SOLAR DIGITAL METER

- Four-digit digital meter displays voltage, current, temperature, logged data, settings, alarms and error reporting.
- Additional displayed information includes battery level, amp hours, and battery operating state
- 3-button menu navigation with custom icons and back lighting
- Automatic circuit protection against faults and user mistakes such as short circuit, overload, high temperature and low voltage disconnect

SOLAR PANELS

Two 24" x 36" Industrial-rated Solar Panels

- Low iron High-transmission 3.2mm tempered impact resistant glass.
- Clear anodized extruded aluminum frame
- 36 EVA encapsulated solar cells bonded to a TPT/TPE Tedlar backsheet.

SOLAR BATTERIES

Two 12-volt GEL maintenance free deep cycle solar GEL batteries

- High purity lead calcium-tin alloy charging grid
- Non-spillable
- Combination reaction (recombinant battery) which prevents escape of hydrogen and oxygen gases.
- Electrical
  - Nominal Voltage: 12V
  - Amp Hour Capacity @ 20 hr rate: 97.6 a/h

STAINLESS STEEL ENCLOSURE

- 16-gauge stainless steel construction with brushed finish
- 2-part cabinet and pedestal mount model
- Filtered louvers for ventilation
- Cam style keylock
- Weather-resistant
- NEMA TYPE 3R rated with SmartLine controller installed
- SLPED-ENC CABINET Dimensions – *19½" W x 19½" H x 9" D (49,53 cm x 49,53 cm x 22,86 cm)*
- SLPED-ENC BASE Dimensions – *19 ¾" W x 24" H x 15" D (50,17 cm x 60,96 cm x 38,1 cm)*

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Technical Specifications
SMARTLINE SOLAR48

CONTROLLER(S) shall be model SL4800 as manufactured by Weathermatic Sprinkler Division of Telsco Industries. Controller(s) shall be a four (4) program controller with hot swappable 12-zone modules to allow expansion to 48 zones.

OPERATION: Controller shall be capable of standard timed watering or auto adjust watering times when equipped with an optional SLW weather monitor manufactured by Weathermatic. Auto Adjust watering shall be based on real time, on-site weather data and system audit data entered by the user. Auto adjust timing shall be based on the Hargreaves ET calculation formula. Controller shall provide reviewable watering deficits, scheduled run times by zone and a total run time recap for each zone which is resettable by the user. A more or less function shall be provided to allow run time adjustment by zone for shade/sunlight, system efficiency and other local factors. Auto adjust mode shall also include automatic calculation of run/soak times based on both soil type and zone elevation.

Each program shall have eight independent start times, calendar schedules, watering budgets by month and a soak/cycle for varying soil percolation rates.

Controller shall have a pump start/master valve position which shall be programmable to operate on demand from any selected zone. A programmable safety delay shall be included for zone to zone delay and master valve to zone delay for opening and closure.

Controller shall have input for rain and freeze sensor devices. Use of the optional SLW weather monitor shall incorporate the rain and freeze shutdown functions and shall incorporate a 48 hour delay after closure of the rain sense switch.

Controller shall have self-diagnostic capabilities to detect "short" or "open" zones and the ability to display lists of faults on an LCD display for the user. Diagnostics shall also include LCD display of volt/amp readings by zone and for transformer output as well as backup battery reading. A chatter function shall also be provided to assist in locating buried valves. The controller shall automatically prevent master valve opening or pump start when the valve locator diagnostic is used.

Display shall be backlit for clear viewing in all lighting conditions. Zone timing shall be settable from 1 minute to 9 hours and 55 minutes.

Program D shall operate concurrently with programs A, B and C. Programs A, B and C shall stack in sequence of start time operation.

Program schedules shall include options for days of the week, odd date, even date or an interval of 1 to 30 days. A 'no water' window shall be available to inhibit daily operations of a program between two selected times on a given day; omission of up to 7 specified calendar dates or specific days of the week. Adjustments for leap year shall be automatic.

Manual operation shall be provided by program, by station, or on a programmable test program with durations from ten (10) seconds to ten (10) minutes. The programmable test program shall also check for short and open conditions on each zone each time it is run.

Non-volatile memory shall retain all programming and real-time clock shall be provided to maintain date and time.

CONSTRUCTION: Controller shall be enclosed in a U.L., CE and C-Mark Listed rainproof plastic enclosure with optional key lock. The enclosure shall be rated for outdoor or indoor use. Enclosure shall be a wall mount (pedestal mount) model with removable knockouts on the lower side and back of the housing for choice of wiring location. The operating panel shall be a totally enclosed module that is removable from the housing for programming at a separate location. A test post for 24V a.c. operation shall be accessible with or without the operating panel. Zone modules (SLM12) shall be self-contained modules that can be installed without turning off power to the unit and programming of new zones shall not be required. Module wiring connections shall be of the type that allows insertion of solid wires without any tool. Each module shall contain its own surge protection.

ELECTRIC: Controller shall be completely electric in operation. Controller shall be installed and wired in accordance with manufacturer's published instructions. Controller shall be capable of operating from an independent power supply. Primary shall be 115V a.c. 60hz or 230V, 50hz.

SOLAR BATTERY ASSEMBLY shall be model SOLARBATT-48 as assembled by Weathermatic Sprinkler Division of Telsco Industries, or approved equal.

CONSTRUCTION: SOLARBATT-48 shall be an American made GEL maintenance free deep cycle battery. The GEL battery case shall be a shock absorbent thick wall polypropylene. The charging grid shall be a high purity lead calcium-tin alloy. The battery shall be non-spillable and be a recombination reaction (recombinant battery) which prevents escape of hydrogen and oxygen gases. The battery may be operated in virtually any position except upside-down.

ELECTRIC: SOLARBATT-48 shall have the following electrical specifications: Nominal Voltage: 12V; Amp Hour Capacity @ 20 hr rate: 97.6 a/h; Reserve Capacity @ 25 amp discharge rate: 190 mins; BCI Group Size: 30H; Terminal Type: dual terminal

SOLAR CHARGE CONTROL BOX ASSEMBLY shall be model SOLARCHG as assembled by Weathermatic Sprinkler Division of Telsco Industries, or approved equal. SOLARCHG shall consist of a digital meter, voltage inverter, and fuse box.

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Water Conserving Innovation

Technical Specifications
SMARTLINE SOLAR48

OPERATION: The SOLARCHG digital meter shall be a universal, four digit display with custom icons that is compatible with several Morningstar controllers and inverters. The digital meter shall display voltage, current, temperature, logged data, settings, alarms and error reporting. The digital meter shall display this data as present, cumulative and maximums/minimums measurements. The digital meter shall also display battery level and operating state. The digital meter's icons and units indicators shall be displayed to indicate whether the numerical information relates to solar, load, battery 1 or 2, options, errors or self-test. The digital meter shall have three soft buttons to allow for navigation of the meter menus. The unit shall also have custom icons and back lighting. The digital meter shall be designed for low self-consumption to avoid draining the system batteries. Self-consumption shall be 6 mA with
backlight off and 15 mA with backlight on. The temperature may be displayed in either °C or °F, the backlight timer may be adjusted for desired running time and the amp-hours and minimum/maximum values may be reset.

The SOLARCHG voltage inverter shall be a pure sine wave inverter designed specifically for electrification requiring AC power using solar. The pure sine wave design shall provide an AC equivalent to grid power. The unit shall utilize a toroidal transformer design to generate a stable wave form throughout the range of input voltages. The voltage inverter shall handle a 200% surge during load start-up to a maximum of 600 watts. Self-consumption shall be 450mA while powering loads and automatically powers down to stand-by mode during no load conditions. The unit shall have electronic protections that will automatically protect against faults and user mistakes such as short circuit, overload, high temperature and low voltage disconnect. Recovery from most faults shall be automatic.

SOLAR PANELS shall be model SOLARPAN-50 as assembled by Weathermatic Sprinkler Division of Telsco Industries, or approved equal.

CONSTRUCTION: SOLARPAN-50 shall be high quality industrial solar modules that have a low iron High-transmission 3.2mm tempered glass front that is impact resistant. The panel frames shall be constructed from clear anodized extruded aluminum. The units shall have pre-drilled holes for easy mounting to mounting frame. Each panel shall have TPT/TPE Tedlar backsheet. The solar cells shall be encapsulated in EVA and bonded to the Tedlar backsheet. Each panel unit shall consist of 36 solar cells that are connected in series. A weather proof junction box shall be mounted to each panel to allow for connection with a waterproof strain relief connectors and conduits or weather resistant output cables.

STAINLESS STEEL PEDESTAL ENCLOSURE shall be model SLPED-ENC as manufactured by Weathermatic Sprinkler Division of Telsco Industries

CONSTRUCTION: Pedestal enclosure shall be fabricated from 16-gauge stainless steel with a brushed finish. The enclosure shall be NEMA type 3R rated weather-resistant with filtered side louvers for cross-ventilation. A removable stainless steel door shall be mounted to the front of the enclosure and include a cam style key-lock to restrict access to the enclosure. Enclosure shall measure 19 ¾" wide x 24" high x 15" deep.

The cabinet shall be fabricated from 16-gauge stainless steel with a brushed finish. The cabinet shall be NEMA type 3R rated weather-resistant. A removable stainless steel door shall be mounted to the front of the cabinet and include a cam style key-lock to restrict access to the cabinet. The cabinet shall measure 19 ½" wide x 19 ½" high x 9" deep.

WARRANTY:
SLSOLAR48 – 2-Years

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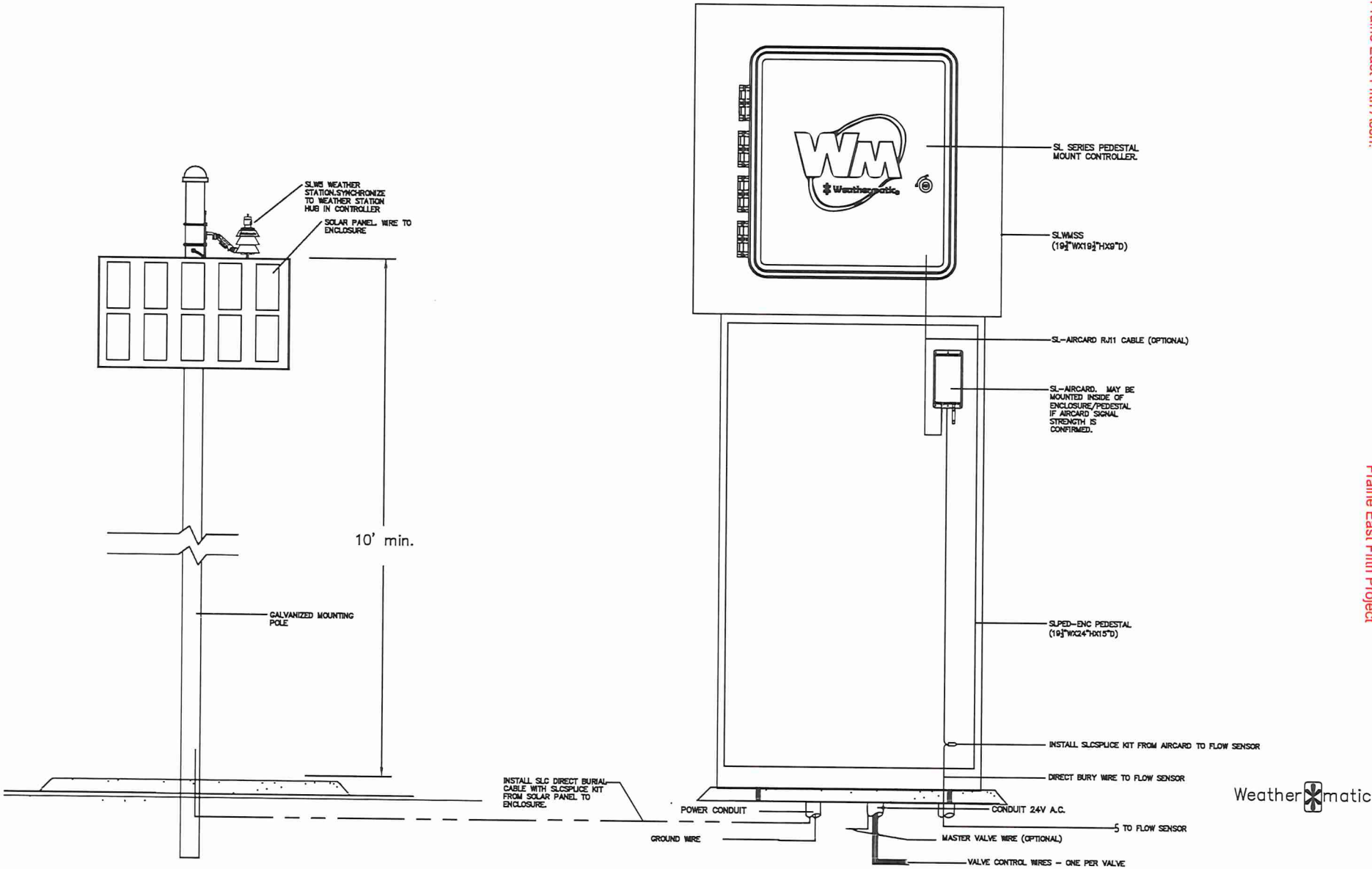

SL4800 IN SLPED-ENC ENCLOSURE W/SLW5 & AIRCARD W/FLOW & SOLAR

NOT TO SCALE

SmartLine® Controllers
SL4800

SL4800 CONTROLLER(S) shall be model SL4800 as manufactured by Weathermatic Sprinkler Division of Telsco Industries, or approved equal. Controller(s) shall be a four (4) program controller with hot swappable 12-zone modules to allow expansion to 48 zones.

OPERATION: Controller shall be capable of standard timed watering or auto adjust watering times when equipped with an optional SLW weather monitor manufactured by Weathermatic. Auto Adjust watering shall be based on real time, on-site weather data and system audit data entered by the user. Auto adjust timing shall be based on the Hargreaves ET calculation formula. Controller shall provide reviewable watering deficits, scheduled run times by zone and a total run time recap for each zone which is resettable by the user. A more or less function shall be provided to allow run time adjustment by zone for shade/sunlight, system efficiency and other local factors. Auto adjust mode shall also include automatic calculation of run/soak times based on both soil type and zone elevation.

Each program shall have eight independent start times, calendar schedules, watering budgets by month and a soak/cycle for varying soil percolation rates.

Controller shall have a pump start/master valve position which shall be programmable to operate on demand from any selected zone. A programmable safety delay shall be included for zone to zone delay and master valve to zone delay for opening and closure.

Controller shall have input for rain and freeze sensor devices. Use of the optional SLW weather monitor shall incorporate the rain and freeze shutdown functions and shall incorporate a 48 hour delay after closure of the rain sense switch.

Controller shall have self-diagnostic capabilities to detect “short” or “open” zones and the ability to display lists of faults on an LCD display for the user. Diagnostics shall also include LCD display of volt/amp readings by zone and for transformer output as well as backup battery reading. A chatter function shall also be provided to assist in locating buried valves. The controller shall automatically prevent master valve opening or pump start when the valve locator diagnostic is used.

Display shall be backlit for clear viewing in all lighting conditions. Zone timing shall be settable from 1 minute to 9 hours and 55 minutes.

Program D shall operate concurrently with programs A, B and C. Programs A, B and C shall stack in sequence of start time operation.

Program schedules shall include options for days of the week, odd date, even date or an interval of 1 to 30 days. A ‘no water’ window shall be available to inhibit daily operations of a program between two selected times on a given day; omission of up to 7 specified calendar dates or specific days of the week. Adjustments for leap year shall be automatic.

Manual operation shall be provided by program, by station, or on a programmable test program with durations from ten (10) seconds to ten (10) minutes. The programmable test program shall also check for short and open conditions on each zone each time it is run.

Non-volatile memory shall retain all programming and real-time clock shall be provided to maintain date and time.

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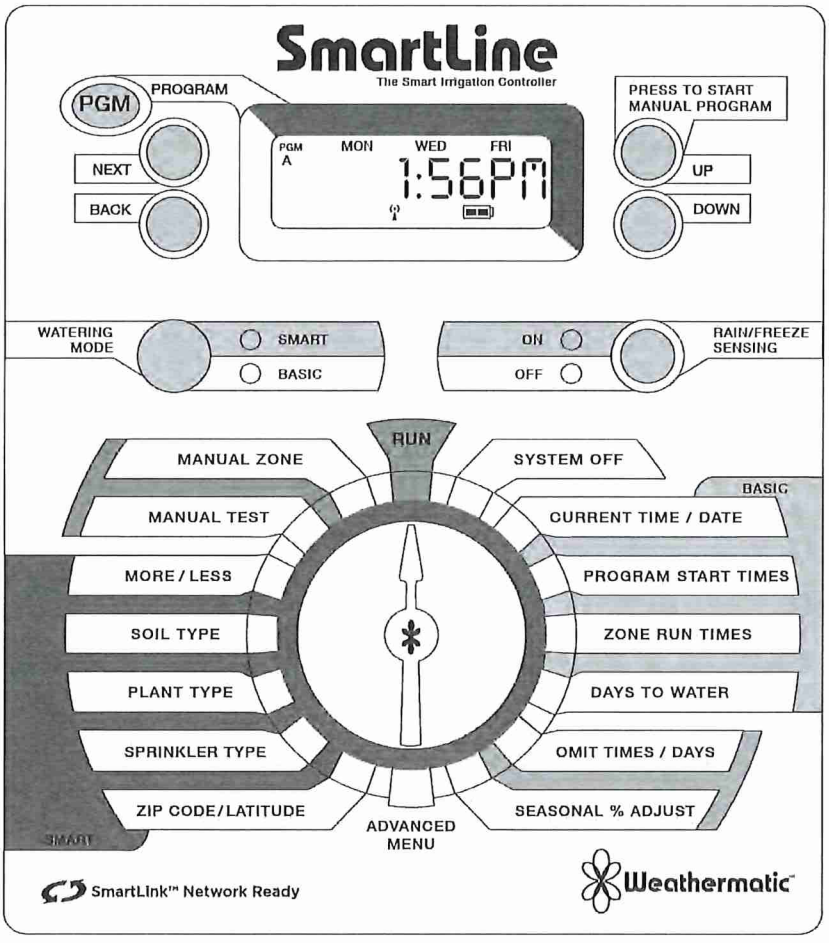
Water Conserving Innovation

CONSTRUCTION: Controller shall be enclosed in a U.L., CE and C-Mark Listed rainproof plastic enclosure with optional key lock. The enclosure shall be rated for outdoor or indoor use. Enclosure shall be a wall mount (pedestal mount) model with removable knockouts on the lower side and back of the housing for choice of wiring location. The operating panel shall be a totally enclosed module that is removable from the housing for programming at a separate location. A test post for 24V a.c. operation shall be accessible with or without the operating panel. Zone modules (SLM4) shall be self-contained modules that can be installed without turning off power to the unit and programming of new zones shall not be required. Module wiring connections shall be of the type that allows insertion of solid wires without any tool. Each module shall contain its own surge protection.

ELECTRIC: Controller shall be completely electric in operation. Controller shall be installed and wired in accordance with manufacturer's published instructions. Controller shall be capable of operating from an independent power supply. Primary shall be 115V a.c. 60hz or 230V, 50hz.

WARRANTY: Controller shall have a manufacturer's limited warranty of three (3) years.



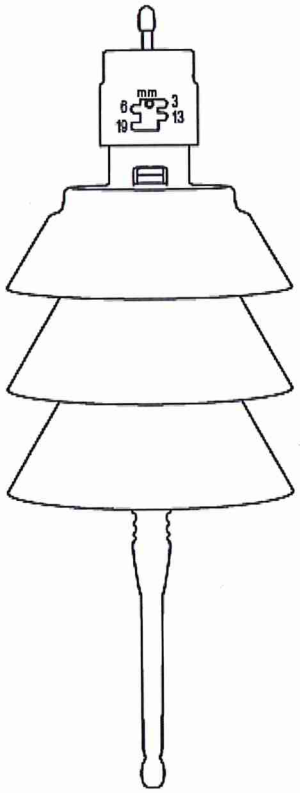
SmartLine® Weather Stations
SLW5

WEATHER STATION(S) shall be model SLW5 manufactured by Weathermatic Sprinkler Division of Telsco Industries. Weather stations must be compatible for use with SmartLine irrigation controls.

CONSTRUCTION: Weather station shall be wireless in design using bi-directional communication. Weather station shall have integrated on-site sensors for rain-shut off, freeze shut-off and calculation of daily evapotranspiration irrigation deficits. Weather station shall have an integral mounting bracket with a two-point articulating arm made from high-impact molded resin. Weather station shall be suitable for outdoor mounting in light-commercial or residential environments. Weather station shall be capable of two-way communications with the SmartLine controls and have independent power supply, self-diagnostic circuit and microprocessor.

OPERATION: Weather stations rain sensor shall be adjustable to interrupt irrigation after a user selected precipitation amount of 1/8th", 1/4" or 1/2". Weather station shall be capable of interrupting irrigation after temperatures reach below 37 degrees Fahrenheit. Weather station shall provide instant notification to the controller of either a rain or freeze event and upon clearing of the same. Evapotranspiration deficits shall be calculated daily and transferred to the SmartLine controller each day.

WARRANTY: Weather station shall have a manufacturer's limited warranty of two (2) years.



SmartLink™
Wireless Landscape Network

SMARTLINK: **s**hall be model SL-AIRCARD1 as manufactured by Weathermatic Sprinkler Division of Telsco Industries. SL-AIRCARD1 is comprised of the SL-AIRCARD and SL-PLAN1for 1 year of service. Additional plans are available in 2, 3, 4, 5 and 10 year packages. Optional package to be available with flow monitoring.

CONSTRUCTION**:** SL-AIRCARD shall be housed in an indoor/outdoor housing. It shall incorporate an L.E.D. visible externally to indicate operating conditions of the SL-AIRCARD. The SL-AIRCARD shall be connected to the SmartLine Control, as manufactured by Weathermatic, through a cable from the SL-AIRCARD terminating in the SmartLine Control with the use of a plug-in RJ11 connector.

OPERATION: **SL-AIRCARD** communications protocol will be cellular (either GSM or CDMA) allowing connection through secure web based servers to smartlinknetwork.com.

SmartLink will not require software to be installed locally on a web-enabled appliance. Connection to SmartLink through the web will be through a web-enabled appliance such as a PC, Smart Phone, Tablet, etc.

SmartLink will not require software to be installed locally on a web-enabled appliance. User access to smartlinknetwork.com has password secured access to the users account.

Security to the account with access to individual sites and controllers is defined by the account administrator.

Each account will have the capability of unlimited users, sites and controllers.

At the controller page of SmartLink, the web user will be able to review, change or establish all programs available in the SmartLine Controller.

User defined names for Sites, Controllers, and individual zones will be available.

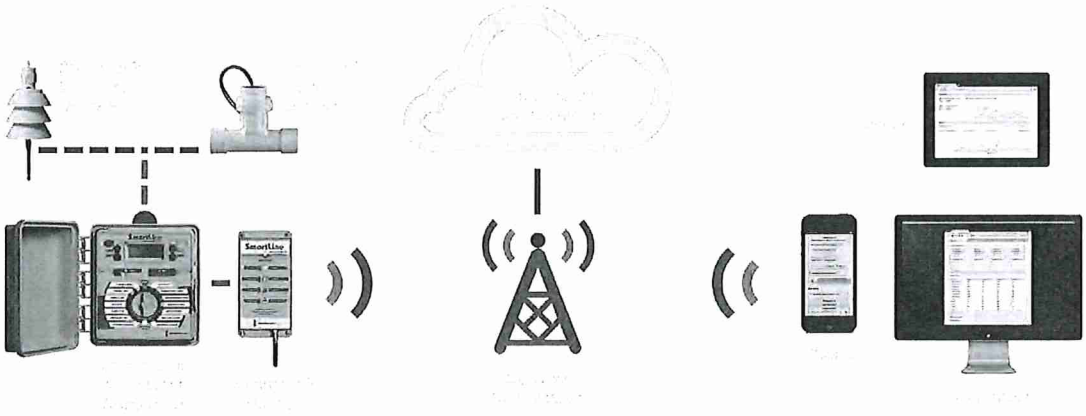
System/Controller/zone alerts will be sent to prescribed user by text or e-mail.

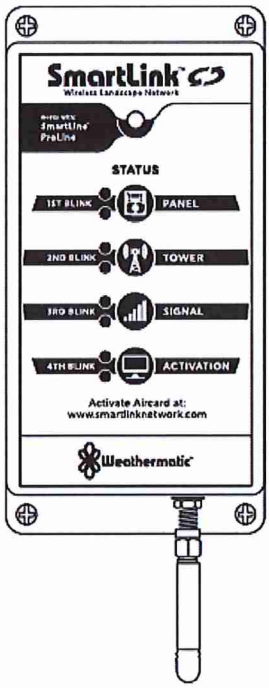
SmartLink will be enabled with Global Commands for complete/partial system control.

SmartLink will be enabled with AT-A-Glance Dashboard for easy review of SmartLine Controller parameters and manual watering operations.

WARRANTY: **SL-AIRCARD** shall have a manufacturer's limited warranty of two (2) years. Optional Extended Warranty is to be available.

Weathermatic™
Water Conserving Innovation





SmartLink® Flow Sensors
SLFSI-T or SLFSI-S

FLOW SENSOR(S) shall be model SLFSL-T or SLFSL-S manufactured by Creative Sensor Technology, Incorporated of Rochester, Massachusetts. The Model number shall include the Series designation followed by a three character group beginning with T (Tee Mounted) or S (Saddle Mounted) and followed by a two digit code referencing line size followed by a three digit electronic version designator. Therefore, the model number for a one inch size flow sensor with standard electronics would be written as: FSI-T10. Flow sensors must be compatible for use with SmartLine irrigation controls.

CONSTRUCTION: The flow sensor shall consist of a custom molded tee or saddle configured shaped body with socket ends conforming to PVC pipe dimensions, a flow sensor housing containing the electronic circuitry and carrying the spinning impeller and a retaining nut.

The meter body shall be an in line type available in 1", 1 1/2", 2", 3" and 4" pipe sizes, molded from Rigid Polyvinyl Chloride material – color white (Tee Mounted) or color grey (Saddle Mounted) - conforming to ASTM D-1784, Cell Class 12454.

The 4 blade impeller (paddle wheel) shall be the only moving part.

The impeller shall be molded of HDPE (High Density Polyethylene) incorporating an integral bearing. The shaft material shall be tungsten carbide. These two items are considered wear items and shall be replaceable in the field without special tools.

The electronics housing, molded from the same material as the body shall be held in place with a single ACME threaded PVC retaining nut held captive by the wire leads. The housing will be sealed with one BUNA N O-Ring and shall be easily removed from the meter body. The electronics housing and tee body shall feature direction of flow arrows to assist in assembly.

The sensor electronics will be epoxy-sealed and fitted with 2 single conductors solid copper U.L. listed #18 AWG leads with direct burial insulation 48 inch in length extending from the top of the sensor. The positive (+) lead shall have red insulation and the negative (-) lead shall have black insulation.

The housing and mounting tee are custom molded to form an integrated measurement chamber resulting in highly accurate, repeatable flow measurements through a wide range of velocities.

The flow sensor shall be designed to schedule 40 specifications and have a tested working pressure of 240 psi @ 73°F (23°C). Maximum working temperature is 140°F (60°C).

The sensor flow range shall be 0.25 to 15 FPS.

The Product Serial Number shall be printed on shrink tubing and attached to the wire leads as they exit the top of the electronics housing.

The Product Model Number shall be printed on shrink tubing and attached to the wire leads above the Product Serial Number.

INSTALLATION and OPERATION: The flow sensor shall be installed with a minimum of 10 diameters of straight pipe upstream, and a minimum of 5 diameters of straight pipe downstream to eliminate irregular flow profiles caused by valves, fittings or pipe bends.

The flow senor shall be installed a valve box or meter pit of sufficient size to provide access to the flow sensor for service.

The installed sensor shall require a minimum clearance of approximately 4 inches (100 mm) above sensor for removal of the electronics housing.

Watertight Wire connections shall be made in the valve box using industry accepted methods and sealing products.

The maximum wire run between flow sensor and the controller shall be 2,000 feet if a 20/2 twisted pair shielded cable is used.

ELECTRICAL SPECIFICATIONS: The flow senor shall have an output Frequency Range of 0.3 Hz to 200 Hz.

The flow sensor shall output a minimum of a 5-millisecond low pulse at low frequencies and reverts to approximately a square wave above 100 Hz.

Quiescent current 600 uA@8 VDC to 35 VDC max.

On State (VLow) = Max. 1.2 VDC@50mA max.

WARRANTY: Flow sensors shall have a manufacturer's limited warranty of five (5) years.

SmartLine® Solar Assembly
SLSOLAR48

SOLAR BATTERY ASSEMBLY shall be model SOLARBATT-48 as assembled by Weathermatic Sprinkler Division of Telsco Industries, or approved equal.

CONSTRUCTION: SOLARBATT-48 shall be an American made GEL maintenance free deep cycle battery. The GEL battery case shall be a shock absorbent thick wall polypropylene. The charging grid shall be a high purity lead calcium-tin alloy. The battery shall be non-spillable and be a recombination reaction (recombinant battery) which prevents escape of hydrogen and oxygen gases. The battery may be operated in virtually any position except upside-down.

ELECTRIC: SOLARBATT-48 shall have the following electrical specifications:
Nominal Voltage: 12V
Amp Hour Capacity @ 20 hr rate: 97.6 a/h
Reserve Capacity @ 25 amp discharge rate: 190 mins
BCI Group Size: 30H
Marine Cranking Amps @ 32* F: 640 amps
Cold Cranking Amps @ 0* F: 450 amps
Terminal Type: dual terminal

WARRANTY: SOLARBATT-48 shall have a manufacturer's limited warranty of one (1) year.

SOLAR CHARGE CONTROL BOX ASSEMBLY shall be model SOLARCHG as assembled by Weathermatic Sprinkler Division of Telsco Industries, or approved equal. SOLARCHG shall consist of a digital meter, voltage inverter, and fuse box.

OPERATION: The SOLARCHG digital meter shall be a universal, four digit display with custom icons that is compatible with several Morningstar controllers and inverters. The digital meter shall display voltage, current, temperature, logged data, settings, alarms and error reporting. The digital meter shall display this data as present, cumulative and maximums/minimums measurements. The digital meter shall also display battery level and operating state. The digital meter's icons and units indicators shall be displayed to indicate whether the numerical information relates to solar, load, battery 1 or 2, options, errors or self-test. The digital meter shall have three soft buttons to allow for navigation of the meter menus. The unit shall also have custom icons and back lighting. The digital meter shall be designed for low self-consumption to avoid draining the system batteries. Self-consumption shall be 6 mA with backlight off and 15 mA with backlight on. The temperature may be displayed in either °C or °F, the backlight timer may be adjusted for desired running time and the amp-hours and minimum/maximum values may be reset.

The SOLARCHG voltage inverter shall be a pure sine wave inverter designed specifically for electrification requiring AC power using solar. The pure sine wave design shall provide an AC equivalent to grid power. The unit shall utilize a toroidal transformer design to generate a stable wave form throughout the range of input voltages. The voltage inverter shall handle a 200% surge during load start-up to a maximum of 600 watts. Self-consumption shall be 450mA while powering loads and automatically powers down to stand-by mode during no load conditions. The unit shall have electronic protections that will automatically protect against faults and user mistakes such as short circuit, overload, high temperature and low voltage disconnect. Recovery from most faults shall be automatic.

WARRANTY: SOLARCHG shall have a manufacturer's limited warranty of one (1) year.

SOLAR PANELS shall be model SOLARPAN-50 as assembled by Weathermatic Sprinkler Division of Telsco Industries, or approved equal.

CONSTRUCTION: SOLARPAN-50 shall be high quality industrial solar modules that have a low iron High-transmission 3.2mm tempered glass front that is impact resistant. The panel frames shall be constructed from clear anodized extruded aluminum. The units shall have pre-drilled holes for easy mounting to mounting frame. Each panel shall have TPT/TPE Tedlar backsheet. The solar cells shall be encapsulated in EVA and bonded to the Tedlar backsheet. Each panel unit shall consist of 36 solar cells that are connected in series. A weather proof junction box shall be mounted to each panel to allow for connection with a waterproof strain relief connectors and conduits or weather resistant output cables.

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BARR

Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report Summarizing June 2018 Activities for July 11, 2018, Board Meeting
Date: June 29, 2018

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

General Services

a. Met with Administrator Bleser on June 7th to finalize the Lower Riley Creek corridor enhancement plan in connection with the cooperative agreement for the Lower Riley Creek Restoration project.

b. Participated in a June 19th preconstruction site meeting for the Lake Susan Park Pond Reuse and water quality improvement project with the City of Chanhassen and contractor (Peterson Construction).

c. Met with Permit Coordinator Jeffery on June 26th to discuss permit inspections, permit review coordination, presenting permits to the Board, and potential permit file sharing options

d. Participated in a June 27th conference call with Permit Coordinator Jeffery and Counsel Smith to discuss rule revision, comments received, and timeline.

e. Met with Permit Coordinator Jeffery on June 28th to review comments received on potential rule revisions and draft initial response to comments.

f. Prepared Engineer's Report for engineering services performed during June 2018.

g. Miscellaneous discussions and coordination with Administrator Bleser about task order status, cooperative agreements (Bluff Creek and Lower Riley Creek stabilization projects), and upcoming Board meeting agenda.

