Riley-Purgatory-Bluff Creek Watershed District

BUDGET WORKSHOP

August 8, 2013
## Manager Compensation

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## Administrator Costs

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Riley-Purgatory-Bluff Creek Watershed District
Board of Managers Budget Workshop and Monthly Meeting

Thursday, August 8, 2013 – 5:00pm Workshop 7:00pm Regular Meeting
Eden Prairie City Center
Heritage Room
8080 Mitchell Rd
Eden Prairie, MN 55344

Budget Workshop

1. 2013 Draft Budget Workshop Information/Discussion
   a. Staff Presentation
   b. Open Public Comment
   c. Manager’s Discussion

Agenda

2. Call to Order

3. Approval of the Agenda Action

4. Reading and approval of minutes Action
   a. June 5
   b. June 24

5. Correspondence Information

6. Citizen Advisory Committee Information

7. Hearing and discussion of matters of general public interest Information

Anyone wishing to address the Board of Managers on an item not on the agenda may come forward at this time the chair will recognize the speakers one by one. Speakers are requested to state their name and address for the record. Comments will be limited to 5 minutes per speaker.
8. Treasurer’s Report  
9. Engineer's Report  
10. Attorney's Report  
11. Administrator's Report  
12. Board Action
   a. Water Quality  
   b. Conflict of Interest Policy  
   c. Website Development  
   d. Minor Plan Amendment Update  
   e. Major Plan Amendment  
   f. Cost-share Funding
13. Manager’s Discussion
   a. AIS Plan  
   b. Rulemaking  
   c. Upcoming board agenda
14. Upcoming Events
   • Citizen Advisory Committee, August 19, Eden Prairie City Hall, 6:30pm
   • Board Meeting and Public Hearing, September 4, Eden Prairie City Hall, 7:00pm
15. Adjournment
1. Call to Order

President Forster called the meeting to order at 5:07 p.m. on Wednesday, June 5, 2013, in the Heritage Room at Eden Prairie City Center, 8080 Mitchell Road, Eden Prairie, MN 55344.

2. Approval of the Agenda

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

3. Interview for Future District Engineer

a. Wenck Associates

Chris Meehan of Wenck Associates introduced himself and the other Wenck staff participating in the interview: Joe Bischoff, Ed Matthiesen, and Kent Torve. Mr. Meehan provided a 15-minute presentation, accompanied by PowerPoint slides, addressing Wenck’s watershed experience, toolbox of solutions, and collaborative work process. He described the Wenck staff that would be working as the District’s engineering team and highlighted qualifications of the team members.

Mr. Meehan described Wenck’s approach of adaptive management, the steps involved, and how Wenck would apply the approach to the District’s initiatives and goals. He spoke about Wenck’s collaborative work process and said that Wenck identifies how it can leverage the strengths and resources of all of the
partners involved. President Forster opened the floor for a 15-minute question and answer period, and the Wenck staff fielded questions from the Board. When the question and answer time was up, President Forster thanked Wenck for coming.

b. **Barr Engineering Company**

Scott Sobiech of Barr Engineering Company introduced himself and the other Barr Engineering staff participating in the interview: Ray Wuolo, Tom MacDonald, Kurt Leuthold, and Janna Kieffer. Mr. Sobiech said that Barr Engineering would like this interview time to be an open dialog between Barr Engineering and the District and said that questions are welcome as they arise. He described Barr Engineering’s proposed staffing structure for its work as the District’s Engineer and summarized the responsibilities that staff would undertake. Mr. Sobiech described the project structure of Barr Engineering’s work and explained how the expertise of Barr Engineering’s 700 scientists and engineers would be resources for the District.

Mr. MacDonald discussed Barr Engineering’s approach of looking at problems from a watershed perspective. Mr. Wuolo described his expertise in hydrogeology. Ms. Kieffer described her experience with hydrology and hydraulic modeling and stormwater planning and rulemaking. Mr. Leuthold described his experience with green infrastructure and low-impact development. The Board asked questions, which were fielded by the Barr Engineering staff members. When the 15-minute presentation and 15-minute question and answer time was up, President Forster thanked Barr Engineering for coming.

c. **Houston Engineering Inc.**

Nancy Stowe of Houston Engineering Inc. introduced herself and the other Houston Engineering staff participating in the interview: Mark Deutschman and Larry Kramka. Ms. Stowe described how Houston Engineering would work with the District and explained Houston Engineering’s approach in doing business with the District. She talked about the company’s watershed work and experience. Ms. Stowe told the Board that Houston’s tailored approach to working with clients is to: do exceptional technical work, understand the client’s needs, develop steps to ensure the client’s success, and engage on the client’s behalf. She provided details on each of the steps of that approach and described how Houston Engineering would listen to and would collaborate with the District, would be accountable to the District and transparent in how business is transacted, and would engage the public and stakeholders.

President Forster opened the floor for a 15-minute question and answer period. Houston Engineering staff answered the Board’s questions. When the period was up, President Forster thanked Houston Engineering for coming.

4. Managers’ Discussion for Professional Services

[Engineer Thoreen arrived.]

The Board members provided their opinions on the important factors to consider as part of this deliberation process. Each member provided input and the Board asked the Administrator for input. After Board discussion, Manager Crafton moved that the Board select Barr Engineering Company as the District’s Engineer. Manager Wencel seconded the motion. Upon a roll call vote, the motion carried 5-0.
President Forster called for a short break.

### 5. Reading and Approval of Minutes

President Forster resumed the meeting. Manager Bisek moved to accept as submitted the minutes of the April 3, 2013, regular board meeting. Manager Wencl seconded the motion. Upon a vote, the motion carried 5-0.

President Forster asked the CAC if it approved of the minutes of its May 21, 2013, meeting as included in the meeting packet. The CAC members in attendance indicated yes.

### 6. Correspondence

Administrator Bleser said that on page 12 of the *Lake Minnetonka Guide* is the District’s and Minnehaha Creek Watershed District’s partnership advertisement about aquatic invasive species prevention. Administrator Bleser reported that the District received a letter from the Blue Thumb asking for funding for 2014. She said that she would include the letter in the District’s packet next month.

### 7. Citizen Advisory Committee

CAC Advisor Bill Satterness announced that CAC has changed its regular meeting time to 6:30 p.m. from here on out.

### 8. Hearing and Discussion of Matters of General Public Interest

CAC Advisor Bob Shurson raised his concern about the possibility of weed harvesting not taking place on Mitchell Lake this season. Administrator Bleser said that the process is in progress and the permits were issued to the City of Eden Prairie today. She said that the weed harvesting will occur at Mitchell Lake and Red Rock Lake.

### 9. Treasurer’s Report

Manager Crafton said that the report is in the meeting packet. She stated that the report now includes the payroll costs that were part of the District’s monthly payments but may not have been reflected in the accounts payable section of the report. President Forster said that those costs are reflected on pages 2 and 5 of the report. Manager Crafton moved to accept the Treasurer’s Report as submitted. Manager Bisek seconded the motion. Upon a vote, the motion carried 5-0.

Manager Crafton moved to approve payment of the District’s bills. Manager Bisek seconded the motion. Upon a vote, the motion carried 5-0.
10. Engineer’s Report

Engineer Carroll said that the Engineer’s Report is in the meeting packet and noted that the Lake Lucy report is not included. He handed out the draft Lake Lucy report and said that anyone having comments on the draft should please get them to him. Manager Wenc asked if there was any fish kill from the past winter. Engineer Carroll said there was fish kill at Duck Lake. Manager Wenc asked about the Riley Purgatory Recreation Area. Administrator Bleser said that there is a pool area there that didn’t freeze all the way and a lot of the carp congregated there. She said that the University of Minnesota continues to learn more about the system and continues to develop solutions regarding the carp breeding grounds of the Rec Area.

Engineer Carroll said that the interns are trained on the monitoring and data management and have been out on their own doing the monitoring. He said that the modeling is progressing very well and they are halfway through the flow monitoring period. He said that once the flow monitoring is complete in the end of June, the data will be calibrated in July, and it will all be complete by August.

Manager Crafton moved to accept the Engineer’s Report. Manager Bisek seconded the motion. Upon a vote, the motion carried 5-0.

11. Attorney’s Report

Attorney Smith said that the main items in the report will be addressed as part of the rulemaking item slated for later in the meeting agenda. He presented his recommendation for the District’s protocol for e-mail correspondence. He said that to address Open Meeting Law concerns, the District should avoid serial communications. He said that the District can do so by the Administrator sending out e-mails to the group by inserting their e-mail addresses into the BCC [Blind Carbon Copy] address line and then noting in the body of the e-mail that the managers have been blind copied.

12. Administrator’s Report

a. Curly-leaf Pondweed Update

Administrator Bleser said that the lake-wide herbicide treatment on Lake Susan and on Lake Riley has been fulfilled. She said that she is processing the paperwork to submit to the Minnesota Department of Natural Resources (DNR) to get the District’s grant funds. She reported that the District got 99% of the signatures of the Lake Riley residents and said that the one non-signature was a non-response. She said that the Lake Riley Association played a key role in getting those signatures. There was a short discussion of the treatment of the two lakes.

b. Cost-share Program Update

Administrator Bleser reported that 12 individuals came to the information session about the Cost-share program. She said that the program is getting a lot of interest and said that there was an article about the program published in the Sun newspaper. She said that the Carver County technical specialist has been doing site visits during the last couple of weeks and the District has received a program application. Administrator Bleser responded to Board questions.

c. Stormwater Ponds

Administrator Bleser explained that the District’s water quality assistants are looking at the pond data gathered in 2010 and 2012 and are mapping out what information the District has and knows in terms of total phosphorous. She said that they are noticing there are three tiers, and she said that she is concerned
about the top tier where the data averages one milligram per liter and higher of phosphorous, which are very high levels. She said that these levels may indicate sources of phosphorous into the District’s water system. Administrator Bleser had the water quality assistants look at the past UAAs (Usability Attainability Analysis) and locate ponds that were identified through modeling as possible sources of phosphorous. Administrator Bleser reported that she has met with Wenc and with Barr Engineering about the UAA updates. She asked them where they thought it would be beneficial to collect additional information in those subwatersheds, leading to the development of a list of ponds that the District should sample if possible. She said that this process is a good way for the District to determine sources of phosphorous and determine if a particular stormwater pond is a source of pollution. She said that now she is working with staff to figure out how many ponds they can sample.

d. Data Collection and Monitoring
Administrator Bleser said that staff members Lindsey Albright and Jeff Anderson have been out sampling lakes and will be out sampling creeks. The Board discussed ways that the staff can be identified as part of the Riley Purgatory Bluff Creek Watershed District. The Board authorized Administrator Bleser to move forward with ordering and purchasing the identification items discussed.

e. Rulemaking
Administrator Bleser noted that the minutes of the Rulemaking meeting is in the meeting packet. She said that further discussion on this item will be handled as a Board Action agenda item. Administrator Bleser responded to Board questions about the cost-share program and also about the status of the fish barrier between Staring Lake and the Purgatory Creek Recreation Area. Administrator Bleser said that the fish barrier was put in just north of the Outdoor Center and on the south side of Staring Lake Parkway. She said that unfortunately with the high waters there was scouring at the bottom of the fish barrier and the carp made their way into the Purgatory Creek Recreation Area. She said that Dr. Sorenson proposed two scenarios: keep the carp in the Rec Area and capture them when they do their run, or remove the barrier and let the carp go back to Staring and capture them on their second run to the Rec Area. Administrator Bleser said that Dr. Sorenson is inclined to recommend the second scenario as opposed to letting the carp stay in the Rec Area.

There was further discussion of the fish barrier, its design, and its location. Administrator Bleser said that the District and the City of Eden Prairie need to work on developing the fish barrier, work on its design, and look at an alternative area for placement of the barrier.

Manager Crafton moved to accept the Administrator’s Report. Manager Wenc seconded the motion.

Upon a vote, the motion carried 5-0.

13. Board Action

a. Bylaws
Administrator Bleser stated that in the last Board packet, the Bylaws were presented. She recommended adoption of these Bylaws and explained that they would supersede the District’s current bylaws. Attorney Smith said that his understanding is that the new Bylaws have been prepared to repeal and replace the previous bylaws. He stated that the new Bylaws were in the District’s last meeting packet, so the District has met its requirement of providing 30-days’ notice. Manager Crafton moved that the District repeal its previous bylaws and replace them with the new Bylaws. Manager Bisek seconded the motion. Upon a vote, the motion carried 5-0.
b. **Purgatory Recreation Area Plan**

Administrator Bleser reminded the Board that as discussed at a previous meeting, it was discovered that both the City of Eden Prairie and the District have not fulfilled the requirements of their permits for the Area. She said that one of the requirements was creating a management plan of the Rec Area. Administrator Bleser said that the DNR has asked the City and the District to develop the plan by year-end. She explained that the DNR communicated that it is willing to help with the development of the plan.

Administrator Bleser said that the City of Eden Prairie asked if the District would be interested in sharing the cost of the plan development. She stated that in April when she notified the Board of this information, a cost estimate for the plan development was not available. She said the cost information is now available from the City and is included in the meeting packet. Administrator Bleser said that the proposal details a cost of $6,400 to the District for the first phase of the project and a cost of $5,000 for the second phase.

She said that the plan development approach is multi-stakeholder. She explained that due to the type of permit, the District and City are required to hold a public meeting with the landowners around the Rec Area as part of stakeholder involvement. Administrator Bleser recommended the District approve conducting phase 1 in partnership with the City of Eden Prairie and then evaluate action about phase 2.

Manager Casanova presented information on the matter from a May 22, 2013, e-mail from Jack Gleason of the DNR. Manager Casanova reported that the DNR said that the plan for moving those boards in and out of the weir needs to be done by October. Manager Casanova requested that when the District is notified by anyone of any violations of any law at all, whether that communication is directed to the Administrator, that the letter or communication be distributed to all Board members directly.

Advisor Bill Satterness asked about the City of Eden Prairie’s proposed share of the cost. Administrator Bleser said that the cost share between the City of Eden Prairie and District would be 50-50. Mr. Satterness asked if by approving the cost share on the plan development the District is setting a precedent that the District will share the costs 50-50 of potential projects coming out of that plan. President Forster said absolutely not.

Manager Crafton moved that the District approve moving forward with phase 1 at a cost of $6,400. Manager Bisek made a friendly amendment to say that if a plan from 2000 is found to be applicable, that it be the basis of the new plan in phase 1 and that by approving the funding of phase 1 the District in no ways binds itself to future cost share for the end product of this project. Manager Crafton approved the amendment and retracted her motion. Manager Bisek moved the retracted amended motion. Manager Crafton seconded the motion. **Upon a vote, the motion carried 5-0.**

c. **Stormwater Ponds**

Administrator Bleser said that this task order was submitted by CH2M HILL at a previous meeting and the District delayed the discussion to this meeting. Administrator Bleser outlined the task order and said that the work relies on utilizing the interns for the labor, so those labor costs are not part of the task order.

Manager Crafton asked what the value is of this proposed work. Administrator Bleser said that the value of looking at the stormwater ponds is to try to identify culprits that may be sources of pollutants to the District’s water resources. Administrator Bleser said that she has been thinking about whether the District could monitor ponds that have been identified by data in the UAAs as possible sources of phosphorous, which would be in addition to replicating the monitoring of the 61 ponds that have been monitored in the past. She said that she sees the District’s direction with its stormwater work as adding on to its knowledge data base in terms of which ponds are sources of pollutants, going out in the field and taking samples, and
Administrator Bleser said that her vision deviates from the task order in terms of the idea of modeling the Rapid Assessment Protocol. She explained that she thinks the District doesn’t have enough data to model yet. She said it would be valuable for the District to know if some of those stormwater ponds are big loaders to the District’s natural systems and with that knowledge the District could take the next step of discussing what the District could do to remediate those sources. She said that it is up to the Board if it wants to move forward with the proposed task order, but she said that she sees the cost as high given that the District is providing the staff for the work.

There was lengthy discussion of the past stormwater pond sampling, the goals of gathering further data, the goals of the task order, and the time limitations on putting together another task order to bring in front of the Board.

Manager Crafton moved that the Board not approve Task Order No. 2 as detailed in the meeting packet and that the Board utilize current staff to do the stormwater pond sampling. Manager Wencl seconded the motion. Upon a vote, the motion carried 5-0.

d. **Minor Plan Amendment/ Rulemaking**

Attorney Smith explained that the purpose of the Minor Plan Amendment is consistent with proceeding with the District’s regulatory program and reinstating a permit program and will, in the front of this process, put the District’s stakeholder on notice that the District is changing its approach from the approach listed in its current Plan. He said that the proposed amendment was presented to the task force, who contributed to the current wording. Attorney Smith said that staff has prepared the Resolution Adopting Watershed Management Plan Regulatory Program Amendment, which is being handed out. He noted that the Board previously approved undertaking a Minor Plan Amendment for the cost share program and staff had recommended that both changes get included in the same Minor Plan Amendment process.

Manager Bisek recommended a change to the Proposed Regulatory Plan Amendment, section 7.1 “Vision” so that “restore, protect, and manage the water resources in the District” replaces the phrase “sustain the achieved conditions.” There was a discussion of the recommendation. Manager Bisek moved to strike the words “sustain achieved conditions” and to insert “improve, protect, and manage the water resources in the District.” Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

Manager Crafton moved to adopt the Resolution Adopting Watershed Management Plan Regulatory Program Amendment, and she read the last two paragraphs of the resolution. Manager Wencl seconded the motion. Upon a roll call vote, the motion carried 5-0.

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14. Manager’s Discussion

a. Floodplain Rule

Administrator Bleser said that the meeting packet includes the information on floodplain management drainage alterations as discussed as part of the rulemaking meeting. She said that she wanted to make the Board aware of what was discussed. Attorney Smith commented that the District is not acting on this issue tonight, and he and Administrator Bleser will keep the Board updated throughout the rulemaking process.

b. Upcoming Board Agenda

Administrator Bleser announced that the next Board meeting will be on Monday, June 24\textsuperscript{th}. She said that Barr Engineering and Wenck will present on the UAA updates at that meeting. President Forster commented that he will be out of town in August on the date of the Board’s regular meeting and requested that the meeting date be changed.

c. Budget Workshop

Administrator Bleser said that the Board needs to do a budget workshop and could do it in August. President Forster asked Administrator Bleser to look at the calendar and bring up the Board’s meeting and workshop schedule again at the Board’s June 24\textsuperscript{th} meeting.

15. Upcoming Events

a. Native Plan Market Fair – Wednesday, June 5, 2013, 3:00 p.m. - 7:00 p.m., Minnetonka City Hall

b. Raingarden and Beyond Workshop – Monday, June 17, 2013, 6:00 p.m. – 9:00 p.m., Eden Prairie Outdoor Center

c. Board Meeting – Monday, June 24, 2013, 7:00 p.m., Eden Prairie City Hall

16. Adjournment

There being no further business, Manager Wencl moved to adjourn the meeting. Manager Crafton seconded the motion. \textit{Upon a vote, the motion carried 5-0.} The meeting adjourned at 9:01 p.m.

Respectfully submitted,

____________________________
Ken Wencl, Secretary
MEETING MINUTES
Riley-Purgatory-Bluff Creek Watershed District
June 24, 2013, Board of Managers Monthly Meeting

PRESENT:
Managers: Mary Bisek
Mike Casanova, Vice President
Jill Crafton, Treasurer
Perry Forster, President
Ken Wenc, Secretary
Administrator: Claire Bleser
Staff: Jason Carroll, Engineer (CH2M HILL)
Chuck Holtman, Attorney (Smith Partners)
Recorder: Amy Herbert
Other attendees: Lindsey Albright, RPBCWD
Kris Langlie, CAC and Liesch Associates
Jeff Anderson, RPBCWD
Chris Meehan, Wenck Associates, Inc.
Przemek Bajer, UMN
Bill Satterness, CAC
Joe Bischoff, Wenck Associates, Inc.
Bob Shurson, CAC
Jim Bracke, Citizen Advisory Committee
(CAC)
Scott Sobiech, Barr Engineering Co.
Eric Johnson, Red Rock Lake
Peter Sorensen, UMN
Jennifer Koehler, Barr Engineering Co.
Laurie Susla, CAC and LLCA
Janna Kieffer, Barr Engineering Co.

1. Call to Order

President Forster called the meeting to order at 7:04 p.m. on Monday, June 24, 2013, in the Heritage Room at Eden Prairie City Center, 8080 Mitchell Road, Eden Prairie, MN 55344.

2. Approval of the Agenda

President Forster requested the addition of an agenda item to terminate Task Order No. 35 regarding Rice Marsh Lake because it is a task order authorizing CH2M HILL to do the work. Manager Bisek requested the addition of a discussion of creating a cost share grant policy that would encourage CAC members and District Board members to apply. CAC Advisor Bill Satterness said that the Red Rock Lake Association would like to bring in front of the Board an item about weed harvesting under agenda item 14 – Manager’s Discussion – instead of under item 8 – Hearing and Discussion of Matters of General Public Interest – as is currently listed in the agenda. He said that if the issue is presented under item 8 it is subject to the five-minute time limit. The Board discussed Mr. Satterness’ request. Manager Crafton moved to approve the agenda as amended with the two additions requested by the Board and with the change in agenda order for Red Rock Lake Association’s item. Manager
Wencel seconded the motion with a friendly amendment to the motion, saying that the Red Rock Lake Association item could remain under item 8, but the Board would waive the maximum five-minute time allocation. Manager Crafton agreed to the friendly amendment. Upon a vote, the motion carried 5-0.

3. Presentation of Lake Lucy/ Lake Ann UAA (Use Attainability Analysis)

a. Lake Lucy/ Lake Ann UAA Presentations

Janna Kieffer, senior water resource engineer at Barr Engineering Company, summarized that the goal of the UAA (Use Attainability Analysis) update was to build on past efforts to identify water quality improvement projects within the Lake Lucy and Lake Ann watersheds in order to help the District achieve the applicable goals and standards.

Ms. Kieffer used a PowerPoint Presentation to illustrate the Lake Lucy and Lake Ann watershed and to depict how water flows into the lakes. She provided details on the lakes’ physical characteristics. Ms. Kieffer noted that Lake Lucy is approximately 90 acres in size and has approximately 1,000 acres draining to it and that Lake Ann is approximately 120 acres and has about 250 acres draining into it. She pointed out that the ratio of the lake to the area draining into the lake for Lake Ann is much smaller compared to that ratio for Lake Lucy. She explained that the bigger ratio presents a bigger challenge in terms of water quality.

Ms. Kieffer summarized Barr Engineering’s UAA Update project approach, discussed historic water clarity and standards and historic total phosphorous levels in Lake Ann and Lake Lucy, and provided detailed numbers regarding concentrations and standards. She remarked that Lake Lucy’s depth puts it right on the border of whether or not it would be categorized as a shallow lake. She said that she spoke about this designation of Lake Lucy with the MPCA (Minnesota Pollution Control Agency), who communicated that it is leaning toward calling Lake Lucy a shallow lake. Ms. Kieffer said that the designation would be good news to the District because the standards are different for shallow lakes compared to deep lakes. She described the differences in the standards and the impact that the change in designation would have in regard to Lake Lucy meeting standards. Ms. Kieffer and Ms. Koehler, a water resources engineer with Barr Engineering Company, answered questions about the data and information presented.

Ms. Kieffer reported that Barr Engineering staff met with the City of Chanhassen about future plans for the watershed. She presented a slide showing areas of the watershed that are expected to develop or redevelop by 2030. She explained that Barr Engineering put this information into the watershed model to see how it would affect water quality. Ms. Kieffer also explained how Barr entered into the model assumptions that the District in the future would have rules in place similar to the MIDS (Minimum Impact Design Standards) program rule on volume, which assumes that 1.1 inches of rain would be captured off of impervious surface. Ms. Kieffer described how the modeling scenario showed that degradation from future development would be mitigated quite a bit by applying stormwater rules.

Manager Casanova asked for information relating the future assumptions based on the updated UAA versus the previous UAAs. Ms. Kieffer agreed to find that and noted that a difference in the previous UAA versus the UAA update would result from the models’ use of different future assumptions of use of stormwater ponds compared to the more recent assumption of stormwater rules.

Ms. Kieffer summarized the sources of phosphorous to Lake Lucy and identified BMPs (Best Management Practices) for water quality improvement. She said that one possible BMP would be located
just south of Lake Lucy Road and on the west side of the lake. She explained that it would utilize iron-enhanced sand filtration to remove the dissolved phosphorous from a certain area. Ms. Kieffer showed another possible BMP that would be put in on the east side of the lake and that would use a technique called spent lime. She explained that spent lime binds with phosphorous. She said that the alum treatment BMP would address the internal load of phosphorous in Lake Lucy. She pointed out that the slide shows the estimated cost of the alum treatment, but she wanted the District to be aware that if the District does an alum treatment and the water clarity improves greatly, there is a risk that the plant community will go crazy. Ms. Kieffer said that if the District is interested in pursuing the alum treatment BMP, then the District would want to do a curlyleaf pondweed management plan before implementing the treatment in order to be ready for the response by the plant community.

Manager Casanova asked if there are other possibilities besides alum for treating internal phosphorous loading. Ms. Kieffer responded that there are other treatments. She and Scott Sobiech, senior water resource engineer at Barr Engineering Company, described some of the other treatment techniques. Manager Casanova said that he raises the question because he is concerned that there may be an alum TMDL (Total Maximum Daily Load) coming down the pike. Ms. Kieffer and Mr. Sobiech provided more detail on the process and the estimated cost of each proposed BMP, and they reported on the anticipated results of different combinations of BMP scenarios. They responded to questions.

Ms. Kieffer and Mr. Sobiech summarized the findings of the UAA update and gave recommendations based on the findings. They recommended that the District continue monitoring water quality, aquatic plants, and fisheries of Lake Ann and Lake Lucy to make sure that these systems stay in check. They recommended potentially discontinuing the operation of the aeriation of Lake Lucy based on the benefits versus the cost and on the fact that aeriation may not be necessary in order to keep the fish population healthy. Regarding Lake Ann Ms. Kieffer said that it meets the water quality goals of the state and the District, but future development will degrade the water quality somewhat. Based on the findings on the UAA update, Ms. Kieffer recommended for Lake Ann that the District implement stormwater rules that minimize the impact from development and that the District improve the quality of Lake Lucy as a protection strategy for Lake Ann. Manager Casanova commented that he believes that the important thing is to keep the dissolved phosphorous out of Lake Ann. President Forster recommended that tonight the Board hear and receive the UAA update reports and then set a future agenda item to discuss the strategies.

Regarding Lake Lucy Ms. Kieffer reported that under existing conditions it meets the MPCA’s water quality goals for a shallow lake based on the 10-year average, but it doesn’t meet the District’s goal as presented in its 10-year plan. She said that under future development conditions, the water quality of Lake Lucy will degrade. She recommended that the District implement stormwater rules that require runoff volume reduction, implement watershed BMPs targeting dissolved phosphorous, and utilize iron-enhanced sand filtration at Lake Lucy Road and spent lime treatment at Utica Lane, and implement alum treatment on Lake Lucy.

### 4. Presentation of Lake Susan UAA

#### a. Lake Susan UAA Presentation

Chris Meehan, Principal Engineer at Wenck Associates, Inc., said that he is presenting the UAA (Use Attainability Analysis) update for the downstream water, Lake Susan, located in the City of Chanhassen. Mr. Meehan provided a PowerPoint presentation to illustrate the information. He summarized that he would provide an overview of the current status of the lake and information on previous studies, analyses,
solutions, and next steps.

He noted that the Lake Susan UAA was done in 1999, so a lot of the data used was from 1997 and 1998. He highlighted characteristics of the lake. Mr. Meehan showed a slide depicting the watershed in 2011 and noted changes, primarily growth such as Highway 212, that have happened in the watershed since the previous UAA.

Mr. Meehan reported that based on the data points, Lake Susan exceeds the amount of total phosphorous for both the deep lake and the shallow lake standards. He said that now in the management plan the lake is characterized as a deep lake. He said that there needs to be reductions in total phosphorous and an implementation plan that addresses the loading. Mr. Meehan said that Chlorophyll A is about the same situation as the total phosphorous, and he reported that clarity is showing improvement.

Mr. Meehan summarized previous studies that had been undertaken and the studies’ findings. He discussed the need to incorporate the existing studies and modeling with information on recent activities, such as the removal of carp, monitoring data, and cost of possible solutions.

He went into more detail about standards and said that Wenck is working with Barb Peichel at the MPCA, getting the data that the MPCA used in its impairment listing process for Lake Susan. He said that the next step would be to submit a request with the data submittal to the MPCA that Lake Susan be considered a shallow lake.

Mr. Meehan explained the phosphorous loading sources to Lake Susan, including an internal load of 39%, and said that the annual total phosphorous load into Lake Susan is 727 pounds per year.

Mr. Meehan described the five projects that Wenck identified as near-term projects and included details on project cost, reduction in pounds of total phosphorous per year, and efficiency in terms of dollar cost per pound of total phosphorous removed:

1. Lake Susan Hills West Park Wetland Restoration;
2. Lake Susan Park Pond Enhancement;
3. Essex Road Pond Enhancement;
4. Lake Susan Alum Treatment; and,
5. Target Pond Enhancement.

He spoke about utilizing collaborative solutions and described how multiple partners would be needed to implement projects and how partners would be important in terms of redevelopment and retrofitting. Mr. Meehan explained about management strategies and said that this is where rule-making will come into play in terms of planning for future development. He described other management strategies such as stabilizing stream corridors, coordinating with public entities such as with the City of Chanhassen, which has communicated that it is excited to work on these projects, education outreach, such as being open to community rain gardens, and continued monitoring.

Mr. Meehan stated that Wenck’s next steps are to get the Board’s feedback on the potential projects and approaches and to move forward with finalizing the UAA update report by July so that Administrator Bleser can move ahead with grant applications. He responded to questions. Manager Wencl requested that Wenck look closer at the wetland going into Lake Susan because there is a place down close to the lake
where he thinks an iron-filing dam could be placed. Manager Wencl asked that the final report identify the location that Wenck thinks would be a proper place for an iron-filing dam.

President Forster thanked the presenters for their time and the information.

5. Reading and Approval of Minutes

President Forster asked if there were any clarifications or changes requested to the minutes of the Board’s May 2, 2013, meeting. Managers Bisek, Casanova, and Crafton requested revisions. Manager Crafton moved to accept as amended the minutes of the May 2, 2013, regular board meeting. Manager Wencl seconded the motion. Upon a vote, the motion carried 5-0.

President Forster asked if there were any clarifications or changes requested to the minutes of the Board’s June 5, 2013, meeting. CAC Advisor Bill Satterness requested two sentences be added to the Administrator’s Report in the June 5th minutes. He handed out a copy of the sentences he requested be added and said that they had been left out of the draft minutes. Manager Casanova requested two changes to the June 5th minutes. The Board discussed the additions to the minutes requested by Mr. Satterness. Manager Crafton moved that the Board defer the approval of the June 5th meeting minutes until the next RPBCWD meeting and direct the recorder to listen to the June 5th meeting recording and to resubmit the draft minutes. Manager Wencl seconded the motion. By call of roll, the motion carried 4-1.

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6. Correspondence

a. **RPBCWD Interns**
   Administrator Bleser introduced the RPBCWD interns Jeff Anderson and Lindsey Albright.

b. **Blue Thumb Request**
   Administrator Bleser announced that the District received a request from Blue Thumb for 2014 funding and the request will be on the District’s next meeting agenda.

c. **2013 Clean Water Summit**
   President Forster announced that in the meeting packet there is information about the 2013 Clean Water Summit in September.
7. Citizen Advisory Committee

Mr. Satterness reported that the CAC is looking forward to making recommendations on the grant program. Mr. Satterness provided a two-sided handout and pointed out that one side that contained two position statements that the CAC voted on and approved. He read the position statements: The Committee understands that the purpose of this District is to manage water resources; and, We believe that management should include consideration of those water bodies' usability for swimming, fishing, and boating.

Mr. Satterness said he is bringing those two position statements to the Board's attention in his role as the Chair of the CAC because some of the CAC members were surprised by something that they learned at the CAC meeting. He said that the points on the other side of the paper are his personal concerns that he is bringing in front of the Board. He mentioned an e-mail that he received on June 11th from the Administrator stating that harvesting for navigational purposes and for recreational value does not fit in the District's 10-year Plan and does not meet any of the District's goals. Mr. Satterness brought up further communication with the Administrator from June 17th, and then he provided his version of what the Administrator had communicated regarding the District's goals.

Mr. Satterness asked the Board members to reaffirm their commitment to some of the statements in the District's 10-Year Plan. He said that the question that surprised some of the CAC members is whether harvesting is within the purview of this District and is in the 10-year Plan. He remarked that the District looks at UAA's to decide what to do, and he said that in past years when the Board has authorized harvesting programs it has expressly said that the purpose of the harvesting was for navigation. Mr. Satterness read excerpts from the District's 10-year Plan and said that those excerpts indicate that recreational use is part of what the District should be concerned about.

President Forster responded that within the District there are lakes of various qualities. He said that Red Rock Lake is classified differently in terms of those qualities than Lake Susan, Lake Ann, or Lake Riley, for example. President Forster said that the intention at the time of writing the Plan was that the District wanted to adapt to do what is best for a particular lake based upon the classifications of that lake, which includes what the MPCA and the DNR said those classifications are. He said that the MPCA does not say that the District should be cutting navigation channels in all of the lakes. Mr. Satterness commented that the District's goal is to manage water resources, which is a very broad charge. He said that one of the things to consider is usability for what people want to do and he has seen it in the 10-year Plan but he heard something different. He expressed that this is a fundamental question and he would like to make sure that everyone here agrees on why they are here.

Manager Crafton commented that Mr. Satterness' definition of recreational uses is not one that she is familiar with. Board members and CAC members added comments. Mr. Satterness repeated his question on whether the District going to consider recreational uses or not, and he said that if not then the District better rewrite its 10-year Plan and be consistent in its actions.

Administrator Bleser reminded the Board that bullet points on the handout from Mr. Satterness were his personal points and not CAC-approved points. CAC Advisor Eric Johnson said that everyone on the CAC was concerned when Administrator Bleser said to the CAC that the ability to navigate on a lake is not a consideration. Manager Wenc asked if that is what the Administrator said or if she said that the intent of the District, when it started getting into this weed harvesting five years ago, was to try to go in there and try to reduce various plants. He said that now the District is hearing that it is not doing enough because boaters can't move around. He said that the Board needs to decide if it is going to stay with its goal of making water resources better or if it is going to take on making all of the lakes so that people can navigate around and go for rides on their boats. Manager Wenc said that they are two different things. He added that if the boat ramp to Red Rock Lake needed repairs, the residents
would go to its City with the issues. Manager Wencl said that he doesn't think that Mr. Satterness is totally on track now thinking that the watershed should take care of the navigation problem when, from Manager Wencl's perspective, it is a City issue. Manager Wencl asked Mr. Satterness and Mr. Johnson if they had gone in front of the Eden Prairie City Council with the navigation issue. Mr. Johnson said no, they started here with the District.

Manager Casanova said that Manager Wencl brings up a valid point and asked if the issues of water quality and navigation are connected. Manager Casanova said that the presentations on the UAAs were very pointed and showed that the UAAs had a very specific goal, and that goal was to meet water quality standards based on MPCA requirements. He said that in contrast, the District's goal has always been citizen goals, because the District knows that if it achieves its citizen goals, it will achieve the MPCA goals. He added that the District has always shot far beyond the MPCA goals, and he said that water clarity and navigability of lakes are the big issues in many of the District lakes and the District needs to be cognizant of it.

Administrator Bleser listed some of the goals listed in the District's 10-year Plan. She said that in regard to navigation, the District's Board approved harvesting for curlyleaf pondweed but did not approve a task order for harvesting for navigational purposes. She said that therefore asking the Board for a permit for navigational purposes is not do-able because there has not been Board action in that respect. Administrator Bleser said that the District is meeting all of its goals for Red Rock Lake per the goals listed in the District's 10-year Plan. She mentioned that the harvesting acreage for Red Rock Lake was smaller this year because through the delineation conducted by a water scientist, the acreage to be treated was lower than the previous years. She said that the reduction this year in acreage of curlyleaf pondweed harvesting is a good sign because it indicates a reduction in curlyleaf pondweed.

Administrator Bleser said that the District's 10-year Plan doesn't outline navigation purposes. She said that the goals for Red Rock Lake outline water quality and native fish and plant populations. She stated that the District is right in-line with the DNR’s goals for this lake. She said that now, looking at the District’s 10-year Plan, the Red Rock UAA, and other data, she doesn’t see navigation being highlighted as a goal for Red Rock Lake or for any of the District’s lakes. There was a discussion about navigation as a recreational issue versus a water quality and water science issue.

Mr. Johnson related his difficulties with getting his pontoon boat out onto Red Rock Lake. He said that he is asking the District to harvest the amount of weeds that the District originally harvested. Mr. Satterness noted that he sent a slide presentation to the Board members detailing six excerpts of previous District task orders of weed harvesting in Red Rock Lake and Mitchell Lake where navigation was the purpose and justification for the harvesting. Administrator Bleser said that based on the District’s 10-year Plan, she would not encourage the District to have a navigational harvesting occur since the Plan does not justify it and additionally, the District is meeting all of its goals for Red Rock Lake. She stated that navigation would be an additional goal, which is not identified in the District’s 10-year Plan.

Manager Wencl commented that perhaps the District got itself into a trench by trying to help out and now the trench is getting deeper all of the time. He recommended that Mr. Johnson and Mr. Satterness go to the proper place, which is the City, and make their request for help. Mr. Satterness commented that the word recreation is in the 10-year Plan, and he said that navigation is a type of recreation. He read aloud excerpts from the Plan. There was discussion about the concept of recreation.

Administrator Bleser commented that she does not have supporting documentation in the District’s 10-year Plan to recommend that the Board pursue a navigational permit on Red Rock Lake. Manager Casanova suggested that the Board approach the City of Eden Prairie with a cost-sharing proposal between the City and the District for
weed harvesting on Red Rock Lake. Administrator Bleser replied that based on the District’s goals and 10-year Plan, the District is meeting its objectives for Red Rock Lake, so this issue becomes a recreational one, which she feels is more suitable for the City of Eden Prairie to deal with. President Forster said that he would prefer to see if the District can help out with a solution through the City of Eden Prairie. There was further discussion of the issue and more comments made by managers and CAC Advisors.

Manager Wencl moved that this issue be tabled for this year so that more information could be gathered and more questions could be answered. Manager Crafton seconded the motion.

Attorney Holtman said he thought it important for the Board to think about structure and about how the Board programs its activities and funding for those activities. He said it is really a policy topic for the Board in terms of what its role is in aquatic plant harvesting, invasive or otherwise, and how it competes against the District’s other priorities. He said that the policy topic extends to a consideration of how much of the District’s funds should be spent on harvesting and how the District would manage such a program in light of competing requests from different sources. Attorney Holtman said it is up to the Board to decide the District’s priorities and how it will work toward those priorities, which is the process of the District’s 10-year Plan. He said that the Plan is broad and it doesn’t make sense to parse the words in it, because the Plan sets the broad priorities and it is through the processes that the District follows that the policies are set and that program the budgeting process. He said that it sounds like there is a policy question about the District’s role. Attorney Holtman said that his concern from a structural perspective that the Board is being asked right now to make a financial commitment on something that the District isn’t sure about how it fits into the District’s overall approach. He said that ideally the Board would develop its views on the topic and then give direction to its administrator to develop policy through the process of coming to the Board with an annual workplan and budget. Attorney Holtman added that if the issue is in the Plan sufficiently already, then the Board could proceed from there, but if the issue isn’t in the Plan sufficiently and the Board decides that it is an important thing, the District could chose to amend its Plan. He recommended that the District approach this from a coherent view and not on a case-by-case basis.

There was more discussion of the issues.

President Forster called the question on the motion on the table. The motion carried 4-1 [Managers Bisek, Crafton, Forster, and Wencl voted in favor and Manager Casanova voted against.] Mr. Johnson thanked the Board for discussing this issue.

8. Hearing and Discussion of Matters of General Public Interest

   a. Red Rock Lake Association: Weed Harvesting
      See discussion under agenda item 7 - Citizen Advisory Committee.

9. Treasurer’s Report

Manager Crafton said that the report is in the meeting packet. She noted that the payables will be reduced by $93.06 and $81.25 for payment to the interns for the June amount. Manager Crafton moved to accept the Treasurer’s Report as submitted. Manager Casanova seconded the motion. Upon a vote, the motion carried 5-0.

Manager Crafton moved to approve payment of the District’s bills. Manager Wencl seconded the motion. Upon a vote, the motion carried 5-0.
10. Engineer’s Report

Engineer Carroll said that CH2M HILL has been working on the District Engineer transition and had a great meeting this morning with Administrator Bleser and Scott Sobiech. He said that CH2M HILL is working on wrapping up projects, and he reported that the model is on track.

Manager Crafton moved to accept the Engineer’s Report. Manager Casanova seconded the motion. Upon a vote, the motion carried 5-0.

11. Attorney’s Report

No Attorney’s Report

12. Administrator’s Report

a. Data Collection and Monitoring
   Administrator Bleser reported the data collection and monitoring has been doing great. She provided a few updates on the program.

b. LID Symposium
   Administrator Bleser announced explained that the LID (Low-Impact Design) Symposium is from August 18th to August 21st in St. Paul and that early registration ends July 15th.

Manager Crafton moved to accept the Administrator’s Report. Manager Bisek seconded the motion. Upon a vote, the motion carried 5-0.

13. Board Action

a. Carver County Soil and Water Conservation District
   Administrator Bleser stated that at a previous Board meeting the Board talked about partnering with the Carver County Soil and Water Conservation District (SWCD), but the Board did not take action to enter into that partnership. She requested that the Board move to approve entering into a partnership with the Carver County SWCD for technical assistance at a cost not to exceed the $30,000 identified in the cost share grant. She explained that this is for the Carver County SWCD to go out and do site assessment as part of the District’s cost share grant program. There was a short discussion of the Carver County SWCD’s proposed work and the grant program. Manager Crafton moved to approve entering into a contract with the Carver County SWCD for an amount not to exceed $30,000 and for the SWCD to provide technical assistance for the District’s cost share grant program. Manager Bisek seconded the motion. Upon a vote, the motion carried 5-0.

b. Termination of Task Order #35 and Task Order #5
   President Forster clarified that the District is not suspending the project but since it is being done under the auspices of CH2M HILL, which completes its role of District Engineer on July 31st, this action is procedural. He said that Administrator Bleser will come back with a new task order to authorize the project being carried out by the new District Engineer. Manager Crafton moved to approve cancelling Task Order #35. Manager Bisek seconded the motion. Upon a vote, the motion carried 5-0.

Administrator Bleser explained that the District is cancelling Task Order #5 with CH2M HILL for data
collection. Manager Crafton moved that the District Administrator be authorized to terminate with CH2M HILL Task Order #5 in accordance with the service agreement. Manager Crafton read additional language for the action. Manager Bisek seconded the motion. Engineer Carroll noted that the action would cancel the subcontracts with CH2M HILL and those subcontracts would go directly to the District through Administrator Bleser instead of through CH2M HILL. Upon a vote, the motion carried 5-0.

c. **Website Development**
   Administrator Bleser said that the website is not user friendly and is on a system that is not easy for staff to update and manage. She said that the service provider who runs the website charges the District $1,000 per month, which by industry standards is extremely steep. She stated that she would like to do a request for proposals to the District’s technology pool regarding re-doing the District’s website and with a limit to the funding between $5,000 and $10,000. She said that the submittals also will need to identify the operating costs involved in running the website.

   Manager Crafton moved to approve sending out the RFP to the District’s technology pool for the redevelopment of the District website at a cost in the range of $5,000 to $10,000. Manager Wencl seconded the motion. Upon a vote, the motion carried 5-0.