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

Permitting Program

a. *2015-029-Shops at SW Station:* The project involved redevelopment of a commercial site near the intersection of Technology Drive and Prairie Center Drive in Eden Prairie. The approved permit included a stipulation that the applicant monitor their proposed propriety jellyfish water quality BMP. Reviewed performance monitoring data which indicated the jellyfish is underperforming for TSS (13% to 96%) and significantly underperforming for TP (-64% to 45%). The average of the individual sample result in 78% TSS removal and 5% TP removal. Note that the supplier claims that removal rates removals for the Jellyfish filter are 89% for TSS and 59% for Total Phosphorus. Met with Permit Coordinator Jeffry and

applicants engineer on June 28th to discuss the underperformance and release of financial assurance.

b. *Permit 2018-016: Avienda*: This project involves a mixed-use regional development in the southwest quadrant of the intersection of Lyman Boulevard and Powers Boulevard in Chanhassen Minnesota. The project will trigger the RPBCWD Floodplain, Erosion Control, Wetland and Creek Buffer and Stormwater Management Rules. The applicant is proposing an initial construction phase to include mass grading and construction of all public infrastructure. The applicant will seek future permit approvals, as development occurs to account for site-specific impervious coverage. Conducted third round of review of revised submittal materials received on May 23rd and notified applicant on June 4th that the submittal was complete. Responded to several calls from applicants engineer with questions about stormwater modeling and floodplain management requirements.

c. *Permit 2018-026: Culvers-Eden Prairie*: This project involves the removal of an existing parking lot and the construction of a new Culver's restaurant, as well as parking lot modifications, utilities installation, stormwater management features implementation, and landscaping in the northeast quadrant of the intersection of Prairie Center Drive and Plaza Drive in Eden Prairie. The project will trigger the RPBCWD Erosion Control and Stormwater Management Rules. Conducted a third round of review of the revised information received on June 4th. Meet with Applicant's engineer on June 20th to discuss comments and opportunities to meet water quality criteria on the site.

d. *Permit 2018-027: MAMAC SYSTEMS:* This project involves construction of building expansion, additional parking, and the installation of an infiltration basin on MAMAC Systems property east of Century Boulevard in Chanhassen. The project will trigger the RPBCWD Erosion Control and Stormwater Management Rules. The application was complete on May 2nd. This permit was approved by the Board of Managers at the June 6th meeting.

e. *Permit 2018-038 Eden Prairie Senior Living*: The project proposes the construction of a new senior multifamily residential apartment building along with new parking lot, underground parking and landscaping on a site in the SW quadrant of Prairie Center Drive and Franlo Road Trail in Eden Prairie. An underground infiltration system and area of permeable pavers will provide stormwater quantity, volume and quality control. The project will trigger the RPBCWD Erosion Control, and Stormwater Management Rules. Reviewed June 7th, June 13th, June 14th, and June 20th submittals and provided three rounds of comments to applicant. The applicant is requesting a variance from rate control requirements to allow additional discharge to an existing storm sewer in Medcom Boulevard. Drafted a permit review report for the Board's consideration at the July 11th meeting.

f. *Permit 2018-043 Control Concepts*: The project proposes the construction of an approximately 50,000 SF Office and Warehouse facility at 8077 Century Boulevard in Chanhassen. The project will trigger the RPBCWD Erosion Control, Wetland and Creek Buffers, and Stormwater Management Rules. Reviewed the June 19th submittal and provided comments. The application is considered incomplete because no wetland information was provided, the applicant appears different than property owner on Caver County's website, and no native electronic modeling files were submitted.

g. Met with Permit Coordinator Jeffery and the applicant for permit 2015-036 – Saville West to discuss construction activities without a permit, permit extension and financial assurance requirements.

h. Performed erosion control inspections of active sites during the week of June 11th (see attached inspection report).

i. Developed permit location maps based on Permit Coordinator Jeffery's requests and provided additional GIS data.

j. Miscellaneous conversations with Permit Coordinator Jeffery about technical questions on permit requirements for potential development and redevelopment projects, including 2018-039 Emerson Site in Eden Prairie, 2018-041 Abra Auto Body construction in Eden Prairie and others.

Education and Outreach

a. Assist with MAWD summer bus tour and technical creek assessment training session.

b. Assist Administrator Bleser with informational poster boards for MAWD Summer Tour.

Wetland Management

a. Developed District-wide map books to assist staff with wetland inventory efforts

b. Performed a wetland delineation and site survey on the south end of Silver Lake.

Data Management/Sampling/Equipment Assistance

a. Updated the customized app for collecting and reporting data electronically from the field based on RPBCWD field staff feedback.

b. b. Uploaded and verified laboratory reports from RMB into EQuIS.

Task Order 6: WOMP Station Monitoring

Purgatory Creek Monitoring Station at Pioneer Trail

a. Download and review data.

b. Storm event sampling - Collect, prep, and deliver sample to MCES lab.

c. File management – organize lab sheets.

d. Remove and test rain gage/cable from site P3 for use as backup equipment.

Purgatory Creek Monitoring Station at Valley View Rd

a. Download and review data.

b. Remove and test rain gage/cable from site P3 for use as backup equipment.

c. Review MCES Lab invoice.

d. Storm event sampling – Collect, prep, and deliver samples to MCES lab.

e. File management – organize lab sheets.

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

a. Completed an inspection of installed plantings and discussed replacement needs with the contractor. Also completed a plan for installing additional plants to provide additional screening from Highway 101.

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

a. Review submittals from Peterson Companies and compare against construction plans and specifications.

b. Prepared for and attended the onsite preconstruction meeting held on June 19, 2018 at Lake Susan Park.

Task Order 14b: Lower Riley Creek Final Design

a. Continued work on permit applications to be submitted to the US Army Corps of Engineers, MnDNR, and RPBCWD. Applications are anticipated to be submitted in July.

b. Worked on draft contract documents to prepare the project for bidding.

c. Met with City staff (Matt Bourne and Dave Modrow) on site on June 6th to discuss the location of a new bridge to be installed with the project.

d. Worked on edits to the 60% plans to incorporate comments from the City.

e. Continued working on corridor enhancement plan.

Task Order 16: Watershed Management Plan Refresh

a. Assisted Administrator Bleser with preparation for the presentation of the 10-year plan to BWSR on June 7thand participated in presentation of plan to BWSR.

b. Incorporated MnDNR comments on the 90-day final review draft.

c. Worked with Administrator Bleser to finalize 10-year plan.

Task Order 19: Chanhassen High School Stormwater Reuse Design

a. Review and comment on numerous submittals from Peterson and correspondence about project schedule.

b. Coordinate and participate in call with Peterson and WaterTronics regarding clarifications and questions on submittals.

c. Prepare for and attend a second preconstruction meeting on June 29, 2018 as requested by the City of Chanhassen staff.

d. Coordinate construction oversight points in preparation for construction observation.

Task Order 21B: Bluff Creek Stabilization Project

a. Worked on draft contract documents to prepare the project for bidding

b. Participated in a public informational meeting on June 13th .

c. Received comments from the City on the plan and made minor edits to the plan set to address those comments. Also discussed a tree inventory with the City and a revegetation plan.

Task Order 23: Scenic Heights School Forest Restoration

a. Native seeding has been delayed to the fall because of our wet spring that led quickly into hot weather. This delay does allow for additional treatments of invasive species prior to seeding, thus making blanket application of herbicide and mechanical removal more efficient as the contractor does not have to be as cautious regarding young native plants. Seeding is now scheduled for late-August, which is ideal timing for significant germination in the cooler months leading into the winter.

b. Herbicides treatments and spot mowing with a handheld brush saw continued on re-sprouts of honeysuckle and buckthorn as well as herbaceous invasive species such as garlic mustard and motherwort. Timing of management visits is coordinated in a manner to not let any garlic mustard or other invasive go to seed.

c. A gravel bed tree nursery, which was constructed by an Eagle Scout candidate, was planted by the contractor with over 100 native shrubs and trees. The plants are bare-root when installed, and when planted in the fall, should have robust, dense root clumps, which increases effective establishment.

Buckthorn re-sprouts are visible within the ground plane which is flush with new growth.

The gravel bed tree nursery, which was constructed by an Eagle Scout candidate, was planted with over 100 bare root native shrubs and understory trees.

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

a. Staff completed tree inventory, wetland delineation, and topographic survey. Staff post processed field investigation information, and will discuss site impacts for each alternatives with Administrator Bleser and Permit Coordinator Jeffery in July..

b. Following the meeting with Administrator Bleser and Permit Coordinator Jeffery, staff will update the feasibility study to reflect comments provided by District staff and confirm the recommended alternative.

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BARR

To: RPBCWD Board of Managers

From: Dave Melmer

Subject: June 15-16, 2018—Erosion Inspection

Date: June 27, 2018

Project: 23/27-0053.14 PRMT 9016

Barr staff has inspected construction sites in the Riley Purgatory Bluff Creek Watershed District for conformance to erosion and sediment control policies. Listed below are construction projects and the improvement needed for effective erosion control. The sites were inspected on June 15-16, 2018.

Site Inspections

2015-008	**3520 Meadow Lane - Existing Single-Family** **3520 Meadow Ln Minnetonka, Minnesota 55345 United States** Construction complete. Temporary BMP's have been removed. With exception of two bio-logs. Seeded grass has sprouted and growing. Landscaping appears to be completed. (June-2018)	**2018-06-16**
2015-010	**Children's Learning Adventure - Private - Commercial/Industrial** **Northwest Coerner of Highway 5 and Galpin Avenue Chanhassen, Minnesota 55317 United States** Area near SW overflow (riprap) still has bare areas on east side slope--vegetation not taking hold (east side). All temporary BMP's have been removed with exception of-inlet protection observed at catch basin on Galphin-- SE corner on site side. (June,2018)	**2018-06-16**
2015-014	**12420 Sunnybrook Road - Private - Residential** **12420 SUNNYBROOK ROAD Eden Prarie, Minnesota 55347 United States** Site has been surveyed. No construction has started.	**2018-06-15**
2015-016	**Blossom Hill - Private - Residential** **10841 Blossom Rd Eden Prairie, Minnesota 55347 United States** Open CA(s): Tracking to street and sediment at curb on Windsor Terrace. CA for cleanup. Site representative notified. Deadline: 6/30/2018 Construction continues. BMP's look good. Tracking to street and sediment at curb on Windsor Terrace. CA for cleanup. Site representative notified.	**2018-06-15**

2015-035	**LaMettry's Chanhassen - Private - Commercial/Industrial** **Audubon RD and Motorplex CT Chanhassen, Minnesota 55317 United States** Construction complete. Site is stable. Two inlet protections still in place. (June-2018)	**2018-06-16**
2015-036	**Saville West Subdivision - Private - Residential** **5325 County Road 101 Minnetonka, Minnesota 55345 United States** Construction complete at 5320 Spring Ln. House site. Silt fence perimeter control in place. BMP's look good. Landscaping not complete. Silt fence installed on southwest and west side of development. Additional lot has silt fence perimeter control installed- no activity at this lot. Lots to south have been brushed/cleared. (June-2018)	**2018-06-16**
2015-050	**Arbor Glen Chanhassen - Private - Residential** **9170 GREAT PLAINS BLVD Chanhassen, Minnesota 55317 United States** Perimeter control (silt fence) installed. Heavy equipment onsite and earthwork/grading complete. Roadway and detention pond installed. All slopes have been stabilized and covered. BMP's look good. (June-2018)	**2018-06-15**
2015-056	**Oster Property - Private - Residential** **9008 & 9010 Riley Lake Road Eden Prairie, Minnesota 55347 United States** Construction complete. Silt fences /bio-logs have been removed. Vegetation mats and wood chips have been installed on all bare soils. All other BMP's look good. Vegetation (grass) still sparse in areas. (June-2018). Homeowner stated they are getting bids for final landscaping. Site is stable. No activity observed to date.	**2018-06-15**
2015-058	**Prairie Center Clinic Addition - Private - Commercial/Industrial** **8455 Flying Cloud Drive Eden Prairie, Minnesota 55344 United States** Construction complete on building. Some BMP's have been removed for landscaping. Vegetation is established. Parking lot top coat complete. Site is stable. BMP's are still in place--silt fence. Trees/shrubs that died are being removed and replaced on inspection date.	**2018-06-15**
2016-004	**Round Lake Park Improvements - Government - Other** **16700 Valley Road Eden Prairie, Minnesota 55344 United States** BMP's look good. Site construction complete. Vegetation is growing. All temporary BMP's have been removed with exception of BMP's at infiltration areas. Infiltration basins vegetation is growing. Site is stable. (June-2018)	**2018-06-16**
2016-015	**18321 Heathcote Lane - Existing Single-Family** **18321 Heathcote LN Deephaven , Minnesota 55391 United States** Construction complete. Landscaping is underway/site has been	**2018-06-16**

	graded and prepped for sod installation.	
2016-017	**SWLRT - Government - Other** **Varies Eden Prairie, Minnesota 55344 United States** No construction observed to date.	**2018-06-15**
2016-019	**Powers Ridge Lot 2 - Private - Commercial/Industrial** **1361 Lake Dr. West Chanhassen, Minnesota 55317 United States** No construction has begun to date.	**2018-06-16**
2016-020	**Prairie View Enclave - Private - Commercial/Industrial** **12701 Pioneer Trail Eden Prairie, Minnesota 55347 United States** No activity observed to date.	**2018-06-15**
2016-021	**Cedar Hills Park - Government - Other** **9580 Eden Prairie Rd Eden Prairie, Minnesota 55347 United States** Construction complete. All temporary BMP's have been removed with exception of some bio-logs at infiltration basin. Vegetation growing. Site is stable.	**2018-06-15**
2016-026	**Foxwood Development - Private - Residential** **9150 and 9250 Great Plains Blvd Chanhassen, Minnesota 55317 United States** Multiple house construction continues-BMP's look good- silt fences and rock entrances installed/ good perimeter control. Silt fences have been installed on unsold lots. Catch basin protection has been reinstalled. Additional silt fences have been installed across site. Bare soils have been recently spray-tac'd vegetation growing. Some tracking to streets. Site is swept regularly. North infiltration pond has standing water-skimmer not hooked up. (June-2018)	**2018-06-15**
2016-030	**IDI Distribution Building Expansion - Private - Commercial/Industrial** **8303 Audubon Road Chanhassen, Minnesota 55317 United States** Parking on north side installed/curb and gutter installed. BMP's look good. Building addition complete. All bare soils have been spray-tac'd. North parking lot area has base rock installed preparing for asphalt. (June-2018)	**2018-06-16**
2016-032	**CSAH 61 Improvements - Government - Linear** **N/A Eden Prairie, Minnesota 55347 United States** Construction continues. Spoil piles have been spray tac'd and wood chips being used were necessary. Additional silt fences and bio-logs have been installed where needed. Area near creek crossing is under construction continues. BMP's to date look good., Construction continues. Silt fences / bio-logs installed. BMP's to date look good.	**2018-06-15**

2016-032	**CSAH 61 Improvements - Government - Linear** **N/A Eden Prairie, Minnesota 55347 United States** Construction continues. Spoil piles have been spray tac'd and wood chips being used were necessary. Additional silt fences and bio-logs have been installed where needed. Area near creek crossing is under construction continues. BMP's to date look good., Construction continues. Silt fences / bio-logs installed. BMP's to date look good.	**2018-06-15**
2016-033	**Anderson Lakes-Purgatory Trail - Government - Other** **Anderson Lakes PKWY and Purgatory Creek Eden Prairie, Minnesota 55344 United States** No construction observed to date.	**2018-06-15**
2016-039	**Powers Ridge Senior Apartments - Private - Residential** **1351 Lake Drive West Chanhassen, Minnesota 55317 United States** Construction complete. Temporary BMP's have been removed. Landscaping and sod installation complete. Vegetation growing.. Wetland signage installed. Site is stable. This will be last field inspection for this permit. (June-2018)	**2018-06-16**
2016-040	**18995 Minnetonka Blvd - Existing Single-Family** **18995 Minnetonka Blvd Deephaven, Minnesota 55391 United States** Construction complete. Slopes with vegetation mats have growth. Southwest corner has more BMP's to control sediment erosion. BMP's installed. Entire site has been covered with matting and vegetation has sprouted. Driveway installed- some class five near south end of driveway has been graded. June-2018.	**2018-06-16**
2016-041	**Chanhassen West Water Treatment Plant - Government - Other** **2070 Lake Harrison Road Chanhassen, Minnesota 55317 United States** Silt fences installed on site. Construction continues. Rock entrance good. BMP's look good. Entrance installed and paved. SW hillside and pond work under construction--exposed soils on a slope day of inspection. May-2018.	**2018-06-16**
2016-042	**18663 St. Mellion Place--Eden Prairie (Bear Path)** Open CA(s): Western silt fence -needs maintaining-- down in areas and 50-80 filled with sediments. Spoke with home owner and fence will be updated. (May-2018)-- not completed as of June inspection. Uncovered/unstablized soils present. Site representative and Terry Jeffery notified. Deadline: 6/30/2018 Construction halted . BMP's are good with exception of western silt fence -needs maintaining-- down in areas and 50-80 filled with sediments. Spoke with home owner and fence will be updated. (May-2018)-- not completed as of June inspection. CA written. Site grading and sod installation has occurred on a large portion of site.	**2018-06-15**

2016-043	**Bongards Redevelopment - Private - Commercial/Industrial** **8330 Commerce Drive Chanhassen, Minnesota 55317 United States** Curb and asphalt installed. BMP's good.	**2018-06-16**
2016-044	**Dell Rd & Riley Creek Repair Project - Government - Other** **9980 Dell Road Eden Prairie, Minnesota 55347 United States** Vegetation was growing appears to have died off. Rip-rap was installed at dirt road edge to control erosion from road. Additional erosion prevention from road needs to be addressed. More rock installed along flow path and silt deposit at beehive catch basin remains. Representative was contacted in September (2017) and is aware of site condition. June-2018.	**2018-06-15**
2016-045	**MCES Blue Lake Interceptor Rehab - Government - Linear** **See attached multiple , Minnesota 55354 United States** Construction complete. Silt fences installed/bio-logs in place. Bare soils covered with spray-tac. Some vegetation growth observed areas of no growth. (June-2018)	**2018-06-16**
2016-047	**9507 Sky Lane Eden Prairie - Existing Single-Family** **9507 Sky Lane Eden Prairie, Minnesota 55347 United States** Construction complete/landscaping completed--sod installation scheduled for week of June 18. Silt fences down in some areas but secondary containment is good. Catch basin protection at road needs to be maintained --it's not installed-- just laying over CB. (street side CB). Catch basin between properties has been protected. Runoff from bare soils going around and offsite from this property-- south property. Site representative was notified after August inspection-no corrective action taken except for landscaping of 9527 Sky Lane. Wetland buffer signage has been installed. June-2018	**2018-06-15**
2017-001	**Kopesky 2nd Addition - Private - Residential** **18340 82nd St Eden Prairie, Minnesota 55347 United States** Site has been cleared and perimeter control--silt fence has been installed. Rock entrance installed. Heavy equipment onsite. Road and storm sewer installation underway. BMP's are good.	**2018-06-15**
2017-002	**7012 Dakota Ave - Existing Single-Family** **7012 Dakota Ave Chanhassen, Minnesota 55317 United States** Construction complete. All temporary BMP's have been removed. Site is stable including area new street water shut off. This will be last field inspection for this permit.	**2018-06-16**
2017-003	**18761 Heathcote Dr Building Addition - Existing Single-Family** **18761 Heathcote Dr Wayzata, Minnesota 55391 United States** House construction complete. Pool installation complete. Landscaping complete--sod and shrubs installed. Temporary BMP's have not been removed. Debris pile onsite. June-2018.	**2018-06-16**

2017-009	**Emerson Chanhassen East Renovation - Private - Commercial/Industrial** **8200 Market Boulevard Chanhassen, Minnesota 55317 United States** Construction nearing completion. BMP's installed. Landscaping underway. West infiltration basin installed and complete-BMP's are good. Bare soils onsite covered with matting and bio-logged. June-2018	**2018-06-16**
2017-010	**Riley Lake Park Renovations - Government - Other** **9100 Riley Lake Rd Eden Prairie, Minnesota 55347 United States** Construction complete. BMP's installed and look good. Grading and landscaping in is complete. Vegetation growing.areas. Vegetation is sparse in areas and mostly likely need reseeding. (June-2018)	**2018-06-15**
2017-011	**Galpin Blvd Watermain Improvements - Government - Linear** **Galpin Blvd & Lake Harrison Road Chanhassen, Minnesota 55317 United States** Construction complete. Soils covered with erosion control mats-some growth observed to date. Silt fence still installed in one area. Some areas have had additional matting laid down. June-2018.	**2018-06-16**
2017-022	**Chanhassen High School Stormwater Reuse - Government - Other** **220 Lyman Blvd Chanhassen, Minnesota 55317 United States** No activity observed to date.	**2018-06-16**
2017-023	**Eden Prairie Assembly of God - Private - Commercial/Industrial** **16591 Duck Lake Trail Eden Prairie, Minnesota 55346 United States** Construction continues. Perimeter control silt fence and rock entrance installed. BMP's look good. (June-2018)	**2018-06-16**
2017-024	**Prairie Bluffs Senior Living - Private - Residential** **10280 Hennepin Town Rd Eden Prairie, Minnesota 55347 United States** Site clearing and earthwork has begun. Perimeter silt fence installed and catch basin portion in place. Site entrance is asphalt to date. BMP's look good.	**2018-06-05**
2017-025	**735 Pleasantview Road - Existing Single-Family** **735 Pleasant View Dr Chanhasssen, Minnesota 55317 United States** Construction complete. Landscaping complete. All temporary BMP's have been removed. Site is stable. This will be last field inspection for this permit. (June-2018)	**2018-06-16**
2017-026	**6135 Ridge Road - Existing Single-Family** **6135 Ridge Road, Shorewood, , Minnesota 55331** Construction continues. Rock entrance has been "refreshed and graded. Silt fence down in multiple areas and	**2018-06-04**

	overtopping/undercutting. Washout gullies on north side of site have not been addressed. Bare soils on site and slopes need to be covered and stabilized. Email and photos were sent to site representative on June 5, 2018. Deadline: 6/30/2018 : Silt fence down in multiple areas and overtopping/undercutting. Washout gullies on north side of site needs to be addressed. Bare soils on site and slopes need to be covered and stabilized. Email and photos were sent again to site representative on June 5, 2018. Site driveway has been refreshed with additional rock and graded-- looks good. Deadline: 6/11/2018 Open CA(s): Construction continues. Rock entrance has been "refreshed and graded. Silt fence down in multiple areas and overtopping/undercutting. Washout gullies on north side of site need to be addressed. Bare soils on site and slopes need to be covered and stabilized. Email and photos were sent to site representative on June 5, 2018. Deadline: 6/12/2018 Follow up inspection for CA. Construction continues. Rock entrance has been refreshed and graded. Silt fence still down in multiple areas and overtopping/undercutting. Multiple washout gullies on north side of site have not been addressed and more washouts observed. Bare soils on site and slopes still need to be covered and stabilized. Email and photos were sent to site representative on May 4, 2018-responded via phone call and stated that these items would be addressed the following week. Site representative was notified again.	
2017-027	**7500 Chanhassen Road - Existing Single-Family** **7500 CHANHASSEN RD Chanhassen, Minnesota 55317-8576 United States** Construction complete. Site has been graded for landscaping. Some silt fences removed and bio-logs installed. BMP's adequate.	**2018-06-16**
2017-029	**Tweet Pediatric Dentistry - Private - Commercial/Industrial** **7845 Century Blvd. Chanhassen, Minnesota 55317 United States** Construction complete . BMP's are installed and good. Catch basin protection installed in this area. Infiltration areas installed. Parking lot grading and curb/gutter installation complete. Landscaping complete. NW infiltration basin has silt fences up-sediment on upstream ends will need to be removed rigor to silt fence removal. (June2018) see photos	**2018-06-16**
2017-030	**Elevate - Private - Commercial/Industrial** **12900 Technology Drive Eden Prairie, Minnesota 55344 United States** Foundation work continues. Perimeter control installed. Catch basin protection installed. Some catch basins have bladders installed and drainage will be directed to other basins. BMP's look good. New (additional rock entrance installed and maintained.	**2018-06-15**
2017-032	**11193 Bluestem Lane - Government - Other** **11193 Bluestem Lane Eden Prairie, Minnesota 55347 United States**	**2018-06-15**

	Construction complete. All exposed soils on slope are covered and stabilized--vegetation growing--areas where seed did not sprout are observed-- matting is keeping soils stable. Bio-logs installed at toe of slope. Site is in good condition.	
2017-034	**Park Road Overlay Chanhassen - Government - Linear** **Park Road Chanhassen, Minnesota 554317 United States** Overlay complete. Landscaping complete. Bridge at stream crossing complete. All exposed soils covered. Vegetation growth observed.	**2018-06-16**
2017-036	**Minnetonka HS Upper Field Access Road - Government - Other** **18301 State Hwy No 7 Minnetonka, Minnesota 55345 United States** Construction complete. Vegetation has sprouted and is growing--sparse in many areas--will need to be addressed in spring-2018. Bare areas are observed and susceptible to erosion -- photo taken and CA created. Site representative was notified after May inspection. No activity to address CA. (June-2018)	**2018-06-16**
2017-037	**The Venue - Private - Commercial/Industrial** **525 W 78th St Chanhassen, Minnesota 55317 United States** Security fence installed. BMP's installed. Demolition of existing buildings underway.	**2018-06-16**
2017-038	**West Park - Private - Residential** **760& 781 Lake Susan Drive 8601 Great Plains Blvd Chanhassen, Minnesota 55317 United States** Construction continues. Street installation on north side started. Rock entrance installed on south side and to individual house sites. Perimeter control installed. Catch basin protection reinstalled. BMP's look good. Minor tracking observed on --onsite streets. South construction site activity has begun-BMP's look good.	**2018-06-15**
2017-039	**Mission Hill Senior Living - Private - Residential** **8600 Grate Plains Boulevard Chanhasen, Minnesota 55317 United States** Construction underway. Earthwork and roadway construction. BMP's installed. Site perimeter control installed. Catch basin protection installed. Site is in good shape. South swale has been stabilized.	**2018-06-15**
2017-040	**Basin 05-12-C Cleanout - Government - Other** **14180 W 78th St Suite 118 Eden Prairie, Minnesota 55344 United States** No site activity observed to date.	**2018-06-16**

2017-044	**17064 Weston Bay Road - Private - Residential** **17064 weston Bay Road Eden Prairie, Minnesota 55427 United States** Construction complete. Landscaping is complete--majority of ares has been hydro-seeded is growing. All temporary BMP's have been removed. Site is stable. This will be last field inspection for this permit. (June-2018)	**2018-06-16**
2017-047	**Fawn Hill - Private - Residential** **7240 Galpin Road Chanhassen, Minnesota 55331 United States** Earthwork completed/roadway installed. Perimeter silt fence install. Exposed soils blown with straw. BMP's to date look good-May CA's taken care of. (June-2018) West pond overflow installed.	**2018-06-16**
2017-052	**Old Excelsior Senior Living - Private - Residential** **17705 Hutchins Drive Minnetonka , Minnesota 55345 United States** Construction continues. Perimeter control installed. BMP's in place. Street is swept regularly. (June-2018)	**2018-06-16**
2017-053	**Mastercraft - Private - Commercial/Industrial** **17717 State Hwy 7 Minnetonka, Minnesota 55345 United States** Construction continues-building construction complete. Inlet protection installed. Bio-logs removed in ares for parking lot install. BMP's look good. June-2018)	**2018-06-16**
2017-055	**Scenic Heights Elementary 2018 Addns - Government - Other** **5650 Scenic Heights Drive Minnetonka, Minnesota 55345 United States** Construction has begun. BMP's installed.	**2018-06-16**
2017-056	**Covington Rd Culvert Replacement - Government - Linear** **Covington Road Minnetonka, Minnesota 55345 United States** Construction complete. Vegetation matting installed. Wetland buffer signage installed on downstream side of Covington. Installed BMP's look good. Vegetation sprouted and growing thru matting. Site is stable. (June-2018)	**2018-06-16**
2017-063	**Clear Springs Elementary 2018 Gymnasium Addition - Government - Other** **5621 County Road #101 Minnetonka, Minnesota 55345 United States** Construction has begun. BMP's installed.	**2018-06-16**
2017-064	**Scenic Heights Elementary School Forest Restoration - Government - Other** **5650 Scenic Heights Drive Minnetonka, Minnesota 55345 United States** Site has been selectively cleared. Inflow area modified and BMP's installed. Restoration continues.	**2018-06-16**

2017-069	**Scheels Redevelopment - Private - Commercial/Industrial 8301 Flying Cloud Dr. Eden Prairie, Minnesota 55344 United States** Security fence installed. Construction trailer onsite. Minimal activity observed. No BMP's installed to date.	2018-06-15
2017-072	**O'Reilly Auto Parts Eden Prairie - Private - Commercial/Industrial 8868 AZTEC DRIVE Eden Prairie, Minnesota 55347 United States** No activity observed to date.	2018-06-15
2017-073	**Preserve Village - Private - Residential 9625 Anderson Lakes Pkwy Eden Prairie, Minnesota 55344 United States** No activity to date.	2018-06-15
2018-001	**Panera - Private - Commercial/Industrial 531 W. 79th Street Chanhassen, Minnesota 55317 United States** Security fence installed. Construction trailer onsite. No demolition to date.	2018-06-16
2018-004	**903 Lake Drive Chanhassen - Government - Other 903 Lake Drive Chanhassen, Minnesota 55317 United States** No activity observed to date.	2018-06-16
2018-007	**Lake Lucy Lane Drainage- Government - Other Chanhassen, Minnesota 55317** Construction complete. All exposed soils covered. Temporary BMP's are in placed.	2018-06-16
2018-008	**Staring Lake Park Play Court - Government - Other 14800 Pioneer Trail Eden Prairie, Minnesota 55344 United States** Construction 95% complete. Security fence removed. Temporary BMP's installed where needed. Seeding complete in areas.	2018-06-15
2018-011	**Maloney Shoreline Stabilization - Existing Single-Family 108 Pioneer Trail Chanhassen, Minnesota 55327 United States** No construction observed to date.	2018-06-15
2018-013	**Soccer Field 11 at Miller Park - Government - Other 8250 Shoreline Drive Eden Prairie, Minnesota 55344 United States** Construction has begun. BMP's in place.	2018-06-16
2018-015	**Starbucks Coffee House - Private - Commercial/Industrial 19285 Highway 7 19245 Highway 7 Shorewood, Minnesota 55401 United States** No activity observed to date.	2018-06-16

2018-020	**9770 Sky Lane - Existing Single-Family** **9770 Sky Lane Eden Prairie, Minnesota 55347 United States** Construction continues. BMP's onsite are installed. No downstream catch basin protection installed- 2 basins downstream. Site representative was notified- second time. CA from May still open. Sediment at curbside downstream.	**2018-06-15**
2018-021	**9810 Sky Lane - Existing Single-Family** **9810 Sky Lane Eden Prairie, Minnesota 55347 United States** Open CA(s): Rock entrance needs improvement. Deadline: 6/30/2018 Construction continues. BMP's onsite are installed. Catch basin protection installed at southwest corner of site. Rock entrance should be improved. Site representative was notified.	**2018-06-15**
2018-022	**Sunrise Park Court Improvement - Government - Other** **9401 Bloomington Ferry Road Bloomington, Minnesota 55438 United States** Survey control points set. No site activity observed to date.	**2018-06-15**
2018-029	**Bloomington 98th St Reconstruction - Government - Linear** **98th Street Bloomington, Minnesota 55438** Site has been surveyed and marked for utilities. No BMP's observed to date.	**2018-06-15**
2018-030	**Bloomington Dakota Rd Reconstruction - Government - Liner** **Dakota Road Bloomington, Minnesota 55438** Site has been surveyed and marked for utilities. No BMP's observed to date.	**2018-06-15**
2018-031	**Ridgeview Elementary School Mechanical Improvements- Government - Other** **9400 Nesbitt Avenue Bloomington, Minnesota 55438 United States** Construction has started. Work to date appears to be roof top and indoors. No BMP's observed or needed to date.	**2018-06-15**
2018-034	**Basin 05-11-A Cleanout - Government - Other** **Corner of Sequioa and Ginger Eden Prairie, Minnesota 55346 United States** No activity observed to date at pond. Outlet and flow line downstream has been cleaned out. BMP's installed in this area.	**2018-06-16**

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

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engineering and environmental consultants

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June 20, 2018

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

Re: Scenic Heights Elementary School Forest Restoration Project – Pay Application #2
Barr Project # 23/27-0053.14-023

Dear President Yetka and Board of Managers:

Enclosed is the Application for Payment #2 from Landbridge Ecological (formally Wetland Habitats Restorations) for work completed through 5/20/18, on the above-referenced project. Upon your review and approval, please sign three copies and return one copy to me, one copy to the contractor and retain the remaining copy for your files.

Major items of work covered by this pay application include final clearing of the remaining 1 acre of woody invasive plants under 8", clearing of 7 trees over 8" in diameter, re-grading, and installation of rock riffles and native seed in the eroded channel into the pond, installation of 137 bare root plants in a gravel bed tree nursery, and first three management visits for 2018.

Barr Engineering has reviewed the application, and is recommending payment in the amount of **$35,516.70**. Payments shall be made directly to Landbridge Ecological.

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

Sincerely,

Matthew Kumka, PLA
Barr Engineering Co.

c: Claire Bleser, RPBCWD
Elissa Thompson, Landbridge Ecological

Enclosure #1 – Application for Payment – Progress Payment 2

Scenic Heights School Forest Restoration Project
Progress Payment Number 2

1.0	Total Completed Through This Period	$85,613.00		
2.0	Total Completed Previous Period		$46,150.00	
3.0	Total Completed This Period			$39,463.00
4.0	Amount Retained, Previous Period		$4,615.00	
5.0	Amount Retained, This Period (See Note 1)		$3,946.30	
6.0	Total Amount Retained		$8,561.30	
7.0	Retainage Released Through This Period:			$0.00
8.0	Amount Due This Period			$35,516.70

Note 1: At rate of 10% until Completed to Date equals 50% of current Contract Price and a rate of 0% thereafter.
Note 2: Current Contract Price $199,225.00

SUBMITTED BY:
Name: Elissa Thompson Date: 6/20/2018
Title: Project Manager
Contractor: Landbridge Ecological
Signature: Elissa Thompson

RECOMMENDED BY:
Name: Matt Kumka Date: 6/20/2018
Title: Project Manager
Engineer: Barr Engineering Company
Signature:

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

Signature:

Scenic Heights School Forest Restoration Project
Riley Purgatory Bluff Creek Watershed District
Summary of Work Completed through June 20, 2018 for Progress Payment Number 2

	Item	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	BID - LANDBRIDGE ECOL		(1) Total Completed Through This Period		(2) Total Completed Through This Period	
					UNIT COST	EXTENSION	Quantity	Amount	Quantity	Amount
	1.06.A	Mobilization/Demobilization	L.S.	1	$15,500.00	$15,500.00	0	$0.00	0	$0.00
	1.06 B	Erosion Control Construction Entrance	Each	1	$2,500.00	$2,500.00	0	$0.00	0	$0.00
	1.06.C	Desirable Plant Marking for Protection	L.S.	1	$1,750.00	$1,750.00	1	$1,750.00	0	$0.00
	1.06 D	Clear and Grub Woody Invasive Plant Removal (Trees under 8")	AC	7	$4,500.00	$31,500.00	6	$27,000.00	1	$4,500.00
	1.06 F	Clear and Grub Woody Invasive Plant Removal (Trees over 8")	Each	40	$450.00	$18,000.00	33	$14,850.00	7	$3,150.00
	1.06 H	Remove and Dispose of Adopt-A-Plots Signs	Each	30	$85.00	$2,550.00	30	$2,550.00	0	$0.00
	1.06 I	Heavy Duty Silt Fence	L.F.	85	$15.50	$1,317.50	0	$0.00	0	$0.00
	1.06 J	Erosion Control Blanket	S.Y.	125	$5.50	$687.50	0	$0.00	125	$687.50
	1.06 K	Remove and Salvage Topsoil (P)	C.Y.	80	$45.00	$3,600.00	0	$0.00	80	$3,600.00
	1.06 L	Grading	L.S.	1	$5,900.00	$5,900.00	0	$0.00	1	$5,900.00
	1.06 M	Rock Riffle	Each	3	$3,500.00	$10,500.00	0	$0.00	3	$10,500.00
	1.06 N	Woodland Seed Mix with Cover Crop (Custom Mix)	AC	4.7	$2,200.00	$10,340.00	0	$0.00	0	$0.00
	1.06 O	Prairie Seed Mix with Cover Crop (MnDOT 35-221)	AC	1.3	$1,950.00	$2,535.00	0	$0.00	0	$0.00
	1.06 P	Woodland Edge Seed Mix with Cover Crop (MnDOT 36-711)	AC	1.2	$1,850.00	$2,220.00	0	$0.00	0	$0.00
	1.06 Q	Wet Meadow Seed Mix with Cover Crop (MnDOT 34-261)	AC	0.5	$3,500.00	$1,750.00	0	$0.00	0.3	$1,050.00
	1.06 R	Live Stake (Furnish and Install)	Each	148	$15.50	$2,294.00	0	$0.00	0	$0.00
	1.06 S	#10 Cont. Tree (Furnish and Install)	Each	30	$350.00	$10,500.00	0	$0.00	0	$0.00
	1.06 T	Shrub, Bare Root (Furnish and Install)	Each	182	$25.50	$4,641.00	0	$0.00	101	$2,575.50
	1.06 U	Herbaceous Plug (Furnish, Install by others)	Each	2520	$1.50	$3,780.00	0	$0.00	0	$0.00
	1.06 U	Straw Mulch	AC	7.7	$1,550.00	$11,935.00	0	$0.00	0	$0.00
	1.06 V	Shredded Hardwood Mulch	C.Y.	45	$65.00	$2,925.00	0	$0.00	0	$0.00
	1.06 W	Herbaceous Management Site Visit 2018	Each	7	$2,500.00	$17,500.00	0	$0.00	3	$7,500.00
	1.06 X	Herbaceous Management Site Visit 2019	Each	7	$2,500.00	$17,500.00	0	$0.00	0	$0.00
	1.06 Y	Herbaceous Management Site Visit 2020	Each	7	$2,500.00	$17,500.00	0	$0.00	0	$0.00
		CONSTRUCTION SUBTOTAL				**$199,225.00**		**$46,150.00**		**$39,463.00**

LANDBRIDGE ECOLOGICAL

670 Vandalia Street | Saint Paul, MN 55114

612-503-4420 | www.landbridge.eco

Invoice

Date	Invoice #
5/15/18	2642

Bill To

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

P.O. No.	Terms	Project
		17-054 Scenic Heights Restoration

Description	Qty	Rate	Amount
Clear and Grub Woody Invasive Plant Removal (Trees under 8" DBH) (AC)	1	4,500.00	4,500.00
Clear and Grub Woody Invasive Plant Removal (Trees over 8" DBH) (EA)	7	450.00	3,150.00
Erosion Control Blanket (SY)	125	5.50	687.50
Remove and Salvage Topsoil (P) (CY)	80	45.00	3,600.00
Grading (LS)	1	5,900.00	5,900.00
Rock Riffle (EA)	3	3,500.00	10,500.00
Wet Meadow Seed Mix with Cover Crop (MnDOT 34-261) (AC)	0.3	3,500.00	1,050.00
Shrub, Bare Root (Furnish and Install) (EA)	101	25.50	2,575.50
Herbaceous Management Site Visit 2018 (EA)	3	2,500.00	7,500.00

Total	$39,463.00
Payments/Credits	$0.00
Balance Due	$39,463.00

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Memorandum

To: Riley Purgatory Bluff Creek Watershed District Board of Managers
From: Barr Engineering Company
Subject: Permit Application 2018-026: Culver's of Eden Prairie
Date: July 3, 2018
Project: 23270053.14

Project Description

Permit No: 2018-026

Received complete: May 14, 2018

Applicant: Prairieview Retail, LLC, Jamie Pollock
Consultant: ISG, Inc., Jerremy Foss
Project: Culvers of Eden Prairie– The project proposes construction of a new 4,704 Culver's restaurant with a drive-thru and reconstruction of a portion of the existing parking lot.
Location: 970 Prairie Center Drive, Eden Prairie, MN
Reviewer: Katie Turpin-Nagel and Scott Sobiech, PE- Barr Engineering

Rules: Applicable rules checked

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

Recommendation

On May 14, 2018, Prairieview Retail, LLC submitted a complete permit application for construction of a new 4,704 Culver's restaurant with a drive-thru and reconstruction of a portion of the existing parking lot at 970 Prairie Center Drive, Eden Prairie, MN. Based on the Engineer's review of the submitted plans, the latest site designs and stormwater management approach do not provide the required water quality treatment.

The review period for Permit 2018-026 expires on July 13, 2018 which is before the Board's regular August meeting. Staff recommends that the Board extend, in accordance with Minnesota Statutes section 15.99, the review period by 60 days to September 1, 2018, for permit 2018-026 Culver's of Eden Prairie to allow the Applicant time to supply revised submissions and give the Engineer time to complete a review.

Approve staff/CAC recommendations for residential cost-share applications

APPLICANT	ADDRESS	SUB-WATERSHED	PROJECT TYPE	POLLUTION REMOVAL	AREA RESTORED	PROJECT COST	FUNDING REQUEST	STAFF REC	CAC REC
CAMPBELL	17040 S. Shore Lane, Eden Prairie	Duck Lake	Lake buffer	NA	895ft^2	$1713.77	$1273.77	$1273.77	$1273.77
FISHER	16820 S. Shore Lake, Eden Prairie	Duck Lake	Lake buffer	NA	830ft^2	$4152	$3000	$3000	$3000
MAIROSE	14419 Westridge Dr. Eden Prairie	Staring Lake	Conservation practice (fescue)/ native buffer	NA	9000ft^2	$2260.80	$1635	$1635	$1635
MOREIRA	5554 Nantucket Place, Minnetonka	Purgatory Creek	Raingarden	2,964 gallons water infiltrated	374ft^2	$3367.42	$2525.57	$2525.57	$2525.57

Staff recommend the four residential cost-share applications in the table above be approved for funding at the amounts listed.

Board action

It was moved by Manager_____, seconded by Manager _____ to approve funding for the four residential cost-share applications listed in the table above, in the amounts recommended by staff/CAC.

Cost share grant application
2018

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Do not fill in gray boxes. District use only.

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

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

Works or resides in district?

Applicant information

Name Eric + Deb Campbell Address 17040 S. Shore Lane

City/State/Zip Eden Prairie MN 55346

Phone 952-270-1404 Alt phone 952-270-9019 Email delscampbell61183@gmail.com

Primary contact

☒ Same as applicant (leave blank)

Name _____ Address _____

City/State/Zip _____

Phone _____ Alt phone _____ Email _____

Project location

Address 17040 S. Shore Lane City/State/Zip Eden Prairie, MN 55346

Property Identification Number (PID) 0811622210006

Property owner(s) Eric + Deb Campbell

Project located in district?

Tributary to a waterbody?

No Yes, indirectly Yes, adjacent

Project summary

Title Native plant shoreline Buffer

Total project cost $1713.77 Grant amount requested $1273.77

Estimated start date 9/1/18 Estimated completion date 9/30/18

Sub-watershed Duck Lake

Project located in priority drainage area?

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

2-3 sentence project description

Native planting along Duck lake, to create a buffer between the lake and the lawn. Include fencing to deter geese.

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

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

Site visit

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

Have you had a site visit? ☐ No ☒ Yes

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

Project details

Do not fill in gray boxes. District use only.

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

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

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

Description

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

Current conditions
- turf grass, mowed

The yard has been maintained well over the years, but grass goes right to the lakeshore. There is some wire fencing along the lakeshore to discourage geese.
water level is very stable.

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

Create a buffer of native plants, between the lake and the ~~lawn~~ lawn. Benefits include:
- Protect + build soil
- Deter geese from lawn
- Filter runoff to lake (improve water quality)

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

List other key participants and their roles

Homeowners (Eric + Deb) will do all site prep, planting and maintenance.

Does the project demonstrate strong partnerships & support?

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

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

How does the project support the goals you checked?

The native plants will provide better wildlife habitat, protect and improve soil, filter polluted runoff to lake. They will lead to improved water quality and provide an example to neighbors on how to improve Duck Lake.

Project details (continued)

Do not fill in gray boxes. District use only.

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

Benefit	Amount
Water captured	gal / year
Water infiltrated	gal / year
Phosphorus removed	lbs / year
Sediment removed	lbs / year
Land restored	895 ft²

Does the project provide water quality treatment?

Does the project provide restoration?

How will you share the project results with your community?

We will invite neighbors and all interested parties to tour the project. We will explain benefits and encourage others to take on similar projects!

Is there educational value to the project?

Will the project be visible to the public?

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

Several of our neighbors along Duck Lake could do a similar project, to improve lake quality!

Evaluation

How will the project be monitored and evaluated?

Homeowners will maintain (water, weed, maintain fencing). Watershed representatives and others are always welcome to evaluate and monitor the planting area.

Maintenance agreement

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

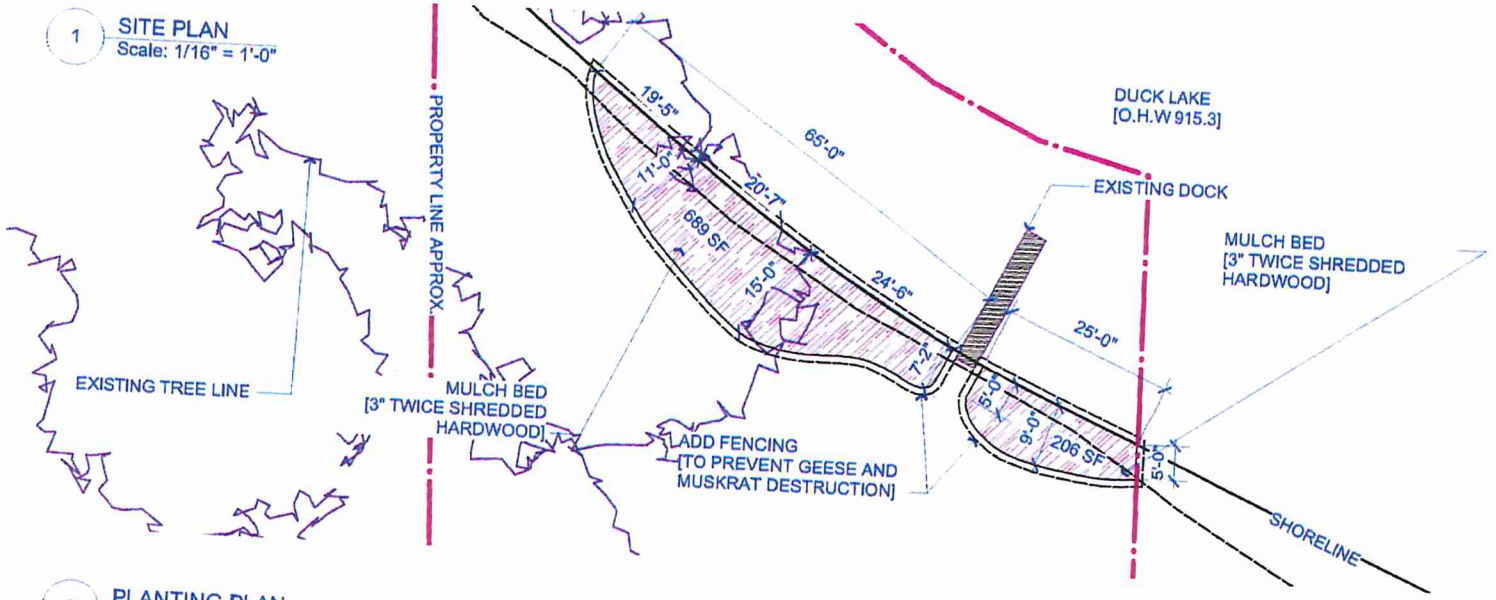
Authorization

Name of landowner or responsible party Eric + Deb Campbell

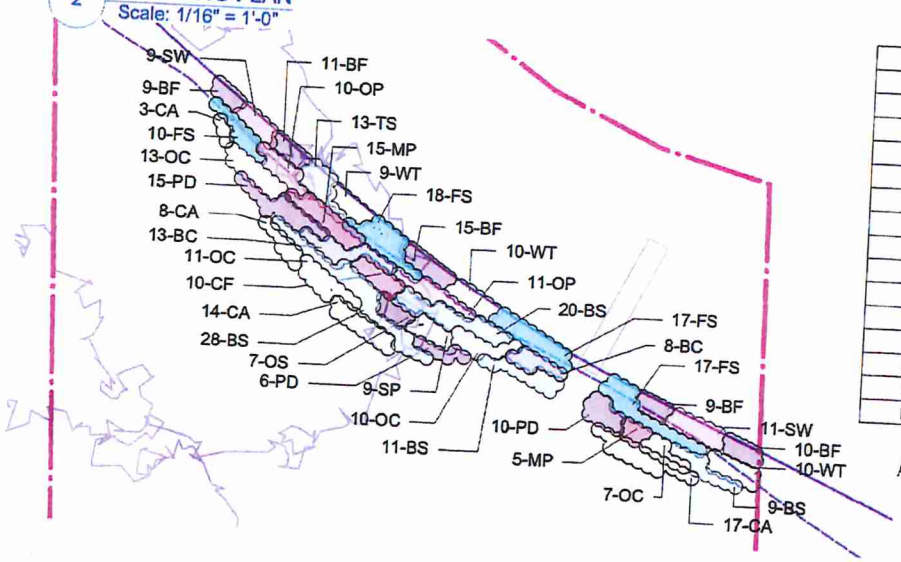
Signature E Campbell Deb Campbell Date 5/18/18

(2)

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



2 PLANTING PLAN
Scale: 1/16" = 1'-0"



ID	Common Name	Latin Name	Quanity
BF	Blue Flag Iris	Iris versicolor	54
SW	Swamp Milkweed	Asclepias incarnata	20
WT	Turtlehead	Chelone glabra	29
FS	Fox Sedge	Carex vulpinoidea	62
TS	Tussock Sedge	Carex stricta	13
MP	Marsh Phlox	Phlox glaberrima ~~CAOV~~	20
BS	Bur Sedge	Carex grayii	68
OP	Obedient Plant	Physostegia virginiana	21
SP	Smooth Penstemon	Penstemon digitalis	9
OS	Ohio Spiderwort	Tradescantia ohiensis	7
OC	Orange Coneflower	Rudbeckia fulgida	41
PD	Purple Dome Aster	Aster novae-anilae 'Purple Dome'	31
CA	Canadian Anemone	Anemone canadensis	42
CF	Cardinal Flower	Lobelia cardinalis	10
BC	Blue Cardinal Flower	Lobelia siphilitica	21

MM Marsh marigold caltha palustris 6
(along lakeshore)

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

CAMPBELL

17040 South Shore Ln.
Eden Prairie, MN 55346

Provided By:
CARVER SWCD
CO.CARVER.MN.US/SWCD

DESIGNER: SETH RISTOW

DATE: 5/02/18
REVISION:
REVISION:

NOTES:

- CALL GOPHER 1 PRIOR TO DIGGING
- KILL EXISTING VEGETATION AT LEAST 1 WEEK PRIOR TO PLANTING
- DO NOT KILL EMERGENT VEGETATION BELOW O.H.W.
- CONTACT SETH RISTOW WITH QUESTIONS (952) 466-8264
- BED SHAPES CAN CHANGE BUT SF SHOULD STAY THE SAME

SCALE: 1/16"=1'

L1.0

Cost Estimating Worksheet

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

Service Provider	Task	# Hours	Rate/Hour	Requested Funds from RPBCWD	Matching / In-Kind Funds	Total
Homeowners	Site Prep	4	$ 10 /hr	$	$ 40.00	$ 40.00
Timberwall Landscape	Mulch Delivery		$ /hr	$ 60.00	$	$ 60.00
Homeowners	Planting / Fencing	32	$ 10 /hr	$	$ 320.00	$ 320.00
			$ /hr	$	$	$
			$ /hr	$	$	$
			$ /hr	$	$	$
			$ /hr	$	$	$
			$ /hr	$	$	$
			$ /hr	$	$	$
			Total:	$ 60.00	$ 360.00	$ 420.00

Project Materials

Materials	Unit Costs	Total # of Units	Requested Funds from RPBCWD	Matching / In-Kind Funds	Total
Herbivore Exclusion Fence (4' green coated wire)	0.84	230	$ 193.00	$	$ 193.00
T-Posts (5.5' steel)	3.50	58	$ 203.00	$	$ 203.00
Cable Ties (bag)	5.00	2	$ 10.00	$	$ 10.00
Round-Up	50.00	1	$	$ 50.00	$ 50.00
Twice Shredded Hardwood Mulch (3" depth)	30.00	8.5	$ 255.00	$	$ 255.00
Native Plants (see attachment)	1.10	468	$ 552.77	$	$ 552.77
Power Plant Auger	30.00	1	$	$ 30.00	$ 30.00
		Total:	$1213.77	$ 80.00	$1293.77

(A) Total Requested Funds from RPBCWD*: $_____ (Labor + Project Materials) #1273.77

(B) Total Matching/In-Kind Funds: $_____ (Labor + Project Materials) #440.00

(C) Project Total: $_____ (A + B) #1713.77

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

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

Campbell Native Plant List
Minnesota Native Landscapes
8740 77th St. NE
Otsego, MN 55362

	# of Plants (multiple of 6)	Per Plant Cost	Total Cost
54 Blue Flag	54	$ 1.10	$ 59.40
20 Swamp Milkweed	24	$ 1.10	$ 26.40
29 Turtlehead	30	$ 1.10	$ 33.00
62 Fox Sedge	60	$ 1.10	$ 66.00
13 Tussock Sedge	12	$ 1.10	$ 13.20
21 Obedient Plant	24	$ 1.10	$ 26.40
9 Smooth Penstemon	12	$ 1.10	$ 13.20
7 Ohio Spiderwort	6	$ 1.10	$ 6.60
10 Cardinal Flower	12	$ 1.10	$ 13.20
21 Blue Lobelia	24	$ 1.10	$ 26.40
42 Canada Anemone	42	$ 1.10	$ 46.20
20 Marsh Phlox--Not grown Sub Blue Vervain	24	$ 1.10	$ 26.40
68 Bur Sedge--Not grown Sub Pointed Broom Sedge	66	$ 1.10	$ 72.60
41 Orange Coneflower--Not grown Sub Sweet Black Eyed Susans	42	$ 1.10	$ 46.20
31 Purple Dome Aster--Not grown Sub Native New England Aster	30	$ 1.10	$ 33.00
6 Marsh Marigold	6	$ 1.10	$ 6.60
Total Before Tax			**$ 514.80**
Sales Tax			**$ 37.97**
Total			**$ 552.77**

Cost share grant application
2018

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Do not fill in gray boxes. District use only.

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

Project type (check all that apply) [ ] Raingarden [ ] Vegetated swale [ ] Lake/creek/wetland buffer
[x] Shoreline/bank stabilization [ ] Wetland restoration [ ] Pervious hard surface [ ] Infiltration basin
[ ] Conservation practice [ ] Other_____

Works or resides in district? [ ]

Applicant information

Name Rod Fisher Address 16820 S. Shore Lane
City/State/Zip Eden Prairie, MN 55346
Phone 952-913-8095 Alt phone_____ Email rfisher06@comcast.net

Primary contact

[xx] Same as applicant (leave blank)
Name_____ Address_____
City/State/Zip_____
Phone_____ Alt phone_____ Email_____

Project location

Address same as above City/State/Zip_____
Property Identification Number (PID)_____
Property owner(s)_____

Project located in district? [ ]

Tributary to a waterbody? No [ ] Yes, indirectly [ ] Yes, adjacent [ ]

Project summary

Title lakeshore restoration
Total project cost approx $4000 Grant amount requested $3000
Estimated start date July 2018 Estimated completion date October 2018
Sub-watershed Purgatory Creek

Project located in priority drainage area? [ ]

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

2-3 sentence project description

103' of lakeshore on Duck Lake. We want to remove non-native and invasive species such as silver grass, crown vetch, and bluegrass, and establish native grasses and perennial flowers.

Is this work required as a part of a permit? [xx] No [ ] Yes

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

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

Have you had a site visit? [ ] No [x] Yes [xx] Michelle Jordan on site 17 Aug 2017

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

Project details

Do not fill in gray boxes. District use only.

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

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

Is time-line reasonable?

Is budget reasonable?

Is plan comprehensive?

Does plant list conform to district's approved plant list?

Description

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

Current condition: gentle slope of yard to lakeshore, then drop of 1-2' at wave erosion line.
Plants established at shoreline up to 10' inland are crown vetch, silver grass, honeysuckle bush, and some bluegrass.
Trees established within 6' of shoreline: 20-year black willow, 50 year black willow leaning into the water.
When we moved in in 1990, bluegrass lawn was established to the shoreline, and we stopped mowing to 30' from the shoreline and installed the vetch and ornamental grass. 6-12" rocks were also brought in to inhibit muskrat burrowing.

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

Objectives: lake water quality improvement, native species preservation, shoreline beauty, wildlife habitat, demonstration to neighbors of value of restoration, and providing a more "wild" place for our grandchildren
.
We will bring in lakeshore neighbors and encourage them to restore. Currently, 1 neighbor (Jay McNab) has done this work, and another neighbor (Deb Campbell) is planning to do it.

Are there multiple objectives?

Does the project have well-defined, measurable results?

List other key participants and their roles

Family members will help with labor.

Does the project demonstrate strong partnerships & support?

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

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

How does the project support the goals you checked?

Project details (continued)

Do not fill in gray boxes. District use only.

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

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

Does the project provide water quality treatment? ☐

Does the project provide restoration? ☐

How will you share the project results with your community?

I have been a CAMP sampler for 4 years. I was on the RPBC citizens advisory board in the past. We installed a streetside raingarden 10 years ago.

I have through these and other ways been active in my neighborhood in talking about lakewater and demonstrating activities for improving quality. We will show this project to neighbors.

Is there educational value to the project? ☐

Will the project be visible to the public? ☐

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

Yes, in our little neighborhood, we have 12 lakeshore homes and soon will have 3 lakeshores restored. I will advocate for more, and can foresee 3 more in the next 2 years.

Evaluation

How will the project be monitored and evaluated?

We will be in the plantings daily for the first two years. I will involve my neighbor who is a Master Gardener to help and advise.

Maintenance agreement

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

Authorization

Name of landowner or responsible party Rod Fisher

Signature _____ Date _____

USING ECOLOGY TO RESTORE LAND AND WATER

NATURAL SHORE

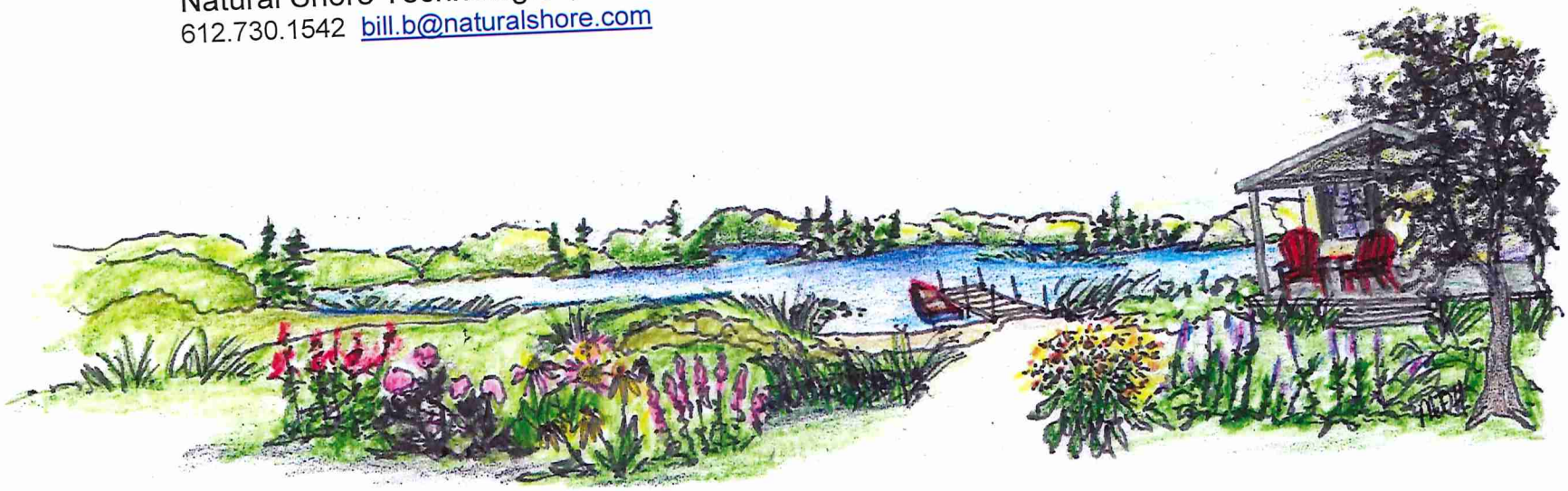
Restoration Proposal for:

Mr. Rod Fischer
16820 South Shore Lane
Eden Prairie, MN 55346

Proposal Date: June 7, 2018

Prepared by:

Bill Bartodziej M.S., Senior Restoration Ecologist
Natural Shore Technologies, Inc.
612.730.1542 bill.b@naturalshore.com



NATURAL SHORE

USING ECOLOGY TO RESTORE LAND AND WATER

612.703.7581 | naturalshore.com | Office & Nursery 1480 County Rd 90 Independence, MN 55359

June 7, 2018

Dear Mr. Fischer:

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

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

Best regards,

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

Project Summary

1. Dimensions: as per plan provided
2. Site assessment and plan development include: detailed site preparation methods, plant selection, and a project timeline and work schedule for our staff.
3. Delineate and verify total restoration project area.
4. Design planting so that flowering will occur at different periods throughout the growing season. Short prairie grass species will be used around the buffer edges closest to the turf.
5. Kill all weedy species and turf with an herbicide appropriate for upland or aquatic use. A licensed herbicide applicator from Natural Shore Technologies will apply the treatment.
6. Cut and remove remaining weedy material.
7. Apply a 3" layer of shredded hardwood mulch over the entire project site.
8. Lay out plants into plant zones per plan specifications. We will use 360 – 3" and 4" container plants for your restoration.
9. Install all plants @ approximately 1.5' centers. Move mulch aside and a light mulch layer will be returned around the base of the plants to hold moisture. Mulch will not be placed below the normal water level.
10. Install metal fencing around the entire restoration area.
11. Site monitoring will be conducted and appropriate maintenance will be provided throughout the 2019 growing season.

Project Cost

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

Cost Breakdown

Site Design, Project Management, Mobilization	$992.00
Site preparation, herb. trts, mulch	$1,410.00
Plants - 360 - 3" and 4" containers	$1,350.00
Temp. wire fencing around restoration area	$400.00
Maintenance - 2 yr plan	$840.00
TOTAL =	**$4,992.00**

Site maintenance

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

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

Staff Qualifications

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

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

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

Natural Shore Technologies Plant Material

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

Information about our ***retail native plant greenhouses*** located in Maple Plain is also available at: www.naturalshore.com

Guarantee

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

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

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

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

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

Contract

A down payment of *$2,496.00* is required to schedule your project.

The remainder of the project cost is due at project completion.

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

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

Contract Value: $ 4,992.00

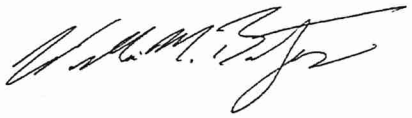
Client name: Mr. Rod Fischer

Signed: _____ **Date** _____

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

Contract Date: *Contract Date for 30 Day term*

Signed:



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

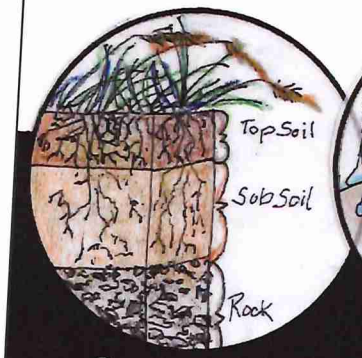
Please return a signed copy of this contract and a check to:

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

NATURAL SHORE

Using Ecology to Restore Land and Water

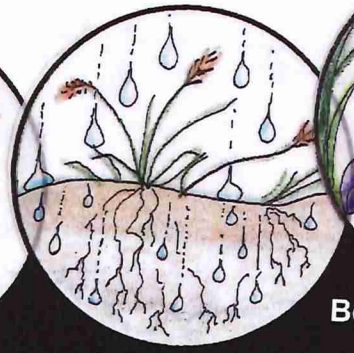
Benefits of our quality restoration work.



Conserve Soil

Native plants:

* *Build soil health*
* *Capture carbon*



Protect Water Quality

Deep roots:

* *Promote infiltration*
* *Reduce runoff*
* *Prevent erosion from runoff & wave action*

Beautiful Landscapes

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

Create Habitat

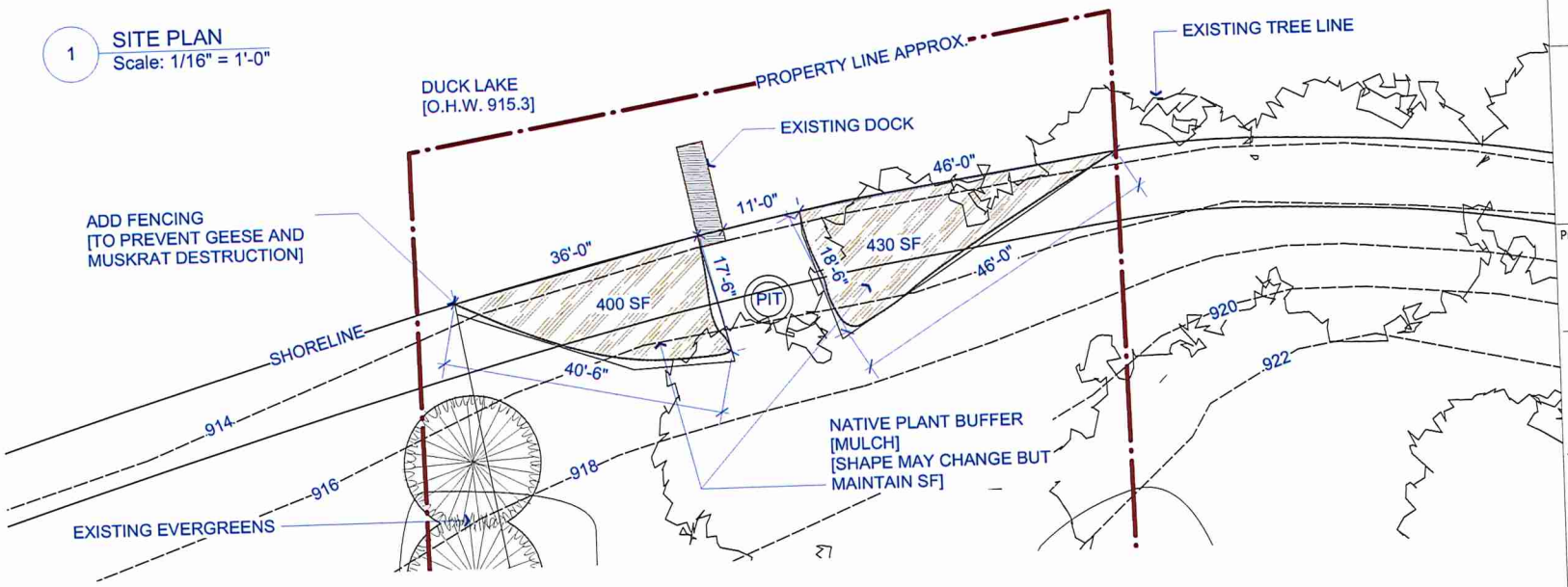
* *For; birds, fish, insects & other wildlife*
* *Diverse plant communities*
* *Food sources*
* *Attract pollinators*

Educate Future Conservationists

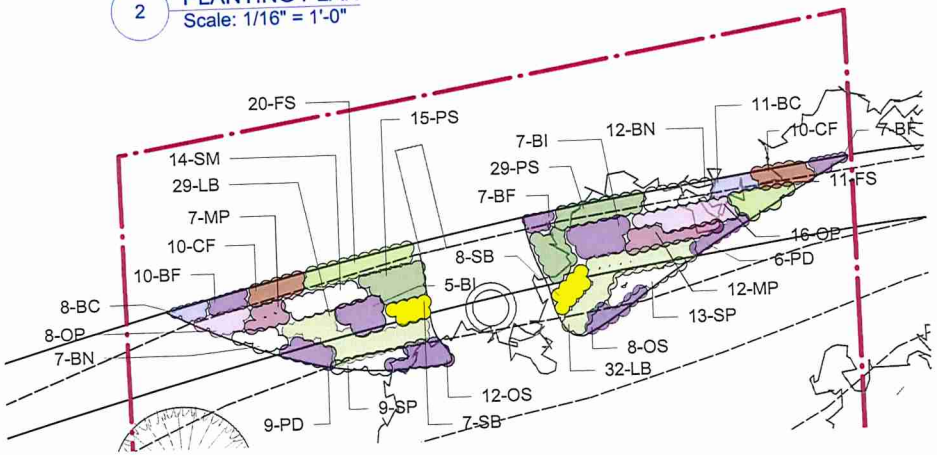
* *Field experience*
* *Make connections between human impact & ecosystem health*

1. How does the project support the goals you checked?
    a. Improve watershed resources. The north half of our ½ acre lot flows directly to the lake. In heavy rains, water top-flows over turf grass into the lake. The better infiltration of these plants, plus the addition of a more absorbent groundcover in front of the new plantings (not shown in the plan, but will be a slow spreading variety, such as Prairie Smoke, and be planted up to the 917' topo level), will reduce runoff into the lake.
    b. Increase familiarity with and acceptance of solutions to improve waters. We have a beautiful raingarden in our front yard capturing gutter flow off the street. As mentioned elsewhere in the application, we are already talking with many neighbors about this lakeshore work, and highlighting the similar recent work of neighbor J. McNab among others, to promote lakeshore restoration. We'll work with David Zeigler to promote raingardens and lakeshore work around the lake.
    c. Foster water-resource stewardship. Our own stewardship of Duck Lake is a small part. Our hope is this project will be a demonstration to many others so that around the lake and the watershed we'll be able to help broader attention and interest in local lakes and streams.
2. Long-term Maintenance. We plan to purchase a two year maintenance plan to make sure the installer succeeds in establishing the plants, and to teach us some tricks of weed control, etc. After that, and perpetually, we plan to maintain the site and add improvements and replacement plants as necessary. We have established extensive perennial beds over the past 28 years, including the rain garden, so we are fully aware that this is a big project that will require many hours, especially in spring and fall, and we are prepared to spend the money necessary each year for this maintenance.
3. Swamp milkweed. Great idea. We have established that in our raingarden, and have nurtured milkweed in our beds and near the lake. We have a monarch caterpillar in the kitchen now getting ready to chrysalis, and are eager to help them.