   **14. Manager’s Discussion**

   a. **Rulemaking**
      Administrator Bleser pointed out that the next rulemaking meeting is next Wednesday, and she provided an update on what the rulemaking group has been reviewing. CAC Advisor Laurie Susla asked when the rules would be ready. Administrator Bleser said that the timeline previously presented to the Board anticipated February 2014, but that timeline didn’t account for groundwater rules, which are now going to be incorporated. She said that the rules would be ready likely after February.

   b. **Upcoming Board Agenda**
      Manager Bisek said that she would like the Board to consider a policy on who is encouraged to apply for cost share grants. She said that the grants are a good outreach opportunity for citizen advisors and managers to have demonstration projects. She said that she thinks that it would be good for the Board to have a policy to identify who can or can’t apply and to be able to encourage those who can. She requested that Administrator Bleser create a draft policy for Board review at the Board’s next meeting.

   c. **Budget Workshop**
      Administrator Bleser recommended that the District’s Budget Workshop take place on Thursday, August 8th at 5:00 p.m. with the District’s regular meeting to follow at 7:00 p.m. Manager Crafton moved to set the District’s Budget Workshop at 5:00 p.m. on August 8th and the District’s regular meeting to follow at 7:00 p.m. Manager Wencl seconded the motion. Upon a vote, the motion carried 5-0. Manager Casanova encouraged the Board to try to maintain its future monthly meetings on its regular meeting day of Wednesday because that it the day that people expect the District to be meeting.

   **15. Hearing and Discussion of Matters of General Public Interest**

   CAC Advisor Laurie Susla apologized for not bringing this up earlier in the agenda for discussion of matters of general public interest. President Forster noted that the agenda had gotten sidetracked with the CAC discussion. Ms. Susla said that she would like to encourage the managers, as the District moves into its budget process, to take a look at priorities and the funding for those priorities. She said that as a
member of the Lotus Lake Conservation Alliance (LLCA), she has been asked by the group to ask for an extension of time on the AIS (Aquatic Invasive Species) inspection program that is going on in the Chanhassen lakes. She said that the LLCA proposes that the District, the City of Chanhassen, and the LLCA each put in $7,000, which would fund the AIS inspection program for eight additional weeks. She said that she knows that there isn’t any more funding available from the DNR (Department of Natural Resources) for this proposed inspection extension. Manager Wencl said that he thinks that the District needs to get a report on what has been happening with the inspections this summer. Ms. Susla said that it would be helpful to have that information, and she said it would be helpful if the District would directly ask for that information.

16. Upcoming Events

a. **Cost-share Deadline:** July 12, 2013

b. **Citizen Advisory Committee:** July 15, 2013, 6:30 p.m., Eden Prairie City Hall

c. **Budget Workshop:** August 8, 2013, 5:00 p.m.

16. Adjournment

There being no further business, Manager Crafton moved to adjourn the meeting. Manager Bisek seconded the motion. **Upon a vote, the motion carried 5-0.** The meeting adjourned at 9:56 p.m.

Respectfully submitted,

____________________________
Ken Wencl, Secretary
July 9, 2013

Claire Bleser  
Riley Purgatory Bluff Creek Watershed District  
c/o City of Eden Prairie  
8080 Mitchell Road  
Eden Prairie, MN 55344

We are pleased to confirm our understanding of the services we are to provide the Riley Purgatory Bluff Creek Watershed District for the year ended December 31, 2013. The scope of services includes the following:

- We will audit the financial statements of the governmental activities and each major fund, including the related notes to the financial statements, which collectively comprise the basic financial statements of Riley Purgatory Bluff Creek Watershed District as of and for the year ended December 31, 2013. Accounting standards generally accepted in the United States of America provide for certain required supplementary information (RSI), such as budgetary comparison schedules, to supplement the Riley Purgatory Bluff Creek Watershed District’s basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. As part of our engagement, we will apply certain limited procedures to the Riley Purgatory Bluff Creek Watershed District’s RSI in accordance with auditing standards generally accepted in the United States of America. These limited procedures will consist of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management’s responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We will not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance. The following RSI is required by generally accepted accounting principles and will be subjected to certain limited procedures, but will not be audited:

  - Budgetary Comparison Schedule(s)
The following other information accompanying the financial statements will not be subjected to the auditing procedures applied in our audit of the financial statements, and our auditor's report will not provide an opinion or any assurance on that other information:

- Introductory section
- Other information

- Preparation, copying and binding of the Annual Financial Report.
- State Legal Compliance Audit

**Audit Objectives**

The objective of our audit is the expression of opinions as to whether your basic financial statements are fairly presented, in all material respects, in conformity with generally accepted accounting principles. Our audit will be conducted in accordance with auditing standards generally accepted in the United States of America and the minimum procedures for auditors as prescribed by M.S. 6.65, and will include tests of the accounting records and other procedures we consider necessary to enable us to express such opinions. We cannot provide assurance that unmodified opinions will be expressed, circumstances may arise in which it is necessary for us to modify our opinions or add emphasis-of-matter or other-matter paragraphs. If our opinions on the financial statements are other than unmodified, we will discuss the reasons with you in advance. If, for any reason, we are unable to complete the audit, or are unable to form or have not formed opinions, we may decline to express opinions or to issue a report as a result of this engagement.

**Management Responsibilities**

Management is responsible for the basic financial statements and all accompanying information as well as all representations contained therein. You agree to assume all management responsibilities for any nonattest services we provide; oversee the services by designating an individual, preferably from senior management, with suitable skill, knowledge, or experience; evaluate the adequacy and results of the services; and accept responsibility for them.

Management is responsible for establishing and maintaining effective internal controls, including monitoring ongoing activities; for the selection and application of accounting principles; and for the preparation and fair presentation of the financial statements in conformity with U.S. generally accepted accounting principles.
Management is also responsible for making all financial records and related information available to us and for the accuracy and completeness of that information. You are also responsible for providing us with (1) access to all information of which you are aware that is relevant to the preparation and fair presentation of the financial statements, (2) additional information that we may request for the purpose of the audit, and (3) unrestricted access to persons within the government from whom we determine it necessary to obtain audit evidence.

Your responsibilities include adjusting the financial statements to correct material misstatements and confirming to us in the representation letter that the effects of any uncorrected misstatements aggregated by us during the current engagement and pertaining to the latest period presented are immaterial, both individually and in the aggregate, to the financial statements taken as a whole.

You are responsible for the design and implementation of programs and controls to prevent and detect fraud, and for informing us about all known or suspected fraud affecting the government involving (1) management, (2) employees who have significant roles in internal control, and (3) others where the fraud or illegal acts could have a material effect on the financial statements. Your responsibilities include informing us of your knowledge of any allegations of fraud or suspected fraud affecting the government received in communications from employees, former employees, regulators, or others. In addition, you are responsible for identifying and ensuring that the entity complies with applicable laws and regulations.

With regard to the electronic dissemination of audited financial statements, including financial statements published electronically on your website, you understand that electronic sites are a means to distribute information and, therefore, we are not required to read the information contained in these sites or to consider the consistency of other information in the electronic site with the original document.

As part of our engagement, we may propose standard, adjusting, or correcting journal entries to your financial statements. You are responsible for reviewing the entries and understanding the nature of any proposed entries and the impact they have on the financial statements.
Audit Procedures – General

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; therefore, our audit will involve judgment about the number of transactions to be examined and the areas to be tested. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We will plan and perform the audit to obtain reasonable rather than absolute assurance about whether the financial statements are free of material misstatement, whether from (1) errors, (2) fraudulent financial reporting, (3) misappropriation of assets, or (4) violations of laws or governmental regulations that are attributable to the entity or to acts by management or employees acting on behalf of the entity.

Because of the inherent limitations of an audit, combined with the inherent limitations of internal control, and because we will not perform a detailed examination of all transactions, there is a risk that material misstatements may exist and not be detected by us, even though the audit is properly planned and performed in accordance with U.S. generally accepted auditing standards. In addition, an audit is not designed to detect immaterial misstatements, or violations of laws or governmental regulations that do not have a direct and material effect on the financial statements. However, we will inform the appropriate level of management of any material errors, any fraudulent financial reporting, or misappropriation of assets that come to our attention. We will also inform the appropriate level of management of any violations of laws or governmental regulations that come to our attention, unless clearly inconsequential. Our responsibility as auditors is limited to the period covered by our audit and does not extend to any later periods for which we are not engaged as auditors.

Our procedures will include tests of documentary evidence supporting the transactions recorded in the accounts, and may include direct confirmation of receivables and certain other assets and liabilities by correspondence with selected individuals, funding sources, creditors, and financial institutions. We may request written representations from your attorneys as part of the engagement, and they may bill you for responding to this inquiry. At the conclusion of our audit, we will require certain written representations from you about the financial statements and related matters.

Audit Procedures – Internal Controls

Our audit will include obtaining an understanding of the entity and its environment, including internal control, sufficient to assess the risks of material misstatement of the financial statements and to design the nature, timing, and extent of further audit procedures. An audit is not designed to provide assurance on internal control or to identify deficiencies in internal control. However, during the audit, we will communicate to management and those charged with governance internal control related matters that are required to be communicated under AICPA professional standards.
Audit Procedures - Compliance

As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we will perform tests of the Riley Purgatory Bluff Creek Watershed District’s compliance with the provisions of applicable laws, regulations, contracts, and agreements. However, the objective of our audit will not be to provide an opinion on overall compliance and we will not express such an opinion.

The Minnesota Legal Compliance Audit Guide for Political Subdivisions requires that we test whether the auditee has complied with certain provisions of Minnesota Statutes. Our audit will include such test of the accounting records and other procedures as we consider necessary in the circumstances.

Audit Administration, Fees and Other

We understand that your employees will prepare all cash or other confirmations we request, schedules per the client to provide list, and will locate any documents selected by us for testing.

Unless additional work is requested, or circumstances require additional work, we agree that our estimated basic audit fee for these services, including expenses (such as report reproduction, postage, etc.), will be $12,100. Our invoices for these fees will be rendered each month as work progresses and are payable on presentation. In accordance with our firm policies, work may be suspended if your account becomes 120 days or more overdue and may not resumed until your account is paid in full. If we elect to terminate our services for nonpayment, our engagement will be deemed to have been completed upon written notification of termination, even if we have not completed our reports. You are obligated to compensate us for all time expended and to reimburse us for all out-of-pocket costs through the date of termination. The above fee is based on anticipated cooperation from your personnel, completion of workpapers per the client to prepare list by your personnel, and the assumption that unexpected circumstances will not be encountered during the audit. If significant additional time is necessary due to a change in scope of services or delays in receiving audit information requests, we will discuss it with you and arrive at a new fee estimate. Examples of an increase in the scope of service include additional audit procedures resulting from certain accounting issues or events, new contractual agreements, new accounting and auditing standards, legal requirements for new bond issues, if there is an indication of misappropriation or misuse of public funds, or difficulties encountered due to lack of accounting records, incomplete records, inaccurate records or turnover in Riley Purgatory Bluff Creek Watershed District’s staff.
We appreciate the opportunity to be of service to the Riley Purgatory Bluff Creek Watershed District and believe this letter accurately summarizes the significant terms of our engagement. If you have any questions, please let us know. If you agree with the terms of our engagement as described in this letter, please sign the enclosed copy and return it to us.

Very truly yours,

HLB TAUTGES REDPATH, LTD.

Peggy A. Moeller, CPA

PAM:aer

Response

This letter correctly sets forth the understanding of the Riley Purgatory Bluff Creek Watershed District:

Management signature: Governance signature:

By: ___________________________ By: ___________________________

Title: ___________________________ Title: ___________________________

Date: ___________________________ Date: ___________________________

Nonaudit Services

The employee(s) assigned to overseen the nonaudit services is as follows:

Employee (name and title): __________________________________________
July 9, 2013

Claire Bleser  
Riley Purgatory Bluff Creek Watershed District  
c/o City of Eden Prairie  
8080 Mitchell Road  
Eden Prairie, MN 55344

Enclosed are two copies of our engagement letter for auditing services for the year ending December 31, 2013 for the Riley Purgatory Bluff Creek Watershed District.

**Services**

The scope of services are the same as for 2012 and are summarized as follows:

- Audit the basic financial statements of the Riley Purgatory Bluff Creek Watershed District as of and for the year ending December 31, 2013.  
- Preparation, copying and binding of the Annual Financial Report.  
- State Legal Compliance Audit.

**Fees**

We are proposing to complete the services described above for an estimated basic audit fee of $12,100. This fee is based on anticipated cooperation from District personnel, their completion of the workpapers per the client to prepare list and the assumption that unexpected circumstances will not be encountered. If significant additional time is necessary, we will discuss it with you and arrive at a new estimate.

Upon the approval of this agreement by your Board and execution, please return one copy to our office and retain the other copy for your files. If you have any questions, please don’t hesitate to call.

Sincerely,

**HLB TAUTGES REDPATH, LTD.**

[Signature]

Peggy A. Moeller, CPA
Tentative Agenda

1. Call to order (Chair)

2. Introductions and attendance (all)

3. Approval of the agenda (all)

4. General information updates (all)

5. Recap of previous CAC meeting (Mon June 17, 2013) (Recorder’s minutes and all)

6. Recap of previous board meeting (Mon June 24, 2013) (attendees)

7. Upcoming events (all)
   - Budget Workshop and Board meeting
     - Thursday, August 8, 2013, 5:00pm, Eden Prairie City Hall
     - Anticipated discussion items
   - CAC meeting
     - Monday, August 19, 2013, 6:30pm, Eden Prairie City Hall
     - Anticipated discussion items

8. CAC discussion and action items (all)
   - Cost-Share program
     - Overview of dollars available, timelines, purpose, evaluation criteria
     - CAC considerations and decision process
     - Review of applications to date
     - Specific recommendations of our technical consultant
     - Additional aspects of this topic
     - CAC actions for this meeting
   - New CAC Chair
     - The role
     - Selection process
     - Candidate nominations, discussion, election
   - Aquatic Invasive Species Committee
     - Committee’s recommendations
     - CAC actions for this meeting
   - Other topics for this meeting
   - Topics for future meetings

9. Adjournment (Chair)
Minutes of the RPBCWD Citizens Advisory Committee

A meeting of the Citizens Advisory Committee (CAC), was duly called to Order by Chairman Bill Satterness on July 15, 2013, 6:30pm at the Eden Prairie City Hall offices. Jim Bracke served as recorder.

The Agenda, as emailed, was approved with no additions.

General Information Updates –
- Kris Langlie is resigning to accept a new position in Rochester (see Action Item below)

Minutes. No changes were made to the final version of the minutes approved earlier via email.

Recap of Previous CAC meeting (June 17) – None needed. Email version final.

Recap of Previous Board Meetings (June 24)
- UAA presentations were interesting, thorough, and professional and will provide good background for the Board to consider for future development around Lakes Anne, Lucy, and Susan.
- Bill Satterness relayed that on June 24 the Board discussed but tabled the question of whether the district should be concerned with “recreational uses”. The CAC had adopted an affirmative position on this issue during its June 17 meeting.

Upcoming Events
- Budget Workshop and Board Meeting (August 8, 5:00 pm):
  o Workshop until 7pm, followed by Board Meeting
  o Claire will discuss specific budget items and that will be followed by a Board Decision on the Budget allocations
  o This will be followed, on September 4, by a public hearing and final Board vote on the budget levy
  o Rulemaking issues may be discussed on subjects noted below
- CAC Meeting (August 19, 6:30pm)
  o Agenda may be influenced by August 8 Manager’s meeting

CAC discussion and action items
- Cost-Share Program Projects:
It was agreed that if any CAC member is associated in any way with a given Project funding proposal, that the individual would recuse themselves from voting on that project.

- McCotter Shoreline Restoration and BMP Application – Approved $3000
- Vatland/Swift Shoreline Restoration – Approved $1678
- Lindon Pond Protection Project – Approved $2068
- Edendale Grading and Erosion Control Plan – Tabled pending more information regarding benefit
- Jensen/Stotesbury Lakeshore Restoration – Approved $1392

- Second Tier (Associations and Non-profits) grant money runs out in 2015 so further funding would be discretionary by the District
- CAC Chair Role – The consensus favors the current chair, Bill Satterness, continuing in this role, while recognizing that other individuals may effectively share the responsibility to be spokespersons for the CAC, depending upon the issues and circumstances.
- AIS Committee – Presented and discussed initial draft of the “RPBCWD CAC Recommendations to the RPBCWD Board”. Insufficient time remained to thoroughly vet the comprehensive document presented by Laurie at this meeting. Because this issue has persisted unresolved for an extended time period, an action was proposed to keep this issue moving:
  - **Action Item:** The CAC will request a spot on the August 8 agenda for the AIS Subcommittee to directly share their thoughts about how the district should address AIS in 2014 and beyond.

- Other topics
  - **Action Item:** Resolved, the CAC recommends that the WS Board consider the immediate appointment of a technically qualified replacement, to be identified by Claire, to complete Kris Langlie’s 2013 term on the CAC.

**Rulemaking Update: ongoing discussions**

- Wetland buffer rule
- Dredging rule
- Shoreline and stream bank rule
- Erosion and Sediment rule – slowed down to look at the Construction rule for potential conflict
- Groundwater rule

There being no further business to come before the CAC, the Chairman adjourned the meeting at 9:05 pm.

Respectfully submitted,

Jim Bracke, Recorder
Riley Purgatory Bluff Creek
Watershed District

Treasurers Report
June 2013

REPORT INDEX

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<th>page #</th>
<th>Report Name</th>
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<td>Disbursements - General Fund</td>
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<td>Performance Analysis - General Fund</td>
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<td>Balance Sheet - 509 Fund</td>
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<td>Disbursements - 509 Fund</td>
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<td>Performance Analysis - 509 Fund</td>
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<td>Balance Sheet - Basic Water Management Fund</td>
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<td>8</td>
<td>Disbursements - Basic Water Management Fund</td>
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<td>Performance Analysis - Basic Water Management Fund</td>
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<td>Balance Sheet - Survey Fund</td>
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<td>15</td>
<td>Performance Analysis - Survey Fund</td>
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<td>Opinion Report</td>
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Riley Purgatory Bluff Creek Watershed District  
Balance Sheet-General Fund  
June 2013

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>General Fund</th>
</tr>
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<tbody>
<tr>
<td><strong>Current Assets</strong></td>
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<tr>
<td>Checking</td>
<td>$ 58,564</td>
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<tr>
<td>Total Current Assets</td>
<td>$ 58,564</td>
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<tr>
<td><strong>Other Assets</strong></td>
<td></td>
</tr>
<tr>
<td>Security Deposit</td>
<td>$ 400</td>
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<tr>
<td>Prepaid Rent</td>
<td>$ 600</td>
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<tr>
<td>Due from BWM Fund</td>
<td>$ 1,335</td>
</tr>
<tr>
<td>Property Taxes Receivable</td>
<td>$ 3,876</td>
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<tr>
<td>Delinquent Taxes Receivable</td>
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<tr>
<td>Total Other Assets</td>
<td>$ 6,211</td>
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<tr>
<td><strong>Total Assets</strong></td>
<td>$ 64,775</td>
</tr>
</tbody>
</table>

| Liabilities and Net Assets  |              |
| Liabilities                 |              |
| **Current Liabilities**     |              |
| Accounts Payable            | $ 18,740     |
| Due to 509 Fund             | $ 9,881      |
| Payroll Withholdings        | $ 27         |
| Accrued Payroll             | $ 368        |
| Klein Bank Loan             | $ 45,000     |
| Total Current Liabilities   | $ 74,015     |
| **Long Term Liabilities**   |              |
| Deferred Property Taxes     | $ 3,876      |
| Total Long Term Liabilities | $ 3,876      |
| **Total Liabilities**       | $ 77,891     |
| **Net Assets**              |              |
| Cumulative Fund Balance     | $ 86,438     |
| Excess (Deficiency) Current | (99,554)     |
| Total Net Assets            | $(13,116)    |
| **Total Liabilities and Net Assets** | $ 64,775 |
## Accounts Payable

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Barr Engineering</td>
<td>$ 6,594.00</td>
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<tr>
<td>Michael Casanova</td>
<td>588.00</td>
</tr>
<tr>
<td>CH2M Hill, Inc.</td>
<td>4,091.67</td>
</tr>
<tr>
<td>City of Eden Prairie</td>
<td>200.00</td>
</tr>
<tr>
<td>Claire Bleser</td>
<td>144.23</td>
</tr>
<tr>
<td>Deli Double</td>
<td>214.36</td>
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<tr>
<td>Amy Herbert</td>
<td>184.55</td>
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<tr>
<td>Larson Records Management</td>
<td>39.95</td>
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<td>Smith Partners</td>
<td>6,139.24</td>
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<td>Southwest Newspapers</td>
<td>544.00</td>
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**Total Accounts Payable**

$ 18,740.00

## Interest Expense

Interest Expense $ 172.37

## Payroll Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Payroll Processing Fee</td>
<td>$ 38.54</td>
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<td>Manager Payroll Taxes</td>
<td>45.90</td>
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<td>Administrator Salary</td>
<td>2,566.66</td>
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<td>Administrator Payroll Taxes</td>
<td>237.22</td>
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<tr>
<td>PERA</td>
<td>186.08</td>
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</tbody>
</table>

Total Payroll Costs $ 2,989.96

## Total Disbursements

Total Disbursements $ 21,902.33

---

**Note** - the 2013 mileage rate is 56.5 cents per mile, up from 55.5 cents per mile for 2012.

Total disbursements are different than total expenses as we cut one check for health insurance out of the 509 Fund and allocate the expense to the Admin Fund.
## Riley Purgatory Bluff Creek Watershed District
### Performance Analysis
#### General Fund
#### June 2013

<table>
<thead>
<tr>
<th>REVENUES</th>
<th>2013 Budget</th>
<th>Current Month</th>
<th>Year to Date</th>
<th>Projected Funds Remaining</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund Levies</td>
<td>$ 250,000</td>
<td>$ -</td>
<td>$ 1,492</td>
<td>$ 248,508</td>
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<tr>
<td>Insurance Levy</td>
<td>$ 12,000</td>
<td>$ -</td>
<td>$ 72</td>
<td>$ 11,928</td>
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<tr>
<td>Other Income</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<tr>
<td>Interest Income</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td><strong>$ 262,000</strong></td>
<td><strong>$ -</strong></td>
<td><strong>$ 1,564</strong></td>
<td><strong>$ 260,436</strong></td>
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</table>