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



2 PLANTING PLAN
Scale: 1/16" = 1'-0"



ID	Common Name	Latin Name	Quantity
BC	Blue Cardinal Flower	Lobelia siphilitica	19
BF	Blue Flag Iris	Iris versicolor	24
OP	Obedient Plant	Physostegia virginiana	24
MP	Marsh Phlox	Phlox glaberrima	19
BN	Boneset	Eupatorium perfoliatum	19
LB	Long Beaked Sedge	Carex sprengelii	61
OS	Ohio Spiderwort	Tradescantia ohiensis	20
SP	Smooth Penstemon	Penstemon digitalis	22
FS	Fox Sedge	Carex vulpinoidea	31
CF	Cardinal Flower	Lobelia cardinalis	20
PS	Palm Sedge	Carex muskingumensis	44
SM	Slender Mountain Mint	Pycnanthemum tenuifolium	14
SB	Sweet Black-eyed Susan	Rudbeckia subtomentosa	15
BI	Blue False Indigo	Baptisia australis	12
PD	Purple Dome Aster	Aster novae-anilae 'Purple Dome'	15

RILEY PURGATORY BLUFF CREEK
WATERSHED DISTRICT

FISCHER

16820 South Shore Ln.
Eden Prairie, MN 55346

Provided By:
CARVER SWCD
CO.CARVER.MN.US/SWCD

DESIGNER: SETH RISTOW

DATE: 4/23/18
REVISION:
REVISION:

NOTES:

- CALL GOPHER 1 PRIOR TO DIGGING
- KILL EXISTING VEGETATION AT LEAST 1 WEEK PRIOR TO PLANTING
- DO NOT KILL EMERGENT VEGETATION BELOW O.H.W.
- CONTACT SETH RISTOW WITH QUESTIONS (952) 466-5264
- BED SHAPES CAN CHANGE BUT SF SHOULD STAY THE SAME

SCALE: 1/16"=1'

L1.0

Cost share grant application
2018

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Do not fill in gray boxes. District use only.

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

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

Works or resides in district? ☐

Applicant information

Name Kyle Mairose Address 14419 Westridge Dr.

City/State/Zip Eden Prairie, MN 55347

Phone 952-681-0818 Alt phone 612 269 9019 Email Kmairose@gmail.com

Primary contact

☒ Same as applicant (leave blank)

Name _____ Address _____

City/State/Zip _____

Phone _____ Alt phone _____ Email _____

Project location

Address 14419 Westridge Drive City/State/Zip _____

Property Identification Number (PID) 2211622220071

Property owner(s) Kyle + Rachel Mairose

Project located in district? ☐

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

Project summary

Title Turf conversion, fescue lawn, restore buffer zone

Total project cost $2,260.80 Grant amount requested $1,635

Estimated start date August 1, 2018 Estimated completion date August 21st 2018

Sub-watershed Lake McCoy ?

Project located in priority drainage area? ☐

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

2-3 sentence project description

9,000 sqft turf grass converted to fescue grass to limit irrigation and fertilizer run-off and promote lawn alternatives. Plant bird/pollinator friendly shrubs/trees on slope at buffer zone approaching lake McCoy for soil stabilization and promote natives in buckthorn prone area.

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

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

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

Have you had a site visit? ☐ No ☒ Yes

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

Project details

Do not fill in gray boxes. District use only.

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

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

Is time-line reasonable?

Is budget reasonable?

Is plan comprehensive?

Does plant list conform to district's approved plant list?

Description

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

Front lawn turf, backyard turf grass; slope in backyard historically non-native gorelan was over-run with thistle and other weeds. In process of converting to prairie and native woodland on my property and working with city to plan invasive removal and buffer zone/wetland/prairie restoration immediately adjacent to property at McCoy lake. Buffer zone area currently low growing weeds. Slope was weeded and planted with oyegrass in preparation for fall seeding/planting in future

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

Are there multiple objectives?

Does the project have well-defined, measurable results?

phase I: convert most lawn to fescue grass for decreased irrigation/fertilizer need and stabilize slope portion with native shrubs. Promote pollinator/bird habitat.

eventual plan: remaining slope to prairie. nearby McCoy parkland restored to natives + clear invasives. Obtain NWF certified lawn designation, plant small prairie in front lawn with sign designating bird area/fescue grass + eventually would want to be example for other neighbors in McCoy Lake watershed to convert lawns and reduce run off to promote both the Lake health and appearance.

List other key participants and their roles

Does the project demonstrate strong partnerships & support?

Through Wild Ones local chapter use yard as example to promote the above strategy for southwestern suburbs.

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

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

How does the project support the goals you checked?

- as above, less lawn irrigation and fertilizer that would directly run into Lake McCoy (if not elimination)
- provide example to Lake McCoy/Sterling/Bergatory/Red Rock neighbors and other SW metro residents through signage in yard AND Wild Ones participation.
- promote native shrubs & / into the buffer zone of Lake McCoy
- remove invasives and replace with deeper rooted natives (eventual prairie)

Project details (continued)

Do not fill in gray boxes. District use only.

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

Benefit	Amount	
Water captured		gal / year
Water infiltrated		gal / year
Phosphorus removed		lbs / year
Sediment removed		lbs / year
Land restored	12,000	ft²

Does the project provide water quality treatment?

Does the project provide restoration?

* initial project as described above, eventual plan to restore 3 holding ponds to raingardens and roughly 1 acre of land between the lake and my property in partership with City/watershed to prairie/shrubland

Is there educational value to the project?

Will the project be visible to the public?

How will you share the project results with your community?

- yard sign
- discuss with neighbors around the lake
- participation in Wild Ones + plan to be example in yard tours
- goal for "Sustainable Eden Prairie" award nomination

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

prairie/buffer zone up to the lake needs invesive control & re-seeding/planting to prairie. Initiated weed removal this year with hope to seed/plant next fall. The extent to which & could establish rain gardens and size of restoration will depend on funding from city/watershed in subsequent applications. City granted permission for weed clearing and developing plan with contractors for further work.

Evaluation

How will the project be monitored and evaluated?

- site visit from city + watershed?
- I will be living at and maintaining property for 15-25 years.

Maintenance agreement

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

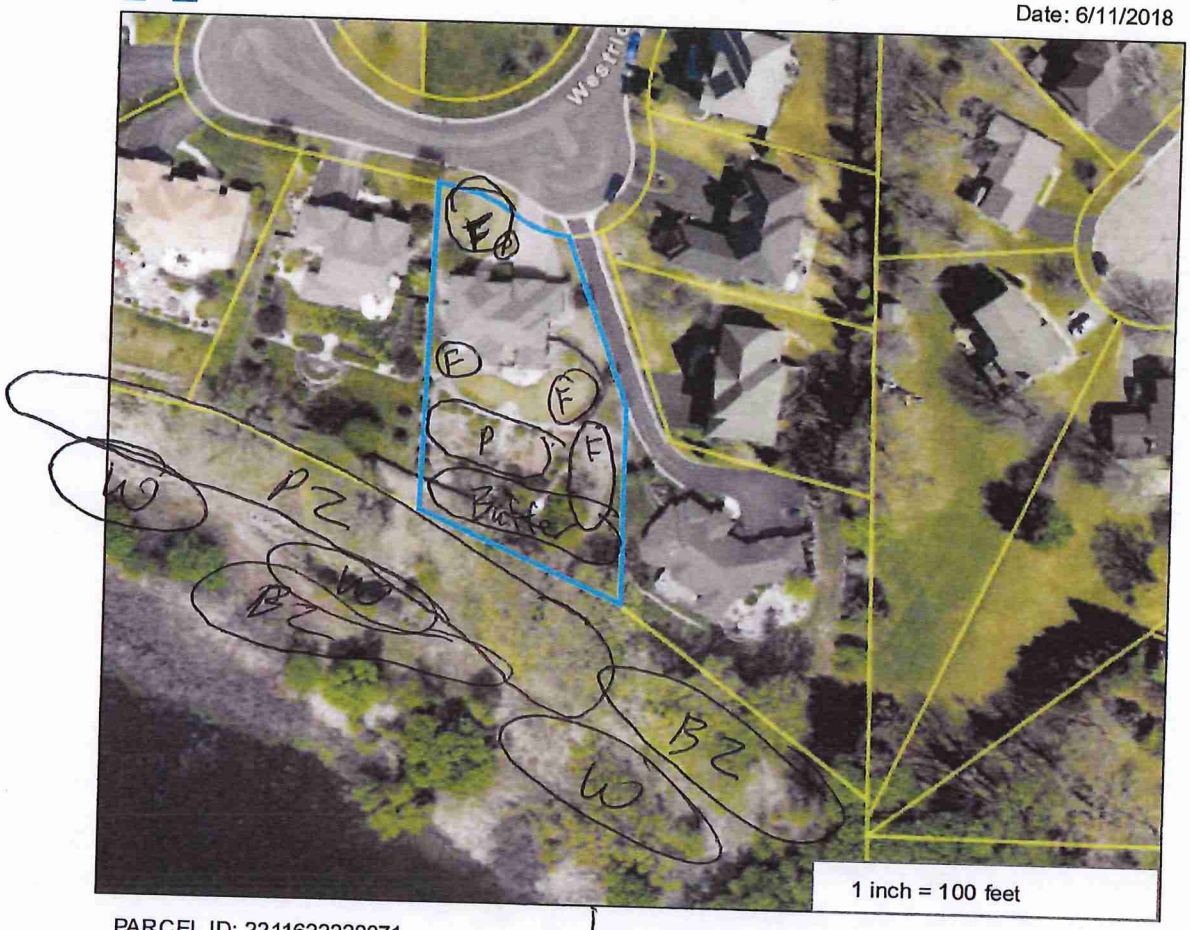
Authorization

Name of landowner or responsible party Kyle Mairose

Signature [signature] Date 6/11/18

Hennepin County Property Map

Date: 6/11/2018



PARCEL ID: 2211622220071

OWNER NAME: K C Mairose & R B Mairose

PARCEL ADDRESS: 14419 Westridge Dr, Eden Prairie MN 55347

PARCEL AREA: 0.52 acres, 22,832 sq ft

A-T-B: Abstract

SALE PRICE: $708,000

SALE DATA: 06/2016

SALE CODE: Warranty Deed

ASSESSED 2017, PAYABLE 2018
PROPERTY TYPE: Residential
HOMESTEAD: Homestead
MARKET VALUE: $682,600
TAX TOTAL: $9,425.22

ASSESSED 2018, PAYABLE 2019
PROPERTY TYPE: Residential
HOMESTEAD: Homestead
MARKET VALUE: $682,600

F = fescue

P = eventual prairie

Buffer zone for shrubs

W = phase 2 raingardens in holding ponds

BZ = phase 2 shrubland Buffer zone

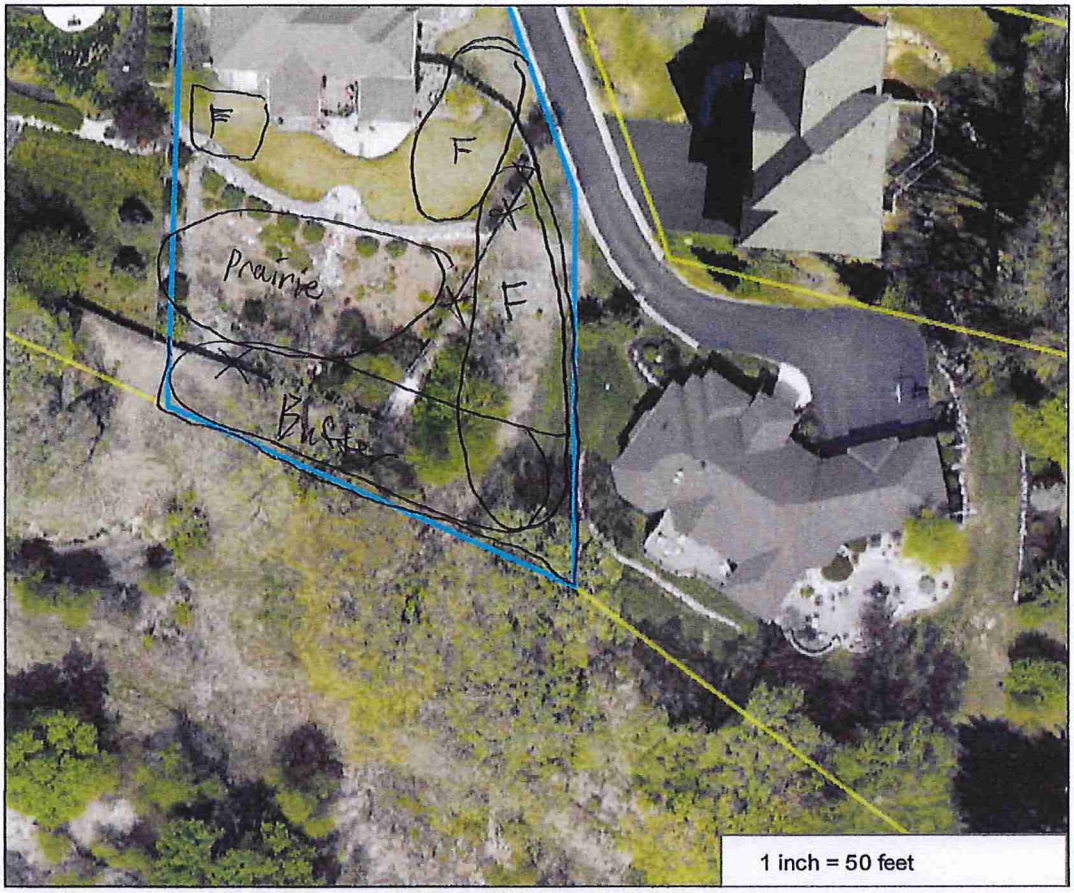
PZ = phase 2 prairie

Comments:

city property

Hennepin County Property Map

Date: 6/11/2018



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ASSESSED 2018, PAYABLE 2019
PROPERTY TYPE: Residential
HOMESTEAD: Homestead
MARKET VALUE: $682,600

Comments:

Table 1

		14419 Westridge Drive Eden Prairie Project		goal1 : turf conversion to fescue--->minimize water use and fertilizer run-off. goal 2: restoring buffer zone and prevent erosion				
				Goal 3: enhance native bird/pollinator habitat promoting native vegetation				
		Labor Costs						
		service provider	**task**	**#hours estimated**	**rate/hour**	**funds requested**	**owner contribution**	**total**
		homeowner	sod removal	16	10		160	160
		homeowner	planting	12	10		120	120
		Project Materials		**unit cost**	**#units**	**requested funds**	**owner contribution**	**total**
		mulch		2.99	20		59.8	59.8
		sod cutter rental		$116/day or $462.24/week	2-4 days	348		348
		erosion blankets		$57.00	9	513		513
		fescue grass seed		6.36/lbs	50	318		318
		hazelnut tree		57	2	0	114	114
		elderberry bush		27	2		54	54
		spice bush		34	4	136		136
		highbush cranberry		27	2		54	54
		snowberry		45	4	180		180
		autum brilliance serviceberry		64	1	0	64	64
		regent serviceberry		30	1	30		30
		allegheny serviceberry		55	1	55		55
		downy serviceberry		55	1	55		55
						total requested funds	**total owner contribution**	**total project cost**
						1635	625.8	2260.8
							Percent funding requested	72%

Cost share grant application
2018

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

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

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

Works or resides in district?

Applicant information
Name ERIC & ANGELA MOREIRA Address 5554 - NANTUCKET PLACE
City/State/Zip MINNETONKA, MN 55345
Phone 763-300-5400 Alt phone 763-439-6054 Email moreirachito@yahoo.com

Primary contact ☒ Same as applicant (leave blank)
Name Address
City/State/Zip
Phone Alt phone Email

Project location
Address 5554 - NANTUCKET PL City/State/Zip MINNETONKA, MN 55345
Property Identification Number (PID) 32-117-22-21-0038
Property owner(s) ERIC & ANGELA MOREIRA

Project located in district?

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

Project summary
Title FRONT YARD RAIN GARDEN
Total project cost Grant amount requested
Estimated start date AUG/SEPT 2018 Estimated completion date AUG/SEPT 2018

Project located in priority drainage area?

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

2-3 sentence project description
THIS RAIN GARDEN PROJECT IS DESIGNED TO INFILTRATE STORM WATER FROM 864 SQFT OF DRIVEWAY; 493 SQFT OF HOUSE ROOF; 65SQFT PORTICO; AND 164 SQFT WALK = 1586SQFT IMPERVIOUS SURFACES AND APPROX. 1320 SQFT OF LAWN AREA.

Is this work required as a part of a permit? ☒ No ☐ Yes
(If yes: describe how the project provides water quality treatment beyond permit requirements on the next page.)

Site visit One of the requirements for a complete application is a site visit from district staff.
Have you had a site visit? ☐ No ☒ Yes Seth Ristow visited on 6/5/18
(If you answered no, please contact staff to schedule one: 952-607-6512)
- Liz Stout, P.E. (Water resources Engineer, city of Minnetonka) visited the site August of 2015

[redacted]

Project details

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

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

Is time-line reasonable?

Is budget reasonable?

Is plan comprehensive?

Does plant list conform to district's approved plant list?

Description

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

THE EXISTING FRONT YARD IS PREDOMINATELY A LAWN AND LARGE DRIVEWAY, BUT A CHANNEL DRAIN WAS INSTALLED IN THE DRIVEWAY AND TWO GARDENS WITH A MIX OF NATIVES AND ORNAMENTALS FLANK IT. UNFORTUNATELY THE GRADE OF BOTH GARDENS IS TOO HIGH TO ALLOW WATER TO DRAIN FROM THE CHANNEL INTO AN AREA THAT IS PERVIOUS. OTHER THAN A FEW OTHER SHRUBS & TREES →

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

1) CAPTURE MOST OF STORMWATER FROM DRIVEWAY BEFORE IT ENTERS STREET
2) CREATE A FUNCTIONING CHANNEL DRAIN AT BOTH ENDS OF THE CHANNEL
3) HOST A NEIGHBORHOOD EVENT POST COMPLETION TO EDUCATE NEIGHBORS ABOUT WATERSHED STEWARDSHIP

Are there multiple objectives?

Does the project have well-defined, measurable results?

List other key participants and their roles

1) MOREIRA FAMILY — REQUESTED DESIGN
2) ROXANNE STUHR — DESIGNER & MASTER WATER STEWARD WHO ASSISTED W/ GRANT WRITING

Does the project demonstrate strong partnerships & support?

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

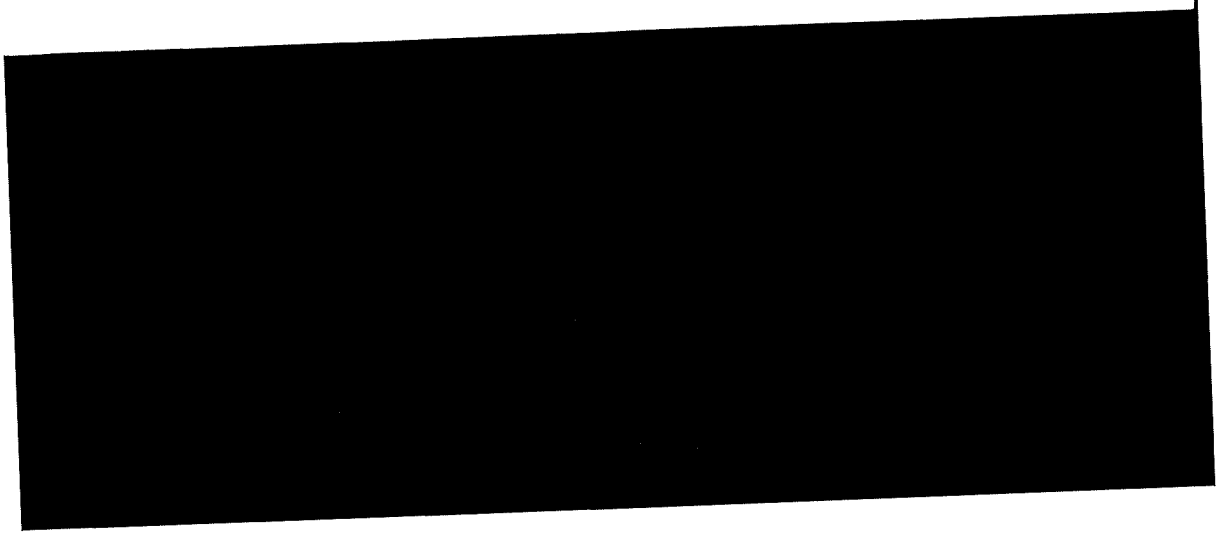
- ☒ Improve watershed resources
- ☒ Increase awareness of the vulnerability of watershed resources
- ☒ Increase familiarity with and acceptance of solutions to improve waters
- ☒ Foster water resource stewardship

How does the project support the goals you checked?

1) WATERSHED RESOURCES ARE IMPROVED BECAUSE STORM WATER REMAINS ONSITE TO SLOWLY INFILTRATE INTO THE GROUND RATHER THAN ENTRER THE CURB & GUTTER SYSTEM PICKING UP SEDIMENTS, ORGANIC DEBRIS & LITTER THAT COULD END UP IN A WATER BODY.
2) INCREASE FAMILIARITY WITH SOLUTIONS BY ITS VISIBLE LOCATION FOR ALL THOSE PASSING BY THE SITE.

[redacted]

THE LARGE ROOF, DRIVEWAY AND LAWN NEED MORE PERVIOUS POCKETS FOR DRAINAGE



Project details (continued)

Do not fill in gray boxes. District use only.

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

Benefit	Amount
Water captured	2,964 gal / year
Water infiltrated	2,964 gal / year
Phosphorus removed	lbs / year
Sediment removed	lbs / year
Land restored	394 ft²

Does the project provide water quality treatment?

Does the project provide restoration?

How will you share the project results with your community?

1) SHARE INTENT W/ NEIGHBORS WHO INQUIRE
2) WELCOME MASTER WATER STEWARDS TO LEARN FROM THE INSTALLATION

Is there educational value to the project?

Will the project be visible to the public?

Are there other projects that could be initiated as a result of this one? YES, BECAUSE THIS PROJECT IS VISIBLE FROM THE STREET AND UNIQUE TO THE BLOCK WITH A CHANNEL DRAIN IN THE DRIVEWAY AND A PERENNIAL GARDEN RATHER THAN LAWN SO IT WILL PROMPT CONVERSATION. ADDITIONALLY THE NATIVE PLANTS WILL ATTRACT BENEFICIAL INSECTS AND MORE INTEREST.

Evaluation

How will the project be monitored and evaluated?

1) PERIODICALLY CHECK CHANNEL & CHANNEL OUTLETS FOR DEBRIS — REMOVE
2) CHECK FOR PERCOLATION IN VARIOUS RAIN EVENTS
3) REGULAR MAINTENANCE (WEEDING, PRUNING DEAD-HEADING AND REMOVAL OF EXCESS SEDIMENT)

Maintenance agreement

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

Authorization

Name of landowner or responsible party ERIC & ANGELA MOREIRA

Signature [redacted] Date 6/6/18

[redacted]

MOREIRA RESIDENCE

August 30 of 2017; Temperature of 75 degrees; Sunny skies; Note, the house faces East

Initial Perk Testing at Moreira Residence

Time	Measurement in Inches	Difference		Inches/Hour (*12)	Analysis/Summary
11:49 AM	7.5				
11:54 AM	5	2.5	12	30	In dry soils, we perk
11:59 AM	3.5	1.5	12	18	6 inches on average
12:04 PM	2.25	1.25	12	15	per hour
12:09 PM	1.75	0.5	12	6	
12:14 PM	1	0.75	12	9	
12:19 PM	0.5	0.5	12	6	
12:24 PM	0	0.5	12	6	

Repeat Perk Testing at Moreira Residence (wet soils)

Time	Measurement in Inches	Difference			Analysis/Summary
12:25 PM	6				
12:30 PM	4.5	1.5	12	18	In saturated soils, we
12:35 PM	3 5/8	0.875	12	10.5	perk 3 inches on
12:40 PM	3 1/8	0.5	12	6	average per hour
12:45 PM	2.5	0.625	12	7.5	
12:50 PM	2 1/8	0.375	12	4.5	
12:55 PM	1 3/4	0.375	12	4.5	
1:00 PM	1 1/2	0.25	12	3	
1:05 PM	1 1/4	0.25	12	3	
1:10 PM	1	0.25	12	3	

Total Impervious	1586 sq ft
Total Pervious	1320 sq ft
Total Runoff	2906 sq ft
% of Impervious Surface	1586 / (1586 + 1320) = .5458

Using our chart, make the rain garden 5% of the size of the total runoff area based upon 6" perk in dry soils tested and 10% of the total runoff area based upon 3" perk in wet soils

This means, our rain garden size is to be (2906 x 5%) + (2906 x 10%) = 218 sq ft

[redacted]

Blue Thumb Guide Infiltration Calculations:

Perk Test #1 7.5" of water infiltration in 40 minutes is equal to 270 inches of infiltration in one 24 hour period in dry soils

Perk Test #2 5" of water infiltration in 50 minutes is equal to 144 inches of infiltration in one 24 hour period in saturated soils

Summary: Infiltration rate is high at average of 207 inches in 24 hours

Blue Thumb Guide Sizing the Garden

Driveway is 864 square feet in size draining toward Proposed Rain Garden

House Roof draining to SE corner of Lawn is 493 sq ft

Roof Portico draining onto driveway is 65 sq ft

Walkway and front steps 164 sq ft

Total Square Feet of Hardscape draining into Potential Rain Garden	1586 sq ft
Total Square Feet of Lawn (Green Concrete) draining into Potential Rain Garden	1320 sq ft
Total Runoff Area	2906 sq ft

Calculation to Sizing the Garden

2906 sq ft of Hardscape Plus divided by average of 207 inches infiltrated in 24 hours = 14 square foot garden size

[redacted]

TRUE
nature
DESIGN

True Nature Design, LLC.
4055 - 25th Avenue South Minneapolis, MN 55406
Phone: 612-558-3161
roxanne@truenaturedesignonline.com

Date: May 31, 2018

Proposal for:

Eric & Angela Moreira
5554- Nantucket Place
Minnetonka, MN 55345-5227

Work address: Same

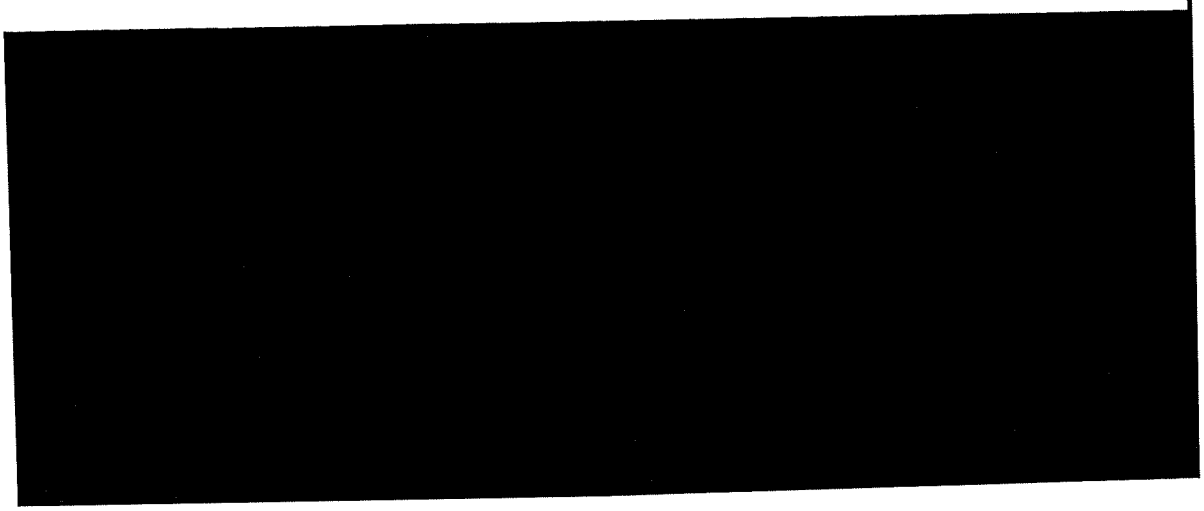
Landscape Installation Proposed for Front Yard Rain Garden:

Site Preparation

Remove and/or move existing perennials in the area. Work to be on a T&M basis of $75 per hour. Approximately 2 -3 hours.		T&M
Excavate the rain garden into the shape, form and depth as proposed in the design and properly dispose of soil and other debris removed from the area.	$	485.00
Install 1.5 cubic yards of compost blend in rain garden	$	165.00

Plants

Qty	Name	Size	Cost Each	Total for Each
15	Heuchera richardsonnii	1 gal	$ 8.00	$ 120.00
9	Ratibida pinnata	1 gal	$ 8.00	$ 72.00
5	Carex muskingumensis	1 gal	$ 8.00	$ 40.00
6	Schizachyrium scoparium	1 gal	$ 8.00	$ 48.00
9	Solidago speciosa	1 gal	$ 8.00	$ 72.00
3	A. melanocarpa 'Autumn Magic'	2 gal	$ 35.00	$ 105.00
12	Asclepias tuberosa	1 gal	$ 8.00	$ 96.00
6	Aster patens	1 gal	$ 8.00	$ 48.00
9	Dalea purpurea	1 gal	$ 8.00	$ 72.00
18	Lobelia siphilitica	1 gal	$ 8.00	$ 144.00
3	Chelone glabra	1 gal	$ 8.00	$ 24.00
9	Rudbeckia fulgida	1 gal	$ 8.00	$ 72.00
10	Eupatorium 'Phantom'	1 gal	$ 8.00	$ 80.00
3	Coreopsis lanceolata	1 gal	$ 8.00	$ 24.00
4	Ruellia humilis	1 gal	$ 8.00	$ 32.00
9	Liatris aspera	1 gal	$ 8.00	$ 72.00
6	Tradescantia bracteata	1 gal	$ 8.00	$ 48.00
9	Asclepias incarnata	1 gal	$ 8.00	$ 72.00
Subtotal of plants				$ 1,241.00
Delivery of plants				$ 150.00
Sales tax on plants and delivery 7.525				$ 104.67
Total of Plants				$ 1,495.67



Planting of Plants

Labor to install plants in rain garden	$	585.00

Mulching of Rain Garden

Install 2-3" of shredded hardwood mulch in rain garden	$	315.00

Deliveries

Pickup & Deliveries of Compost & Mulch (two separate)	$	300.00
Sales tax on delivery	$	21.75

Project Management

Designer to manage the project as needed. Approximated at 2 hours at $120 per hr
This is a T&M oversight service.

Total for Landscape Installation	T&M **$ 3,367.42** **plus T&M**

NOTE: If smaller container sizes are available for perennials proposed, then those will be purchased. This would reduce the overall plant cost.

Client Signature: _____ Date: 6/6/18

Designer Signature: Roxanne T. Stuhr Date: May 31, 2018

THANK YOU FOR WORKING WITH TRUE nature DESIGN!

TRUE NATURE DESIGN, LLC TERMS & CONDITIONS:

Payment:

A signed contract and 50% downpayment are required before scheduling the project. Customer will receive a final invoice after project completion. Payment is expected within ten (10) days of receipt. A service charge of 2% per month will be issued on payments not received within thirty (30) days of the invoice date. All quoted prices are subject to applicable state and local sales taxes.

Any variation from the specifications will change the price and be communicated by a change order. Estimates are good for 30 days. Estimates are subject to a 10% over/under run, based upon unexpected cost changes.

Scope of the Work

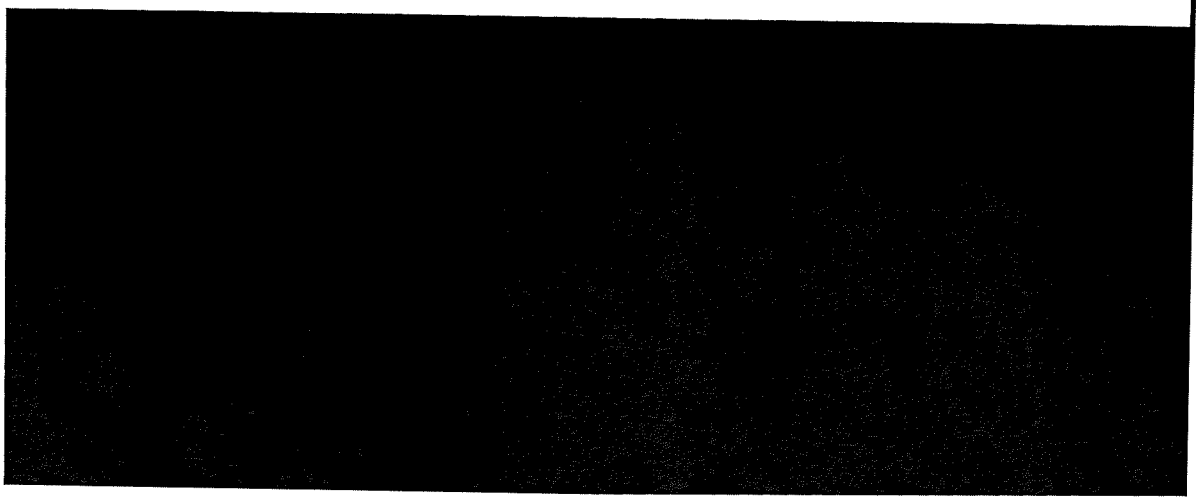
The contractor shall furnish all of the material and perform all of the work for the implementation of the design or project as shown on the drawings and/or described in the specifications prepared by the True Nature Design, LLC representative, all in accordance with the Contract herein and attachments.

Time of Completion

The project will be completed as soon as possible, giving allowances for weather or circumstances beyond the Contractor's control.

Surveys and Easements

The Owner shall furnish all surveys unless otherwise specified. Easements for permanent structures or permanent changes in existing facilities or legal property surveys shall be secured and paid for by the Owner, unless otherwise agreed. The designs created by True Nature Design, LLC should not be treated as legal property surveys.



Contractor's Right to Terminate Contract
Should the work be stopped by any public authority for a period of thirty (30) days or more, through no fault of the Contractor, or should the work be stopped through act of neglect of the Owner for a period of seven (7) days, or should the Owner fail to pay the Contractor upon seven (7) days after it is due, then the Contractor upon seven (7) days notice to the Owner, may stop work or terminate the contract and recover from the Owner payment for all work executed and any loss sustained and reasonable profit and damages.

Disputes
Any dispute arising out of this Contract shall be governed by the State Courts of Minnesota. Customer agrees to such venue and the application of Minnesota laws regarding any such dispute. Further, the parties agree that the prevailing party in any matter arising out of this Contract shall be entitled to reimbursement of all costs of collection, including attorneys fees, from the losing party.

Changes and Determinations by the Contractor
The Contractor reserves the right to make such changes and/or substitutions in the construction as may be necessary because of the unavailability of materials through Contractor's ordinary and usual sources of supply or as may be required by law provided the changes are of equal or better quality. Any changes will be noted and agreed to between the homeowner and contractor in the form of a Change Order. Further, whether or not mentioned, any Change Order shall require commensurate additional project management at the current hourly rate for such management work.