<table>
<thead>
<tr>
<th>EXPENDITURES</th>
<th>2013 Budget</th>
<th>Current Month</th>
<th>Year to Date</th>
<th>Projected Funds Remaining</th>
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<tbody>
<tr>
<td>Engineering Services</td>
<td>$ 62,000</td>
<td>$ 10,686</td>
<td>$ 29,965</td>
<td>$ 32,035</td>
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<tr>
<td>Legal Expenses</td>
<td>$ 50,000</td>
<td>$ 6,139</td>
<td>$ 23,310</td>
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<td>Manager Expenses</td>
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**Excess (Deficiency)**

- $ - $ (20,255) $ (99,554) $ 99,554

**Fund Balance 12/31/2012**

- $ 86,438

**Current Fund Balance**

- $ 86,438

**Projected Ending Fund Balance**

- $ 86,438

See Accountants Compilation Report
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<tr>
<th>Asset Category</th>
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<td>Due from General Fund</td>
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<td>Total Other Assets</td>
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<td>Liabilities</td>
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<td>Current Liabilities</td>
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<td>Accounts Payable</td>
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## Accounts Payable

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<td>Jeff Anderson</td>
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<td>Lindsey Albright</td>
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<td>Medica</td>
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**Total Accounts Payable**

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## Payroll Costs

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<td>PERA</td>
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**Total Payroll Costs**

$3,892.59

**Total Disbursements**

$407,245.64

*Total disbursements are different than total expenses as we cut one check for health insurance out of the 509 Fund and allocate the expense to the Admin Fund.*

See Accountants Compilation Report

- 5 -
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<th>Year to Date</th>
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See Accountants Compilation Report

- 6 -
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<thead>
<tr>
<th><strong>Riley Purgatory Bluff Creek Watershed District</strong></th>
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<tbody>
<tr>
<td><strong>Balance Sheet-Basic Water Mgmt Fund</strong></td>
</tr>
<tr>
<td><strong>June 2013</strong></td>
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**ASSETS**

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**Total Assets**

| $103,627 |

<table>
<thead>
<tr>
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<tbody>
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<tr>
<td>Current Liabilities</td>
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</tr>
<tr>
<td>Accounts Payable</td>
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<tr>
<td>Due to General Fund</td>
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<td>Due to R&amp;M Fund</td>
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<td>Due to 509 Fund</td>
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<table>
<thead>
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<th>Long Term Liabilities</th>
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<tr>
<td>Deferred Property Taxes</td>
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**Total Liabilities**

| $143 |

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**Total Liabilities and Net Assets**

| $103,627 |

See Accountants Compilation Report
Riley Purgatory Bluff Creek  
Watershed District  
Disbursements - Basic Water Management Fund  
June 2013

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Total Disbursements

See Accountants Compilation Report
- 8 -
**Riley Purgatory Bluff Creek Watershed District**  
**Performance Analysis**  
**Basic Water Management Fund**  
**June 2013**

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<tr>
<th></th>
<th>Total Project Levy/Costs</th>
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<th>Lifetime Project Costs</th>
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<td>BWM Levies - Current Year</td>
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<td><strong>TOTAL REVENUES</strong></td>
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<td><strong>EXPENDITURES</strong></td>
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<tr>
<td>Projected Ending Fund Balance</td>
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See Accountants Compilation Report  
- 9 -
**Riley Purgatory Bluff Creek Watershed District**  
**Balance Sheet-Repair Maintenance Fund**  
**June 2013**

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<th><strong>ASSETS</strong></th>
<th><strong>Repair &amp; Maintenance Fund</strong></th>
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<td>$ 72,200</td>
</tr>
<tr>
<td><strong>Other Assets</strong></td>
<td></td>
</tr>
<tr>
<td>Due from 509 Fund</td>
<td>$ -</td>
</tr>
<tr>
<td>Due From BWM Fund</td>
<td>$ -</td>
</tr>
<tr>
<td>Property Taxes Receivable</td>
<td>77</td>
</tr>
<tr>
<td>Delinquent Taxes Receivable</td>
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</tr>
<tr>
<td><strong>Total Other Assets</strong></td>
<td>$ 223</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>$ 72,423</td>
</tr>
</tbody>
</table>

<p>| <strong>Liabilities and Net Assets</strong> |                           |
| <strong>Liabilities</strong> |                                                  |
| <strong>Current Liabilities</strong> |                                              |
| Accounts Payable    | $ -                                        |
| <strong>Total Current Liabilities</strong> | $ -                                    |
| <strong>Long Term Liabilities</strong> |                                                |
| Deferred Property Taxes | $ 146                                    |
| <strong>Total Long Term Liabilities</strong> | $ 146                                  |
| <strong>Total Liabilities</strong> | $ 146                                      |
| <strong>Net Assets</strong> |                                        |
| Cumulative Fund Balance | $ 92,187                               |
| Excess (Deficiency) Current | (19,910)                |
| <strong>Total Net Assets</strong> | $ 72,277                                |
| <strong>Total Liabilities and Net Assets</strong> | $ 72,423           |</p>
<table>
<thead>
<tr>
<th>Accounts Payable</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
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</tbody>
</table>

| Total Disbursements | $ | - |

See Accountants Compilation Report
- 11 -
Riley Purgatory Bluff Creek Watershed District  
Performance Analysis  
Repair and Maintenance Fund  
June 2013

<table>
<thead>
<tr>
<th></th>
<th>2013 Budget</th>
<th>2013 Current Month</th>
<th>2013 Year to Date</th>
<th>Projected Funds Remaining</th>
</tr>
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<tbody>
<tr>
<td><strong>REVENUES</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Repair and Maintenance Levies</td>
<td>$ 15,000</td>
<td>$ -</td>
<td>$ 90</td>
<td>$ 14,910</td>
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<tr>
<td>Interest Income</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td>$ 15,000</td>
<td>$ -</td>
<td>$ 90</td>
<td>$ 14,910</td>
</tr>
<tr>
<td><strong>EXPENDITURES</strong></td>
<td></td>
<td></td>
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<tr>
<td>Homeward Hills Road</td>
<td>-</td>
<td>$ -</td>
<td>$ 20,000</td>
<td>$ -</td>
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<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td>$ -</td>
<td>$ -</td>
<td>$ 20,000</td>
<td>$ -</td>
</tr>
<tr>
<td>Excess (Deficiency)</td>
<td>$ 15,000</td>
<td>$ -</td>
<td>$ (19,910)</td>
<td>$ 14,910</td>
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</table>

Fund Balance 12/31/2012: $92,187  
Current Fund Balance: $72,277  
Projected Ending Fund Balance: $107,187

See Accountants Compilation Report  
- 12 -
<table>
<thead>
<tr>
<th>ASSETS</th>
<th>Survey &amp; Data Acquisition Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
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<tr>
<td>Checking</td>
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<tr>
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<td><strong>Other Assets</strong></td>
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<td>Due from BWM Fund</td>
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<tr>
<td>Delinquent Taxes Receivable</td>
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</tr>
<tr>
<td>Total Other Assets</td>
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</tr>
<tr>
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<table>
<thead>
<tr>
<th>Liabilities and Net Assets</th>
<th>Survey &amp; Data Acquisition Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liabilities</strong></td>
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</tr>
<tr>
<td><strong>Current Liabilities</strong></td>
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</tr>
<tr>
<td>Accounts Payable</td>
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</tr>
<tr>
<td>Due to R&amp;M Fund</td>
<td>-</td>
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<tr>
<td>Total Current Liabilities</td>
<td>$ -</td>
</tr>
<tr>
<td><strong>Long Term Liabilities</strong></td>
<td></td>
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<tr>
<td>Deferred Property Taxes</td>
<td>$ 7</td>
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<tr>
<td>Total Long Term Liabilities</td>
<td>$ 7</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td>$ 7</td>
</tr>
</tbody>
</table>

| **Cumulative Fund Balance** | $ 1,673                  |
| **Excess (Deficiency) Current** | 222                      |
| **Total Net Assets**        | $ 1,895                   |
| **Total Liabilities and Net Assets** | $ 1,902               |
Riley Purgatory Bluff Creek
Watershed District
Disbursements - Survey, Data and Acquisition Fund
June 2013

<table>
<thead>
<tr>
<th>Accounts Payable</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
</tr>
<tr>
<td>Total Disbursements</td>
<td>$</td>
</tr>
</tbody>
</table>
Riley Purgatory Bluff Creek Watershed District
Performance Analysis
Survey, Data and Acquisition Fund
June 2013

<table>
<thead>
<tr>
<th></th>
<th>2013 Budget</th>
<th>Current Month</th>
<th>Year to Date</th>
<th>Projected Funds Remaining</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REVENUES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survey Fund Levies</td>
<td>$ 48,255</td>
<td>$ -</td>
<td>$ 288</td>
<td>$ 47,967</td>
</tr>
<tr>
<td>Interest Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td>$ 48,255</td>
<td>$ -</td>
<td>$ 288</td>
<td>$ 47,967</td>
</tr>
</tbody>
</table>

| **EXPENDITURES**        |             |               |              |                          |
| Bank Fees               |             | 6             | 66           | -                        |
| **TOTAL EXPENDITURES**  | $ -         | $ 6           | $ 66         | $ -                      |

| Excess (Deficiency)     | $ 48,255    | (6)           | $ 222        | $ 47,967                 |

| Fund Balance 12/31/2012 | 1,673       |               | 1,673        |                          |
| Current Fund Balance    |             | $ 1,895       | 1,895        |                          |
| Projected Ending Fund Balance | $ 49,928 | $ 49,862      |              |                          |
Riley Purgatory Bluff Creek
Watershed District
Minneapolis, MN

To the Board of Managers:

We have compiled the accompanying June 30, 2013, Treasurer’s Report of the Riley Purgatory Bluff Creek Watershed District’s statements of;

- Balance Sheet – General Fund
- Disbursements – General Fund
- Performance Analysis - General Fund
- Balance Sheet – 509 Fund
- Disbursements – 509 Fund
- Performance Analysis - 509 Fund
- Balance Sheet – Basic Water Management Fund
- Disbursements – Basic Water Management Fund
- Performance Analysis - Basic Water Management Fund
- Balance Sheet – Repair and Maintenance Fund
- Disbursements – Repair and Maintenance Fund
- Performance Analysis – Repair and Maintenance Fund
- Balance Sheet – Survey, Data and Acquisition Fund
- Disbursements – Survey, Data and Acquisition Fund
- Performance Analysis – Survey, Data and Acquisition Fund

in the accompanying prescribed form. We have not audited or reviewed the accompanying financial statements and, accordingly, do not express an opinion or provide any assurance about whether the financial statements are in accordance with the form prescribed by the Riley Purgatory Bluff Creek Watershed District.

Management is responsible for the preparation and fair presentation of the financial statements in accordance with requirements prescribed by the Riley Purgatory Bluff Creek Watershed District and for designing, implementing and maintaining internal controls relevant to the preparation and fair presentation of the financial statements.

Our responsibility is to conduct the compilation in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. The objective of a compilation is to assist management in presenting financial information in the form of financial statements without undertaking to obtain or provide any assurance that there are no material modifications that should be made to the financial statements.
These financial statements (including related disclosures) are presented in accordance with the requirements of the Riley Purgatory Bluff Creek Watershed District, which differ from accounting principles generally accepted in the United States of America. This report is intended solely for the information and use of the Riley Purgatory Bluff Creek Watershed District and is not intended to be and should not be used by another other than this specified party.

We are not independent with respect to the Riley Purgatory Bluff Creek Watershed District.

CAVANAUGH & COMPANY, P.A.
Certified Public Accountants

July 25, 2013
Minneapolis, MN
Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report for July 2013 Activities – for August 8, 2013 Board Meeting
Date: July 27, 2013

The purpose of this memorandum is to provide the Riley-Purgatory-Bluff Creek Watershed District (RPBCWD) Board of Managers and the District Administrator a summary of the activities performed by Barr Engineering Co. serving in the role of District Engineer from late-June through July 2013.

**Purgatory Creek Monitoring Station Rebuild at Pioneer Trail**
- a. Meeting with contractor, Ford Construction, at site.
- b. Review contractor bid.
- c. Meeting with Leigh Harrod at Met Council to see new shelter.
- d. Order new radar sensor.
- e. Clean and remove ISCO auto sampler from old shelter. Maintenance on ISCO auto sampler.
- f. Remove cables, phone and other equipment from old shelter. Clean.
- g. Communications with RPBCWD, MCES and Ford Construction.

**Lake Lucy and Ann UAA Update**
- a. Continued evaluation of implementation strategies, including discussion with University of Minnesota researchers
- b. Develop planning level cost estimates for implementation strategies, including cost benefit estimates (annual cost per pound phosphorus removed)
- c. Development of presentation to the RPBCWD Board of Managers
- d. Preparation for and attendance at June 24, 2013 RPBCWD Board of Managers meeting
- e. Submit draft UAA report to District Administrator
- f. Discussions with Administrator about Draft UAA report

**Rulemaking**
- a. Rulemaking meeting with Administrator and District attorney to discuss draft rules previously discussed by TAC.
- b. Review draft erosion and sediment, floodplain, wetland buffer, shoreline and streambed rules and definitions.
- d. Develop draft stream order map using National Hydrography Dataset (NHD), USACE guidance, and ArcGIS and discussions with Administrator.
e. Participate in groundwater rule planning meeting on July 12, 2013 with Manager Bisek, Administrator, District Attorney, and District Engineer
f. Participate in groundwater rule planning meeting on July 17, 2013 with MnDNR, Met Council, Administrator, District Attorney, and District Engineer

**SWLRT**

a. Participate in June 20, 2013 meeting with SWLRT to share District knowledge and learn about SWLRT plans.
b. Participate in July 2, 2013 SWLRT TEP kick-off meeting.
c. Participate in July 22 and 25, 2013 meetings with SWLRT to discuss RPBCWD’s environmental concerns, stormwater concerns, and draft rules that are being developed

**Plan Review**

a. Review revised plan submittal for the Reeder Ridge development in Eden Prairie and prepare and forward a revised memorandum dated June 28, 2013 summarizing our review comments on the revised plans.
b. Review Hyland Park ski trail project, correspond with SEH about questions associated with proposed water withdrawal from Hyland lake for snowmaking, and provide summary email to Administrator and John Gleason of the MnDNR

**Data Management/Sampling/Equipment Assistance**

a. Meeting with Claire Bleser and interns at the RPBCWD storage sites to assess equipment.
b. Meeting with RPBCWD interns to review questions on equipment and sampling methods.
c. Begin process and discussions about transfer of EQuIS data base.
d. Began transferring the Districts EQuIS database for CH2M Hill to Barr’s servers
e. Working with CH2M Hill to clarify some of the EQuIS database definitions.
f. Working with Braun Intertec to provide lab reports and EDD files to Barr for quality review and uploading into EQuIS
g. Review several lab reports and upload data to EQuIS
h. Coordination with RPBCWD about duplicate sampling

**General Services**

a. Transition meeting with Administrator, RPBCWD staff, and CH2M Hill.
b. Review June monthly Board packet.
c. Attend June 24, 2013 regular Board of Managers meeting.
d. Participate in meeting about potential boundary change initiated by CCWMO at Administrator’s request.
e. Site visit at 9119 Lake Riley Blvd with Administrator to review site drainage, retaining walls, and shoreline
f. Assist Administrator with planning and budgeting for 2014
g. Respond in developer inquiry about flood levels at 13618 St. Andrew Drive, Eden Prairie
h. Regular and frequent communication, meetings, collaboration, and coordination with the Administrator, including providing requested information.
1. **Stormwater Ponds**
   Staff has trained and is working with the cities on the stormwater pond project. Close to 100 ponds are being sampled. Two rounds were completed up to date.

2. **CAC**
   Staff has met with the CAC on July 19th. The CAC reviewed cost-share applications. Seth Bossert, Urban Technician from CCSWCD was present to answer questions on the projects.

3. **Transitioning**
   We are still waiting for more files from CH2MHiLL.

4. **Purgatory Creek Hydraulic and Hydrology model**
   CH2MHiLL has requested an extension to developing a model for the District. They will provide the model to the District August 15th.

5. **Rulemaking**
   Our next rulemaking meeting is August 24th. We finished discussing the Wetland Buffer Rules and have discussed Dredging and Sediment Removal and Shoreline and Streambank Improvement Rules. Staff is continuing discussion and developing Groundwater Rules. Staff has met with the DNR and the Metropolitan Council. Another meeting with both entities is planned for August 14th. Please find at the end of your packet the following rules attached: Rule G Waterbody Crossings & Structures, Rule H – Appropriations of Public Waters.

6. **Data Collection Update - June and July 2013**

   The following is a review of the efforts that the Water Quality Assistants have put forward during the months of June and July.

   **Lake Sampling**
   District staff is responsible for monitoring several lakes within the District including Lotus Lake, Lake Lucy, Lake Ann, Lake Susan, Silver Lake, Rice Marsh Lake, Duck Lake, Red Rock Lake, and Staring Lake. Two water bodies were added to the sampling effort from previous years: Eden Lake and Neill Lake, both in Eden Prairie. Six lakes are accessible by the jon boat (special permission was granted by the City of Chanhassen to use the boat on Lake Ann), while others require the use of the Sea Eagle pontoon; sampling efforts have been divided accordingly (boat day and raft day) in order to maximize productivity in the field. Water quality measurements using the sonde and secchi disk, along with water samples, are collected at each lake and water body. Water sample duplicates are collected during each sampling event, following a randomized pattern created using Microsoft Excel for water quality control. So far in 2013, only one water quality sampling event has been conducted at Silver Lake in Shorewood due to
limited accessibility (silt fence and floating bogs prevent access from the outlet). Lake sampling is conducted with the assistance of Kari Madison, Water Resources Intern from the City of Chanhassen.

Upon further discussion with Administrator Bleser, two changes to the 2013 lake/water body sampling strategy are currently being discussed. Beginning on July 16, 2013 water samples were collected along the shoreline of Neill Lake instead of using the Sea Eagle, as it has been identified as a stormwater pond by city officials. Because of this, the water sample will only be tested for total phosphorous (similar to how the samples collected from other stormwater ponds in the District are analyzed). The second change currently being discussed is in regards to the sampling strategy for Eden Lake (categorized as a stormwater pond). The city of Eden Prairie has requested that District staff monitor it due to the large amount of runoff that it receives from the Eden Prairie Mall and the surrounding area. Sampling will continue in accordance to the original plan as long as the access point at Eden Lake remains clear.

**Stream Sampling**
The sampling of lakes continues with the addition of streams. Riley, Purgatory and Bluff creeks are being monitored bi-weekly in an alternating pattern with lakes. The 3 streams have a total of 11 monitoring sites where flow (using the Flowmeter), water quality measurements (using the sonde and transparency tube), and water samples are taken. Heavy rainfall has delayed some of our stream monitoring dates due to high water levels and fast flowing conditions. Staff has noted the safety vest work well in the field.

**Stormwater Pond Sampling**
During June work was done to implement a stormwater pond program. The program is based off of the previous work of CH2M Hill. Minor adjustments have been made throughout the project to better suit the districts needs and goals. On July 1, 2013, District staff held a training and demonstration session with the cities of Bloomington (Bryan Gruidl, Sophia Bainbridge), Chanhassen (Terry Jeffery, Kari Madison), Eden Prairie (Hagen Kaczmarek) and Minnetonka (Liz Stout, Lydia Larson, Sarah Hazlewood) all of whom have chosen to contribute to the 2013 sampling effort. The training session covered pond assessment and sampling techniques. Stormwater pond sampling in the city of Shorewood will be conducted by District Water Quality Assistants. Close to one hundred ponds have been identified to be assessed. The first two sampling rounds were completed on August 2nd and went well. Two wetlands on the south side of Lake Susan are being sampled to help identify sources of phosphorus; this information was shared with Wenck as part of their UAA update for Lake Susan.

**Other Monitoring and Maintenance**
In addition to weekly lake, stream and pond monitoring and sampling, water quality staff have other tasks that periodically needed their attention. In June, district staff installed staff gauges with lake level sensors in Hyland Lake and Rice Marsh Lake. The district has 11 level sensors that continuously monitor surface level elevation, temperature and pressure. Data is collected from the sensors and staff read off the staff gauges to check
for accuracy. District staff have also performed field assessments that have included checking on grant projects, site conditions, and other residential concerns. The two data sondes used for lake and stream monitoring get calibrated by staff each month.

Data Management
Data collected during sampling efforts is being logged and we are waiting to discuss with new data management personnel on how it can be applied. Staff have been updating operating procedures along with making new procedures, lists and directions that apply to the monitoring program.

Outreach
On Wednesday June 5th, 2013, Water Quality Assistants Lindsey Albright and Jeff Anderson represented the District at the Native Plant Market and Eco Fun Fest hosted by the City of Minnetonka. This was the first time that the District has attended this event and both the Event Coordinators and the public were very excited to see them there. Several District residents approached the booth with questions about rain garden installations and the new cost share program. Residents were also interested in hearing about the in house lake and stream monitoring programs as well as the expansion of the stormwater monitoring program.

Other outreach opportunities have presented themselves while they were out in the field. Residents are generally interested in hearing about their work and telling them about their fishing adventures in local lakes. In July, the staff attended the Summer Turf Maintenance and the Winter Parking Lot and Sidewalk Maintenance workshops.

Looking Forward
On Tuesday August 27th, 2013, Lindsey Albright will be representing the District at the Blue Thumb booth at the Minnesota State Fair. Moving into September, all five stormwater pond sampling rounds will be completed and District staff will begin preparations for the completion of creek assessments which will be conducted towards the end of September or early October.

7. Site Visits/Inspection
   Staff has been conducting site visits and inspecting sites in the District.

8. Olympic Hills Golf course
   Staff has been working with Eden Prairie and the golf course on their upcoming renovations

9. CAC
   The Administrator continues to work with the CAC. Unfortunately, Kris Langlie stepped down as he will be relocating to Rochester.

10. SWLRT
Staff has been meeting staff of the SWLRT. We reviewed possible alignment routes proposed in Eden Prairie. Possible alignments come near to Lake Idlewind (Tobias) and would either go near the rec area and over floodplain or go along 212 if the route is extended to having a Mitchell station. Purgatory Creek would then be crossed. Staff is discussing with the SWLRT the type of structure they intend to use. Bridges were discussed as one element that would minimize impacts to the creek.

11. Websites
   We have received three proposals for the website RFP. Please find them included in your packet.

12. Purgatory Recreational Area Management Plan
   The City and the District with BARR have met to discuss the next steps for the Recreational Area. A site visit was performed on the 31st.

13. Cost-share program
   I have reviewed the cost-share applications. We have received 2 for cities, 1 townhome association and X residential. 3 more are in the works.

14. Bluff Creek TMBL
   I attended a presentation on the Bluff Creek TMDL Implementation Plan. Ravines in lower Bluff Creek are vulnerable and restorations in these were recommended as to reduce pollution loads.

15. University of Minnesota
   I have met with the University of Minnesota to discuss 2014-2015 efforts. Both grants end in December 2014. I have asked the Sorensen lab to submit one of their deliverables (Fish Management Plan) for the Riley Creek Watershed this Fall.

16. Technical Environmental Panel
   The District has been providing input for various development: Olympic Hills Golf course redesign and Reeder Ridge.

17. Citizen outreach
   Presented at the Bloomington Sustainable Garden and Rain Garden Tour sponsored by the Bloomington Green Congregations Coalition
Board Action – August 8th, 2013

12.a  Water Quality
Staff recommends the board to take no action on modifying the 10-year plan to include recreation in particular navigation to it’s understanding of water quality. Staff believes that efforts should be linked first to effort to protect and restore our water.

12.b.  Conflict of Interest Policy
Conflict of interest policy related to the cost-share program will be distributed digitally on Monday August 5th

12.c.  Website Development
Please find included three proposals for website development. BARR, HDR and Houston submitted.

12.d. Minor Plan Amendment
Please find included draft letter and minor plan amendment proposal. Please note that Staff has added modification in Section 7.4.1 for homogeneity with rest of the plan. Staff is seeking motion from the board to accept the modification included in 7.4.1.

12.e. Major Plan Amendment
Major Plan amendment draft will be presented to the board. Copies of the amendment will be distributed electronically to the board on the 5th. The major amendment is linked to the proposed budget for 2014 which includes capital improvement projects not identified in the 10-year plan.

12.f  Cost-Share Funding
Staff recommends that applicants identified in the following cost-share table be recipients of the District Grants as per staff recommendation.
## Project Proposal Summary

<table>
<thead>
<tr>
<th>Project Proposer</th>
<th>Address</th>
<th>City</th>
<th>Zip</th>
<th>Project Description</th>
<th>Project Cost</th>
<th>Amount Requested</th>
<th>CAC Recommendation</th>
<th>Staff Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tim and Sharon McCotter</td>
<td>7000 Utica Lane</td>
<td>Chanhassen</td>
<td>55317</td>
<td>Shoreline restoration</td>
<td>$9,423.75</td>
<td>$3,000.00</td>
<td>$3,000.00</td>
<td>$3,000.00</td>
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<tr>
<td>Jack Vatland and Susan Swift</td>
<td>17826 Steading Rd</td>
<td>Eden Prairie</td>
<td>55347</td>
<td>Shoreline restoration</td>
<td>$2,244.50</td>
<td>$1,678.00</td>
<td>$1,678.00</td>
<td>$1,678.00</td>
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<tr>
<td>Cristy Jensen and Jennifer Stotesbery</td>
<td>17578 George Moran Dr</td>
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<td>55347</td>
<td>Shoreline restoration</td>
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<td>$1,391.62</td>
<td>$1,391.62</td>
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<tr>
<td>Matt Lindon</td>
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<td>planting, Pond protection</td>
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<td>Laurie Susla</td>
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<td>Non-Profit - Clean Water Funds</td>
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<td>Infiltration</td>
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<td>Commercial</td>
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<td>infiltration, capture and reuse</td>
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<td>City of Chanhassen</td>
<td>7700 Market Boulevard</td>
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<td>$34,708.87</td>
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</tbody>
</table>
July 22, 2013

Ms. Claire Bleser, District Administrator
Riley-Purgatory-Bluff Creek Watershed District
8080 Mitchell Road
Eden Prairie, MN 55344

SUBJECT: Request for Proposal for Technology Consulting Services: Website Redesign

Dear Ms. Bleser:

HDR Engineering, Inc. (HDR) is excited about the opportunity to collaborate with the Riley-Purgatory-Bluff Creek Watershed District (the District) to support redevelopment of your watershed website, rileywd.org. HDR has extensive experience helping clients develop multi-media communication and outreach tools, including websites. HDR would be delighted to serve the District by helping you develop an effective, intuitive, and easily maintained website to facilitate your watershed management work.

COMPANY BACKGROUND

HDR Understands Watershed Districts

HDR provides practical, cost-effective solutions to the natural resource challenges faced by our many watershed district clients. We listen to clients and stakeholders to develop the best plan for every project. We make every effort to include all project stakeholders as we develop the best plan of action to meet your goals.

HDR has decades of experience providing a wide range of services to watershed districts throughout Minnesota. Through working with these clients, we have gained insight and understanding of the mission, vision and values that drive a watershed district and the importance of effective communication to the success of watershed district operations. HDR will be an informed and understanding partner to help you with your communication and outreach needs.

HDR Creates Websites That Are Easy to Use and Update

HDR leverages content management technology to create websites that are easy to update and edit for any project team member without knowledge of programming. Our websites include an intuitive editing interface that allows our clients to take ownership over the content on their websites if they choose, and allows District and HDR project team members to update content workflow, resulting in a more efficient process for keeping our websites up-to-date.

HDR has designed and managed websites for a variety of clients for several years. Our experience with website design and interactive education materials includes project such as:

- Project-specific websites to allow stakeholders within the project area to gather information, view interactive maps, leave comments and contact the project team.
- A public website with secure team-only pages to track and upload report and survey documents for the US Navy Marine Species Monitoring Program
- An online education system and visually-oriented dam safety manual used by dam operators nine national hydropower companies
- Interactive mapping websites to help multiple clients track and publish construction and inspection information internally and externally as required.
- Online Public Meetings to compliment in-person meetings and provide interactive project information for website visitors.

Our website capabilities allow us to create a strategy and design that fits each specific client’s needs.

Website Strategy and Organization. HDR can help to evaluate the District’s existing site structure and work with the District to identify where and how to reorganize and redesign the site through planning tools like site maps, wireframes, mockups and staging sites. We will also help the District identify any tools or desired functionality, like calendars, charts and graphs, maps, document libraries, etc., that will help track and publish important information. Our goal is to help the District create a vision for the website that can be carried forward as an effective, long-term tool for the watershed.
Tools and Technology. HDR’s communication professionals understand and use existing and up-and-coming communication tools and technology, including Content Management System (CMS) web development, web-based comment management systems, interactive mapping and data visualization, surveys, social media, animations, on-line public meetings, graphic design, and educational kiosks. We can assist with a full review of the 2009 approaches that were implemented, identify their successes and shortcomings, and adjust or reinvent as needed.

Training and Support. HDR can offer as much training and ongoing support to the District’s designated web content managers as is required. Our website’s intuitive editing interface typically requires minimal training to make basic content edits and file uploads, but HDR can provide training and support to the District at any level.

Track Your Website’s Impact. HDR believes in the importance of quantifying the return on your investment in creating an online presence. We create periodic reports that visually present and explain the ‘why’ and ‘how’ of visitor statistics for your website. Our reports not only show how many, who, and where your visitors are – they often help highlight how additional public engagement efforts, like mailings, workshops, advertisements, news stories, etc. translate into web traffic, offering a complete view of the impact of your public outreach program.

Technical Partnership. HDR’s technical water resources scientists and engineers are located in the same offices as our Public Involvement Team, enabling ongoing communication and collaboration. Instead of working through issues separately, technical staff and communication professionals sit down together to understand and solve potential issues or problems.

HDR Offers a Dynamic Website Design Team
HDR’s Minneapolis Public Involvement team includes a full-time website and graphic designer. Kelly Spitzley provides full design and content development for print and web resources. She is adept at Adobe’s Creative Suite and is experienced with HTML, CSS, SQL, PHP, jQuery, Javascript, and various content management systems. In addition to our local team, HDR has various website designers nationally that provide a support system to expand services and technology and continuously improve website designs for our clients.

Emily Hyland, HDR’s local Public Involvement manager, will serve as project manager. Resumes for team members can be found in the Appendix to this proposal.

HDR Understands Your Website Redesign Requirements
With HDR’s local presence and previous work with watershed districts, we have a good understanding of the needs and expectations that visitors to your website may have. Examples of our work include:

- HDR’s Public Involvement team in Minneapolis is currently working with Capitol Region Watershed District (CRWD) to develop a 2014-2015 Education and Outreach Plan. A portion of the Education and Outreach Plan is a recommendation for the redesign of the existing CRWD website. Through collaborative meetings with the CRWD staff, Citizen Advisory Committee (CAC) and Board of Managers, HDR is developing recommendations for updates, content and redesign.

- HDR is also working with the City of Omaha to provide both engineering services and public outreach support on a combined sewer overflow project. HDR will be launching a new website on August 1, 2013 for this municipal government client. Primary communication to the public occurs through the Program website http://omahacso.com/index.htm. We have included a detailed description of this project in the Appendix to this proposal.

- Last year, HDR had the opportunity to work with the South Dakota Department of Agriculture to develop a website to generate interest and input from conservation districts and landowners across South Dakota. Input gathered through this process will be incorporated in the South Dakota Coordinated Plan for Natural Resources Conservation (website link in Qualifications section below).

QUALIFICATIONS
The table below presents a list of clients for which HDR has provided relevant services in website design. The websites below may be viewed by clicking on the links. We have also provided contact information for client references.

<table>
<thead>
<tr>
<th>Client</th>
<th>Website Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minnesota Power</td>
<td><a href="http://www.greatnortherntransmissionline.com">http://www.greatnortherntransmissionline.com</a></td>
</tr>
<tr>
<td>City of Omaha</td>
<td><a href="http://omahacso.com/">http://omahacso.com/</a> (a new redesigned site will launch on August 1)</td>
</tr>
<tr>
<td>South Dakota Dept. of Agriculture</td>
<td><a href="http://www.coordinatedplanfornaturalresourcesconservation.com">http://www.coordinatedplanfornaturalresourcesconservation.com</a></td>
</tr>
<tr>
<td>Denver Water Online Meeting</td>
<td><a href="http://www.northsystemrenewal.com/">http://www.northsystemrenewal.com/</a></td>
</tr>
</tbody>
</table>
U.S. Navy  http://www.navymarespeciesmonitoring.us/
North Dakota Department of Transportation  http://www.dickinsonbypass.com/
Minnkota Power Cooperative, Inc.  www.minnkotacgf.com
Omaha Public Power District  http://www.oppdistens.com/onlinemeeting/
Arizona Department of Transportation  http://www.smfonlinehearing.com/
City of Omaha  http://www.16thstreetproject.com/

REFERENCES

| Project: Great Northern Transmission Line  
| Jim Atkinson, Environmental Lead  | Minnesota Power  
| jbatkinson@allete.com | (218) 355-3561 |

| Project: Omaha CSO  
| Jim Theiler, PE  | City of Omaha  
| jtheiler@ci.omaha.ne.us | (402) 444-4923 |

| Project: North System Renewal  
| Jim Light  | Denver Water  
| Jim.Light@denverwater.org | (303) 628-6000 |

| Project: Big Stone South to Ellendale Transmission Line  
| Cris Oehler, Director of Public Relations  | Otter Tail Power Company  
| coehler@otpco.com | (218) 739-8297 |

For ease of reference, the Appendix to this proposal contains the full Statement of Qualifications for Technology and Website Enhancement that HDR previously submitted to the District.

SCOPE OF WORK

HDR proposes to develop and support a website for both public and secure access throughout the life of the contract. HDR’s web development services will include web host and domain name management site framework installation and periodic upgrading, development of site structure, layout, and branding, search engine optimization, web traffic analytics, and training for any staff designated to make website updates. The site will be developed as a Content Management System (CMS) using the Concrete5 framework. HDR uses Concrete5 because of its intuitive end-user interface, efficient site development, and available marketplace of add-ons for advanced functionality. The site will be maintained by designated HDR and District staff. No web development or programming experience is required for staff to edit the website content when using Concrete5 CMS.

HDR will complete the following tasks to provide a redesigned, fully functioning website to the District by November 15, 2013 for $8,970.00.

Initial Website Structure and Design

Before any work is started on the website, HDR will hold a one-hour in-person meeting with District staff to discuss the structure, design, and functionality to incorporate in the website redesign. It is very important that website designers and District staff be “on the same page” early in the project. After the meeting, HDR will communicate proposed redesign options with the District via site maps and mockups before beginning site development.

Deliverables:

- Meeting minutes will be drafted and provided electronically to the District within one week of meeting
- A website design mock-up and site map will be provided to the District for review before website development begins

Website Development

HDR will develop a simple interim website with the new design and structure in order to maintain current District workflows while the full site development continues. The District will provide HDR with an outline of the specific content to be included on the interim website. Development of the full site will occur “behind the scenes” on the interim website, visible only to those team members who are logged in as members on the site. In this way, the site development can continue seamlessly behind the interim website. New pages, content, and features can be published individually as they are completed, or as a consolidated release per the District’s preference. It is anticipated that District staff with provide any content, mapping shapefiles, images and documents, and data during the initial draft stage. This will allow HDR to understand the information and structure the website requires for the content provided.
There will be two review stages during the website development in which HDR will gather input from District staff, answer questions and identify changes. Following each review stage, HDR will address comments and make improvements to the website.

**Deliverables:** Interim and Final website

**Content Management Staff Training and Support**
The Concrete5 Content Management System (CMS) will allow District staff to log in securely to the website with personal user accounts and edit the site content, access pages not visible by the public, view and monitor site statistics and web form data, and manage site files. HDR will conduct two one-hour webinar sessions to train District staff on the functionality of the website. In addition to the training sessions, HDR has budgeted 12 hours for HDR staff to be on-call to provide support, lead tutorials, and assist the District as needed.

**Deliverables:** A secure ‘how to’ page on the website visible only to logged-in team members, with links to helpful documentation and how-to videos.

**Site Backup, Design Templates, and Style Sheets**
A full site backup will be created daily and accessible at any time on both the web server and on HDR’s internal servers. Included in the full site backup are all design-related files, including images and style sheets, as well as all site content and a full backup of the site database. The District can request site files at any time through HDR, and will also be given full access to the web server to allow file and database access and download at any time.

**Schedule**

- **Week of August 19** In-person meeting with District staff to discuss website redesign
- **Week of August 26** HDR provide website mock-up and site map to District for review. District will provide HDR with an outline for the interim website content.
- **Week of September 2** HDR receive feedback from District staff on mock-up and site map.
- **September 9 to 20** HDR develops RPBCWD interim website on a staging site District provide content, images, photos, map shapefiles, etc. to HDR
- **Week of September 23** HDR provide link to District to review draft interim website
- **Week of September 30** District to provide edits to HDR on draft interim website
- **Week of October 7** HDR incorporate District changes and provide link to District to review final RPBCWD interim website
- **October 7-November 1** HDR builds out the full website behind the interim site. HDR will send completed components to the District for review throughout this period.
- **Week of November 4** District completes a full review of website.
- **Week of November 11** HDR incorporates changes. HDR hosts first 1-hour staff training on website editing.
- **November 15** Website goes live.

**Website Components**
HDR offers a robust Website Package that we believe will fit the District’s needs for a professional, efficient, and educational website. Below is a list of the website components that HDR can provide per District preferences.

- Public access with registered user login for HDR and District team members
- Editable content and layout for designated registered users (no programming experience required)
- Document libraries with team upload capabilities
- Document and image search and sorting
- Image slideshows and galleries
- Interactive mapping component
- Social media integration and blogging
- Interactive calendar and event management
- Secure pages or blocks hidden from public view
- Embedded YouTube, Vimeo, Flash, or interactive media
- Basic news feed, news pages, and RSS feeds
- Site search functionality
- Customizable forms and surveys (with export to Excel)
- Google analytics reporting
- Email list sign-up (with export to Excel)
- Search engine optimization
- Page versioning with built-in approval and publishing process
- Multi-lingual website translation
- Custom website styling
- Visitor commenting with optional moderator approval
- Intuitive back-end dashboard for managing site settings, files, users, and styles
Website Technology: The Concrete5 Content Management System (CMS)

HDR will use the Concrete5 CMS framework for the site in order to provide the functionality and cost benefits best suited to accomplish the Client’s goals and provide an optimal web experience for both the project team and website users. Using the Concrete5 CMS will enable HDR and District staff to log in securely to the website with their personal user accounts and edit site content, access pages not visible by the public, view and monitor site statistics and web form data, and manage site files.

ASSUMPTIONS

The HDR team will create a hosting account and associated domain name for an up-front, 36-month period. The ownership of the hosting account and domain name will be transferrable at any time via submitting a signed and notarized form.

- HDR prefers to use Bluehost for web hosting due to its popularity, longevity, cost and features such as SimpleScripts. If the District prefers a web hosting service other than Bluehost, the District will be responsible for confirming or installing the necessary system requirements (outlined here: http://www.concrete5.org/documentation/background/system_requirements).
- The HDR team will provide two one-hour training sessions to introduce any communications or administrative staff designated to edit website content to the system. HDR has budgeted 12 hours of additional as-needed training and support for the contract period. Additional training, or any in-depth development training required as a result of transferred ownership will require a scope amendment.
- Due to occasional server maintenance, upgrades, and/or unforeseen events, there may be short, temporary periods of website downtime associated with HDR’s or Bluehost’s maintenance and/or upgrade efforts.
- HDR cannot guarantee 100% uptime of HDR services or external non-HDR services. HDR will make its best effort to work with third-party providers in the event of a technical issue to solve the problem and minimize downtime.
- Web-ready images, logo files, color palettes, documents, and initial website content will be provided by the District unless otherwise determined.
- Any additional functionality beyond the site components listed above will require a scope amendment.
- Major site updates after development is completed, including re-branding, transferring hosting services, changing domain names, or significant organizational restructuring, will require a scope amendment.

PRICE PROPOSAL

The estimated cost for the work on this project is $8,800 for the work set forth in the Scope description above. The work will be performed on a Lump Sum basis.

<table>
<thead>
<tr>
<th>Basic Website - Detailed Cost Breakdown</th>
<th>Staff Category</th>
<th>Hours</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial website layout/branding draft</td>
<td>Project Management</td>
<td>11</td>
<td>$940</td>
</tr>
<tr>
<td></td>
<td>Website Developer</td>
<td>6</td>
<td>$500</td>
</tr>
<tr>
<td>Interim website development</td>
<td>Website Developer</td>
<td>20</td>
<td>$1,700</td>
</tr>
<tr>
<td>Post-review interim website refinement</td>
<td>Website Developer</td>
<td>6</td>
<td>$500</td>
</tr>
<tr>
<td>Final website development</td>
<td>Website Developer</td>
<td>25</td>
<td>$2,200</td>
</tr>
<tr>
<td>Post-review final website refinement</td>
<td>Website Developer</td>
<td>15</td>
<td>$1,270</td>
</tr>
<tr>
<td>Content management staff training and support</td>
<td>Website Developer</td>
<td>14</td>
<td>$1,200</td>
</tr>
<tr>
<td>Expenses (36 months of hosting and add-ons / Technology Charges / Mileage)</td>
<td></td>
<td></td>
<td>$730</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>97</td>
<td>$8,970</td>
</tr>
</tbody>
</table>

OPTIONAL TASK: Monthly site maintenance for 36 months

(These costs are not included in this proposal)

Website Developer 2 hours/month 72
Website Content Manager 2 hours/month 72
HDR is excited to provide the District with an easy-to-use website that can serve its long-term needs and allow the District to truly take ownership over the content of their site. We hope to use our experience and knowledge in creating websites for public education and outreach to help the District create and use their new site to enhance services and enrich communication with their community. Should you have any questions about our proposal, please feel free to contact Emily Hyland at 763.278.5985 or Emily.Hyland@hdrinc.com.

Sincerely,

HDR Engineering, Inc.

Emily Hyland
Project Manager

Scott Reed, PG
Vice President/Department Manager

Attachments: HDR Standard Terms & Conditions
General Statement of Qualifications Submittal – Technology and Website Enhancement Section
Experience Overview
Ms. Emily Hyland is a public involvement manager with seven years of experience in consulting. With a background in environmental science and a previous focus on NEPA permitting, Emily possesses an understanding of natural resources management that informs her work for clients such as watershed districts. She has experience in leading and implementing strategic public involvement plans, facilitating open house meetings, and developing effective communication tools including project websites, information hotlines, public notices and advertisements, and outreach mailings.

Project Experience
National Park Service, Alternative Transportation Plan for Mississippi National River and Recreation Area, MN. HDR, on behalf of the National Park Service, was retained to work with the Minnesota Department of Transportation, the Metropolitan Council, MRT Inc., and local partners to develop a multi-modal, alternative transportation plan for the Mississippi National River and Recreation Area (MNRRA). As a public involvement manager, Emily developed the public outreach recommendations for the MNRRA Plan, including outreach approach, tools, and a project survey system.

South Dakota Department of Agriculture, Revision of South Dakota Coordinated Plan for Natural Resources Conservation, SD. As the South Dakota Department of Agriculture's consultant, HDR evaluated the results of the previous South Dakota Coordinated Plan for Natural Resources Conservation and updated the Coordinated Conservation Plan. The updated plan provides guidance to the state's conservation partners as they allocate resources to pertinent projects through the year 2019, and also informs the public on the status of the state's natural resources and conservation programs. Emily led the public involvement team for this project which included the content development and review of the project website.