Completion, Inability to Complete
Contractor shall not be liable if unable to complete construction or for any delays in completion of construction occasioned by: (1) governmental restrictions or manufacture, sale, distribution, and/or use of necessary materials; (2) Contractor's inability to obtain necessary materials because of strikes, lockout, fires, floods, earthquakes, rain, snow, other severe weather, other acts of God, military operations & requirements, or national emergencies, etc.

Work by Other than Contractor
Owner shall not authorize or permit any work to be performed or any materials to be installed or supplied to the property by any person or persons not employed by or under the contract to the Contract, without the prior written consent of the Contractor.

Underground utilities.
All areas will be marked by the appropriate utilities. Changes to the plan as the result of unforeseen utilities will result in a Change Order. Contractor works in a conscience and responsible manner, and will do everything we can to avoid underground utilities in the work area. Contractor is NOT responsible for damage to these underground utilities, even if marked, when they are within the work area. This includes irrigation lines, cable lines, low voltage lighting and invisible dog fences.

Restriction on Assignability
This agreement is binding upon the heirs, executors, and administrators of the respective parties, and it is expressly understood and agreed that neither Owner nor Contractor will assign this contract without the written consent of the other.

Default & Lien Notice:
In the event of default by Owner, Owner shall pay to Contractor reasonable attorney's fees, collection charges and interest at the rate of 18% per annum. Owner agrees that acceptance of a payment after default shall not be deemed a waiver by contractor of any action or right which he may have by reason of such default. The Contractor reserves the right to file any liens on all properties listed in this contract.
Any person or company supplying labor or materials for this improvement to your property may file a lien against your property, if that person or company is not paid for the contributions.
Under Minnesota law, you have the right to pay persons who supplied labor or materials for this improvement directly and deduct this amount from our contract price, or withhold the amounts due from us

[redacted]

until 120 days after completion of the improvement unless we give you a lien waiver signed by persons who supplied any labor or material for the improvement and who gave you timely notice.

Address for Notices and Payments
Owner shall deliver all payments required herein and all notices to Contractor at: True Nature Design, LLC 4055 -25th Avenue South, Minneapolis, MN 55406. All notices and change orders by Owner shall be in writing seven days prior to commencement of project.

Entire Agreement
This Contract of sale contains the entire agreement between the Contractor and Owner and nothing is binding on either of them which is not contained in this Contract. Anything not outlined in the contract should not be assumed to be included as part of the contracted work, whether related or otherwise. This Contract is intended to bind the Contractor and Owner and those who succeed to their interests.

General Considerations & Signatures
The Contract consists of the Language describing the work in detail and the Terms & Conditions of the working relationship. Unless all of the persons whose names appear at the beginning of this Proposal sign within 30 days of this Proposals date, then no Contract will exist. The design drawings are a guide for the installation process and as such, indicate general layout for the proposed project. As such, True Nature Design, LLC prefers to have the client onsite on day one of the installation to review the job and to be available as needed, particularly for constructed (hardscape) elements. Otherwise, if the client chooses not to be onsite on day one of the installation, then they are agreeing to allow True Nature Design, LLC to make field adjustments as needed.

Who should be the contact during the installation process:
Day Phones: **Evening Phones:**
Is there a time when we should not call?
Do you have an Irrigation?
Co. Name & Phone:
Do you have Invisible Dog Fencing?
Co. Name & Phone:

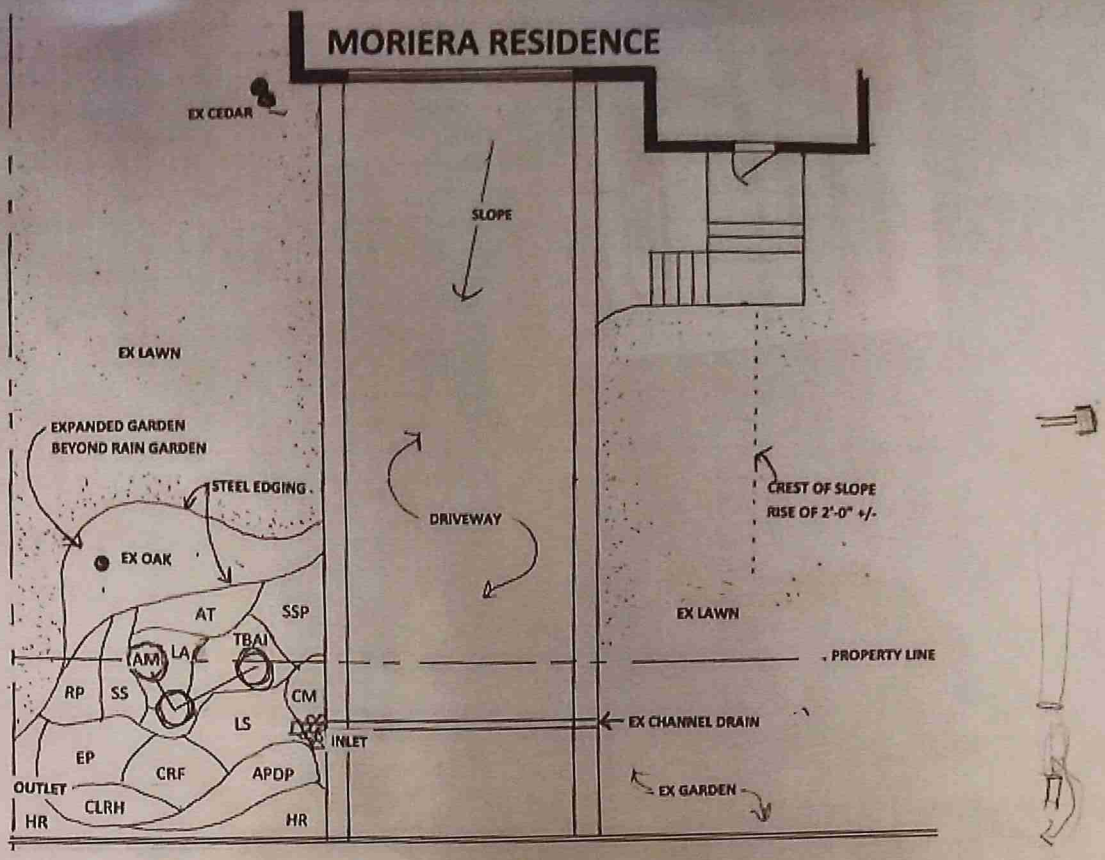
Do you have Landscape Lighting?
Co. Name & Phone:
Do you have private underground utilities?
(ie Electricity to garage from house, water features, gas line to a grill, lamp posts, other outlets)

True Nature Design, LLC Representative: Roxanne T. Stuhr Date: 5.31.18

Client Signature: _____ Date: 6/6/18

[redacted]

MORIERA RESIDENCE



PLANT KEY

HR	Heuchera richardsonnii (15)
RP	Ratibida pinnata (9)
CM	Carex muskingumensis (5)
SS	Schizachyrium scoparium (6)
SSP	Solidago speciosa (9)
AM	Aronia melanocarpa 'Autumn Magic' (3)
AT	Asclepias tuberosa (12)
APDP	Aster patens (6) & Dalea pupurea (9)
LS	Lobelia siphilitica (18)
CRF	Chelone glabra (3) & Rudbeckia fulgida (9)
EP	Eupatorium 'Phantom' (10)
CLRH	Coreopsis lanceolata (3) & Ruellia humilis (4)
LA	Liatris aspera (9)
TBAI	Tradescantia bracteata (6) & Ascelpias incarnata (9)

NOTES

The average rainfall in the Twin Cities is 30.5" per year.
The catchment area for this project is 1586 sq ft.
Assuming 2" rainfall with a conversion factor of 0.623
We need to create a rain garden that captures 198 gallons in a 2" rain event.

Design for: Moriera Residence
Address: 5554 - Nantucket Place
Minnetonka, MN 55345

Designed by: Roxanne Stuhr of
True Nature Design, LLC.

Scale: 1/8" = 1'-0"
North ---------->

CONSTRUCTION NOTES

The rain garden is to be 6" deep as the percolation tests indicated a soil that is capable of draining sufficiently w/in 24hrs at this depth. If we include the sloped sod area in our runoff considerations, then we need a rain garden that is at least 218 sq ft in size.

The outside of the rain garden is to be defined by steel edging. The soils of the rain garden are to be amended with compost to improve tilthe to a depth of 9".

Minutes: Monday, June 18, 2018

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

CAC Members

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

Others

Michelle Jordan	District Liaison	P

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

1. **Motion: Sharon McCotter moved and Lori Tritz seconded that the CAC support asking the Board of Managers for up to $150 for the storm drain stenciling project for the Silver Lake Homeowners Association.**

I. **Opening**

- **A. Call CAC meeting to Order:** President Ziegler called the meeting to order at 6:02 p.m.
- **B. Attendance:** As noted above
- **C. Matters of general public interest:** None
- **D. Approval of Agenda:** Sharon asked to delete the watershed pamphlet and add the Silver Lake Homeowners Association stenciling project expenses item to the agenda. Michelle asked to add status of website and 10-year plan to the agenda. Anne asked to add Staff Reports as a standing agenda item. Joan moved and Matt seconded to approve the agenda as amended. Motion carried.
- **E. Approval of May 21, 2018 CAC Meeting Minutes:** David remembered that Pete Iverson had told him he would be gone for the May meeting, so the minutes should reflect "Excused" instead of a question mark. Jim Boettcher moved and Paul Bulger seconded to approve the minutes as amended. Motion carried.

II. **Staff Report:** Michelle reported the web designer has made a lot of headway and Maya, Claire and Michelle are all on track to get it launched. There will be some tweaking after launch. Michelle asked that we also review it after launch to help tweak.

High School student, Beth, is installing a raingarden for her, Master water Steward, capstone project at Eden Prairie High School today and tomorrow. She will be interning at the district for the summer before heading out for the college.

III. **Old Business**

- **A.** RPBCWD Board Workshop and Meeting information: David reported on the Board of Managers meeting. Draft minutes of the meeting were distributed as well as David's notes. Richard Chadwick is not applying for another term. Replacement will need to be from Carver County. The Board was very supportive of Paul's groundwater conservation idea but unfortunately there is not staff to support it this year. They suggested we study similar efforts by Chanhassen and Eden Prairie to refine the program for next year. Michelle would like a larger education component; giving tips and tools for conserving and would like to incorporate it into 50th anniversary commemoration. Lori reported Woodbury purchased water sensors and resold them. There are concerns that the sensors don't work. Paul had a question on the Board's decision that the Lower Riley Creek Stabilization Project did not require and EIS. This was based on favorable reviews of the EAW from the Metropolitan Council, the Minnesota Pollution Control Agency (MPCA), the State Historical Preservation Office, and the U.S. Army Corps of Engineers that the project does not create significant environmental issues and that the long-term effects of the project are beneficial to both the natural and the human environments.

B. 10-Year Plan Status: Michelle reported the plan was submitted to the BWSR Central Regional Committee who recommended approval. On June 27 it will go to BWSR for final approval.

C. Recommendations for Interface with other CAC groups: David reported that he had sent around a list of topics to share with other CACs. Jim as rep from Carver County WMO reported on the differences in methodology of our groups. The education and outreach person from Carver County WMO is Madeline Seveland. It seems no other CACs are clamoring for our expertise, so no need to push it. If we get more requests in the future, we should get personal contacts.

D. **Updates from subcommittees as available**

1. Storm Drains: Sharon reported the storm drain clean up in Chanhassen is on. She asked Michelle to send the RPBCWD logo to be included on the save the date cards. Silver Lake Homeowners Association decided to stencil their 30 storm drains. Rather than a community project they want to do it themselves and have "awareness" after the fact. Part 2 of 100 drains will occur next year. They're all set up with vendor and paint. Sharon McCotter moved and Lori Tritz seconded that the CAC support asking the Board of Managers for up to $150 for the storm drain stenciling project for the Silver Lake Homeowners Association. Motion carried. We would like to see before and after photos.
2. Sharon reported the Sun Sailor newspaper reported on High school student Aimi Dickel's Scenic Heights capstone project and our Michelle got some good press. Aimi will be doing some illustration work for the watershed district this summer.

IV. New Business

A. **2018 Cost Share reviews:** Michelle says the process has varied in the last 4 years. We usually try to get staff recommendations prior to the CAC review, but Seth is backed up because of covering very pregnant Michelle's part of cost share, so the staff review is on the back end this year. There is enough in the budget so that the applications are not competitive. Worthiness is the only consideration.

1. Campbell, Shoreline Restoration on Duck line: Staff recommends this project for the full amount. Turf grass conversion to native plants; Applicants are very invested. Fencing is recommended by watershed to prevent new plants from getting eaten. People who do their own labor are often more invested and will tend to maintain the project.
2. Rod Fisher, Duck Lake Shoreline Restoration: Staff recommends to approve this project. The homeowners are very invested. Reasonable quote. Joan would like to see how it addresses goals and longer than two years of maintenance. Marilyn requested to include some species of milkweed.
3. Jay: Staff does not recommend this project yet. It needs a site visit and a lot more information. It also includes a retaining wall which is not considered a natural best practice. Plus the drainage area is already in a wet place. If they resubmit, this project will come back to the CAC for review.
4. Moeira Rain Garden: Staff recommends funding this project.
5. Mairose: Staff recommends funding this project. It is a multiple phase project but this year includes conversion from turf to low mow grass. Not a native species, but qualifies under water conservation goal. Rules allow applications for one project per property per year. Anne asked that the composition of the erosion blanket be determined and discouraged if it contained plastic.
6. Ross: Staff has requested a site visit and more information before it can recommend funding. Matt thought it was tree heavy, too vague on "native plants," and more ground cover for infiltration. If they resubmit it will come back to CAC for review.
7. Smithson: Staff does not recommend this project. It is lacking much information, too many nonnative plants; needs a site visit. If they resubmit it will come back to CAC for review.

Joan moved and Matt moved to support the staff recommendations with additional questions from the CAC.

An application from Prairie East Fifth Homeowners Association has also come in and will be reviewed by staff. Staff is still working on the Rustica rain garden application to hopefully happen yet this year.

B. **Wetlands Walk:** Michelle reported the new date for wetland walk is July 17 with a rainout date on July 26, from 6:00 to 8:00 starting at the district offices led by Terry, Zach and summer intern Emma. We will then carpool to a wetland. Wear sensible shoes or boots and bring bug spray.

C. **Watershed awareness pamphlet**: David asked if anyone is interested in pursuing updating the users guide to watershed permitting pamphlet. Michelle feels it is worth keeping it up to date and likes the idea of making what we have more visually appealing and more graphical and possibly incorporating the info on the website. Matt likes a big poster format. Michelle will talk to Claire about it.

D. **Ground Water Conservation Incentive**: Paul reported we can take a step back and think about incorporating other ideas – partnership with city, businesses, incorporating low flow faucets and sprinkler sensors. Sharon suggests individually gathering info and feeding it back to Paul. Paul will determine next steps.

E. **U of M Stormwater Pond Study Proposal**: While the 5 stormwater ponds in the iron filings study have not been identified yet, David thought we should identify 5 similar pond in size and condition to monitor as a control. Staff recommended looking at methodology available from the Wetland Health Evaluation Program (WHEP). Marilynn has been trained on monitoring macroinvertebrates, so she and David will confer.

F. **Floating islands**: These are a structure of plastic beverage containers used to clarify a water body. Plant roots grow through the structure and bacteria forms on the bottom. The science supports that they definitely clean water.

V. Looking Forward

A. CAC 2018 agenda items for our July meeting

1. Cost shares
2. More info on floating islands
3. Budget review: The CAC requests to preview it

B. Upcoming events

1. We wish Michelle good luck. We will miss you.
2. Pollinator workshop by Paul Erdman, Tuesday, June 26, 2018 from 7-8:30 pm hosted by Nine Mile Creek WD
3. RPBCWD Board of Managers meeting, July 11 at 7:00 pm, 18681 Lake Drive East
4. RPBCWD CAC meeting July 16 at 6:00 pm, 18681 Lake Drive East
5. Wetlands Walk July 17, 6:00 – 8:00 pm
6. Property Manager lunch on July 18, 2018 at 12:00 pm
7. Splash Bash: July 21 at Lake Ann Pavilion, everything water related 1:00 to 4:00
8. Turf to Fescue Workshop Carver WMO and 9-Mile Creek, June 25, 6:30 to 8:00 pm, Chanhassen Library. (Second session July 27 at Southdale library)

VI. Adjourn CAC meeting:

Motion and second to adjourn by Joan/Marilynn, approved. Meeting adjourned at 8:08.

REDPATH AND COMPANY

June 28, 2018

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

Dear Claire:

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

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

Sincerely,

REDPATH AND COMPANY, LTD.

Mark C. Gibbs, CPA
Enclosure

REDPATH
AND COMPANY

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

Accountant's Opinion

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

Reporting Process

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

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

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

Redpath and Company, Ltd.

REDPATH AND COMPANY, LTD.
St. Paul, Minnesota
June 28, 2018

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Treasurers Report

May 31, 2018

REPORT INDEX

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

Accounts Payable:

Check #	Payee	Amount
4494	Advance Telemetry Systems	$2,620.00
4495	Barr Engineering	45,291.27
4496	CenterPoint Energy	33.69
4497	CenturyLink	281.32
4498	Chanhassen High School	250.00
4499	CSM Financial, LLC	7,353.70
4500	ECM Publishers, Inc.	1,448.40
4501	Fe Security, LLC	182.38
4502	Freshwater Society	7,500.00
4503	Freshwater Scientific Services	6,970.00
4504	HealthPartners	3,747.62
4505	Amy Herbert, LLC	438.00
4506	Iron Mountain	39.95
4507	Landbridge Ecological	35,516.70
4508	Lincoln National Life Insurance	501.19
4509	Metro Sales, Inc.	455.85
4510	PLM Lake & Land Mgmt. Corp.	8,048.26
4511	ProTech	236.56
4512	Redpath & Company	1,380.00
4513	RMB Environmental Laboratories	2,435.00
4514	Jenna Rowley	250.00
4515	Smith Partners	9,202.30
4516	Southwest News Media	405.72
4517	Xcel Energy	711.61
	Total Accounts Payable:	**$135,299.52**

Payroll Disbursements:

	Payroll Processing Fee	171.67
	Employee Salaries	27,872.91
	Employer Payroll Taxes	2,323.08
	Employer Benefits (H.S.A. Match)	525.00
	Employee Benefit Deductions	(396.26)
	Staff Expense Reimbursements	236.55
	PERA Match	2,004.27
	Total Payroll Disbursements:	**$32,737.22**
EFT	Klien Bank - VISA	5,013.49
TOTAL DISBURSEMENTS:		**$173,050.23**

Memos

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

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

	2018 Budget	Fund Transfers	Revised 2018 Budget	Current Month	Year-to-Date	Year-to Date Percent of Budget
REVENUES						
Plan Implementation Levy	$3,420,000.00		$3,420,000.00	-	-	0.00%
Permit	20,000.00		20,000.00	4,650.00	22,453.00	112.27%
Grant Income	373,175.00		373,175.00	-	5,988.27	1.60%
Data Collection Income	-		-	-	171.78	---
Other Income	-		-	-	15,016.76	---
Investment Income	-		-	3,289.90	9,303.52	---
Past Levies	1,736,968.00		1,736,968.00	-	-	0.00%
Partner Funds	445,000.00		445,000.00	-	-	0.00%
TOTAL REVENUE	**$5,995,143.00**	**$0.00**	**$5,995,143.00**	**$7,939.90**	**$52,933.33**	**0.88%**
EXPENDITURES						
Administration						
Accounting and Audit	40,000.00		40,000.00	1,551.67	25,237.33	63.09%
Advisory Committees	4,000.00		4,000.00	-	1,311.46	32.79%
Insurance and bonds	12,000.00		12,000.00	-	-	0.00%
Engineering Services	103,000.00		103,000.00	7,905.50	38,219.92	37.11%
Legal Services	75,000.00		75,000.00	2,719.70	14,464.64	19.29%
Manager Per Diem/Expense	19,000.00		19,000.00	(114.26)	1,116.39	5.88%
Dues and Publications	8,000.00		8,000.00	-	8,439.00	105.49%
Office Cost	100,000.00		100,000.00	10,391.65	52,877.21	52.88%
Permit Review and Inspection	90,000.00		90,000.00	18,780.66	77,271.41	85.86%
Recording Services	15,000.00		15,000.00	438.00	3,353.00	22.35%
Staff Cost	434,000.00		434,000.00	36,722.81	175,979.83	40.55%
Subtotal	**$900,000.00**	**$0.00**	**$900,000.00**	**$78,395.73**	**$398,270.19**	**44.25%**
Programs and Projects						
District Wide						
10-year Management Plan	9,662.00		9,662.00	654.72	25,492.01	263.84%
AIS Inspection and early response	75,000.00		75,000.00	1,020.00	26,425.64	35.23%
Cost-share	200,000.00		200,000.00	165.00	403.00	0.20%
Creek Restoration Action Strategies Phase	20,000.00		20,000.00	-	-	0.00%
Data Collection and Monitoring	180,000.00		180,000.00	12,200.81	56,043.37	31.14%
District Wide Floodplain Evaluation - Atlas 14/SMM model	30,000.00		30,000.00	-	-	0.00%
Education and Outreach	115,000.00		115,000.00	9,200.43	51,699.89	44.96%
Plant Restoration - U of M	40,000.00		40,000.00	-	10,287.09	25.72%
Repair and Maintenance Fund *	177,005.00		177,005.00	-	-	0.00%
Survey and Analysis Fund *	13,464.00	(13,464.00)	-	-	-	---
Wetland Management*	150,000.00		150,000.00	2,828.54	17,282.43	11.52%
District Groundwater Assessment	-		-	-	166.38	---
Groundwater Conservation*	130,000.00		130,000.00	-	-	0.00%
Lake Vegetation Implementation	75,000.00		75,000.00	15,018.26	15,018.26	20.02%
Opportunity Project*	100,000.00		100,000.00	-	-	0.00%
TMDL - MPCA	10,000.00		10,000.00	-	-	0.00%
Stormwater Ponds - U of M	-	22,092.00	22,092.00	-	-	0.00%
Subtotal	**$1,325,131.00**	**$8,628.00**	**$1,333,759.00**	**$41,087.76**	**$202,818.07**	**15.21%**
Bluff Creek						
Bluff Creek Tributary*	236,741.00		236,741.00	668.50	18,016.00	7.61%
Chanhassen High School *	282,478.00		282,478.00	2,336.49	24,410.62	8.64%
Subtotal	**$519,219.00**	**$0.00**	**$519,219.00**	**$3,004.99**	**$42,426.62**	**8.17%**
Riley Creek						
Lake Riley - Alum Treatment*	22,424.00		22,424.00	-	17,423.96	77.70%
Lake Susan Improvement Phase 1 *	7,106.00		7,106.00	-	-	0.00%
Lake Susan Water Quality Improvement Phase 2 *	353,365.00	100,000.00	453,365.00	595.79	48,031.75	10.59%
Rice Marsh Lake in-lake phosphorus load	150,000.00		150,000.00	-	472.75	0.32%
Riley Creek Restoration (Reach E and D3) *	1,427,987.00		1,427,987.00	13,587.76	75,501.56	5.29%
Subtotal	**$1,960,882.00**	**$100,000.00**	**$2,060,882.00**	**$14,183.55**	**$141,430.02**	**6.86%**
Purgatory Creek						
Fire Station 2 (Eden Prairie)	100,262.00		100,262.00	-	-	0.00%
Purgatory Creek Rec Area- Berm/retention area - feasibility/design	50,000.00		50,000.00	-	-	0.00%
Lotus Lake in-lake phosphorus load control	345,000.00		345,000.00	-	25,282.05	7.33%
Lotus Lake - Feasability Phase 1	18,802.00		18,802.00	-	-	0.00%
Purgatory Creek at 101*	246,259.00	(100,000.00)	146,259.00	-	50.00	0.03%
Silver Lake Restoration - Feasibility Phase 1	11,003.00		11,003.00	260.00	7,857.50	71.41%
Scenic Heights	208,957.00		208,957.00	36,118.20	81,767.82	39.13%
Hyland Lake in-lake phosphorus load control	20,000.00		20,000.00	-	-	0.00%
Duck Lake watershed load	220,000.00		220,000.00	-	-	0.00%
Subtotal	**$1,220,283.00**	**($100,000.00)**	**$1,120,283.00**	**$36,378.20**	**$114,957.37**	**10.26%**
Reserve	**$99,628.00**	**($8,628.00)**	**91,000.00**	-	-	0.00%
TOTAL EXPENDITURE	**$6,025,143.00**	**$0.00**	**$6,025,143.00**	**$173,050.23**	**$899,902.27**	**14.94%**
EXCESS REVENUES OVER (UNDER) EXPENDITURES	**($30,000.00)**	**$0.00**	**($30,000.00)**	**($165,110.33)**	**($846,968.94)**	

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

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

Programs and Projects	Total Project	FUNDING SOURCE District funds	Partner Fund	Grants	Month Ended 05/31/18	Year To-Date	Lifetime Costs	Remaining
District Wide								
10-year Management Plan	187,000.00	187,000.00	-	-	654.72	25,492.01	202,830.10	(15,830.10)
District Wide Floodplain Evaluation - Atlas 14/SMM model	30,000.00	30,000.00	-	-	-	-	-	30,000.00
Repair and Maintenance Fund	202,005.00	177,005.00	-	-	-	-	25,000.00	177,005.00
Survey and Analysis Fund	23,792.00	23,792.00	-	-	-	-	23,792.00	-
Wetland Management	150,000.00	150,000.00	-	-	2,828.54	17,282.43	17,282.43	132,717.57
Groundwater Conservation	130,000.00	130,000.00	-	-	-	-	-	130,000.00
Opportunity Project*	100,000.00	100,000.00	-	-	-	-	-	100,000.00
Stormwater Ponds - U of M	64,092.00	22,092.00	42,000.00	-	-	-	-	64,092.00
Subtotal	$886,889.00	$819,889.00	$42,000.00	$0.00	$3,483.26	$42,774.44	$268,904.53	617,984.47
Bluff Creek								
Bluff Creek Tributary*	292,362.00	242,362.00	50,000.00	-	668.50	18,016.00	72,637.46	219,724.54
Chanhassen High School *	368,000.00	118,000.00	50,000.00	200,000.00	2,336.49	24,410.62	134,932.49	233,067.51
Subtotal	$660,362.00	$360,362.00	$100,000.00	$200,000.00	$3,004.99	$42,426.62	$207,569.95	$452,792.05
Riley Creek								
Lake Riley - Alum Treatment 1st dose *	260,000.00	260,000.00	-	-	-	17,423.95	254,999.82	5,000.18
Lake Susan Improvement Phase 1 *	275,000.00	275,000.00	-	-	-	-	267,894.28	7,105.72
Lake Susan Water Quality Improvement Phase 2 *	662,491.00	330,000.00	99,091.00	233,400.00	595.79	48,031.75	158,066.17	504,424.83
Rice Marsh Lake in-lake phosphorus load	150,000.00	150,000.00	-	-	-	472.75	472.75	149,527.25
Riley Creek Restoration (Reach E and D3) *	1,565,000.00	1,265,000.00	300,000.00	-	13,587.76	75,501.56	136,727.16	1,428,272.84
Subtotal	$2,912,491.00	$2,280,000.00	$399,091.00	$233,400.00	$14,183.55	$141,430.01	$818,160.18	$2,094,330.82
Purgatory Creek								
Fire Station 2 (Eden Prairie)	139,287.00	20,000.00	20,000.00	99,287.00	-	-	19,025.36	120,261.64
Purgatory Creek Rec Area- Berm/retention area - feasibility/design	50,000.00	50,000.00	-	-	-	-	-	50,000.00
Lotus Lake in-lake phosphorus load control	345,000.00	345,000.00	-	-	-	25,282.05	25,282.05	319,717.95
Purgatory Creek at 101*	561,094.00	561,094.00	-	-	-	50.00	414,885.60	146,208.40
Scenic Heights	260,000.00	165,000.00	45,000.00	50,000.00	36,118.20	81,767.82	132,810.76	127,189.24
Duck Lake watershed load	220,000.00	220,000.00	-	-	-	-	-	220,000.00
Subtotal	$1,575,381.00	$1,361,094.00	$65,000.00	$149,287.00	$36,118.20	$107,099.87	$592,003.77	$983,377.23
Total Multi-Year Project Costs	$6,035,123.00	$4,821,345.00	$606,091.00	$582,687.00	$56,790.00	$333,730.94	$1,886,638.43	$4,148,484.57

See Accountants Compilation Report

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

ASSETS

Current Assets

General Checking-Klein	$241,974.13	
Checking-Klein/BMW	1,388,089.79	
Investments-FMV	692.98	
Investments-Standing Cash	19,726.79	
Investments-Wells Fargo	2,464,435.92	
Accrued Investment Interest	8,670.64	
Due From Other Governments	154,436.00	
Taxes Receivable-Delinquent	20,556.16	
Pre-Paid Expense	26,181.51	
Security Deposits	7,244.00	
Total Current Assets:		**$4,332,007.92**

LIABILITIES AND CAPITAL

Current Liabilities

Accounts Payable	$190,293.32	
Retainage Payable	13,469.38	
Salaries Payable	17,564.00	
Due to Other Governments	32,650.00	
Permits & Sureties Payable	714,352.00	
Deferred Revenue	20,556.16	
Unavailable Revenue	6,666.00	
Total Current Liabilities:		**$995,550.86**

Capital

Fund Balance-General	$4,183,187.00	
Net Income	(846,729.94)	
Total Capital		**$3,336,457.06**
Total Liabilities & Capital		**$4,332,007.92**

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

DATE	PURCHASED FROM	AMOUNT	DESCRIPTION	ACCOUNT #	RECEIPT
05/10/18	Microsoft	80.65	Software for Computers	10-00-4203	Y
05/17/18	U of M	1,913.95	Computer for O & O Staff	10-00-4635	Y
05/18/18	Bruegger's Bagels	14.49	Team Meeting	10-00-4205	Y
05/19/18	Randy's	62.20	Trash Service	10-00-4215	Y
05/23/18	Verizon	228.27	Phones	10-00-4240	Y
05/25/18	Amazon	85.93	Office Supplies	10-00-4200	Y
05/30/18	Punch	83.65	Team Meeting	10-00-4321	N
06/06/18	Lunds & Byerly's	17.98	Office Supplies	10-00-4200	Y
06/08/18	Cub	7.96	Cleaning Supplies	10-00-4200	Y
06/10/18	Microsoft	80.65	Software for Computers	10-00-4203	Y
06/21/18	Verizon	228.27	Phones	10-00-4240	Y
		$2,804.00	**General Administration Total**		
05/07/18	General Delivery Service	72.28	Delivery Services	40-02-4260	Y
05/10/18	Chaska Community Center	650.00	MAWD/Local Leaders Tour	20-08-4260	Y
05/14/18	Amazon	39.43	MAWD/Local Leaders Tour	20-08-4260	Y
05/14/18	General Delivery Service	72.28	Courier	20-13-4280	Y
05/14/18	Amazon	60.09	Canoe Teaching Tool	20-08-4260	Y
05/15/18	Lakewinds	54.31	Builders Workshop Supplies	20-08-4265	Y
05/15/18	Office Depot	81.75	Office Supplies	20-08-4205	Y
05/15/18	Cub	36.48	Education & Outreach Supplies	20-08-4260	N
05/16/18	Amazon	32.93	MAWD/Local Leaders Tour	20-08-4260	Y
05/16/18	Amazon	25.92	MAWD/Local Leaders Tour	20-08-4260	Y
05/16/18	Potbelly	185.53	Builders Workshop Luncheon	20-08-4265	Y
05/16/18	Amazon	9.63	MAWD/Local Leaders Tour	20-08-4260	Y
05/16/18	Amazon	39.94	Equipment	20-13-4280	Y
05/17/18	SuperAmerica	64.08	Gas for Vehicle	20-05-4322	Y
05/18/18	Amazon	25.89	MAWD/Local Leaders Tour	20-08-4260	Y
05/18/18	HydroCAD	1,135.00	Wetland Software	20-13-4203	Y
05/18/18	Hologram	50.00	Field Supplies	20-05-4201	Y
05/21/18	Amazon	(48.12)	Refund on Purchase	20-08-4260	Y
05/22/18	Home Depot	10.55	Field Supplies	20-05-4201	Y
05/22/18	USPS	200.00	Stamps/Public Information Meeting	20-08-4280	Y
05/22/18	Kuhl	96.01	MAWD/Local Leaders Tour	20-08-4260	Y
05/22/18	Amazon	(40.55)	Refund on Purchase	20-08-4260	Y
05/23/18	Amazon	20.36	MAWD/Local Leaders Tour	20-08-4260	Y
05/23/18	Safe-Fast, Inc.	270.60	Safety Gear	20-05-4260	Y
05/23/18	Hach	1,445.03	Field Supplies	20-05-4201	Y
05/24/18	Hologram	40.46	Field Supplies	20-05-4201	Y
05/24/18	Amazon	8.61	MAWD/Local Leaders Tour	20-08-4260	Y
05/26/18	Storm Creek	235.00	Local Leaders Tour Supplies	20-08-4250	Y
05/29/18	Amazon	52.29	Education Supplies	20-08-4260	Y
05/29/18	Hach	48.25	Shipping Cost/Calibrating Equipment	20-05-4201	Y
05/29/18	Office Depot	124.11	Publication Materials	20-08-4250	Y
05/29/18	Staples	67.50	Summer Tour Publication Materials	20-08-4250	Y
05/30/18	Amazon	(20.36)	Return/Supplies	20-08-4201	Y
05/30/18	Amazon	59.95	Data Collection Safety Supplies	20-05-4260	Y
05/31/18	Science First	103.84	Electro Nets	20-05-4201	Y
05/31/18	Office Depot	9.61	Publication Materials	20-08-4250	Y
05/31/18	Office Depot	(100.44)	Return/Publication Materials	20-08-4250	Y
06/01/18	SuperAmerica	43.81	Gas for Vehicle	20-05-4322	Y
06/04/18	SuperAmerica	78.69	Gas for Vehicle	20-05-4322	Y
06/05/18	SuperAmerica	68.23	Gas for Vehicle	20-05-4322	Y
06/05/18	SuperAmerica	8.59	Safety Equipment	20-05-4260	Y
06/05/18	Target	45.07	Data Collection Supplies	20-05-4260	Y

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

DATE	PURCHASED FROM	AMOUNT	DESCRIPTION	ACCOUNT #	RECEIPT
06/08/18	Cub	41.90	Data Collection Supplies	20-05-4201	Y
06/08/18	Home Depot	54.32	Data Collection Supplies	20-05-4201	Y
06/10/18	Amazon	44.99	Local Leaders Tour Supplies	20-08-4250	Y
06/10/18	Amazon	51.59	Local Leaders Tour Supplies	20-08-4250	Y
06/10/18	Amazon	56.86	Local Leaders Tour Supplies	20-08-4250	Y
06/10/18	Amazon	168.44	Local Leaders Tour Supplies	20-08-4250	Y
06/10/18	Amazon	98.98	Local Leaders Tour Supplies	20-08-4250	Y
06/11/18	Hoops & Threads, LLC	229.79	Local Leaders Tour Supplies	20-08-4260	Y
06/11/18	Amazon	58.99	Wetland Board	20-13-4260	Y
06/12/18	Teledyne Instrument	184.00	Calibration of Field Equipment	20-05-4201	Y
06/13/18	Kwik Trip	26.95	Gas for Vehicle	20-13-4322	Y
06/13/18	Amazon	94.05	Field Supplies	20-05-4260	Y
06/13/18	Kowalski's	1,294.93	MAWD/Local Leaders Tour	20-08-4260	Y
06/14/18	Teledyne Instrument	351.04	Repair of Field Equipment	20-05-4201	Y
60/14/18	Amazon	18.46	MAWD/Local Leaders Tour	20-08-4260	Y
06/14/18	Amazon	39.75	MAWD/Local Leaders Tour	20-08-4260	Y
06/14/18	Amazon	173.82	MAWD/Local Leaders Tour	20-08-4260	Y
06/15/18	Amazon	77.76	MAWD/Local Leaders Tour	20-08-4260	Y
06/18/18	Staples	63.20	Summer Tour Publication Materials	20-08-4250	Y
06/18/18	Crumb Deli	120.97	Eden Prairie HS Raingarden Luncheon	20-03-4205	Y
06/18/18	Crumb Deli	24.19	Eden Prairie HS Raingarden Luncheon	20-03-4205	Y
06/18/18	West Metro Supply, Inc.	51.00	Eden Prairie HS Raingarden Luncheon	20-03-4205	Y
06/18/18	Menards	19.42	Eden Prairie HS Raingarden Luncheon	20-03-4205	Y
06/18/18	A-Z Rental	175.80	Eden Prairie HS Raingarden Luncheon	20-03-4205	Y
06/19/18	Brueggers	15.94	Eden Prairie HS Raingarden Luncheon	20-03-4205	Y
		$8,999.77	**District-Wide Total**		
		$11,803.77	**GRAND TOTAL**		

RILEY
PURGATORY
BLUFF CREEK
WATERSHED DISTRICT

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

Alyson Fauske
City of Shorewood

Re: Shorewood Local Surface Water Management Plan

Wednesday, July 11, 2018

Dear Mrs Fauske,

Riley-Purgatory-Bluff Creek Watershed District completed its review of the Shorewood's Local Surface Water Management Plan (Plan). RPBCWD received and considered the Metropolitan Council's **April 30, 2018**, comments in completing its review. RPBCWD's review was conducted pursuant to Minnesota Statutes section 103B.235, subdivision 3. And at its July 11, 2018, meeting the RPBCWD board of managers approved the Plan. The board of managers would also suggest that the plan consider the following modifications of the Shorewood Local Surface Water Management Plan:

- Problem 4.7.5: *Increase prevalence of chloride in stormwater ponds in the Twin Cities from road salt runoff from roadways and other impervious surfaces.*

  Consider modifying problem to state surface and groundwater instead of stormwater ponds.

- Corrective Measure 4.7.5: *If chloride is identified as a problem pollutant in the City's stormwater ponds in the future, the City will work to implement preventive measures to reduce the chloride runoff before it reaches the stormwater ponds as noted in the twin Cities Metropolitan Area Chloride Management Plan.*

  Consider modifying corrective measure by implementing preventive measures such as education and outreach for salt applicators (private of commercial), partner with WD for trainings, promoting winter best practices.

The District also recommends that the plan be updated to reflect the findings from the Lower Minnesota River WRAPS when these are finalized. The RPBCWD board's approval was premised on reading sections 3 and 3.3, to authorize RPBCWD to continue to exercise regulatory authority in Shorewood, as provided in Minnesota Statutes section 103B.211, subdivision 1(a)(3)(iii).
Thank you again for giving the District an extension for its review till July 13, 2018 and working with the District to protect, restore and manage the water resources in RPBCWD.

Sincerely,

Claire Bleser
District Administrator

BOARD OF WATER AND SOIL RESOURCES

June 27, 2018

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

Dear Chair and Managers:

I am pleased to inform you that the Minnesota Board of Water and Soil Resources (Board) has approved the Riley Purgatory Bluff Creek Watershed District (RPBCCWD) revised Watershed Management Plan (Plan) at its regular meeting held on June 27, 2018. For your records I have enclosed a copy of the signed Board Order that documents approval of the Plan. Please be advised that the RPBCWD must adopt and implement the Plan within 120 days of the date of the Order, in accordance with MN Statutes 103B.231, Subd. 10.

The managers, staff, consultants, advisory committee members, and all others involved in the planning process are to be commended for developing a plan that clearly presents water management goals, actions, and priorities of the watershed. With continued implementation of your Plan, the protection and management of the water resources within the watershed will be greatly enhanced to the benefit of the residents. The Board looks forward to working with you as you implement this Plan and document its outcomes.

Please contact Steve Christopher of our staff at 651-249-7519, or at the central office address for further assistance in this matter.

Sincerely,

Gerald Van Amburg
Chair

Enclosure

cc's on next page

Cc: Karen Galles, Hennepin County (via email)
Jeanne Daniels, DNR (via email)
Kate Drewry, DNR (via email)
John Freitag, MDH (via email)
Karen Voz, MDH (via email)
Jeff Berg, MDA (via email)
Judy Sventek, Met Council (via email)
Beth Neuendorf, MN DOT (via email)
Kevin Bigalke, BWSR (via email)
Steve Christopher, BWSR (via email)
File Copy

Minnesota Board of Water and Soil Resources
520 Lafayette Road North
Saint Paul, Minnesota 55155

In the Matter of the review of the Watershed Management Plan for the Riley Purgatory Bluff Creek Watershed District, pursuant to Minnesota Statutes Section 103B.231, Subdivision 9.	**ORDER APPROVING A WATERSHED MANAGEMENT PLAN**

Whereas, the Board of Managers of the Riley Purgatory Bluff Creek Watershed District (RPBCWD) submitted a Watershed Management Plan (Plan) dated April 2018 to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103B.231, Subd. 9, and;

Whereas, the Board has completed its review of the Plan;

Now Therefore, the Board hereby makes the following Findings of Fact, Conclusions and Order:

FINDINGS OF FACT

1. **RPBCWD Establishment.** The Riley Purgatory Creek Watershed District was established on July 31, 1969 by order of the Minnesota Water Resources Board under the authority of the Minnesota Watershed Act (Minnesota Statutes, Chapter 112). The first water resources management plan for the District was prepared and adopted in 1973. The second plan was adopted in 1982. Bluff Creek was added to the District in June 1984. The plan was then revised in accordance with the Metropolitan Surface Water Management Act of 1982 (M.S. 103B), and approved by the Board of Water and Soil Resources (Board) in August 1996. The Board approved the current "third generation" Water Resources Management Plan in January 2011.

2. **Authority of Plan.** The Metropolitan Surface Water Management Act requires the preparation of a watershed management plan for the subject watershed area which meets the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

3. **Nature of the Watershed.** The District is approximately 47 square miles in size and located in both Hennepin County (32.8 sq. miles) and Carver County (14.5 sq. miles), within the Minnesota River basin. The land use in the watershed consists predominantly of single family low density residential land use, with a mix of recreational/golf courses/preserved areas, commercial, industrial, institutional land uses, as well as undeveloped areas. Development pressure within the watershed is projected to slightly increase through the life of this Plan, particularly from medium density residential development. There are a total of 13 major lakes and three major creeks in the District. The following municipalities lie partially within the District: Bloomington, Chanhassen, Chaska, Deephaven, Eden Prairie, Minnetonka, and Shorewood. The District is bound by the Lower Minnesota River Watershed District to the south, the Carver County WMO to the southwest, the Minnehaha Creek Watershed District to the west and north, and the Nine Mile Creek Watershed District to the east.

4. **Plan Development and Review.** The RPBCWD initiated the planning process for the 2018-2027 Plan in January of 2016. As required by MR 8410, a specific process was followed to identify and assess priority issues. Stakeholders were identified, notices were sent to municipal, regional, and state agencies to solicit input for the upcoming Plan.

   RPBCWD initiated a survey and began promotion of the public input meetings in February of 2016. RPBCWD conducted numerous technical advisory committee meetings, citizen's advisory committee meetings and staff workshops along with public input meetings. The RPBCWD also provided a preview of the plan at their annual watershed tour on July 31st which allowed stakeholders to better understand the goals.

   The Plan was submitted for formal 60-day review in November 2017. The District received comments on the draft Plan and responded to Plan reviewers' comments in writing. After formal review of the RPBCWD Plan, the District held a public hearing on the draft Plan on March 15, 2018. All additional comments received during the 90-day review period have been addressed. The final draft Plan and all required materials were submitted and officially received by the Board on April 13, 2018.

5. **Local Review.** The RPBCWD distributed copies of the draft Plan to local units of government for their review pursuant to Minnesota Statutes Section 103B132, Subd. 7. Local written comments and edits were received from City of Eden Prairie, Bloomington Sustainability Commission, Lotus Lake Conservation Alliance, Mitchell Lake Association, along with several citizens. The RPBCWD responded to all comments.

6. **Metropolitan Council Review.** During the 60-day review, the Council noted the thorough and well organized plan. RPBCWD thanked the Council for its comments.

7. **Department of Agriculture (MDA) Review.** No comments were received during the 60-day or 90-day final review period.

8. **Department of Health (MDH) Review.** No comments were received during the 60-day or 90-day final review period.

9. **Department of Natural Resources (DNR) Review.** The DNR noted that the plan is well thought out and aligns with the Agency's goals. The DNR also noted the efforts of the District in its regulatory capacity and goals for sustainable groundwater management. RPBCWD thanked the DNR for its comments.

10. **Pollution Control Agency (PCA) Review.** PCA participated in TAC meetings and provided feedback throughout the plan development process. During the 60-day review, PCA stated it had no additional comments.

11. **Department of Transportation (DOT) Review.** No comments were received from the DOT during the 60-day or 90-day comment periods.

12. **Board Review.** Board staff commended the RPBCWD on a Plan that demonstrates sound justification for its programs and projects. Board staff also noted the high number of goals and stressed the importance of measurability to gauge its success. RPBCWD responded to this comment noting that it will be continuing to develop a process for measurement, tracking and reporting on the aforementioned goals.

13. **Plan Summary.** The Plan focuses on a watershed approach recognizing the needs of it three major subwatersheds: Riley Creek, Purgatory Creek and Bluff Creek. Each subwatershed has its own resource needs and well developed strategies are identified to address each.

The process identified the following thirteen goals:

- Operate in a manner that uses District resources and capacity efficiently and effectively while advancing the District's vision and goals.
- Collect data and use the best available science to recommend and support management decisions.
- Design, maintain, and implement Education and Outreach programs to educate the community and engage them in the work of protecting, managing, and restoring water resources.
- Plan and conduct the District's implementation program to most effectively accomplish its vision with consideration for all stakeholders and resources.
- Include sustainability and the impacts of climate change in District projects, programs, and planning.
- Implement the District's regulatory program to protect water resources from further degradation, enhancing resources when possible.
- Support Carver and Hennepin County to operate effectively as Ditch Authorities.
- Protect, manage, and restore water quality of District lakes and creeks to maintain designated uses.
- Preserve and enhance the quantity, as well as the function and value of District wetlands.
- Preserve and enhance habitat important to fish, waterfowl, and other wildlife.
- Promote the sustainable management of groundwater resources.
- Protect and enhance the ecological function of District floodplains to minimize adverse impacts.
- Limit the impact of stormwater runoff on receiving waterbodies.

The District has also set a goal of the following overarching outcomes for the duration of the plan:

- 41,000 linear feet of streambank, shoreline, ravine and slope stabilization
- 3,200 pounds of phosphorus reduction per year
- 11 acres of habitat restored
- 4.1 million gallons of groundwater conserved per year

14. **Central Region Committee Meeting.** On June 7, 2018, the Board's Central Region Committee and staff met in St. Paul to review and discuss the final Plan. Those in attendance from the Board's committee were Jill Crafton, Jack Ditmore, Terry McDill, Duane Willenbring (via phone), Paige Winebarger (via phone), and Joe Collins, chair. Board staff in attendance were Central Region Manager Kevin Bigalke and Board Conservationist Steve Christopher. RPBCWD Administrator Claire Bleser provided highlights of the Plan and process. Board staff recommended approval of the Plan. After presentation and discussion, the committee unanimously voted to recommend the approval of the Plan to the full board, with the exception of a committee member who abstained due to a conflict of interest.

CONCLUSIONS

1. All relevant substantive and procedural requirements of law and rule have been fulfilled.

2. The Board has proper jurisdiction in the matter of approving the Watershed Management Plan for the Riley Purgatory Bluff Creek Watershed District (RPBCWD) pursuant to Minnesota Statutes Section 103B.231, Subd. 9.

3. The RPBCWD Watershed Management Plan, attached to this Order, defines the water and water-related problems within the RPBCWD's boundaries, possible solutions thereto, and an implementation program through 2027.

4. The RPBCWD Watershed Management Plan will be effective July, 2018 through June, 2027.

5. The attached Plan is in conformance with the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

ORDER

The Board hereby approves the attached Riley Purgatory Bluff Creek Watershed District Watershed Management Plan dated April 2018.

Dated at Saint Paul, Minnesota this 27th day of June 2018.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Gerald Van Amburg, Chair

RESOLUTION 18-04

RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT
BOARD OF MANAGERS

Resolution adopting watershed management plan

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

WHEREAS Riley-Purgatory-Bluff Creek Watershed District is responsible for the preparation of a watershed management plan for the Riley-Purgatory-Bluff Creek watershed pursuant to Minnesota Statutes section 103B.231, subdivision 3;

WHEREAS in accordance with Minnesota Statutes section 103B.231 and Minnesota Rules chapter 8410, beginning in early 2015 RPBCWD solicited input for a 10-year update of its watershed plan from watershed residents and other stakeholders, state agencies with jurisdiction over water resources and counties and municipalities with jurisdiction in the Riley-Purgatory-Bluff Creek watershed to ensure that current issues in watershed management were identified prior to preparing the update;

WHEREAS RPBCWD, relying on and informed by the input received, prepared a draft watershed management plan, entitled "Riley-Purgatory-Bluff Creek Watershed District: Planning for the Next Ten Years 2018-2027" (the Plan) in accordance with Minnesota Statutes sections 103B.201 through 103B.255, chapter 103D and Minnesota Rules 8410.0050 through 8410.0150 to set forth the goals, policies, programs and projects RPBCWD would adopt and implement to fulfill its statutory role;

WHEREAS RPBCWD submitted a draft of the Plan to local, regional and state governmental organizations for review and comment in accordance with Minnesota Statutes section 103B.231, subdivision 7, and RPBCWD analyzed the comments and revised the plan in consideration thereof;

WHEREAS RPBCWD held a duly noticed public hearing on the Plan, in accordance with Minnesota Statutes section 103B.231, subdivision 7(c), on March 15, 2018, and duly considered the comments made at the public hearing;

WHEREAS the District submitted the draft Plan to the state Board of Water and Soil Resources for final review and approval in accordance with Minnesota Statutes section 103B.231, subdivision 9, and the Board of Water and Soil Resources approved the Plan on June 27, 2018;

WHEREAS the RPBCWD Board of Managers finds that RPBCWD has completed the required process to update its watershed plan, and that the Plan fairly reflects a robust engagement in the planning process with watershed residents, communities and agencies and will serve as a sound document to guide the management of the Riley-Purgatory-Bluff Creek Watershed in the next 10 years; and

WHEREAS the RPBCWD Board of Managers finds that the adoption of the Plan is in accordance with the law and the best interests of the public.

NOW THEREFORE BE IT RESOLVED that the Riley-Purgatory-Bluff Creek Watershed District Board of Managers hereby adopts the Riley-Purgatory-Bluff Creek Watershed District: Planning for the Next Ten Years 2018-2027 in accordance with Minnesota Statutes section 103B.231, subdivision 10; and

BE IT FURTHER RESOLVED that the board of managers directs the administrator to publish the adopted Plan on the RPBCWD website, along with an expression of the managers' appreciation for the involvement of the members of watershed residents, communities and agencies in the development of the Plan, and to transmit a copy of the Plan to the clerks of each of the local governmental units within the watershed, and to Hennepin County and Carver County, together with a letter expressing the managers' appreciation for their involvement in the preparation of and contributions to the Plan.

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

	Yea	Nay	Absent
CHADWICK	☐	☐	☐
CRAFTON	☐	☐	☐
PEDERSON	☐	☐	☐
WARD	☐	☐	☐
YETKA	☐	☐	☐

Upon vote, the chair declared the resolution adopted.

_____ Dated: _____, 2018

_____, Secretary

* * * * * * * * * * * *

LAKE WEST
DEVELOPMENT, LLC

Monday, June 04, 2018

Terry Jeffery
Project Manager / Permit Administrator
Riley Purgatory Bluff Creek Watershed District
18681 Lake Drive East
Chanhassen, MN 55317
O: 952-807-6885
E: tjeffery@rpbcwd.org

RE: **Saville West Permit Extension Request (Permit No. 2015-036)**
Riley Purgatory Bluff Creek Watershed District

This is a formal request for a one-year extension to Lake West Development's existing Saville West Riley Purgatory Bluff Creek Watershed District permit (Permit No. 2015-036). This extension is needed to allow for time to meet conditional approval requirements set forth by the watershed district.

Sincerely,

Perry Ryan
Vice President – Land Development
Lake West Development
14525 Highway 7, Suite 265
Minnetonka, MN 55345
O: 952-653-1359
E: perry@lwestdev.com

CC: Curt Fretham

Encl: Riley Purgatory Bluff Creek Watershed District Permit Application Review
Lake West Development – Bridgewater Bank Check No. 3568

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

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

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2018-005
Received complete: May 9, 2018
Board Meeting Date: July 11, 2018 (60-day extension approved at June 6, 2018 meeting)
Applicant: D&T Eden Prairie
Consultant: Eric Kaul, Ramaker & Associates
Project: Hampton Inn Eden Prairie – Removal of existing site improvements and construction of a Hampton Inn hotel with associated parking. An underground infiltration system will provide stormwater quantity, volume and quality control. The applicant is seeking variances for buffer that falls short of RPBCWD requirements around two wetlands.
Location: 11825 Technology Drive, Eden Prairie
Reviewer: Terry Jeffery, Permit Coordinator

Rules: Applicable rules checked

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

Rule Conformance Summary

Rule	Issue		Conforms to RBPCWD Rules?	Comments
C	Erosion Control Plan		Yes	
D	Wetland and Creek Buffers		No	See Rule K Variance Request and Rule Specific Permit Condition D1.
J	Stormwater Management	Rate	Yes	
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J1.
K	Variances and Exceptions		Yes	
L	Permit Fee		Yes	$1500 was received on January 19, 2018.
M	Financial Assurance		See Comment	The financial assurance has been calculated at $195,530.

Project Description

The proposed redevelopment will consist of the removal of existing buildings and site improvements on the property and construction of a 6-story Hampton Inn hotel with surface parking and associated site infrastructure. The project includes an underground infiltration system for stormwater treatment prior to discharging to Lake Idlewild, which, despite its name and classification by the Department of Natural Resources as a Public Water, was determined to be a wetland by the City of Eden Prairie (acting as Wetland Conservation Act Local Government Unit) and is one of two wetlands on the site. The project site information is summarized below:

1. Total Site Area: 1.71 acres
2. Existing Site Impervious Area: 1.07 acres (46,493 square feet)
3. Existing Impervious Area Disturbed: 1.07 acres (46,493 square feet) (100% disturbance of site impervious area)
4. New (Increase) Site Impervious Area: 0.15 acres (6,387 square feet) (14% increase in site impervious area)
5. Net Impervious Surface: 1.21 acres (52,880 square feet)
6. Total Disturbed Area: 1.47 acres (64,199 square feet)

Exhibits:

1. Permit Application dated January 18, 2018.
2. Stormwater Management Plan dated February 28, 2018 (REVISED May 9, 2018).
3. HydroCAD Modeling (existing and proposed conditions) dated May 9, 2018.
4. Abstraction Requirement Calculations dated December 14, 2017
5. MIDS Calculator files dated December 14, 2017 (REVISED May 9, 2018).
6. Drainage Area Figures dated February 27, 2018.
7. Design Plans Sheets (No. 9) C100 – C601 dated January 16, 2018 (REVISED May 9, 2018)
8. Landscaping Plan Sheet L100 dated January 12, 2018 (REVISED May 4, 2018).
9. Wetland Buffer Planting Plan Sheet L101 dated January 12, 2018 (REVISED May 4, 2018).
10. Geotechnical Exploration Report prepared by Haugo Geotechnical Services dated May 15, 2015.
11. Wetland Buffer Plan Existing Conditions dated February 27, 2018.
12. Wetland Buffer Plan Proposed Conditions dated February 27, 2018 (REVISED April 16, 2018).
13. Wetland Delineation Report prepared by Bolton and Menk dated August 9, 2015 (revised September 18, 2015).
14. MnRAM Assessment Report dated September 4, 2015.
15. Wetland Notice of Decision dated October 20, 2015.
16. Phase 1 Environmental Site Assessment prepared by Braun Intertec dated February 24, 2011.

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter more than 1.47 acres (64,199 square feet) of surface area the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plan prepared by Ramaker & Associates, Inc. includes installation of silt fence – including redundant silt fence upstream of the wetland, inlet protection for storm sewer catch basins, a rock construction entrance, placement of a minimum of 6 inches of topsoil, decompaction of pervious areas compacted during construction, retention of native topsoil onsite, phasing of construction activities, and inspection schedule. For the proposed project to conform to the RPBCWD Rule C requirements the following revision is needed:

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

Rule D: Wetland and Creek Buffers

Because the proposed work triggers a permit under RPBCWD Rule J and the onsite wetlands are protected by the state Wetland Conservation Act, Rule D, Subsections 2.1a and 3.1 require buffer around these wetlands.

A 2015 wetland delineation report, including a type and boundary determination, for the site was included with the submittal. Staff has reviewed the submitted wetland type and boundary determination and concurs with the conclusion of the City of Eden Prairie (the WCA local government unit) that the delineation supporting the decision accurately depicts the extents and type of wetland on the property.

There are two WCA protected wetlands on the site; a small wetland at the southwest corner of the site (14-21-C) and "Lake" Idlewild (a type 5 wetland) on the southern portion of the site (14-21-A). The MnRAM analysis dated September 4, 2015 indicates that the wetland that is Lake Idlewild is a high value wetland according to Appendix D1. Rule D, Subsection 3.1.a.ii requires a wetland buffer with an average of 60 feet from the delineated edge of the wetland, minimum 30 feet. The other wetland is a medium value wetland and requires a wetland buffer with an average width of 40 feet and a minimum width of 20 feet. As the applicant is not proposing any disturbance to the wetlands, the buffer requirements only apply to those portions of the wetlands down gradient from the land disturbing activities. The Applicant has requested a variance from the average and minimum buffer width requirement in Rule D,

Subsection 3.1a and from maintaining the minimum separation between the reconstructed pervious trail and the wetlands as required by Rule D, Subsection 3.2d. (see variance discussion below).

The applicant provided a proposed wetland buffer planting plan illustrating that buffer areas disturbed during construction will be seeded with a variety of native seed mixes (BWSR woodland, savanna and riparian), trees (red maple, river birch and red oak) and shrubs (Isanti dogwood, low-gro sumac, and dark green spreader yew) to conform with Rule D, Subsection 3.2. The Applicant is proposing buffer monument locations consistent with criteria in Rule D, Subsection 3.3. The plan sheet provided includes a note for the contractor to construct the project so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible conforming to Rule D, Subsection 3.5.

Aside from the variance request discussed below, to conform to the RPBCWD Rule D the following revisions are needed:

D1. Buffer areas and maintenance requirements must be documented in a declaration or other document approved by RPBCWD and recorded, after approval, in accordance with Rule D, Subsection 3.4.

Rule J: Stormwater Management

Because the project will alter 1.47 acres (64,199 square feet) of surface area the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1). The criteria listed in Subsection 3.1 will apply to the entire parcel because the project will disturb 100% of the existing impervious surface on the parcel (Rule J, Subsection 2.3).

The developer is proposing construction of an underground infiltration system to provide the rate control, volume abstraction and water quality management on the site. Sump manholes with a proprietary filtration system called Flexstorm PC will provide pretreatment for the underground infiltration system.

The Phase I Environmental Site Assessment (ESA) concluded that there was no environmental concern warranting procession to a Phase II ESA. Staff agrees that there are no environmental concerns that infiltration would cause or exacerbate the migration of contaminants into or through groundwater and thereby would preclude the employment of infiltration as a stormwater management practice on the site.

Rate Control

In order to meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site.

The Applicant used a HydroCAD hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in the table below. Rates decreased after development under all rainfall recurrence intervals. The proposed project conforms to RPBCWD Rule J, Subsection 3.1.a.

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
West	1.44	1.32	2.35	2.11	4.06	3.58	0.47	0.40
Lake Idlewild	4.06	2.55	8.05	6.16	14.41	14.26	4.88	4.49

Volume Abstraction

Subsections 3.1.b and 2.3 of Rule J require the abstraction onsite of 1.1 inches of runoff from all disturbed and additional impervious surface of the parcel. An abstraction volume of 4,552 cubic feet is required from the 1.14 acres (49,658 square feet) of new and reconstructed impervious area on the project for volume retention. Because the relocated trail is less than 10 feet wide and is buffered downgradient by more than half the trail, the trail is exempt from the stormwater rule per Rule J, Subsection 2.2d. The application of this exemption is reflected in the quantities above and in the tables to follow.

Soil borings performed by Haugo Geotechnical Services show that soils in the project area are clayey sand with an underlying layer of silty sand; the MN Stormwater Manual indicates an infiltration rate of 0.45 inches per hour for such silty sand. At the location of the underground infiltration system, the clayey sands will be over-excavated to the layer of silty sand and backfilled with similar sandy material. The Applicant proposes an underground infiltration system with pretreatment of runoff provided by sump manholes and associated filtration. Soil borings performed by Haugo Geotechnical Services show no groundwater to a boring depth of 23 feet. This indicates there will be a minimum of 5.10-feet of separation between the bottom of the proposed underground infiltration system and the observed groundwater, thus conforming to Rule J, Subsection 3.1.b.ii.

The Applicant provided volume control calculations supporting that volume abstraction is provided through the underground infiltration system to infiltrate 1.1 inches of runoff from the impervious areas on the site. The proposed project conforms to RPBCWD Rule J, Subsection 3.3.b.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)
1.1	4,552	4,752

Water Quality Management

Subsection 3.1.c of Rule J requires the Applicant provide for at least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff. The Applicant is proposing an underground infiltration system to achieve the required TP and TSS removals. A MIDS calculator model was developed to estimate the TP and TSS removal capacity of the proposed BMP and is summarized in the table below.

Pollutant of Interest	Regulated Load (lbs)	Required Removal in lbs (%)	Estimated Removal in lbs (%)
Total Suspended Solids (TSS)	489.8	440.8 (90)	445.2 (90.6)
Total Phosphorus (TP)	2.696	1.618 (60)	2.265 (84.0)

The Engineer concurs with the modeling, and finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

Low floor Elevation

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation according to Rule J, Subsection 3.6. The low floor elevation of the underground parking is less than 2 feet above the 100-year event flood elevation of underground infiltration system. Applicant provided an analysis in accordance with Appendix J1 to demonstrate conformance with Rule J, Subsection 3.6 as summarized below.

Location	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Stormwater BMP (feet)	Freeboard (feet)
Underground Infiltration System	877.55	865.27	12.28
Existing Pond	877.55	855.27	22.28

The freeboard provided conforms to Rule J, Subsection 3.6.

Maintenance

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

J1. Permit applicant must provide a draft maintenance and inspection plan. Once approved by RPBCWD, the plan must be recorded on the deed.

Rule K: Variances and Exceptions

The Applicant has requested a variance from the RPBCWD buffer rule requirement that the minimum buffer width be 30 feet and the average width be 60 feet from the delineated edge of the wetland referred to as Lake Idlewild as well as a variance from the minimum width requirement of 20 feet for a medium-value wetland (Rule D, Subsection 3.1a). The Applicant is also requesting a variance from the required minimum buffer width between the regulated water feature and the trail. According to RPBCWD's Rule K, the Board of Managers must find that because of unique conditions inherent to the subject property the application of the buffer rule provision will impose a practical difficulty on the Applicant. For purposes of the Board of Managers' consideration, the following factors were analyzed based on Rule K.

- The Applicant is proposing to provide buffers as summarized in the table below.

	Wetland 14-21-A (Lake Idlewild)		Wetland 14-21-C (Wetland in Southwest portion of parcel)	
Parameter	Required Buffer	Provided Buffer	Required Buffer	Provided Buffer
Minimum Buffer Width to Nearest Structure	30 feet	35.6 feet (119% of 30 feet)	20 feet	14.8 feet (74% of 20 feet)
Average Buffer Width	60 feet	51.1 feet (85% of 60 feet)	40 feet	48.8 feet (122% of 40 feet)
Variance Requested		8.9 feet from average buffer width		5.2 feet from minimum buffer width
Buffer to Trail	30 feet	25.7 feet	20 feet	6.9 feet
Staff Comment		The average buffer width is 4.6 feet wider than the approved 2015 site plan.		The applicant is proposing to replace the impervious bituminous trail with a pervious product. The minimum buffer width is equal to

				the width of buffer provided on the adjoining property with an impervious trail.

- There is an existing 30-foot drainage and utility easement located along the north property line and a 20-foot drainage and utility easement located along the east property line. The applicant is proposing roadways within the easement, but the City of Eden Prairie will not allow any structures within the existing easements. As a result, the placement of the proposed 6-story hotel and associated parking lot cannot be located further north on the parcel to provide additional separation between the existing wetlands and proposed impervious surfaces or structures. The Applicant discussed relocating the utility lines within the easements with the City of Eden Prairie, but it was determined by the City of Eden Prairie to not be feasible.
- The proposed buffer would cover about 17,196 square feet of the parcel which is about 8.9 percent less than existing site conditions provide (19,281 square feet of buffer). The Applicant documented nine alternative site layouts to reduce the impervious area footprint and increase the proposed minimum and average buffer widths for the proposed project by analyzing existing utility relocations, easement locations and parking configurations. In addition, the Applicant worked with the City to reduce the number of parking stalls from what is required by City code (113 stalls) to 106 stalls and the stall widths from the 9-foot width required to 8.5 feet.
- The City also granted the applicant a drive lane width variance from the required 25 feet to 20 feet. The applicant inquired with the City of Eden Prairie about further reducing the drive lane width within the underground parking structure from 20 feet down to 18 feet to gain a few more feet of buffer setback, but the City will not allow a further reduction from the proposed 20-foot design.
- As part of the project the Applicant is proposing to replace the existing bituminous trail within the buffer with a pervious trail. Rule D, Subsection 3.2d allows trails for non-motorized use within a buffer area as long as the minimum required buffer width is provided. The Applicant is proposing to replace the existing bituminous trail within the buffer areas with a pervious pavement trail. The proposed trail will be no closer to the wetland than the current alignment but will be less than the required minimum.
- The redevelopment plans include mitigation efforts to remove existing invasive species and a low diversity composition of native species with only a forb and grass layer and replace it with a buffer composed of a diverse mix of high-quality native plant species including trees, shrubs, and perennials. This will also enhance the buffer functionality and improve wildlife/pollinator habitat. Revegetating with high quality native vegetation will partially mitigate the shortfall in the buffer width protection of the wetlands by intercepting rainfall and increasing infiltration with the deep rooted native vegetation.

Because the proposed revegetation of the entire buffer area with diverse, high quality vegetation will partially mitigate the shortfall in the proposed buffer width and the replacement of the existing impervious trail with a pervious surface will provide improved protection of the wetlands from degradation, RPBCWD staff finds that the technical analysis above supports a determination by the managers that adequate technical findings support approval of the variance(s).

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $1,500

Rule M: Financial Assurance:

Rules C: Silt fence & Blanket

915 L.F. + 260 L.F. x $2.50/L.F. = ... $1,565

Restoration: 1.47 acres x $2,500/acre = ... $3,675

Rule D: Wetland and Creek Buffers: $5,000 + $1,000/acre over 10 acres = ... $5,000

Rules J: Underground BMP – Engineer's Opinion of Cost = ... $125,000

Contingency (10%) $13,670

Administration (30%) $45,120

Total Financial Assurance $195,530

Applicable General Requirements:

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

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project conforms to Rule C.

3. The applicant has requested a variance from compliance with the Rule D criteria related to minimum and average buffer width.
4. The proposed project will conform to Rule J if the Rule Specific Permit Conditions listed above are met.

Recommendation:

Approval, contingent upon:

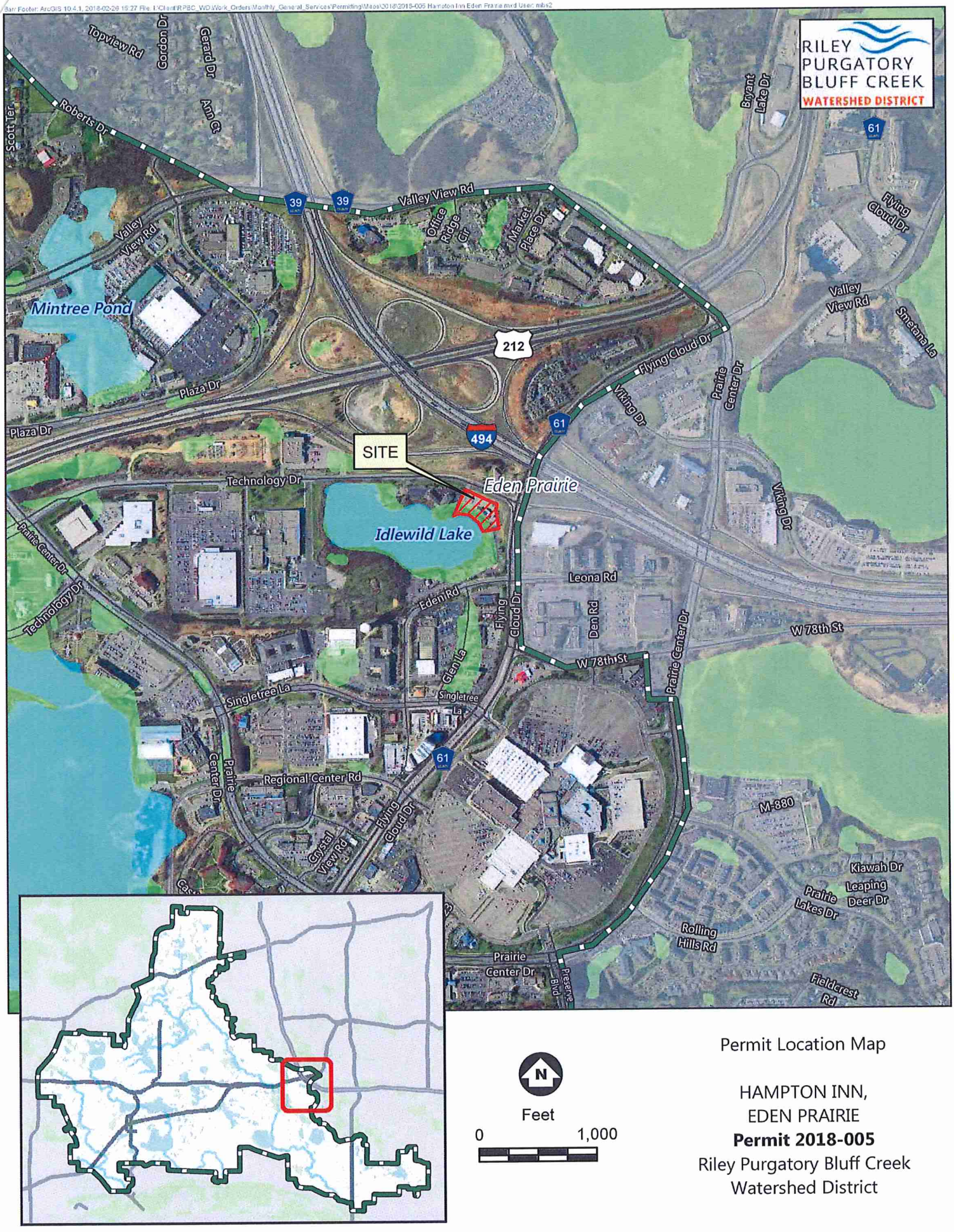
1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $195,530.
3. Receipt in recordation of a maintenance declaration for the stormwater management facilities and wetland buffer. A draft must be approved by the District prior to recordation.