Minnesota Power, Great Northern Transmission Line, MN. HDR was selected to provide environmental and permitting support for construction of two new High Voltage Transmission Lines (HVTL); a HVTL between the Minnesota and Manitoba border and an Iron Range Substation and a 345kV HVTL between the Iron Range Substation and the Arrowhead Substation near Duluth, Minnesota. HDR was commissioned to provide all public outreach for the project. As the public involvement manager, Emily developed a project-wide public involvement plan. She managed and coordinated all stakeholder engagement including one round of 11 stakeholder workshops and two rounds of 11 and 14 open house meetings across the project area. She collaborated with the communication team at Minnesota Power while managing the project message, contact and comment database, media monitoring and outreach, website development and content management, project materials, notifications, and toll-free hotline.

Minnkota Power Coop Inc., Center to Grand Forks Project, Phase II, ND. Minnkota proposes to construct a 260-mile 345 kV transmission line between the Center 345 kV Substation and the Prairie Substation. HDR is supporting Minnkota in its federal Rural Utilities Service (RUS) NEPA review process, alternative evaluation study, and macro-corridor study development, Environmental Assessment (EA) with Scoping for the RUS, Section 106 consultation, Section 7 consultation, Section 10 and 404 permitting, North Dakota Public Service Commission Certificate of Route Compatibility and Route Permit Application process, public involvement, and county and township Conditional Use Permit applications. Emily’s responsibilities include development, and management of the public outreach program and the permitting development of the Macro-Corridor Study (MCS) and the EA. Emily coordinated the redevelopment of the project website once the project moved into the construction phase (www.minnkotacgf.com)
EMILY HYLAND — PUBLIC INVOLVEMENT MANAGER

Otter Tail Power Co. and Montana-Dakota Utilities, Big Stone South to Ellendale 345kV Transmission Line, SD, ND. HDR was selected for a 345kV transmission line project from Ortonville, Minnesota north to the Ellendale substation in North Dakota that is fulfilling an identified need for transmission. As the public involvement manager, Emily developed a project-wide public involvement plan for the project, managed and coordinated all stakeholder engagement including local leader meetings and two rounds of open house meetings across the project area. She also managed the project message, contact and comment database, media monitoring and outreach, website development and content management, project materials, notifications, toll-free hotline and quarterly newsletter development and distribution.

Clean Line Energy Partners, Rock Island Clean Line HVDC Transmission Line, IA, IL, NE. HDR was retained to provide siting, permitting, and stakeholder outreach for the Rock Island Clean Line, which will consist of a single +500 kV overhead High Voltage Direct Current transmission line to move 3,500 MW of renewable energy from northwest Iowa and either the Dakotas or Nebraska to the Chicago area. As the public involvement manager for the project, Emily is working with Clean Line Energy and her public involvement team at HDR to execute effective public outreach across two states. The project team has held over 300 grassroots meetings along with over 40 public open house meetings since spring 2011. Emily is responsible for managing all meetings, project website, comment database, ongoing comment response, and outreach strategy.
Experience Overview
Ms. Kelly Spitzley provides graphic, multimedia, database, and web design for strategic communications and public involvement, project permitting and development, and construction efforts. She provides full design, layout, and content development services for print and web resources including public meeting informational materials, project websites, interactive web components, mapping, mailers, and advertisement. Kelly also provides services for technical research, database design, and technical writing support. She is adept at Adobe’s Creative Suite software package, including InDesign, Photoshop, Illustrator, and Dreamweaver; is experienced at programming in Microsoft Access and Excel, developing Microsoft SharePoint sites, Google Maps API, Fusion Tables; and has experience with Flash development, HTML, XML, CSS, SQL, VBA for Access and Excel, and various content management systems.

Project Experience
**U.S. Navy, Marine Species Monitoring Program Management, Nationwide.** Kelly designed, developed, and manages a public web portal for the U.S. Navy’s Marine Species Monitoring Program. This website serves as an online portal for information on the background, history, and progress of the program, as well as provides access to reports, documentation, data, and updates on current monitoring projects and initiatives. The website includes a secure document library for team members to access and exchange documents.

**Clean Solutions for Omaha (CSO) Program Management, Omaha, NE.** The City of Omaha is working to ensure that the CSO Solutions (Control Projects) outlined in the Long Term Control Plan are constructed and operational by October 2027, in accordance with the Consent Order between the City and the Nebraska Department of Environmental Quality. HDR was contracted to provide program management, including public involvement services. Kelly is providing website development services for the redesign of the project website and also maintained and updated the quarterly newsletter.

**South Dakota Department of Agriculture, Revision of South Dakota Coordinated Plan for Natural Resources Conservation, SD.** As the South Dakota Department of Agriculture’s consultant, HDR evaluated the results of the previous South Dakota Coordinated Plan for Natural Resources Conservation and updated the Coordinated Conservation Plan. The updated plan provides guidance to the state’s conservation partners as they allocate resources to pertinent projects through the year 2019, and also informs the public on the status of the state’s natural resources and conservation programs. Kelly designed meeting promotional and informational materials, including mailed invites, an email campaign, multiple paid ads, meeting boards, handouts, and presentation materials. Kelly also designed, developed, and maintains a project website using content management.

**South Washington Watershed District (SWWD), Central Draw Storage Facility Outlet and Workshops, Minneapolis, MN.** HDR facilitated workshops with the SWWD and stakeholder cities to coordinate the final design conditions and resolve outstanding questions related to the construction of an outlet to the Mississippi River from the northern subwatershed of the SWWD, serving 25 square miles of landlocked watershed. Kelly assisted with the design and development of a workshop presentation for the project. She worked closely with the engineering team to create a clear, understandable, visually informative presentation.

**Washington County Public Works and SWWD, CSAH 19-20-22 Geometric Layout, Cottage Grove, MN.** HDR provided services from concept development through final design and construction for the reconfiguration of the existing intersections of CR 22 and CR 20 with CSAH 19 in the City of Cottage Grove to support the long-term goals of SWWD. Kelly designed an informational folded booklet visually outlining the details and considerations of the project alternatives.
KELLY SPITZLEY — WEBSITE DEVELOPER AND CONTENT MANAGER

Papio-Missouri River Natural Resources District (NRD), Planning Study and Preliminary Design of Dam Site 15A, Douglas County, NE. HDR provided planning, permitting, preliminary and final design, and construction contract administration services for Dam Site 15A. Dam Site 15A is a regional detention basin to be located on the North Branch of West Papillion Creek in Douglas County, Nebraska. As the project's graphic designer, Kelly design informational brochures intended to educate the public about the project elements.

CEATI International, Inc., HDR Dam Safety Training, U.S. and Canada. HDR developed a digital educational guide and eLearning system for dam safety programs at dams and levees throughout the U.S. and Canada. The program includes a synthesis of currently available literature, an interactive course and testing system, and a visually-oriented printable guide for dam operator use. Kelly designed the educational guide document and developed instructive visual figures and diagrams for use in both the guide and eLearning program.

Iowa Department of Transportation, Lock and Dam Feasibility Study, IA. HDR developed an in-depth study for the Iowa Department of Transportation analyzing the current state and possible future options for modernization of the Iowa lock and dam system on the upper Mississippi River. Kelly used the information and data in the technical report to develop a highly visual infographic handout intended to educate government officials with key conclusions and recommendations from the report.

Minnesota Power, Great Northern Transmission Line, MN. HDR was selected to provide environmental and permitting support for construction of two new High Voltage Transmission Lines (HVTL); a HVTL between the Minnesota and Manitoba border and an Iron Range Substation and a 345kV HVTL between the Iron Range Substation and the Arrowhead Substation near Duluth, MN. HDR provided all public outreach for the project. As the public involvement specialist, Kelly developed and maintains the project website. Kelly developed two rounds of online public meetings accessible through the project website which included videos, maps, and links to meeting tools and handouts in a unique format that allowed visitors to navigate the information rather than attending the in-person open house meeting. Kelly developed all graphics for meeting information boards, project newsletters, and presentations.

Otter Tail Power Co. and Montana-Dakota Utilities, Big Stone South to Ellendale 345kV Transmission Line, SD, ND. HDR was selected for a 345kV transmission line project from Ortonville, MN north to the Ellendale substation in North Dakota that is fulfilling an identified need for transmission. As the public involvement specialist, Kelly developed and maintains the project website. Kelly also developed all graphics for meeting information boards, project newsletters, e-Newsletters, handouts, and presentations.

Clean Line Energy Partners, Rock Island Clean Line HVDC Transmission Line, IA, IL, NE. HDR was retained to provide siting, permitting, and stakeholder outreach for the Rock Island Clean Line, which will consist of a single +500 kilovolt overhead High Voltage Direct Current transmission line to move 3,500 MW of renewable energy from northwest Iowa and either the Dakotas or Nebraska to the Chicago area. Kelly provided graphic design, web design, and production support for the public involvement effort. Materials produced included informational boards and collateral materials for use at numerous public meetings through the proposed project area. Kelly also developed graphics and interactive web components for the project website.

MnDOT, Cayuga and Maryland Avenue Bridge Replacement, St. Paul, MN. HDR was retained to provide full engineering design services for the reconstruction of I-35E between University Avenue and Maryland Avenue. HDR also provided public outreach coordination, meeting facilitation, promotion, and informational material development for the project. Kelly designed and produced the meeting materials, including informational boards, handouts, and promotional material.
Since 2009, HDR has been actively involved in the implementation phase of the City of Omaha Combined Sewer Overflow (CSO) Control Program (Program). As part of the Program Management Team (PMT), HDR has led the oversight and coordination for design and construction of facility and sewer separation projects.

In addition to oversight and management of projects, HDR is actively involved in the public outreach process. HDR’s role is to coordinate with the Program Public Facilitator to explain the progress and status of LTCP implementation to the public and to help mitigate construction impacts on the public. Primary communication occurs through the Program website (www.omahacso.com), which HDR developed and continues to update and maintain. The public website includes maps, descriptions, links to public meeting and other reference materials, and contact information for all active projects. A searchable map is also included to assist the public in identifying current and future projects in their area.

Some of the key features that make the website design effective are:

- Abundant images, photo sliders, icons, buttons, and videos make the site more visually pleasing, interesting and current.
- Additional buttons, icons and top navigation with drop-downs make the site easier to navigate. There is also a Search Bar on the bottom of every website page that makes it easier for the public to locate specific information.
- The site includes a Google calendar to which the public can subscribe.
- A database-linked comment form on the Contact Us page allows all public comments and responses to be archived and organized for future use in analyzing stakeholder feedback.
- Bluehost site hosting offers an economical option for a complete online backup of the site.
- CMS website using a Concrete5 template that provides review and approval capabilities, as well as ease of editing for client’s staff. The Concrete5 template selected is responsive and works on desktop computers, tablets and hand-held devices.
HDR offers customized web design and development services to fit the needs of your project. From simple project websites to keep the public informed about your project to more dynamic web platforms with secure pages, online public meetings, document management, interactive mapping, and media components, HDR can scale its services based on your specifications to deliver an appropriate web-based solution designed to enhance your project's online presence.

**Develop an engaging online presence**

Successful web development is more than just creating a website; it’s creating a clear, visually appealing, interactive environment for the public to truly engage with your project. HDR's web team offers graphic and information design, interactive mapping, social media strategy, content and document management, and media development services together to create professional, customized websites that promote your project’s identity while also thoughtfully conveying project information in a manner that is easy to understand and interact with for all visitors. From interactive mapping and video production to online public meetings, HDR has the experience to build an online presence that is a critical extension of your project's public outreach program.
Create websites that are easy to use and keep updated

HDR leverages content management technology to create websites that are easy to update and edit for project team members without knowledge of programming or code. This intuitive interface allows our clients to take ownership over the information on their websites if they choose, and also allows HDR project team members to contribute to the website update workflow, resulting in a more efficient process for keeping our websites up-to-date. HDR also offers secure internal team communication, data, and document management capabilities through SharePoint, if requested.

Track your site’s impact

HDR believes in the importance of quantifying the return on your investment in creating an online presence. We create periodic reports that visually present and explain the ‘why’ and ‘how’ of visitor statistics for your website. Our reports not only show how many, who, and where your website are – they often help highlight how additional public engagement efforts, like mailings, advertisements, news stories, etc. translate into web traffic, offering a complete view of the impact of your public outreach program.
<table>
<thead>
<tr>
<th>Name and Credentials</th>
<th>Experience</th>
<th>Projects</th>
</tr>
</thead>
</table>
| Kelly Spitzley | Ms. Kelly Spitzley provides graphic, multimedia, database, and web design for strategic communications and public involvement, project permitting and development, and construction efforts. She provides full design, layout, and content development services for print and web resources including public meeting informational materials, project websites, interactive web components, mapping, mailers, and advertisement. Kelly also provides services for technical research, database design, and technical writing support. She is adept at Adobe’s Creative Suite software package, including InDesign, Photoshop, Illustrator, and Dreamweaver, is experienced at programming in Microsoft Access and Excel, developing Microsoft SharePoint sites, Google Maps API, Fusion Tables, and has experience with Flash development, HTML, XML, CSS, SQL, VBA for Access and Excel, and various content management systems. | **Public-facing websites:**  
- Minnesota Power, Great Northern Transmission Line Environmental Support, Hibbing, MN  
- Minnkota Power Coop Inc., Center to Grand Forks Project, Phase II, ND  
- Clean Line Energy Partners, Rock Island Clean Line HVDC Transmission Line, IA, IL, NE  
- Otter Tail Power Co., Big Stone South to Ellendale 345kV Transmission Line, Ellendale, ND, Milbank, SD  
- State of South Dakota, Revision to SD Coordinated Plan for Natural Resource Conservation, SD  
- Navy Marine Species Monitoring Program Management, Nationwide  
- North Dakota Dept of Transportation, North Dakota Department of Transportation, Dickinson Bypass EA, Dickinson, ND  
- City of Omaha, 16th Street Streetscape Improvement Project, Omaha, NE  
- Capital Metro Transportation Authority, Alternative Analysis for the Austin North Central Corridor  
- HDR Engineering, Merricourt Wind Farm to Ellendale 230 kV Transmission Line, ND  
**Internal team websites:**  
- Bergmann, Hanson, HDR Joint Venture, Fargo-Moorhead Metropolitan Area Flood Risk Management Project - Modeling Plan, Fargo, ND, Moorhead, MN  
- Coronal, LLC, Plasma Gasification Arc Facility, International Falls, MN  
- Great River Energy, Brookings to Hampton Transmission Line Environmental Permitting and Inspection, Brookings, SD, MN  
- Minnesota Power, Great Northern Transmission Line Environmental Support, Hibbing, MN  
- Alllete Clean Energy, Alllete Clean Energy - 230 kV North Dakota Transmission Line, ND.  
- Mountrail - Williams Electric Coop, Mountrail-Williams Electric Coop - Program Support for North Dakota Activity, Williston, ND. |
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| **Emily Hyland**     | Ms. Emily Hyland a public involvement specialist who manages HDR's public involvement team in the Minneapolis Office. She has six years of experience in the consulting industry, with a background in environmental science, and has transitioned to public involvement services. She has recently been working on large power and energy projects in the Midwest. | • Great River Energy, CapX 2020 Brookings County to Hampton Transmission Line Project, MN, SD  
• Rock Island Clean Line HVDC Transmission Line, Iowa, Illinois, Nebraska  
• Minnkota Power Coop Inc., Center to Grand Forks Transmission Line Project, Phase II  
• Otter Tail Energy Services Company, Sheridan Ridge Wind Farm Phase II, ND |
| **Stephanie White**  | As a senior public involvement manager, Ms. Stephanie White is a skilled facilitator and consensus builder and has managed stakeholder groups across the country representing citizens, elected officials, and governmental employees at the local, county, state, and federal levels. She has experience in leading large- and small-scale public involvement programs, as well as education and training, marketing, and public relations. She specializes in grassroots education and outreach through the identification of, and collaboration with, existing social groups in communities. She also leverages the Web with interactive maps, surveys, live webcasts, and social networking. She has developed a standardized comment management database and protocol to streamline the flow of information to the public, accelerate response times, and improve the accuracy of reporting. | • Environment Omaha, Omaha By Design, Omaha, NE  
• Papio-Missouri River NRD, Study of Reservoir Sites 1 and 3C  
• Papio-Missouri River NRD, Papillion Creek Watershed Plan Stage III  
• Hydro Relicensing Project, Loup Power District, Columbus, NE |
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<th>Client, Project Name and Location</th>
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<tbody>
<tr>
<td><strong>Omaha By Design</strong>&lt;br&gt;Environment Omaha&lt;br&gt;<em>Omaha, NE</em>&lt;br&gt;<strong>Key Personnel:</strong>&lt;br&gt;Stephanie White</td>
<td>Environment Omaha intended to establish an environmental component of the City’s master plan through an in-depth look at five aspects: natural environment, urban form and transportation, building construction, resource conservation, and community health. HDR facilitated many of the committee meetings, designed the program logo, and designed and managed the program’s Web presence that included a project website, private committee blogs, a public blog, live webcasts of public meetings, and Facebook and Twitter sites.</td>
</tr>
<tr>
<td><strong>Revision of South Dakota Coordinated Plan for Natural Resources Conservation</strong>&lt;br&gt;<em>South Dakota Department of Agriculture&lt;br&gt;SD</em>&lt;br&gt;<strong>Key Personnel:</strong>&lt;br&gt;Kelly Spitzley&lt;br&gt;Emily Hyland</td>
<td>The natural resources in South Dakota are important to the livelihood of the state’s residents. As the South Dakota Department of Agriculture’s consultant, HDR evaluated the results of the previous South Dakota Coordinated Plan for Natural Resources Conservation and updated the Coordinated Conservation Plan. HDR created website branding and design for this project, as well as print media and other communication tools. HDR’s project effort also included conducting six public meetings throughout the state and seven meetings with an advisory committee composed of representatives from federal, state, and local conservation partners. The updated South Dakota Coordinated Plan for Natural Resources Conservation included goals, objectives, and performance criteria based on the collective mission of the state’s conservation partners, public requests, and available resources/funds. The updated plan provides guidance to the state’s conservation partners as they allocate resources to pertinent projects through the year 2019, and also informs the public on the status of the state’s natural resources and conservation programs.</td>
</tr>
<tr>
<td><strong>CapX 2020 Brookings County to Hampton Transmission Line Project</strong>&lt;br&gt;<em>Great River Energy&lt;br&gt;South Dakota and Minnesota</em>&lt;br&gt;<strong>Key Personnel:</strong>&lt;br&gt;Emily Hyland</td>
<td>The CapX 2020 project consists of an approximately 200-mile, double circuit 345 kV electric transmission line between Brookings, South Dakota and the southeast Twin Cities area. The project will also include an approximately 30-mile, 345kV transmission line between a new substation southwest of Granite Falls, Minnesota and the Minnesota Valley Substation. In total, the project includes upgrades or new construction of seven substations. HDR coordinated the public outreach effort and agency consultation which included three public open houses and two work group sessions, at several locations along the route, and several meetings with local, state and federal agencies - a total of more than 80 meetings.</td>
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<tr>
<td><strong>Rock Island Clean Line HVDC Transmission Line</strong>&lt;br&gt;<em>Clean Line Energy Partners&lt;br&gt;Iowa, Illinois, Nebraska</em>&lt;br&gt;<strong>Key Personnel:</strong>&lt;br&gt;Emily Hyland&lt;br&gt;Kelly Spitzley</td>
<td>The Rock Island Clean Line will deliver 3,500 MW of renewable energy from the region of Iowa, Minnesota, Nebraska and South Dakota to markets in Illinois and states further east. Power will be delivered via a 500-mile, 600 kV overhead High Voltage Direct Current (HVDC) transmission line at a cost of $1.7 billion. The Clean Line Energy team sought to study and review a wide range of alternatives consistent with all federal, state, and local laws and regulations to determine suitable study corridors. HDR’s role in this project is to provide support for siting, permitting, public involvement and stakeholder outreach.</td>
</tr>
</tbody>
</table>
1. STANDARD OF PERFORMANCE
The standard of care for all professional engineering, consulting and related services performed or furnished by ENGINEER and its employees under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under the same or similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER's services.

2. INSURANCE/INDEMNITY
ENGINEER agrees to procure and maintain, at its expense, Workers' Compensation insurance as required by statute; Employer's Liability of $250,000; Automobile Liability insurance of $1,000,000 combined single limit for bodily injury and property damage covering all vehicles, including hired vehicles, owned and non-owned vehicles; Commercial General Liability insurance of $1,000,000 combined single limit for personal injury and property damage; and Professional Liability insurance of $1,000,000 per claim for protection against claims arising out of the performance of services under this Agreement caused by negligent acts, errors, or omissions for which ENGINEER is legally liable. OWNER shall be made an additional insured on Commercial General and Automobile Liability insurance policies and certificates of insurance will be furnished to the OWNER. ENGINEER agrees to indemnify OWNER for claims to the extent caused by ENGINEER's negligent acts, errors or omissions. However, neither Party to this Agreement shall be liable to the other Party for any special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project or the Agreement from any cause or causes, including but not limited to any such damages caused by the negligence, errors or omissions, strict liability or breach of contract.

3. OPINIONS OF PROBABLE COST (COST ESTIMATES)
Any opinions of probable project cost or probable construction cost provided by ENGINEER are made on the basis of information available to ENGINEER and on the basis of ENGINEER's experience and qualifications, and represents its judgment as an experienced and qualified professional engineer. However, since ENGINEER has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor's methods of determining prices, or over competitive bidding or market conditions, ENGINEER does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost ENGINEER prepares.

4. CONSTRUCTION PROCEDURES
ENGINEER's observation or monitoring portions of the work performed under construction contracts shall not relieve the contractor from its responsibility for performing work in accordance with applicable contract documents. ENGINEER shall not control or have charge of, and shall not be responsible for, construction means, methods, techniques, sequences, procedures of construction, health or safety programs or precautions connected with the work and shall not manage, supervise, control or have charge of construction. ENGINEER shall not be responsible for the acts or omissions of the contractor or other parties on the project. ENGINEER shall be entitled to review all construction contract documents and to require that no provisions extend the duties or liabilities of ENGINEER beyond those set forth in this Agreement. OWNER agrees to include ENGINEER as an indemnified party in OWNER's construction contracts for the work, which shall protect ENGINEER to the same degree as OWNER. Further, OWNER agrees that ENGINEER shall be listed as an additional insured under the construction contractor's liability insurance policies.

5. CONTROLLING LAW
This Agreement is to be governed by the law of the state where ENGINEER's services are performed.

6. SERVICES AND INFORMATION
OWNER will provide all criteria and information pertaining to OWNER's requirements for the project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations. OWNER will also provide copies of any OWNER-furnished Standard Details, Standard Specifications, or Standard Bidding Documents which are to be incorporated into the project.

OWNER will furnish the services of soils/geotechnical engineers or other consultants that include reports and appropriate professional recommendations when such services are deemed necessary by ENGINEER. The OWNER agrees to bear full responsibility for the technical accuracy and content of OWNER-furnished documents and services.

In performing professional engineering and related services hereunder, it is understood by OWNER that ENGINEER is not engaged in rendering any type of legal, insurance or accounting services, opinions or advice. Further, it is the OWNER's sole responsibility to obtain the advice of an attorney, insurance counsel or accountant to protect the OWNER's legal and financial interests. To that end, the OWNER agrees that OWNER or the OWNER's representative will examine all studies, reports, sketches, drawings, specifications, proposals and other documents, opinions or advice prepared or provided by ENGINEER, and will obtain the advice of an attorney, insurance counsel or other consultant as the OWNER deems necessary to protect the OWNER's interests before OWNER takes action or forebears to take action based upon or relying upon the services provided by ENGINEER.

7. SUCCESSORS AND ASSIGNS
OWNER and ENGINEER, respectively, bind themselves, their partners, successors, assigns, and legal representatives to the covenants of this Agreement. Neither OWNER nor ENGINEER will assign, sublet, or transfer any interest in this Agreement or claims arising therefrom without the written consent of the other.

8. RE-USE OF DOCUMENTS
All documents, including all reports, drawings, specifications, computer software or other items prepared or furnished by ENGINEER pursuant to this Agreement, are instruments of service with respect to the project. ENGINEER retains ownership of all such documents. OWNER may retain copies of the documents for its information and reference in connection with the project; however, none of the documents are intended or represented to be suitable for reuse by OWNER or others on extensions of the project or on any other project. Any reuse without written verification or adaptation by ENGINEER for the specific purpose intended will be at OWNER's sole risk and without liability or legal exposure to ENGINEER, and OWNER will defend, indemnify and hold harmless ENGINEER from all claims, damages, losses and expenses, including attorney's fees, arising or resulting therefrom. Any such verification or adaptation will entitle ENGINEER to further compensation at rates to be agreed upon by OWNER and ENGINEER.

9. TERMINATION OF AGREEMENT
OWNER or ENGINEER may terminate the Agreement, in whole or in part, by giving seven (7) days written notice to the other party. Where the method of payment is "lump sum," or cost reimbursement, the final invoice will include all services and expenses associated with the project up to the effective date of termination. An equitable adjustment shall also be made to provide for termination settlement costs ENGINEER incurs as a result of commitments that had become firm before termination, and for a reasonable profit for services performed.

10. SEVERABILITY
If any provision of this agreement is held invalid or unenforceable, the remaining provisions shall be valid and binding upon the parties. One or more waivers by either party of any provision, term or condition shall not be construed by the other party as a waiver of any subsequent breach of the same provision, term or condition.

11. INVOICES
ENGINEER will submit monthly invoices for services rendered and OWNER will make prompt payments in response to ENGINEER's invoices.

ENGINEER will retain receipts for reimbursable expenses in general accordance with Internal Revenue Service rules pertaining to the support services.
of expenditures for income tax purposes. Receipts will be available for inspection by OWNER’s auditors upon request.

If OWNER disputes any items in ENGINEER’s invoice for any reason, including the lack of supporting documentation, OWNER may temporarily delete the disputed item and pay the remaining amount of the invoice. OWNER will promptly notify ENGINEER of the dispute and request clarification and/or correction. After any dispute has been settled, ENGINEER will include the disputed item on a subsequent, regularly scheduled invoice, or on a special invoice for the disputed item only.

OWNER recognizes that late payment of invoices results in extra expenses for ENGINEER. ENGINEER retains the right to assess interest on any amounts which are not paid within thirty (30) days from the date of the invoice. In the event undisputed portions of ENGINEER’s invoices are not paid when due, ENGINEER also reserves the right, after seven (7) days prior written notice, to suspend the performance of its services under this Agreement until all past due amounts have been paid in full.

12. CHANGES

The parties agree that no change or modification to this Agreement, or any attachments hereto, shall have any force or effect unless the change is reduced to writing, dated, and made part of this Agreement. The execution of the change shall be authorized and signed in the same manner as this Agreement. Adjustments in the period of services and in compensation shall be in accordance with applicable paragraphs and sections of this Agreement. Any proposed fees by ENGINEER are estimates to perform the services required to complete the project as ENGINEER understands it to be defined. For those projects involving conceptual or process development services, activities often are not fully definable in the initial planning. In any event, as the project progresses, the facts developed may dictate a change in the services to be performed, which may alter the scope. ENGINEER will inform OWNER of such situations so that changes in scope and adjustments to the time of performance and compensation can be made as required. If such change, additional services, or suspension of services results in an increase or decrease in the cost of or time required for performance of the services, an equitable adjustment shall be made, and the Agreement modified accordingly.

13. CONTROLLING AGREEMENT

These Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice-to-proceed, or like document.

14. EQUAL EMPLOYMENT AND NONDISCRIMINATION

In connection with the services under this Agreement, ENGINEER agrees to comply with the applicable provisions of federal and state Equal Employment Opportunity for individuals based on color, religion, sex, or national origin, or disabled veteran, recently separated veteran, other protected veteran and armed forces service medal veteran status, disabilities under provisions of executive order 11246, and other employment, statutes and regulations, as stated in Title 41 Part 60 of the Code of Federal Regulations § 60-1.4 (a-f), § 60-300.5 (a-e), § 60-741 (a-e).

15. HAZARDOUS MATERIALS

OWNER represents to ENGINEER that, to the best of its knowledge, no hazardous materials are present at the project site. However, in the event hazardous materials are known to be present, OWNER represents that to the best of its knowledge it has disclosed to ENGINEER the existence of all such hazardous materials, including but not limited to asbestos, PCB’s, petroleum, hazardous waste, or radioactive material located at or near the project site, including type, quantity and location of such hazardous materials. It is acknowledged by both parties that ENGINEER’s scope of services do not include services related in any way to hazardous materials. In the event ENGINEER or any other party encounters undisclosed hazardous materials, ENGINEER shall have the obligation to notify OWNER and, to the extent required by law or regulation, the appropriate governmental officials, and ENGINEER may, at its option and without liability for delay, consequential or other damages to OWNER, suspend performance of services on that portion of the project affected by hazardous materials until OWNER: (i) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the hazardous materials; and (ii) warrants that the project site is in full compliance with all applicable laws and regulations.

OWNER acknowledges that ENGINEER is performing professional services for OWNER and that ENGINEER is not and shall not be required to become an “arranger,” “operator,” “generator,” or “transporter” of hazardous materials, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), which are or may be encountered at or near the project site in connection with ENGINEER’s services under this Agreement. If ENGINEER’s services hereunder cannot be performed because of the existence of hazardous materials, ENGINEER shall be entitled to terminate this Agreement for cause on 30 days written notice. To the fullest extent permitted by law, OWNER will indemnify and hold harmless ENGINEER, its officers, directors, partners, employees, and subconsultants from and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused by, arising out of or resulting from hazardous materials, provided that (i) any such cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or injury to or destruction of tangible property (other than completed Work), including the loss of the use thereof, and (ii) notwithstanding anything in this paragraph shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual’s or entity’s sole negligence or willful misconduct.

16. EXECUTION

This Agreement, including the exhibits and schedules made part hereof, constitute the entire Agreement between ENGINEER and OWNER. This Agreement may be amended, supplemented or modified only by a written instrument duly executed by the parties.

17. ALLOCATION OF RISK

OWNER and ENGINEER HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING ENGINEER’S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE RISKS, SO, TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF ENGINEER (AND ITS RELATED CORPORATIONS, SUBCONSULTANTS AND EMPLOYEES) TO OWNER AND THIRD PARTIES GRANTED RELIANCE IS LIMITED TO THE GREATER OF $100,000 OR ITS FEE, FOR ANY AND ALL INJURIES, DAMAGES, CAUSES OF ACTION, LOSSES, EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF ENGINEER’S SERVICES OR THIS AGREEMENT REGARDLESS OF CAUSE(S) OR THE THEORY OF LIABILITY, INCLUDING NEGLIGENCE, INDEMNITY, OR OTHER RECOVERY. THIS LIMITATION SHALL NOT APPLY TO THE EXTENT THE DAMAGE IS PAID UNDER ENGINEER’S COMMERCIAL GENERAL LIABILITY INSURANCE POLICY.

18. LITIGATION SUPPORT

In the event ENGINEER is required to respond to a subpoena, government inquiry or other legal process related to the services in connection with a legal or dispute resolution proceeding to which ENGINEER is not a party, OWNER shall reimburse ENGINEER for reasonable costs in responding and compensate ENGINEER at its then standard rates for reasonable time incurred in gathering information and documents and attending depositions, hearings, and trial.

19. UTILITY LOCATION

If underground sampling/testing is to be performed, a local utility locating service shall be contacted to make arrangements for all utilities to determine the location of underground utilities. In addition, OWNER shall notify ENGINEER of the presence and location of any underground utilities located on the OWNER’s property which are not the responsibility of private/public utilities. ENGINEER shall take reasonable precautions to avoid damaging underground utilities that are properly marked. The OWNER agrees to waive any claim against ENGINEER and will indemnify and hold ENGINEER harmless from any claim of liability, injury or loss caused by or allegedly caused by ENGINEER’s damaging of underground utilities that are not properly marked or are not called to ENGINEER’s attention prior to beginning the underground sampling/testing.
Proposal for
Technology Consulting Services

Prepared for the
Riley-Purgatory-Bluff Creek Watershed District

Submitted by Barr Engineering Company
July 22, 2013
July 22, 2013

Claire Bleser
District Administrator
Riley-Purgatory-Bluff Creek Watershed District
8080 Mitchell Road
Eden Prairie, MN 55344

Re: Proposal for Technology Consulting Services

Dear Ms. Bleser:

Barr Engineering Company is pleased to submit our proposal to the Riley-Purgatory-Bluff Creek Watershed District for technology consulting services to redesign your website. We have helped many clients use the Internet to disseminate information and data to both internal and external stakeholders. Barr is well-suited to assist you.

- **Your website needs to grow with you.** A well-design website can accommodate the changing and expanding needs of the District. With your long-term goals in mind, Barr will design your site to seamlessly integrate future enhancements to make it more robust and interactive.

- **Your website must convey openness and transparency to a wide variety of stakeholders.** A key component to achieving this is a design and structure that allows visitors to quickly and easily find information or documents. We will work closely with you to identify an efficient and logical structure and design for your site to facilitate ease of use and self-service by visitors.

- **Your website needs to be easy to update.** An easy-to-maintain website is one that is updated frequently. We will design pages that can be maintained using a standard web-editing tool. For dynamically (database) driven content, a custom web-based content management screen can be programmed.

- **You want to integrate your existing monitoring database.** Your current website delivers water-quality data through a mapping interface. Since the EQuIS database was recently transferred to Barr’s server, hiring Barr to develop your website will streamline future expansion efforts to include a mapping interface for water-quality data or other enhancements such as permit review information.

Thank you for the opportunity to propose on this project. We’re excited about the opportunity to work with you. If you have any questions, please feel free contact me (952-832-2755 or ssobiech@barr.com) or project manager Tanya Roberts (952-832-2862 or troberts@barr.com).

Sincerely,

Scott Sobiech, PE
Vice President, Principal in Charge
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Barr was incorporated in 1966 and traces its origins to Adolph Meyer, one of the first hydrologists in the United States. Today, Barr is an employee-owned company with almost 700 employees located in Minnesota, North Dakota, Missouri, Michigan, and Alberta, Canada. More than 450 of our staff are located at our Minneapolis headquarters. Working together, our engineers, scientists, and support specialists help clients develop, manage, and restore natural resources.

For nearly 50 years, Barr has offered comprehensive engineering and technical services to watershed management organizations and municipalities in Minnesota and neighboring states. We specialize in addressing complex and technically challenging engineering and environmental problems and can tailor solutions to match your scope, budget, and timeframe.

Website design experience
Barr has helped many clients design or redesign their website, making sure the site is easy to use, easy to maintain, and visually appealing. We specialize in database-driven functionality, which is especially important for applications related to mapping.

We specialize in the customer self-service concept—websites that let customers help themselves. Customers like self-service for its speed and convenience; clients like it because it saves money. Barr routinely designs, develops, and hosts websites to share project information and progress with our clients as well as project stakeholders and the public.

Barr is well positioned to design and program a website for you that will be able to accommodate your current needs while also being able to incorporate future robust enhancements, such as bringing in information from program sources (e.g., permitting) and using GIS-mapping functions to display information.

Watershed district website
Client: Nine Mile Creek Watershed District
Barr has worked with the Nine Mile Creek Watershed District for over a decade to support their needs to share information with the public and among district managers.

District staff were able to edit content throughout the site using a market-based web editing tool of their choice. The site featured a header with a suite of random-display images for a unique view at each visit, database-driven event and announcement functions to provide fast editing and date-driven display of information, and integrated mapping features. The most recent
Enhancement to the site was the development of a select set of pages in mobile-compatible format that are displayed automatically when the site detects a user is viewing the page from a mobile device.

**Lake Bronson Dam repair evaluation**

**Client:** Minnesota Department of Natural Resources

Barr completed an alternatives evaluation and a feasibility study to rebuild the Lake Bronson Dam. The work included options for repair of the dam and providing reports and public presentations outlining the evaluation process and the repair alternatives.

As part of the project, we developed a public-information website to inform the public about project reports on alternatives being considered, schedule updates, and public meetings. The site also allowed the public to post comments about the project—with a built-in review step by project staff before those comments were displayed publicly.

**Monitoring program tracking website**

**Client:** Xcel Energy

To streamline tracking and completion of numerous environmental activities, Barr developed an electronic database and reporting system that allows access to real-time information via a secure website. The system houses all inspection forms and instructions for correcting accidental environmental infractions, and allows instant report generation. For each of more than 800 transmission poles, we prepared site maps and GIS figures and incorporated them into the database. The system, which organizes and links thousands of documents, makes information quickly and easily accessible to Xcel, the multiple parties involved in construction, and regulators. Field staff carry iPads with which they can view a satellite image superimposed by comprehensive site data—pole location, wetland boundaries, and mitigation measures—and make updates that are instantaneously available to everyone using the system.
Website design team

Tanya Roberts  
Information Technology Specialist

Tanya has 14 years of application and website design, development, and project management experience. She specializes in projects that require integration of data from multiple systems and designs graphical interfaces that are friendly and intuitive for users. An experienced project manager and JAD facilitator, Tanya leads our clients and developers through project planning, development, and implementation.

Tanya will manage the project, facilitate stakeholder engagement, design the website, and populate the static content pages.

Brie Meyer  
Programmer/Analyst  
BS, Business Computer Information Systems; Client/Server Technology Certificate

Brie has 13 years of experience with a wide variety of programming languages, database platforms, and development tools. She specializes in programming that integrates websites and databases, as well as other IT tools used in manufacturing and industry, such as production-tracking applications.

Brie will program dynamic content for the website.

Aaron Mielke  
GIS Specialist  
BS, Natural Resources; GIS Graduate Certificate

Aaron’s primary areas of expertise are GIS technology and data analysis. At Barr, he works on environmental impact statement (EIS) reports, permits, and studies. He also creates maps and datasets/shapefiles using data analysis procedures or by digitizing information from aerial photographs or field data.

Aaron will serve as a technical advisor for identifying future dynamic content integrations.

Scott Sobiech, PE, CFM  
Vice President, Senior Water Resources Engineer  
MS, Civil Engineering; BS, Civil Engineering

Scott has more than 15 years of experience in the areas of civil and environmental engineering as a project manager and technical expert. His areas of expertise are levee evaluations/certification, evaluation of flood-protection options, flood insurance studies, and detailed hydrologic, hydraulic, water-quality modeling, and economic analysis. He is a certified floodplain manager.

Scott will serve as the principal in charge and facilitate stakeholder engagement.
Qualifications

Client website work

Nine Mile Creek Watershed District
www.ninemilecreek.org

Valley Branch Watershed District
www.vbwd.org

Bassett Creek Watershed Management Commission
www.bassettcreekwmo.org

City of Edina (Login: edat; Password: hennepin)
www.barr.com/ClientRes/Projects/Hennepin%20Cty/Bassett%20Creek/admin/edat/index.html

References

Kevin Bigalke
Administrator
Nine Mile Creek Watershed District
7710 Computer Avenue Suite 135
Edina, MN 55439
Tel: (952) 835-2078
Email: kbigalke@ninemilecreek.org

Wayne Houle
City Engineer
City of Edina
7450 Metro Boulevard
Edina, MN 55439
Tel: (952) 826-0443
Email: WHoule@EdinaMN.gov

Data availability of full site backup, design templates, & style sheets

The site would be constructed as a stand-alone site developed with a blend of static and dynamic (database driven) pages as is appropriate for each content area. While Barr is willing to host the website on our servers, RPBCWD has the ability to obtain the full site content, code, stylesheet, and design template files to store in-house or at any other web host of your choosing. Backups of databases and file contents on Barr’s servers are run nightly; the most recent backup can be provided to Riley at any time upon request.
**Task 1: Stakeholder Engagement**
While the District is looking at the development of a relatively simple site to start, engaging a team of stakeholders now will help the District define what the early website should offer to your audiences right away and how it may grow over time to support various programs and information sharing needs of the District. This will assure that your site is constructed with both the immediate and a long-term view in mind so that it can be easily expanded to accommodate future needs—without lengthy and expensive re-development efforts. During this phase, Barr will work with you to explore and identify your goals for the site’s look, functionality, content, navigation, and user experience.

*Timeframe:* August 19-30  
*Deliverable(s):* two 1-hour meetings at Barr’s office, meeting notes documenting decisions  
*Information needed from the District:* approval of meeting notes and decisions by September 13

**Task 2: Site Design**
Site design follows approval of the meeting minutes and decisions, and involves the actual design of the look, feel, and navigation of the site. Barr will develop and provide several different designs to the District for review and feedback to reach a final design and layout for the website.

*Timeframe:*  
September 16-27: design development  
September 30-October 4: design review and one round of modifications  
October 8: final design approval from District  
*Deliverable(s):* two to three design options  
*Information needed from the District:* brand color specifications, electronic file of logo, electronic file of photos that can be used in design layouts, typography, or other style guidelines

**Task 3: Site Development**
Site development begins upon approval of the site design. Barr will configure the database, program dynamic components, and place content.

*Timeframe:* October 8-November 8  
*Deliverable(s):* beta version of website for testing  
*Information needed from the District:* electronic files of content text, electronic files in PDF format of documents to be published on the website in the content areas, electronic files of content photos that should accompany text

**Task 4: Testing**
Upon completion of development, District staff will be asked to test the website to confirm functionality, provide final feedback, and give the go-head to launch the site. Barr will make final edits before launch.

*Timeframe:* November 11-14  
*Deliverable(s):* link to beta website for testing, final edits to site as needed  
*Information needed from the District:* approval of site by November 14 for launch

**Task 5: Site Launch**
The site is published live on the Internet and configured to the District’s domain name.

*Timeframe:* November 15  
*Deliverable(s):* live site launched on Internet  
*Information needed from the District:* none

**Recommendations**
To provide the District with a fully-functional site that can grow to meet future needs, Barr proposes to develop a customized site. For maximum efficiency and cost effectiveness, we recommend that the District use a market-standard web editing tool, such as Adobe Dreamweaver, to maintain the general text and photo content of the site. Where the content is
delivered dynamically (such as a calendar of events), a custom web-based content management screen would be programmed to manage the entry and display of that data. This allows the District to access and manage every element of the website while minimizing development costs.

Mobile versions of websites are becoming standard. Because of this, the District may want to explore designing a mobile compliant version of the website in a future phase of site development.

The use of online mapping tools and links to databases provide enormous benefit to both the website audiences and to the District staff tasked with maintaining the site content. Barr can assist with the development of GIS-based mapping features, dynamic content delivery pulled from databases, and secured content sections specific to a particular audience. These types of features would be explored during the stakeholder engagement meetings early in the process and planned for as future site components so they can be incorporated when the District is ready to do so. For example, the District could deliver water-quality data through a mapping interface similar to functionality on the current District website, access permit information, access groundwater data, and provide tools to enter and report on future permit review or other inspection and monitoring activities.

**Estimated project cost**

We understand the District currently has allocated a budget of $5,000 to 10,000 for an interim website. Barr can develop a simple one to two page static website within the budgeted amount. However, it would likely prove difficult to expand in the future, causing potential rework. Therefore, we propose to develop a fully-customized site that can grow with the needs of the District over time and support sophisticated integration of program information in a user-friendly format. We estimate that building this starting platform at a time and materials cost of $14,000.

**Estimated maintenance budget**

Barr will host the District website on Barr’s servers at no hosting cost to the District. District staff will be able to maintain site content directly on the website. Barr will provide 16 hours per year at no cost to be used at the discretion of District staff, either for support in posting content on the site or to enhance site programming and functionality. Any support requested above the 16 annual hours would be billed on a time and expense basis on the approval of District staff. District staff will be able to reach Barr team members by telephone and email throughout the business week to request support as needed.