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

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

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2018-005 with the conditions recommended by staff.



Feet

0 1,000

Permit Location Map

HAMPTON INN,
EDEN PRAIRIE
Permit 2018-005
Riley Purgatory Bluff Creek
Watershed District

AREAS OF SITE

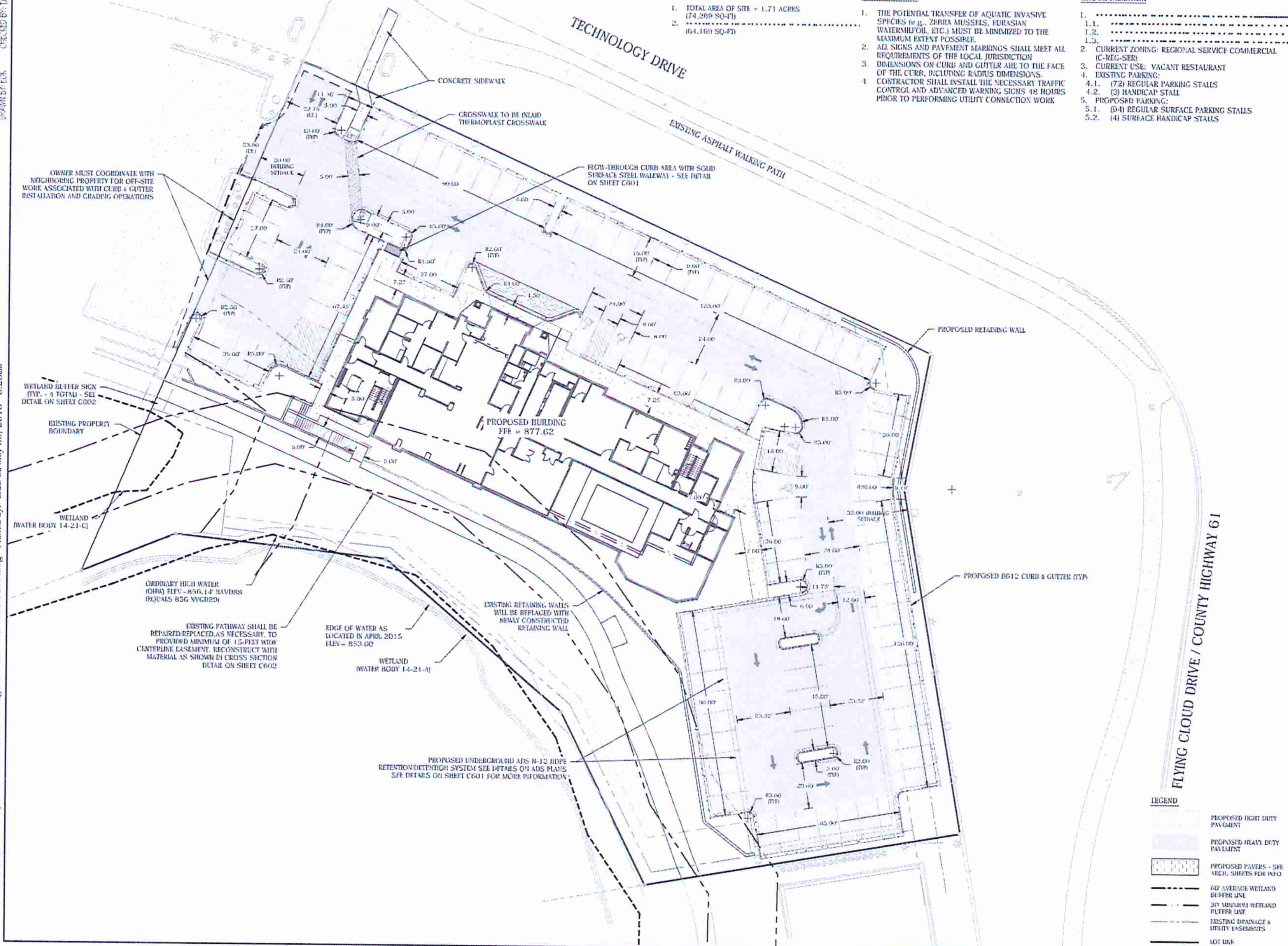
1. TOTAL AREA OF SITE = 1.71 ACRES (74,289 SQ-FT)
2. .... (64,160 SQ-FT)

GENERAL NOTES

1. THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (e.g., ZEBRA MUSSELS, EURASIAN WATERMILFOIL, ETC.) MUST BE MINIMIZED TO THE MAXIMUM EXTENT POSSIBLE.
2. ALL SIGNS AND PAVEMENT MARKINGS SHALL MEET ALL REQUIREMENTS OF THE LOCAL JURISDICTION
3. DIMENSIONS ON CURB AND GUTTER ARE TO THE FACE OF THE CURB, INCLUDING RADIUS DIMENSIONS.
4. CONTRACTOR SHALL INSTALL THE NECESSARY TRAFFIC CONTROL AND ADVANCED WARNING SIGNS 48 HOURS PRIOR TO PERFORMING UTILITY CONNECTION WORK

SITE INFORMATION

1. ....
1.1. ....
1.2. ....
1.3. ....
2. CURRENT ZONING: REGIONAL SERVICE COMMERCIAL (C-REG-SER)
3. CURRENT USE: VACANT RESTAURANT
4. EXISTING PARKING:
4.1. (72) REGULAR PARKING STALLS
4.2. (3) HANDICAP STALL
5. PROPOSED PARKING:
5.1. (94) REGULAR SURFACE PARKING STALLS
5.2. (4) SURFACE HANDICAP STALLS



LEGEND

- PROPOSED LIGHT DUTY PAVEMENT
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED PAVERS - SEE ARCH. SHEETS FOR INFO.
- 60' AVERAGE WETLAND BUFFER LINE
- 30' MINIMUM WETLAND BUFFER LINE
- EXISTING DRAINAGE & UTILITY EASEMENTS
- LOT LINE

RAMAKER & ASSOCIATES, INC.

855 Community Dr. Sauk City, WI 53583
608-643-4100 www.ramaker.com
Sauk City, WI • Wilkinson, MN
Woodcliff Lake, NJ • Bayonne, NJ

NORTH

MARK	DATE	DESCRIPTION
	5-1-18	PUD RE-SUBMITTAL
	4/16/18	PUD RE-SUBMITTAL
	2/27/18	PUD RE-SUBMITTAL

DATE ISSUED: 3/23/2018

ISSUE PHASE: PUD SUBMITTAL

PROJECT TITLE:

6 STORY, 105 UNIT HAMPTON INN

PROJECT OWNER:

TPI HOSPITALITY

PROJECT LOCATION:

EDEN PRAIRIE, MINNESOTA

SHEET TITLE:

SITE LAYOUT

PROJECT NUMBER: 34521

SHEET NUMBER: C200

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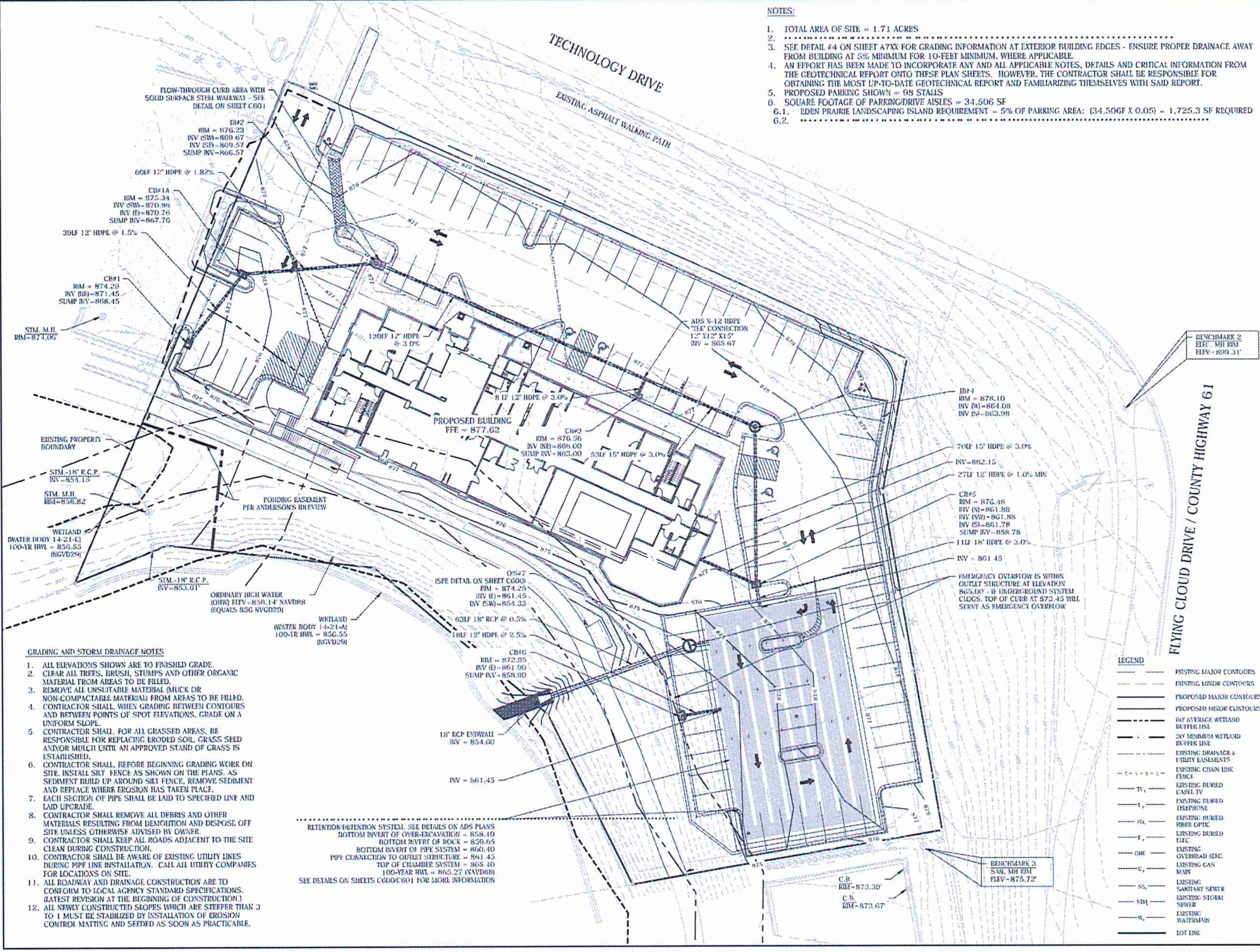
DRAWN BY: EDK CHECKED BY: TAT

NOTES:

1. TOTAL AREA OF SITE = 1.71 ACRES
2. ....
3. SEE DETAIL #4 ON SHEET A7XX FOR GRADING INFORMATION AT EXTERIOR BUILDING EDGES - ENSURE PROPER DRAINAGE AWAY FROM BUILDING AT 5% MINIMUM FOR 10-FEET MINIMUM, WHERE APPLICABLE.
4. AN EFFORT HAS BEEN MADE TO INCORPORATE ANY AND ALL APPLICABLE NOTES, DETAILS AND CRITICAL INFORMATION FROM THE GEOTECHNICAL REPORT ONTO THESE PLAN SHEETS. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE MOST UP-TO-DATE GEOTECHNICAL REPORT AND FAMILIARIZING THEMSELVES WITH SAID REPORT.
5. PROPOSED PARKING SHOWN = 98 STALLS
6. SQUARE FOOTAGE OF PARKING/DRIVE AISLES = 34,506 SF
   6.1. EDEN PRAIRIE LANDSCAPING ISLAND REQUIREMENT = 5% OF PARKING AREA: (34,506F X 0.05) = 1,725.3 SF REQUIRED
   6.2. ....



GRADING AND STORM DRAINAGE NOTES

1. ALL ELEVATIONS SHOWN ARE TO FINISHED GRADE.
2. CLEAR ALL TREES, BRUSH, STUMPS AND OTHER ORGANIC MATERIAL FROM AREAS TO BE FILLED.
3. REMOVE ALL UNSUITABLE MATERIAL (MUCK OR NON-COMPACTABLE MATERIAL) FROM AREAS TO BE FILLED.
4. CONTRACTOR SHALL, WHEN GRADING BETWEEN CONTOURS AND BETWEEN POINTS OF SPOT ELEVATIONS, GRADE ON A UNIFORM SLOPE.
5. CONTRACTOR SHALL, FOR ALL GRASSED AREAS, BE RESPONSIBLE FOR REPLACING ERODED SOIL, GRASS SEED AND/OR MULCH UNTIL AN APPROVED STAND OF GRASS IS ESTABLISHED.
6. CONTRACTOR SHALL, BEFORE BEGINNING GRADING WORK ON SITE, INSTALL SILT FENCE AS SHOWN ON THE PLANS. AS SEDIMENT BUILD UP AROUND SILT FENCE, REMOVE SEDIMENT AND REPLACE WHERE EROSION HAS TAKEN PLACE.
7. EACH SECTION OF PIPE SHALL BE LAID TO SPECIFIED LINE AND LAID UPGRADE.
8. CONTRACTOR SHALL REMOVE ALL DEBRIS AND OTHER MATERIALS RESULTING FROM DEMOLITION AND DISPOSE OFF SITE UNLESS OTHERWISE ADVISED BY OWNER.
9. CONTRACTOR SHALL KEEP ALL ROADS ADJACENT TO THE SITE CLEAN DURING CONSTRUCTION.
10. CONTRACTOR SHALL BE AWARE OF EXISTING UTILITY LINES DURING PIPE LINE INSTALLATION. CALL ALL UTILITY COMPANIES FOR LOCATIONS ON SITE.
11. ALL ROADWAY AND DRAINAGE CONSTRUCTION ARE TO CONFORM TO LOCAL AGENCY STANDARD SPECIFICATIONS. (LATEST REVISION AT THE BEGINNING OF CONSTRUCTION.)
12. ALL NEWLY CONSTRUCTED SLOPES WHICH ARE STEEPER THAN 3 TO 1 MUST BE STABILIZED BY INSTALLATION OF EROSION CONTROL MATTING AND SEEDED AS SOON AS PRACTICABLE.

LEGEND

- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- 60' AVERAGE WETLAND BUFFER LINE
- 30' MINIMUM WETLAND BUFFER LINE
- EXISTING DRAINAGE & UTILITY EASEMENTS
- EXISTING CHAIN LINK FENCE
- EXISTING BURIED CABLE TV
- EXISTING BURIED TELEPHONE
- EXISTING BURIED FIBER OPTIC
- EXISTING BURIED ELEC.
- EXISTING OVERHEAD ELEC.
- EXISTING GAS MAIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATERMAIN
- LOT LINE

RAMAKER & ASSOCIATES, INC.
855 Community Dr. Sauk City, WI 53583
608-643-4100 www.Ramaker.com

NORTH

MARK	DATE	DESCRIPTION
	5/4/18	PUD RE-SUBMITTAL
	4/16/18	PUD RE-SUBMITTAL
	2/27/18	PUD RE-SUBMITTAL

DATE ISSUED: 3/23/2018
ISSUE PHASE: PUD SUBMITTAL

PROJECT TITLE: 6 STORY, 105 UNIT HAMPTON INN

PROJECT OWNER: TPI HOSPITALITY

PROJECT LOCATION: EDEN PRAIRIE, MINNESOTA

SHEET TITLE: STORM DRAINAGE/PIPING PLAN

PROJECT NUMBER: 34521
SHEET NUMBER: C301

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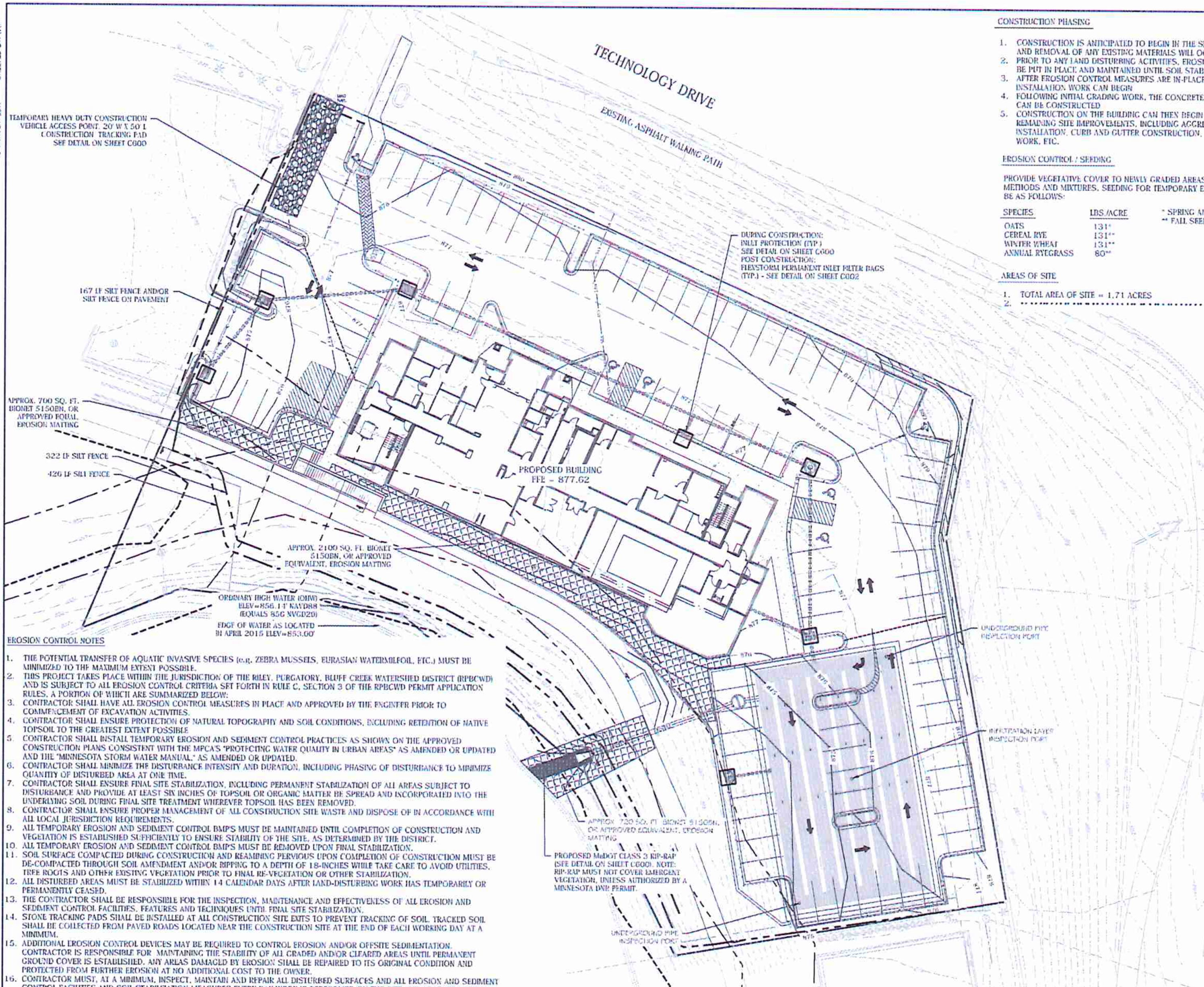

CONSTRUCTION PHASING

1. CONSTRUCTION IS ANTICIPATED TO BEGIN IN THE SPRING OF 2018. DEMOLITION AND REMOVAL OF ANY EXISTING MATERIALS WILL OCCUR FIRST
2. PRIOR TO ANY LAND DISTURBING ACTIVITIES, EROSION CONTROL MEASURES SHALL BE PUT IN PLACE AND MAINTAINED UNTIL SOIL STABILIZATION HAS TAKEN PLACE
3. AFTER EROSION CONTROL MEASURES ARE IN-PLACE, SITE GRADING AND UTILITY INSTALLATION WORK CAN BEGIN
4. FOLLOWING INITIAL GRADING WORK, THE CONCRETE BUILDING FOUNDATION/SLAB CAN BE CONSTRUCTED
5. CONSTRUCTION ON THE BUILDING CAN THEN BEGIN IN COORDINATION WITH REMAINING SITE IMPROVEMENTS, INCLUDING AGGREGATE BASE COURSE INSTALLATION, CURB AND GUTTER CONSTRUCTION, ASPHALT PAVING, CONCRETE WORK, ETC.

EROSION CONTROL / SEEDING

PROVIDE VEGETATIVE COVER TO NEWLY GRADED AREAS BY ACCEPTABLE SEEDING METHODS AND MIXTURES. SEEDING FOR TEMPORARY EROSION CONTROL SHALL BE AS FOLLOWS:

SPECIES	LBS./ACRE
OATS	131*
CEREAL RYE	131**
WINTER WHEAT	131**
ANNUAL RYEGRASS	80**

* SPRING AND SUMMER SEEDING
** FALL SEEDING

AREAS OF SITE

1. TOTAL AREA OF SITE = 1.71 ACRES
2.

EROSION CONTROL NOTES

1. THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (e.g. ZEBRA MUSSELS, EURASIAN WATERMILFOIL, ETC.) MUST BE MINIMIZED TO THE MAXIMUM EXTENT POSSIBLE.
2. THIS PROJECT TAKES PLACE WITHIN THE JURISDICTION OF THE RILEY, PURGATORY, BLUFF CREEK WATERSHED DISTRICT (RPBCWD) AND IS SUBJECT TO ALL EROSION CONTROL CRITERIA SET FORTH IN RULE C, SECTION 3 OF THE RPBCWD PERMIT APPLICATION RULES, A PORTION OF WHICH ARE SUMMARIZED BELOW:
3. CONTRACTOR SHALL HAVE ALL EROSION CONTROL MEASURES IN PLACE AND APPROVED BY THE ENGINEER PRIOR TO COMMENCEMENT OF EXCAVATION ACTIVITIES.
4. CONTRACTOR SHALL ENSURE PROTECTION OF NATURAL TOPOGRAPHY AND SOIL CONDITIONS, INCLUDING RETENTION OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE
5. CONTRACTOR SHALL INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES AS SHOWN ON THE APPROVED CONSTRUCTION PLANS CONSISTENT WITH THE MPCA'S "PROTECTING WATER QUALITY IN URBAN AREAS" AS AMENDED OR UPDATED AND THE "MINNESOTA STORM WATER MANUAL," AS AMENDED OR UPDATED.
6. CONTRACTOR SHALL MINIMIZE THE DISTURBANCE INTENSITY AND DURATION, INCLUDING PHASING OF DISTURBANCE TO MINIMIZE QUANITITY OF DISTURBED AREA AT ONE TIME.
7. CONTRACTOR SHALL ENSURE FINAL SITE STABILIZATION, INCLUDING PERMANENT STABILIZATION OF ALL AREAS SUBJECT TO DISTURBANCE AND PROVIDE AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
8. CONTRACTOR SHALL ENSURE PROPER MANAGEMENT OF ALL CONSTRUCTION SITE WASTE AND DISPOSE OF IN ACCORDANCE WITH ALL LOCAL JURISDICTION REQUIREMENTS.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S MUST BE REMOVED UPON FINAL STABILIZATION.
11. SOIL SURFACE COMPACTED DURING CONSTRUCTION AND REAMINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DE-COMPACTED THROUGH SOIL AMENDMENT AND/OR RIPPING TO A DEPTH OF 18-INCHES WHILE TAKE CARE TO AVOID UTILITIES, TREE ROOTS AND OTHER EXISTING VEGETATION PRIOR TO FINAL RE-VEGETATION OR OTHER STABILIZATION.
12. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 14 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSPECTION, MAINTENANCE AND EFFECTIVENESS OF ALL EROSION AND SEDIMENT CONTROL FACILITIES, FEATURES AND TECHNIQUES UNTIL FINAL SITE STABILIZATION.
14. STONE TRACKING PADS SHALL BE INSTALLED AT ALL CONSTRUCTION SITE EXITS TO PREVENT TRACKING OF SOIL. TRACKED SOIL SHALL BE COLLECTED FROM PAVED ROADS LOCATED NEAR THE CONSTRUCTION SITE AT THE END OF EACH WORKING DAY AT A MINIMUM.
15. ADDITIONAL EROSION CONTROL DEVICES MAY BE REQUIRED TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE STABILITY OF ALL GRADED AND/OR CLEARED AREAS UNTIL PERMANENT GROUND COVER IS ESTABLISHED. ANY AREAS DAMAGED BY EROSION SHALL BE REPAIRED TO ITS ORIGINAL CONDITION AND PROTECTED FROM FURTHER EROSION AT NO ADDITIONAL COST TO THE OWNER.
16. CONTRACTOR MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED.

LEGEND

- INLET PROTECTION
- EROSION MATTING
- CONSTRUCTION TRACKING PAD
- SILT FENCE
- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- 60' AVERAGE WETLAND BUFFER LINE
- 30' MINIMUM WETLAND BUFFER LINE
- EXISTING DRAINAGE & UTILITY EASEMENTS
- LOT LINE

RAMAKER & ASSOCIATES, INC.
855 Community Dr. Sauk City, WI 53583
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NORTH

MARK	DATE	DESCRIPTION
	5/4/18	PUD RE-SUBMITTAL
	4/16/18	PUD RE-SUBMITTAL
	2/27/18	PUD RE-SUBMITTAL

DATE ISSUED: 3/23/2018
ISSUE PHASE: PUD SUBMITTAL

PROJECT TITLE: 6 STORY, 105 UNIT HAMPTON INN

PROJECT OWNER: TPI HOSPITALITY

PROJECT LOCATION: EDEN PRAIRIE, MINNESOTA

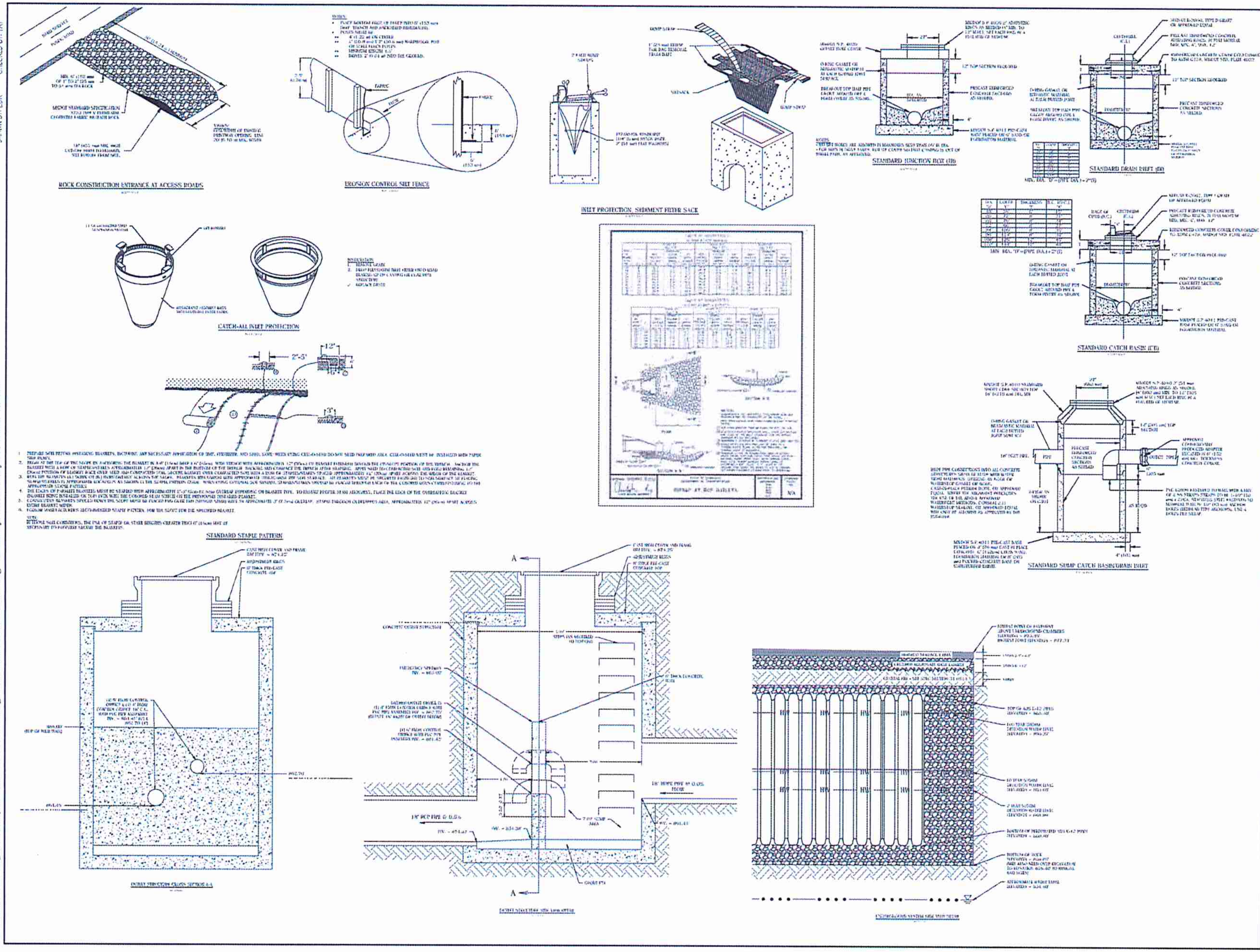
SHEET TITLE: EROSION CONTROL PLAN

0 10' 20' 40'

PROJECT NUMBER: 34521
SHEET NUMBER: C500

DRAWN BY: EDK CHECKED BY: TAT

I:\34500\34521 Torgerson-Hampton-Eden Prairie\01. Drawings\Autocad\Civil\34521 C500.dwg Printed by: ekaul on May 30, 2018 - 8:30am



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MARK	DATE	DESCRIPTION
	5/4/18	PUD RE-SUBMITTAL
	4/16/18	PUD RE-SUBMITTAL
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DATE ISSUED: 3/23/2018
ISSUE PHASE: PUD SUBMITTAL

PROJECT TITLE:
6 STORY, 105 UNIT HAMPTON INN

PROJECT OWNER:
TPI HOSPITALITY

PROJECT LOCATION:
EDEN PRAIRIE, MINNESOTA

SHEET TITLE:
STORM WATER & EROSION CONTROL DETAILS

SCALE:
AS NOTED

PROJECT NUMBER: 34521
SHEET NUMBER: C600

5/20/2018

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DRAWN BY: EDK CHECKED BY: TAT

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

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

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2018-038

Received complete: June 6, 2018

Applicant: Lance Lemieux

Consultant: Civil Site Group, David Knaeble

Project: Eden Prairie Senior Living (aka Southview Senior Housing)– Construction of a new senior multifamily residential apartment building along with new parking lot, underground parking and landscaping. An underground infiltration system and area of permeable pavers will provide stormwater quantity, volume and quality control.

Location: 8460 Franlo Road, Eden Prairie, MN

Reviewer: Scott Sobiech, PE- Barr Engineering

Rules: Applicable rules checked

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

Rule Conformance Summary

Rule	Issue		Conforms to RBPCWD Rules?	Comments
C	**Erosion Control Plan**		See Comment	See Rule Specific Permit Conditions C1
J	**Stormwater Management**	Rate	See Comment	See Rule K variance discussion.
		Volume	See Comment	See Rule Specific Permit Condition J1.
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J2.
L	**Permit Fee**		Yes	$1,500 was received on June 6, 2018
M	**Financial Assurance**		See Comment	The financial assurance has been calculated at $263,200.

Project Description

The project proposes the construction of a new senior multifamily residential apartment building along with new parking lot, underground parking and landscaping on a site in the SW quadrant of Prairie Center Drive and Franlo Road Trail in Eden Prairie. The existing site is comprised of three parcels that are primarily wooded with one existing single family home. The three parcels are being replatted into one parcel An underground infiltration system and area of permeable pavers will provide stormwater quantity, volume and quality control. The drawings include construction activities on Medcom Boulevard to connect to the existing storm sewer system in the roadway and a driveway access to Franlo Road. Drawing C3.1 also suggests the expansion of Medcom boulevard connection to Franlo Road. The applicant confirmed in the June 13, 2018 response to comments from the engineer that it does not propose to construct the connection from Medcom Boulevard to Franlo as part of this project The expansion of Medcom Boulevard suggested on sheet C3.1 was not analyzed for purposes of this report and will not be authorized by permit 2018-038, if issued. To the degree the work triggers RPBCWD regulatory requirements, a separate application with necessary supporting materials for the Medcom Boulevard extension work must be submitted.

The project site information is summarized below:

1. Total Site Area: 2.89 acres
2. Existing Site Impervious Area: 0.44 acres (19,210 square feet)
3. Post Construction Site Impervious: 1.45 acres (63,336square feet)
4. New (Increase) in Site Impervious Area: 1.01 acres (43,996 square feet) (>100% increase in site impervious area)
5. Disturbed impervious surface: 0.38 acres (16,774 square feet) (86% of existing site impervious area)
6. Sidewalk area exempt from stormwater requirements: 0.07 acres (2,865 square feet)
7. Total Disturbed Area: 2.77 acres

Exhibits:

1. Permit Application dated June 6, 2018.
2. Design Plan Set (20 pages) dated June 6, 2018 (revised June 12, 2018).
3. Stormwater Management Report dated October 18, 2017 (revised June 6, June 12, and June 14,2018).
4. MIDS Model received June 6, 2018.
5. P8 Model received June 13, 2018 (revised June 14, 2018).
6. Existing and Proposed Conditions HydroCAD Model received June 6, 2018.(revised June 14, 2018)
7. Draft Geotechnical Evaluation Report by Bruan Intertec dated August 31, 2017.