**Assumptions**

- The District will provide all content for the site in electronic format.
- For the initial site development, the only dynamic (database) content and an associated content management interface will be for a District calendar.
- GIS mapping and delivery of water quality data will be considered a future-phase development project and is not included in this scope of work.
- Management of the domain name is the responsibility of the District. Barr can assist on a time and materials basis as requested. The current domain name rileywd.org is held by CH2M Hill and is registered through September 19, 2014. Ownership of that domain should be transferred to the District and/or the old District domain name rpbcwd.org could be reserved again (it was available for reservation at the writing of this proposal) and used for the new website. The District is responsible for all domain registration and transfer fees.
- The District is responsible for the purchase and licensing of the web-editing tool of their choice.
Technology Consulting Services

July 22, 2013
July 22, 2013

Claire Bleser, Administrator  
Riley-Purgatory-Bluff Creek Watershed District  
8080 Mitchell Road  
Eden Prairie, MN 55344

Subject: Technology Consultants Who Understand Watershed District Needs

Dear Claire:

Through our conversations regarding your technology needs, we understand that you are looking to update the District’s website visually and improve how you communicate critical information. A new era for Riley Purgatory deserves a new look and feel. Website improvements are a great way to show off your efforts to constituents and keep them informed.

Our philosophy with technology consulting is to work collaboratively and guide you to find solutions that really will work best for the District. We have a unique blend of technology experience and insight on District functions. We’ll guide the project to fit your vision, integrating an advanced workflow process for your staff with a great user experience and design.

We have full-service capabilities with a personalized touch you would expect from a smaller, local firm. We are experienced in providing services to metro-area watershed districts and understand the unique challenges you can face. We have an in-house team of web developers, engineers, and geospatial experts who can offer you the direct service you deserve.

We feel that our web service proposals are the most competitive you will find. We believe we can offer you the best understanding to advance your technology while understanding what makes your watershed unique. We look forward to the opportunity to collaborate with you to find the technology that will best serve these needs.

We will call to follow up on our submittal on Monday, July 29. If you have any questions before that time, please do not hesitate to contact us at 763.493.4522.

Sincerely,

HOUSTON ENGINEERING, INC.

Brian Fischer, CFM, Project Manager  
Direct: 763.493.6664  
bfischer@houstoneng.com

Nancy Stowe, PE, Client Manager  
Direct: 763.493.6681  
nstowe@houstoneng.com
1. Understanding Your Needs

Houston Engineering, Inc. (HEI) understands RPBCWD wants to redesign the District website to improve the appearance, functionality, and usefulness to visitors. The current website can no longer be maintained by staff, and we understand that the first phase is to redesign the website to a functioning state where staff can update pages. Future phases might include additions of a GIS map viewer, permit database, and water quality database.

We also understand the District would like to have an interim website to post upcoming events and Board packets. Our approach would be to initially spend a few hours to determine whether or not the existing Sharepoint site could be used. If that is not feasible, HEI will use the design (see Task 1 on page 3) and create a very simple web page that the District can use with an HTML editor to post events and Board packets. The interim website will be replaced once the newly designed website is migrated into a content management system.

The website will provide:

- a fresh look and feel that supports the organization’s administrative mission
- a dynamic interface for sharing project information
- visual interest to attract new visitors and add to the user experience
- content areas highlighting organization initiatives and events
- easy maintenance using a content management system that supports multiple contributors

We understand that another company is currently providing e-mail services to the District. While we do not provide this service, we can help the District transition to a new e-mail provider such as Google Mail (http://www.google.com/enterprise/apps/business/products.html?section=gmail#gmail).

2. Company Background and Team

HEI will team with Nova Studios (http://www.nova-studios.net/) to provide the graphic design for the website redesign. After extensive work together to complete similar websites, we offer a one-team approach and have a proven track record of working well together. HEI will be the primary point of contact for all communication.

Brian Fischer, GIS Project Manager with HEI, will serve as your main point of contact throughout the life of this project. Brian is backed by a deep bench of web developers with the experience and knowledge of current trends and technology to help guide RPBCWD to find the best technology solution for its needs. Brian has led the Geographic Information System (GIS) sector for the past 12 years and leads our geospatial group, a team of cutting-edge technology specialists. Our team brings the dedication and experience you need to finish the project and receive the solution that will work best for RPBCWD.

Nova Studios is a locally-owned and operated firm, specializing in website design, logo development, and printed collateral materials (e.g. brochures, letterhead, business cards, etc.). They also provide website content development and maintenance services to businesses needing an ongoing outsourced website management solution. Their focus is serving not-for-profit organizations and small to medium sized for-profit companies. As a part of company philosophy, Nova Studios places an emphasis on up-front planning and analysis to ensure projects are aligned with organization business goals from the start. This means less second-guessing and more getting down to business. The company has been operating since 2005.

The company’s founder, Michelle Novak, has more than 15 years of experience in graphic design and marketing. She has coordinated large-scale web-based projects, including global corporate intranets, and more than 40 customer-facing websites. Michelle has a BA degree in graphic design/journalism and an MBA from the University of St. Thomas in St. Paul, Minnesota.
3. Qualifications

HEI and Nova Studios have partnered together to complete several successful sites, listed below. We invite you to call any of our references to learn more about our projects and their experience working with the HEI team:

1. **International Water Institute** | Chuck Fritz: 701.388.0861
2. **South Washington Watershed District** | Matt Moore: 651.714.3729
3. **Sun River Watershed District** | Alan Rolo: 406.727.4337
4. **Middle Snake Tamarac Watershed District**
5. **Red River Basin Decision Information Network**
6. **Buffalo-Red River Watershed District**
7. **Middle Fork Crow River Watershed District**
8. **Sauk River Watershed District**
9. **Ramsey County Park and Rec Department**
10. **Klamath Basin Decision Support System**

1. [iwinst.org](http://iwinst.org)
2. [swwdnn.org](http://swwdnn.org)
3. [sunriverwatershed.org](http://sunriverwatershed.org)
4. [mstrwd.com](http://mstrwd.com)
5. [rrbdin.org](http://rrbdin.org)
6. [brrwd.houstoneng.net](http://brrwd.houstoneng.net) (In Progress)
7. [mfcrow.org](http://mfcrow.org)
8. [srwdmn.org](http://srwdmn.org)
9. [https://maps.co.ramsey.mn.us/goramsey/](https://maps.co.ramsey.mn.us/goramsey/)
10. [klamathdss.org](http://klamathdss.org)
4. **Scope of Work**

**Task 1: Website Design and Informational Gathering**
HEI will develop an original site, with graphic design elements that improve the user experience while supporting the organization’s current branding. This site will include general and informational pages and a content management system that will allow staff to update content.

HEI will review the content of the current District site to see if it is easily navigable and/or organized in a logical manner based on the following criteria:

- Navigation categories accurately identify the content
- Navigation is in an easily accessible location
- Content is linked at the appropriate level in the navigation
- Navigation includes all required content

HEI will then conduct a kick-off meeting to gather information from the District regarding design preferences, colors, logos, navigation, and content pages. HEI will also gather information about the District’s current e-mail service and discuss options to migrate to a new provider. Please note that costs for the migration of e-mail service are not included in this proposal.

Nova Studios will prepare two mock-ups that incorporate design elements that support the RPBCWD brand and meet the site requirements. The mock-ups will include a design for the home page and a secondary page. Mock-ups may also include designs for additional secondary and tertiary pages as deemed necessary to meet individual content requirements. All elements including navigation, content areas, images, and technology features will be incorporated into the mock-ups.

Nova Studios will review any photos and graphic elements available from the organization to identify images that will be used for the website. If additional design elements are needed (e.g., logos or brochures) Nova Studios can design these for an additional fee.

After the mock-ups are developed, they will be presented to the District for feedback. Mock-ups will be provided as PowerPoint slides and later revised based on feedback. A final mock-up will be provided to the District for review and final approval.

**Task 2: Interim Website Setup**
Following final approval of the mock-ups, Nova Studios will build an XHTML template of the home page, secondary page, and up to two customized pages for the website. We will also create the CSS file for the site that defines all site styles. The XHTML template and CSS document will be submitted to HEI for WordPress (http://wordpress.org/) development.

HEI will then use the homepage from the design and one secondary page for an interim website. The interim website will only contain the sections “About Us”, “Event Listing”, and “Board Packet”. The interim website will be hosted on HEI’s web server. We will provide FTP access to the HTML files for the District staff that can use an HTML editor, such as Dreamweaver, to update content. District staff will be responsible for HTML editing and no training will be provided, unless requested at an hourly fee. HEI staff can also post content for the District on the interim website for an hourly fee until the content management system is set up. We will also work with District staff to transfer the domain name for the website to direct it to our web server.

**Task 3: Content Management System Setup**
A content management system (CMS) provides an easier way for non-web programmers to create and update Web pages. HEI recommends using the very popular industry standard CMS: WordPress. We have successfully used this CMS for other watershed districts. Following the template development, we will set up and configure a CMS that contains the RPBCWD new website design. As part of the WordPress setup, HEI will create the necessary templates, posts, and plugins to create a fully functional website. We will also set up a calendar for event postings. The website will be set up and hosted on HEI’s web server.
Content Transfer:
RPBCWD will be responsible for transferring the existing Web page content to the new website design. There may be some content that is not transferrable to the new format. In this case, RPBCWD will be required to create the new content in the new site (for example: monitoring data). If RPBCWD does not have staff available to transfer or create web page content, HEI can provide this service for an hourly fee.

Task 4: Training and Follow-Up Technical Support
HEI will provide two separate 2 hour web training sessions for RPBCWD staff demonstrating how to add, edit, and delete pages in the website. The training will also review the WordPress administrative user interface, discuss the posts implemented for the website, and discuss any special plugins used (such as calendars). After the web training sessions are complete, HEI and Nova Studios will provide up to 12 hours of technical support via web, phone, and email through December 31, 2013. If more training or technical support hours are needed, they can be provided at an hourly rate. Finally, we will provide web statistics through Google Analytics free tools.

Task 5: Hosting and Maintenance
After sign-off and final deployment, the project team will have met their obligations under this project. Web hosting will be provided by HEI for $25/month. Hosting will be provided by HEI as part of the project from the start date through December 31st, 2013. Maintenance for this type of website usually comes in the form of technical support and enhancements. It is not possible for HEI to estimate the maintenance needs due to unknowns in District staff skills and enhancements desires. Maintenance and technical support can be provided in 2014 for $115/hr.

Task 6: Recommendation for Future Enhancements
HEI has developed a variety of enhancements for watershed districts that compliment websites or provide tools to help staff with day-to-day activities. We pride ourselves on being a leader in technology solutions for watershed districts. We can provide demonstrations for any of the following District enhancements:

- “Am I in the Watershed District?” App (http://rcwd.houstoneng.net/googleapp/map.html) and (http://mnparks.houstoneng.net/crwwhereiam/)
- GIS Map Viewers (http://map.swwdmn.org/)
- Web-based Permit Database (password protected)
- Web-based Monitoring Data Database (in development stage- http://wq.swwdmn.org)
- Cost Share BMP/Project Tracking Database (password protected)
- Mobile Inspection Apps
Deliverables

- Two web design mock-ups.
- A basic interim website.
- A WordPress CMS setup and configured with the RPBCWD website.
- Web statistics report through Google Analytics.
- 4 hours of web training sessions.
- 12 hours of follow-up technical support.

Assumptions

- New website page content will be created and entered into the CMS by RPBCWD staff.
- The website will be hosted at HEI, and the domain name will be pointed to HEI webserver.
- Nova Studios will provide the website design and template development.
- No on-site meetings will be required for technical support.
- Cost for e-mail service migration and 3rd party service is not included in this proposal.

5. Schedule

The proposed project schedule assumes a signed contract by August 2, 2013. Schedule also assumes quick turnaround on mock-up reviews and requests for content by District staff. If the District cannot meet these deadlines, the project schedule will need to be extended. HEI can be flexible with the schedule to meet the constraints and needs of RPBCWD.

- Project start: August 12, 2013
- Graphic design mock-ups completed: September 3, 2013
- Review of website design due from RPBCWD: September 13, 2013
- Interim website deployed: September 20, 2013
- WordPress setup completed: October 11, 2013
- District staff can begin to transfer and/or create content: October 14, 2013
- End of technical support: December 31, 2013

6. Cost Estimate

**Task 1:** Website Design and Informational Gathering $3,000

**Task 2:** Interim Website Setup $1,500

**Task 3:** Content Management System Setup $3,500

**Task 4:** Training and Follow-up Technical Support $1,800

**TOTAL:** $9,800
October 3, 2005

Riley-Purgatory-Bluff Creek Watershed District
Attn: Mr. Bob Obermeyer
Barr Engineering Company
4700 West 77th Street
Suite 200
Minneapolis, MN 55435

RE: Permit Extension and Amendment, General Permit #97-6113, Riley-Purgatory-Bluff Creek Watershed District, Carver and Hennepin Counties

Dear Mr. Obermeyer:

As requested in your September 28, 2005 email, authorization for storm water sediment removal has been added and the expiration date of General Permit #97-6113 is hereby extended to November 30, 2010. In addition, language has been updated to reflect state rule changes regarding docks, mooring facilities, and marinas. All other conditions of the permit shall remain in effect. General Permit #97-6113 authorizes property owners and their agents in Riley-Purgatory-Bluff Creek Watershed District to do riprap protection, dock, mooring facility, marina, retaining wall, boat ramp, bridge, culvert, intake and outfall projects, and storm water sediment removal, when Riley-Purgatory-Bluff Creek Watershed District acts as the reviewing agent.

The intent of this General Permit continues to be to simplify permit processing in areas where we have overlapping authority, and to avoid duplication of effort for most categories. If a proposed project meets the conditions of General Permit #97-6113, and a permit is obtained from the Riley-Purgatory-Bluff Creek Watershed District, the applicant will not be required to obtain a separate individual permit from the DNR Waters. However, projects that exceed the conditions in General Permit #97-6113 will continue to require an individual DNR Waters permit.

Thank you for your continued cooperation. If you have any questions, please contact Area Hydrologist Julie Ekman at (651) 772-7910.

Sincerely,

[Signature]

Dale E. Homuth
Regional Hydrologist

Enclosure

c: Cities of Bloomington, Chanhassen, Chaska,
  Deephaven, Eden Prairie, Minnetonka, Shorewood
  Carver County Planning & Zoning, Dave Drealan
  Hennepin County Environmental Services, Joel Settles
  U.S. Army Corps of Engineers, Joe Yanta
  Carver Soil & Water Conservation District, Mike Wanous
  Hennepin Conservation District, Stacey Puranen
  Lower Minnesota River Watershed District, Terry Schwalbe
  Minnehaha Creek Watershed District, Eric Everson
  DNR Conservation Officers, Jackie Glaser and Jim Konrad
  DNR Ecological Services, Wayne Barstad
  DNR Fisheries, Daryl Ellison
  DNR Wildlife, Bryan Lueth and Diana Regenscheid
  DNR Central Waters, Jim Japs, Bruce Gerbig. Ron Anderson

DNR Information: 651-296-6157 • 1-888-646-6367 • TTY: 651-296-5484 • 1-800-657-3929

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Who Values Diversity

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AMENDED GENERAL PUBLIC WATERS WORK PERMIT

THIS AMENDED PERMIT SUPERCEDES THE ORIGINAL AND ANY PREVIOUS AMENDMENT(S)
Pursuant to Minnesota Statutes, Chapter 103G, and on the basis of statements and information contained in the permit application, letters, maps, and plans submitted by the applicant and other supporting data, all of which are made a part hereof by reference, PERMISSION IS HEREBY GRANTED to the applicant to perform the work as authorized below:

<table>
<thead>
<tr>
<th>Public Water Name</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various within Riley-Purgatory-Bluff Creek Watershed District</td>
<td>Hennepin (27) and Carver (10)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Permittee</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Owners of Property within the Riley-Purgatory-Bluff Creek Watershed District; Agent: Riley-Purgatory-Bluff Creek Watershed District, Attn: Bob Obermoyer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address (No. &amp; Street, RFD, Box No., City, State, Zip Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barr Engineering Company, 4700 West 77th Street, Suite 200, Minneapolis, Minnesota 55435</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authorized Work:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural rock riprap and other shorland protection practices, retaining walls, docks, mooring facilities, marinas, boat ramps, removal of structures, bridges, culverts, intakes and outfalls, and removal of storm water sediment; all in accordance with the Conditions listed in Attachment A and the Conditions of this permit.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purpose of Permit</th>
<th>Expiration Date of Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shore Protection, Shoreline Restoration, Water Access, Road Crossings, Intakes and Outfalls, and Soil Removal</td>
<td>November 30, 2010</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property Described As:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various within Riley-Purgatory-Bluff Creek Watershed District</td>
</tr>
</tbody>
</table>

In this General Permit, the following definitions apply:

"Permittee" means the state, a political subdivision of the state, a public or private corporation, or any person permitted by the Riley-Purgatory-Bluff Creek Watershed District (RPBCWD) to perform work in the public waters/public water wetlands/public watercourses and floodplain within the jurisdiction of the RPBCWD pursuant to uniform DNRF/RPBCWD requirements, and the terms and conditions of this General Permit.

"Agent" means the Riley-Purgatory-Bluff Creek Watershed District (RPBCWD), as the agency authorized by the terms and conditions of this General Permit, to enforce uniform DNRF/RPBCWD requirements concerning riprap, retaining walls, shoreline erosion control, docks, mooring facilities, marinas, boat ramps, removal of structures, bridges, culverts, intakes and outfalls, and storm water sediment removal.

This permit is granted subject to the following CONDITIONS:

1. The permittee is not released from any rules, regulations, requirements, or standards of any applicable federal, state or local agencies, including, but not limited to, the U.S. Army Corps of Engineers, Board of Water and Soil Resources, MN Pollution Control Agency, watershed districts, water management organizations, county, city and township zoning. This permit does not release the permittee of any permit requirement of the St. Paul District, U.S. Army Corps of Engineers, Army Corps of Engineers Centre, 190 Fifth Street East, St. Paul, MN 55101-1838.

2. This permit is not assignable by the permittee except with the written consent of the Commissioner of Natural Resources.

3. The permittee shall make no changes, without written permission previously obtained from the Riley-Purgatory-Bluff Creek Watershed District, in the dimensions, capacity or location of any items of work authorized hereunder.

4. The permittee shall grant access to the site at all reasonable times during and after construction to authorized representatives of the Commissioner of Natural Resources and Riley-Purgatory-Bluff Creek Watershed District for inspection of the work authorized hereunder.

5. This General Permit may be terminated by the Commissioner of Natural Resources at any time deemed necessary for the conservation of water resources of the state, or in the interest of public health and welfare, or for violation of any of the provisions or applicable law of this permit, unless otherwise provided in the Conditions.

6. The agent may request an extension of time to this General Permit, upon written request to the Commissioner of Natural Resources.
ATTACHMENT A: CONDITIONS FOR GENERAL PERMIT #97-6113 CONTINUED
(Page 1 of 4)

GENERAL CONDITIONS THAT APPLY TO ALL PROJECTS

1. All appropriate licenses or approvals from the Riley-Purgatory-Bluff Creek Watershed District and from the City in which the project is located must be obtained prior to commencing the project.

2. Erosion control measures shall be adequately designed for the site characteristics. They may include staked haybales, diversion channels, sediment ponds, or sediment fences. They shall be installed in accordance with “Protecting Water Quality in Urban Areas - Best Management Practices for Minnesota” MPCA, October 1989 (or its updates), prior to commencement and maintained throughout the project. All exposed soil shall be stabilized as soon as possible and no later than 72 hours after the completion of the project. Soil stabilization shall be achieved by mulching and seeding or placement of sod at the rates or manner prescribed in the above referenced guidance document on erosion control or by other accepted manner defined in said document. Topsoil should be used to re-dress disturbed soil areas and indigenous plant species should be used to revegetate disturbed areas whenever possible.

3. **No removal or destruction of aquatic vegetation** is permitted unless an Aquatic Plant Management Permit is obtained from DNR Regional Fisheries Office at (651) 772-7950, or the removal consists of mechanical (i.e., not chemical) removal of submerged or floating aquatic vegetation that meets the conditions for not requiring a permit (i.e., mechanical removal of submerged or floating aquatic vegetation in an area of less than 2,500 square feet). Note: Removal of any amount of emergent vegetation is prohibited unless an aquatic plant management permit has been obtained from DNR Fisheries.

4. Project equipment shall be inspected for Eurasian water milfoil, zebra mussels and other exotics, and decontaminated prior to and following project completion and/or when equipment is moved from one waterbody to another. Every reasonable precaution shall be taken to prevent inoculation of other waterbodies. DNR-Ecological Services (651-296-2835) may be contacted for information on how to decontaminate equipment.

5. The permittee shall monitor all disturbed areas for the presence of purple loosestrife and control the plant. The DNR aquatic plant manager should be contacted at (651) 772-7950 for permit needs and additional information.

6. The permittee is authorized to maintain the approved work to the dimensions in the RPBCWD permit. Prior to commencing any maintenance work, the permittee shall advise the Riley-Purgatory-Bluff Creek Watershed District of the extent and method of maintenance. The maintenance shall not be commenced until permittee receives written approval from the Riley-Purgatory-Bluff Creek Watershed District. The RPBCWD shall mail a copy of the approval to the DNR Area Hydrologist and the Conservation Officer on such maintenance approvals within 10 days of issuance.

7. Structures (docks, ramps, etc.) shall not be constructed with materials that would have a detrimental impact on aquatic organisms or water quality.

8. A sediment barrier shall be installed around an area of excavation immediately prior to starting the project to limit erosion and turbidity to the affected areas. This barrier involves the use of filter fabric material supported by stakes or a snow fence. The barrier shall be removed upon completion of the work, after sediment has consolidated. Accumulated sediment shall be removed to the greatest extent possible prior to removal of the sediment barrier.

9. Any work below the water level shall be encircled by a flotation sediment curtain to prevent sediment from being transported beyond the construction site. This sediment curtain shall be constructed and maintained as described in Section 6.6 of “Protecting Water Quality in Urban Areas - Best Management Practices for Minnesota” MPCA, October 1989, or its updates. The barrier shall be removed upon completion of the work after the silt has settled.

10. Excavated materials associated with construction must be deposited or stored in an upland area, in a manner where the materials will not be redeposited into the protected water by reasonably expected high water or runoff.

11. Excavated materials associated with construction shall not be permanently placed within community-designated floodplain areas or shoreland areas, unless all necessary local permits and approvals have been obtained.

12. Minnesota Rules Sections 6115.0150 to 6115.0280 and all future revisions, are to be consulted regarding standards for this General Permit. The Area Hydrologist should be consulted on interpretation of Minnesota Rules