8. Revised Geotechnical Evaluation Report by Bruan Intertec dated January 15, 2018.
9. Response to Comments email dated June 13, 2018.

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter 2.77 acres (120,602 square feet) of land-surface area the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plan prepared by Civil Site Group includes installation of silt fence, inlet protection for storm sewer catch basins, a rock construction entrance, placement of a minimum of 6 inches of topsoil, decompaction of areas compacted during construction, daily inspection, and retention of native topsoil onsite. To conform to the RPBCWD Rule C requirements the following revisions are needed:

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

Rule J: Stormwater Management

Because the project will alter 2.77 acres (120,602 square feet) of surface area, approval under the RPBCWD Stormwater Management Rule is required. The proposed land-disturbing activities will disturb 100% of the existing impervious area (i.e., more than 50 percent of the existing impervious area), therefore under the paragraph 2.3 redevelopment framework, the RPBCWD stormwater management criteria apply to the entire project site.

The developer is proposing a combination of an underground infiltration system and area of permeable pavers to provide stormwater quantity, volume and quality control. The stormwater entering the underground infiltration system will be pretreated via sump manholes.

Rate Control

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

The proposed stormwater management plan will provide rate control in compliance with the RPBCWD requirements for the 2-, 10-, and 100-year events along the northwestern and eastern discharge points (EX1A/PR1A, EX1B/PR1B and EX3/PR3 in the table below). The installation of a centralized stormwater management facility redirects drainage to the southwest resulting in an increase in discharge at EX2/PR2.

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
EX1A/PR1A	1.7	0.2	3.3	0.5	6.8	0.9	0.3	0.02
EX1B/PR1B	1.3	0.9	2.5	1.8	4.9	3.7	0.2	0.1
EX2/PR2	0.5	0.8	1.0	3.3	2.0	6.8	0.1	0.2
EX3/PR3	0.5	0.3	1.0	0.5	1.8	0.9	0.04	0.02
Total	4.0	2.2	7.7	6.1	15.5	12.3	0.5	0.3

The majority of existing runoff from the site is conveyed overland to a private storm sewer system on the adjacent property to the west. That private system then discharges to the western storm sewer in Medcom Boulevard before discharging to a stormwater pond (Pond K) just southwest of the project site. The applicant's proposed conditions will connect the piped discharge from the proposed stormwater management facility to the existing eastern storm sewer in Medcom Boulevard, which of course would continue to discharges into Pond K.

Information provided by the applicant indicates there is adequate capacity in the existing storm sewer. The overall site discharge in proposed conditions is lower than that in existing conditions. Because the Applicant cannot meet rate control requirements at the southern discharge point from EX2, approval of a variance is requested. See Rule K discussion for additional information. Otherwise, the proposed project meets the rate control requirements in Rule J, Subsection 3.1a.

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all impervious surface of the parcel. An abstraction volume of 5,543cubic feet is required from the 1.39 acres (60,471square feet) of impervious area on the project for volume retention. The Applicant proposes an underground infiltration system and pretreatment sump manholes to abstract runoff from the site. The table below summarizes the volume abstraction on the site.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)
1.1	5,543	6,238

Soil borings performed by Braun Intertec show that soils in the project area are typically lean clay soils underlain by sands and silty sand soils at varying depths. Also, some borings on the site did not encounter the sand layer. The construction drawings indicate the project will excavate below the underground infiltration system to connect the infiltration system to the underlying sands. This will improve the infiltration and abstraction capacity of the proposed project. The infiltration rate of the below ground soils has been assumed to be 0.45"/hour. The MN Stormwater Manual indicates an infiltration rate of 0.8 inches per hour for loamy sand soils and 0.45 inches per hour for silty sand soils. The soils data and infiltration rate assumptions need to be confirmed with field data.

The nearest soil boring to the underground infiltration system (ST-9) was only drilled to approximate elevation 867, which is above the bottom of the proposed stormwater facility. The other boring near underground infiltration system (ST-7), which is located under the proposed building) showed no groundwater to a boring elevation of 832.9 feet. This suggests that groundwater is at least 3 feet below grade at the proposed infiltration basins (Rule J, Subsection 3.1.b.ii).

While these boring are close to the proposed underground infiltration system they do not appear to be within the system footprint as required in Rule J, subsection 4.3c. To conform to the RPBCWD Rule J, Subsection 3.1.b the following revision is needed:

J1. Paragraph 4.3c of the rule requires a soil boring at the proposed infiltration sites to demonstrate that the bottoms of the infiltration basins are at least 3 feet above the water table, the soils present below the basin and confirm the infiltration capacity. The applicant must submit documentation verifying the soils present, infiltration capacity of the soil and the groundwater elevation at the proposed underground infiltration system. This can be accomplished by soil boring, infiltrometer test, potholing or other methods. If the soils, groundwater elevation or infiltration capacity are less than anticipated, design modifications would be required and an permit amendment submitted for approval.

Water Quality Management

Subsection 3.1.c of Rule J requires the Applicant provide for at least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff. The Applicant is proposing an underground infiltration system with pretreatment sump manholes. The table below summarized the water quality treatment provided for the site. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.c.

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	1033	930 (90%)	995 (96.3%)
Total Phosphorus (TP)	3.3	2.0 (60%)	2.9 (87.9%)

Low floor Elevation

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation according to Rule J, Subsection 3.6. The low floor elevation of the adjacent apartment building and the flood elevation in the adjacent stormwater management feature is summarized below. An analysis in accordance with Appendix J1 was completed for the proposed structure and adjacent stormwater feature because the low floor elevation of the proposed structures was less than the required 2 feet above the 100-year event flood elevation of the adjacent stormwater feature.

Location Riparian to Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)	Provided Distance Between Building and Adjacent Stormwater Feature (feet)	Required Separation to Groundwater based on Appendix J, Plot 1 (feet)	Provided Separation to Groundwater (feet)
Apartment Building	860.57	858.60	1.97	15	14	27.7

The horizontal distance between the apartment building and the proposed underground infiltration system is 15 feet; therefore, the required separation to groundwater at the building is 14 feet in order to be in compliance with Plot 1 in Appendix J1. As shown in the above table the proposed apartment building provides 27.7 feet of separation from groundwater in conformance with Rule J, Subsection 3.6.

Maintenance

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

J2. Permit applicant must provide a draft maintenance and inspection plan. Once approved by RPBCWD, the plan must be recorded on the deed in a form acceptable to the District.

Rule K: Variances and Exceptions

The Applicant has requested a variance from the RPBCWD stormwater management rule requirements as follows:

1. The first variance request is from the requirements of Rule J, Subsection 3.1a of the stormwater management rule which states that peak runoff flow rates for proposed condition must be limited to that from existing conditions for the two-, 10- and 100-year frequency storm events using a nested 24-hour rainfall distribution, and a 100-year frequency, 10-day snowmelt event, for all points where stormwater discharge leaves the site (Rule J, subsection 3.1a). The applicant is proposing to increase the discharge at the southwestern parcel boundary to the Medcom Boulevard storm sewer by between 0.1 to 4.8 cubic feet per second for the 2-year and 100-year events respectively.

The attached variance request letter submitted on behalf of the applicant cites several facts related to the development in support of the request. Rule K requires the Board of Managers to find that because of unique conditions inherent to the subject property the application of rule provisions will impose a practical difficulty on the Applicant. Assessment of practical difficulty is conducted against the following criteria:

1. how substantial the variation is from the rule provision;
2. the effect of the variance on government services;
3. whether the variance will substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties;
4. whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules;
5. how the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance; and
6. in light of all of the above factors, whether allowing the variance will serve the interests of justice.

While the applicant must address these criteria to support a variance request, the following is the RPBCWD engineer's assessment of information from the request relevant to the applicant's request for a variance from the rate control criterion:

- Related to variance criterion 1 – the increased rates from the southwest area, approximately 0.1 cfs for the 2-year storm and 4.8 cfs for the 100-year storm are within the capacity of the existing storm sewer in Medcom.
- With regard to variance criterion 2 – the City of Eden Prairie has indicted there is adequate capacity in the storm sewer in Medcom Boulevard to handle the additional runoff. As indicated in the applicant's variance request, the City directed the applicant to route the stormwater away from the private system and to the Medcom Boulevard storm sewer. Because the stormwater discharge from the site is conveyed to city streets and ultimately reaches the same stormwater

pond just to the southwest of the site as existing condtions there will be no adverse effects to offsite governmental services, water resources, flood levels, or neighboring properties.

- More important and related to variance criterion 3 – Because the project routes the discharge from the site via storm sewer to the same downstream stormwater pond (Pond K) at a lower overall rate there should be no impacts to the flood elevation or storage volume of the existing pond.
- Technical measures incorporated into the project plan to alleviate the practical difficulty (variance criterion 4) include directing as much of the overland flow from the northern portion of the site to the existing collection point on the adjacent property. The applicant is also proposing permeable pavement for the patio and sidewalk area north of the proposed building, which minimizes the increased rates. In addition, the applicant has oversize the proposed underground infiltration system to abstract 695 cubic feet of runoff (13%) more volume than required which also minimizes the increased rates.
- With regard to variance criterion 5, the existing topography directs the majority of the site runoff overland onto the adjacent property to the west where it is collected in a private storm sewer on the adjacent parcel– site conditions that the applicant did not create or exacerbate – cause to a substantial degree the need for the variance.
- In summary, the increase in peak runoff rate from the southwest portion of the site via storm sewer does not present a material risk to downstream properties because the overall rate entering Pond K is reduced from existing conditions.

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

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $1,500

Rule M: Financial Assurance:

Rules C: Silt fence: 18,50 L.F. x $2.50/L.F. = ... $4,700

Restoration: 2.8 acres x $2,500/acre = ... $7,000

Rules J: Underground Infiltration: 125% Construction Cost (1.25*125,000) = ... $156,300

Permeable Pavers: 125% Construction Cost (1.25*12,750) = ... $16,000

Contingency (10%) $18,400

Administration (30%) $60,800

Total Financial Assurance $263,200

Applicable General Requirements:

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

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The Applicant has requested a variance from compliance with the Rule J criteria related to not increasing the discharge rate at all points where stormwater runoff leaves the site.
3. The proposed project will conform to Rule C if the Rule Specific Permit Conditions listed above are met; the applicant is requesting a variance from the rate-control requirements of Rule J.

Recommendation:

Approval, contingent upon:

1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $263,200.
3. Applicant providing the name and contact information of the individual responsible for erosion and sediment control at the site.
4. The applicant must submit documentation verifying the soils present, infiltration capacity of the soil and the groundwater elevation at the proposed underground infiltration system. This can be accomplished by soil boring, infiltrometer test, potholing or other methods. If the soils, groundwater elevation or infiltration capacity are less than anticipated, design modifications would be required.
5. Receipt in recordation a maintenance declaration for the operation and maintenance of the stormwater management facilities. A draft must be approved by the District prior to recordation.

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

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

Board Action

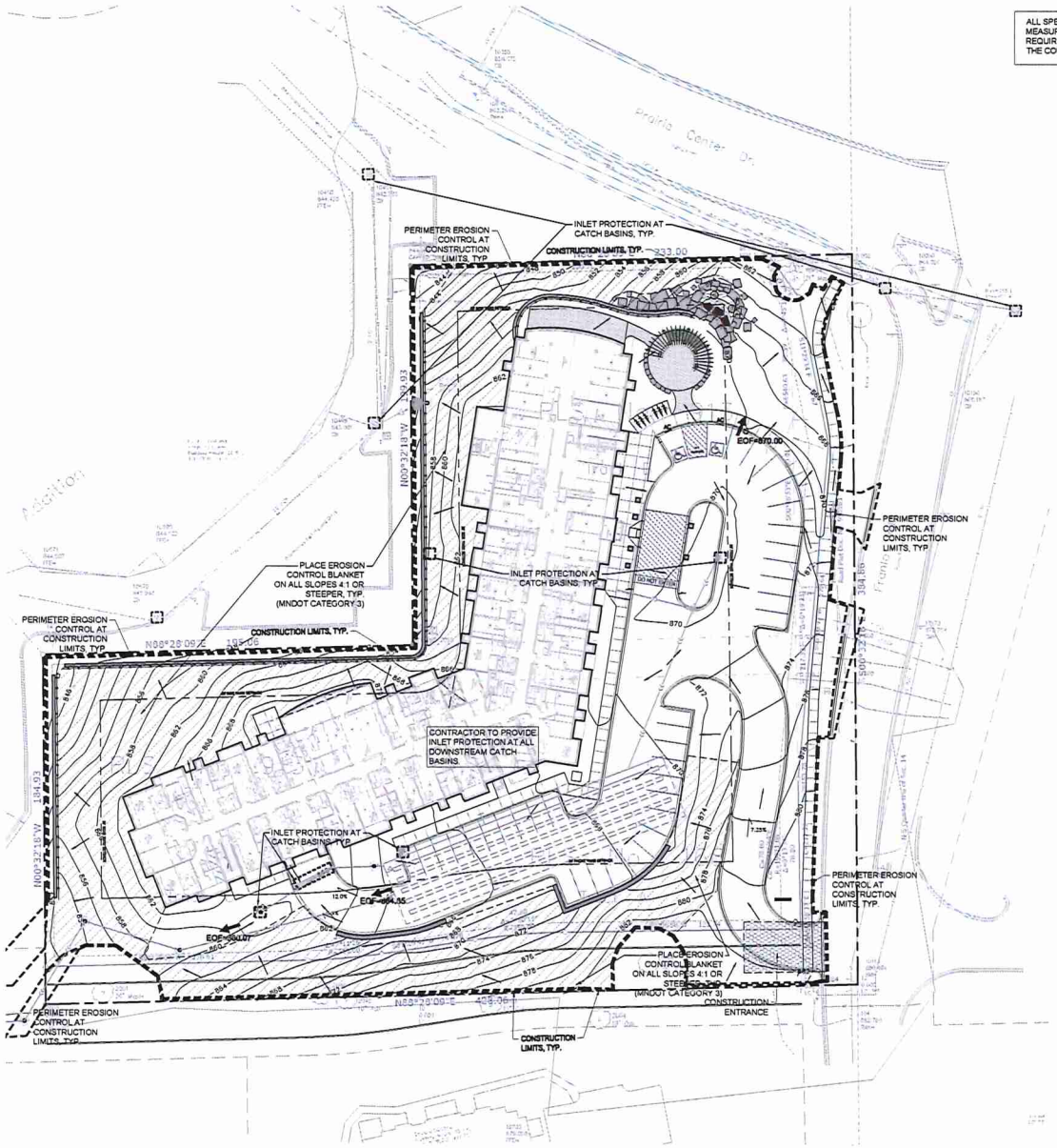
It was moved by Manager _____, seconded by Manager _____ to approve permit modification for permit No. 2018-038 with the conditions recommended by staff at the July 11, 2018 RPBCWD Board of Managers meeting.

Permit Location Map

EDEN PRAIRIE SENIOR LIVING

Permit 2018-038

Riley Purgatory Bluff Creek Watershed District



ALL SPECIFIED EROSION AND SEDIMENT CONTROL PRACTICES, AND MEASURES CONTAINED IN THIS SWPPP ARE THE MINIMUM REQUIREMENTS. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.

SWPPP NOTES:

1. THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN MPCA NPDES PERMIT. AN EROSION CONTROL PERMIT IS ALSO REQUIRED FROM THE CITY OF EDEN PRAIRIE.

2. SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES.

3. SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES.

4. CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, AND COMPLIANCE WITH NPDES PERMIT.

CITY OF EDEN PRAIRIE EROSION CONTROL NOTES:

1. RESERVED FOR CITY SPECIFIC EROSION CONTROL NOTES.

RPBCWD EROSION CONTROL NOTES:

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

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

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

4. FINAL SITE STABILIZATION MEASURES MUST INCLUDE PERMANENT STABILIZATION OF ALL AREAS SUBJECT TO DISTURBANCE, SPECIFYING THAT AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHENEVER TOPSOIL HAS BEEN REMOVED.

5. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE.

LEGEND:

- EX. 1' CONTOUR ELEVATION INTERVAL
- 1.0' CONTOUR ELEVATION INTERVAL
- DRAINAGE ARROW
- SILT FENCE / BIOROLL - GRADING LIMIT
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

1" = 20'-0"

CivilSite GROUP
4931 W. 35TH ST. SUITE 200
ST. LOUIS PARK, MN 55416
CivilSiteGroup.com
Matt Pavek 763-213-3944
Pat Sarver 952-250-2003
knaus wilson architects

PROJECT
SOUTHVIEW SENIOR HOUSING
8480 FRANLO RD, EDEN PRAIRIE, MN 55344
SOUTHVIEW SENIOR COMMUNITIES
945 SIBLEY MEMORIAL HWY, ST. PAUL, MN 55118

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.

Matthew R. Pavek
DATE 06/12/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
04/09/18	CITY SUBMITTAL
04/20/18	PERMIT SET
05/09/18	WATERSHED SUBMITTAL
06/12/18	WATERSHED RESUBMITTAL

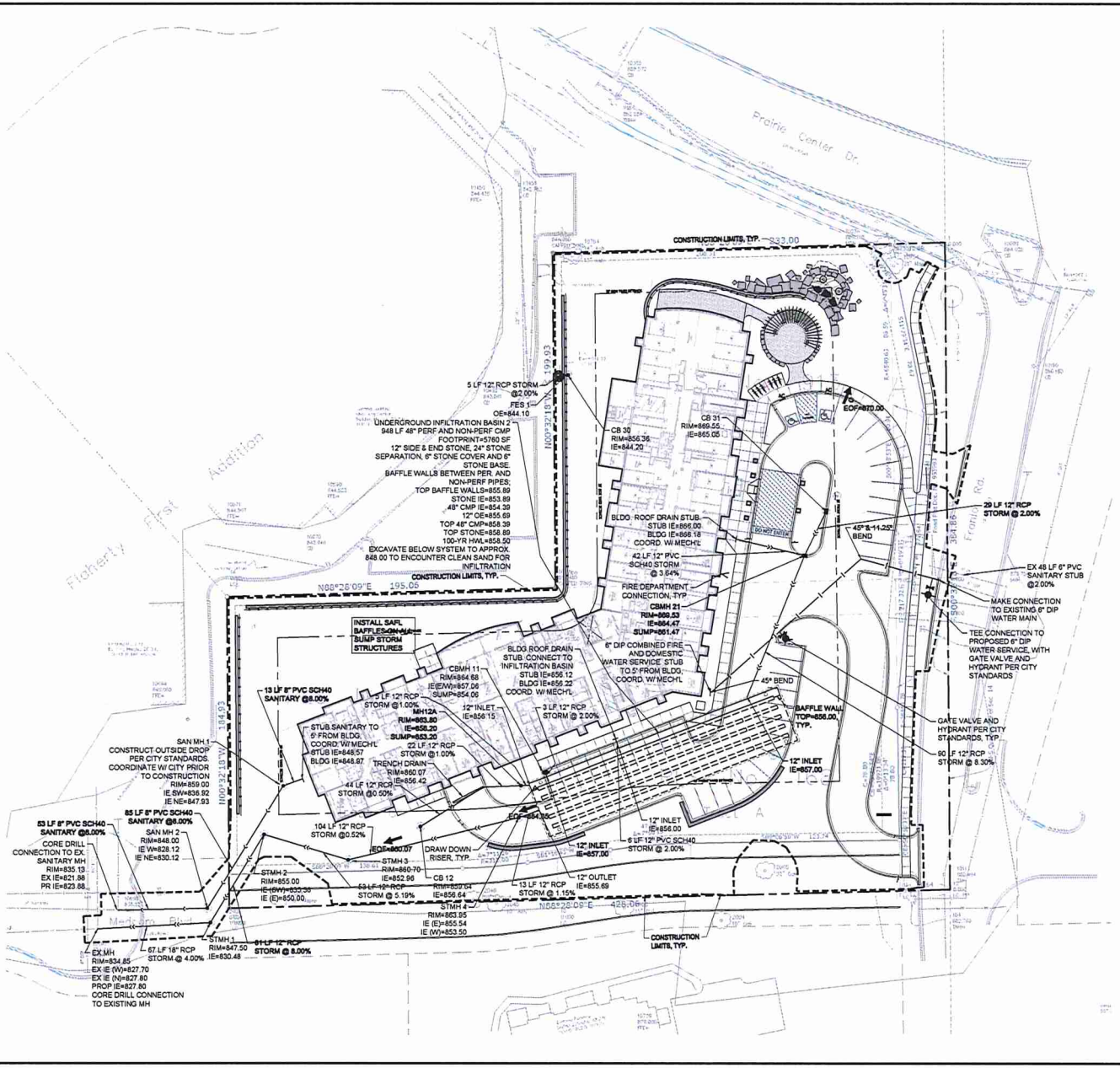
REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO. 17115

SWPPP - PROPOSED CONDITIONS

SW1.1



GENERAL UTILITY NOTES:

1. SEE SITE PLAN FOR HORIZONTAL DIMENSIONS AND LAYOUT.
2. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.
3. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
4. UTILITY INSTALLATION SHALL CONFORM TO THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE LINE INSTALLATION" AND "SANITARY SEWER AND STORM SEWER INSTALLATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), AND SHALL CONFORM WITH THE REQUIREMENTS OF THE CITY AND THE PROJECT SPECIFICATIONS.
5. CASTINGS SHALL BE SALVAGED FROM STRUCTURE REMOVALS AND RE-USED OR PLACED AT THE DIRECTION OF THE OWNER.
6. ALL WATER PIPE SHALL BE CLASS 52 DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED.
7. ALL SANITARY SEWER SHALL BE SDR 26 POLYVINYL CHLORIDE (PVC) UNLESS OTHERWISE NOTED.
8. ALL STORM SEWER PIPE SHALL BE HDPE UNLESS OTHERWISE NOTED.
9. PIPE LENGTHS SHOWN ARE FROM CENTER TO CENTER OF STRUCTURE OR TO END OF FLARED END SECTION.
10. UTILITIES ON THE PLAN ARE SHOWN TO WITHIN 5' OF THE BUILDING FOOTPRINT. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE FINAL CONNECTION TO BUILDING LINES. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS.
11. CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET, ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.15 FEET PER DETAILS. RIM ELEVATIONS SHOWN ON THIS PLAN DO NOT REFLECT SUMPED ELEVATIONS.
12. ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB UNLESS OTHERWISE NOTED.
13. HYDRANT TYPE, VALVE, AND CONNECTION SHALL BE IN ACCORDANCE WITH CITY REQUIREMENTS. HYDRANT EXTENSIONS ARE INCIDENTAL.
14. A MINIMUM OF 8 FEET OF COVER IS REQUIRED OVER ALL WATERMAIN, UNLESS OTHERWISE NOTED. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. EXTRA DEPTH WATERMAIN IS INCIDENTAL.
15. A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES, UNLESS OTHERWISE NOTED.
16. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND COORDINATED WITH THE CITY PRIOR TO CONSTRUCTION.
17. CONNECTIONS TO EXISTING STRUCUTRES SHALL BE CORE-DRILLED.
18. COORDINATE LOCATIONS AND SIZES OF SERVICE CONNECTIONS WITH THE MECHANICAL DRAWINGS.
19. COORDINATE INSTALLATION AND SCHEDULING OF THE INSTALLATION OF UTILITIES WITH ADJACENT CONTRACTORS AND CITY STAFF.
20. ALL STREET REPAIRS AND PATCHING SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY. ALL PAVEMENT CONNECTIONS SHALL BE SAWCUT. ALL TRAFFIC CONTROLS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL BE OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
21. ALL STRUCTURES, PUBLIC AND PRIVATE, SHALL BE ADJUSTED TO PROPOSED GRADES WHERE REQUIRED. THE REQUIREMENTS OF ALL OWNERS MUST BE COMPLIED WITH. STRUCTURES BEING RESET TO PAVED AREAS MUST MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.
22. CONTRACTOR SHALL CORDINATE ALL WORK WITH PRIVATE UTILITY COMPANIES.
23. CONTRACTOR SHALL COORDINATE CONNECTION OF IRRIGATION SERVICE TO UTILITIES. COORDINATE THE INSTALLATION OF IRRIGATION SLEEVES NECESSARY AS TO NOT IMPACT INSTALLATION OF UTILITIES.
24. CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO ENGINEER UPON COMPLETION OF WORK.
25. ALL JOINTS AND CONNECTIONS IN STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, OR OTHER STRUCTURES.
26. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MN RULES, CHAPTER 4714, SECTION 1109.D.

CITY OF EDEN PRAIRIE UTILITY NOTES:

1. RESERVED FOR CITY SPECIFIC UTILITY NOTES.

UTILITY LEGEND:

- CATCH BASIN
- MANHOLE
- GATE VALVE AND VALVE BOX
- PROPOSED FIRE HYDRANT
- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- FES AND RIP RAP

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N

1" = 30'-0"
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REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO.: 17115

UTILITY PLAN

C4.0

CivilSite GROUP

Stormwater Rate Summary:

Peak Discharge:
The site is required to maintain existing conditions for the 2-yr, 10-yr and 100-yr, 24 hour storm events as well as the 100-yr, 10 day snowmelt. Utilize Atlas 14 rainfall data.

Drainage Area	Existing Rate (cfs)			
	2-YR [2.87"]	10-YR [4.27"]	100-YR [7.41"]	10-D SNOW [7.20"]
EX-1AR	1.67	3.34	6.83	0.25
EX-1BR	1.27	2.46	4.91	0.18
EX-2R	0.51	0.98	1.95	0.07
EX-3R	0.53	0.95	1.78	0.04
TOTAL	3.98	7.73	15.47	0.54

Drainage Area	Proposed Conditions Rate (cfs)			
	2-YR [2.87"]	10-YR [4.27"]	100-YR [7.41"]	10-D SNOW [7.20"]
PR-1AR	0.22	0.45	0.90	0.02
PR-1BR	0.91	1.82	3.70	0.10
PR-2R	0.78	3.32	6.76	0.20
PR-3R	0.31	0.51	0.89	0.02
TOTAL	2.22	6.10	12.25	0.34

	Total Existing Conditions Rate (cfs)	Total Proposed Conditions Rate (cfs)
2-Year Event	3.98	2.22
10-Year Event	7.73	6.10
100-Year Event	15.47	12.25
10-Day Snowmelt	0.54	0.34

	DA 1A Existing Conditions Rate (cfs)	DA 1A Proposed Conditions Rate (cfs)	DA 1B Existing Conditions Rate (cfs)	DA 1B Proposed Conditions Rate (cfs)
2-Year Event	1.67	0.22	1.27	0.65
10-Year Event	3.34	0.45	2.46	1.30
100-Year Event	6.83	0.90	4.91	2.67
10-Day Snowmelt	0.25	0.02	0.18	0.10

	DA 2 Existing Conditions Rate (cfs)	DA 2 Proposed Conditions Rate (cfs)	DA 3 Existing Conditions Rate (cfs)	DA 3 Proposed Conditions Rate (cfs)
2-Year Event	0.51	0.78	0.53	0.31
10-Year Event	0.98	3.32	0.95	0.51
100-Year Event	1.95	6.76	1.78	0.89
10-Day Snowmelt	0.07	0.20	0.04	0.02

The existing project site discharges to four separate drainage subcatchments. The majority of the site discharges northwest into an existing parking lot located on the adjacent site. The drainage headed this direction is split into two separate subcatchments. A portion sheet flows to the adjacent property (EX1A) and a portion discharges into an existing

culvert (EX1B). The southwestern portion of the site discharges southwest into Medcom Blvd. (EX2). An eastern portion of the site discharges east towards Franlo Road (EX3).

The overall discharge rates from the proposed site will be less than the existing discharge rates in all events. The proposed project will be increasing the discharge rate in drainage area DA2, which discharges to Medcom Blvd. because the City has indicated that there is additional capacity in this storm sewer and all the stormwater from DA1 and DA2 ultimately end up in the same downstream pond. This increase in stormwater rate to DA2 will require a variance from the RPBCWD.

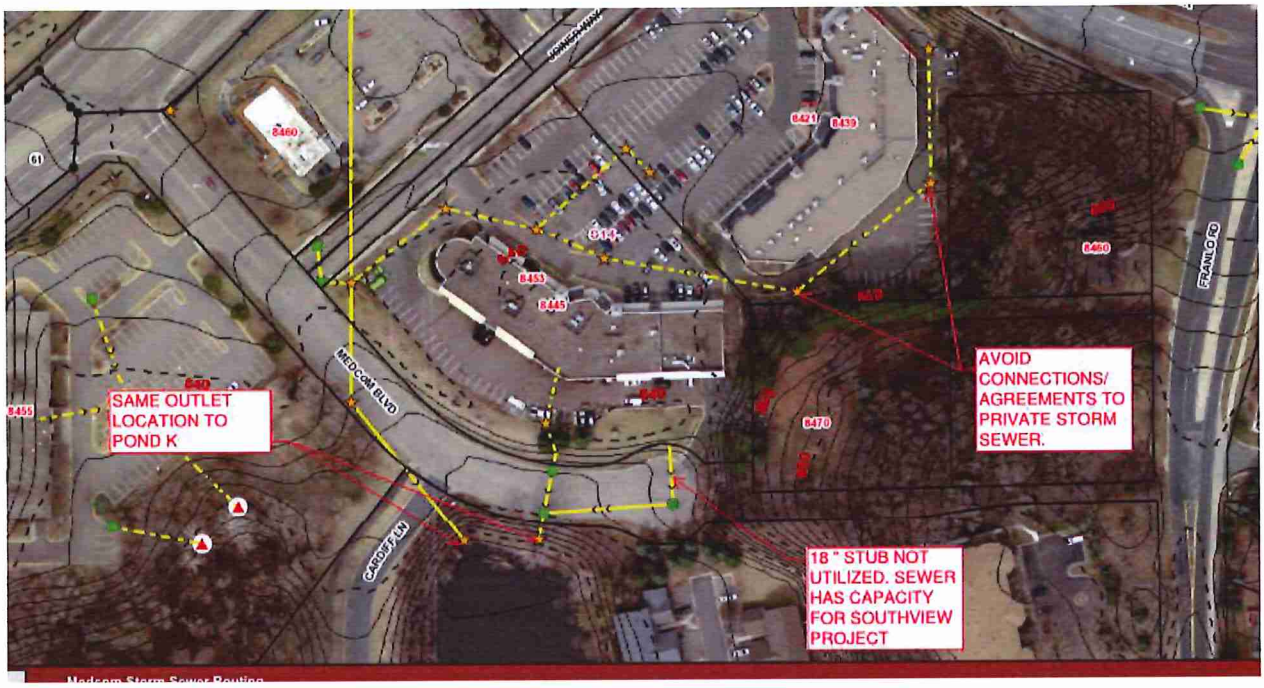
VARIANCE REQUEST FOR INCREASED RUNOFF TO DIFFERENT LOCATION (RULE K)

To grant a variance, the Board of Managers must find, based on demonstration by the applicant, that because of unique conditions inherent to the subject property, which do not apply generally to other land or structures in the Riley Purgatory Bluff Creek watershed, strict application of a rule provision will impose a practical difficulty on the applicant, not a mere inconvenience. For purposes of the Board of Managers' determination of whether a practical difficulty exists, the following factors will be considered for each variance request:

K-1.1 How substantial the variation is from the rule provision.
K-1.2 The effect of the variance on government services.
K-1.3 Whether the variance will substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties.
K-1.4 Whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules.
K-1.5 How the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance.
K-1.6 In light of all the above factors, whether allowing the variance will serve the interests of justice.

This project will be requesting a variance from the RPBCWD to allow an increase in runoff rate to a discharge location. The overall discharge rates for the entire site will still be less than existing, but the project is requesting to decrease the runoff that is discharged to an adjacent private property (DA1) and increase the runoff to the public Right-of-Way of Medcom Blvd. (DA2). The City of Eden Prairie prefers that we discharge our site this direction and has confirmed that there is additional capacity in the storm sewer system in Medcom Blvd. to convey this increased runoff. All the stormwater from drainage areas DA1

and DA2 eventually discharge to the same stormwater pond just southwest of our proposed project site. See the image below.



K-1.1 – Currently, the majority of the existing site discharges to the adjacent property west of the project site. This stormwater is routed through the adjacent parcel, then discharges to a stormwater pond southwest of the project site. An existing City street (Medcom Blvd.) is located in the southwest corner of the site. This street currently does not collect much of the runoff from the project property, but there is a storm sewer in this street that has additional capacity to collect the water from the project site. This storm sewer in Medcom Blvd. discharges to the same stormwater pond that the adjacent parcel discharges to southwest of the project property. The project is proposing to increase drainage rates to Medcom Blvd. and decrease the drainage rates to the adjacent property. The City of Eden Prairie has indicated that the storm sewer in Medcom Blvd. has the capacity to handle the increased flows.

The stormwater rule that exists to match rates at all locations where stormwater discharges from a site is in place to protect downstream properties and to ensure stormwater runoff is not increased to a downstream facility that was not sized to handle the increase. In this situation, accepting the proposed variance will not negatively impact downstream properties, because the location that this discharge is being routed is the public right-of-way and the facilities in the right-of-way are adequate size to handle the increased runoff. The runoff also ultimately discharges to the same pond just southwest of the project site. This variance request is not a substantial change from the rule provision.

K-1.2 – Allowing this variance will not impact any government services. The City of Eden Prairie has already indicated that they are okay with the increased runoff to Medcom Blvd. and they have indicated that the existing storm sewer is sized to adequately handle the increased runoff. The runoff from the project site ultimately discharges to the same stormwater pond.

K-1.3 – Allowing this variance will not change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District. No changes to the existing pond, flood elevations, or flood storage volume is proposed. The project is reducing the overall discharge rates that enter the downstream pond.

K-1.4 – This practical difficulty that this project is attempting to resolve is stormwater runoff flowing onto an adjacent parcel. This variance request will direct the majority of the site runoff to the public right-of-way instead of to a private property. The City of Eden Prairie has already indicated that they are okay with the increased runoff to Medcom Blvd. and they have indicated that the existing storm sewer is sized to adequately handle the increased runoff.

K-1.5 – This practical difficulty did not occur by the current landowner, or any of their agents. The existing site discharges to the adjacent property to the west. The project is attempting to reduce the drainage towards the adjacent property and increase the runoff to the City right-of-way.

K-1.6 – This variance request will serve the interests of justice because no other properties or landowners will be impacted by approving this request and this is not a substantial variation from the rule provision. Allowing this variance will not change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District.

Stormwater Quality Control Summary:

(RPBCWD)
Quality Control:
Total Phosphorus (TP):
60% annual removal efficiency of total phosphorus.
Total Suspended Solids (TSS):
90% annual removal efficiency of total suspended solids.

(City of Eden Prairie)
Quality Control: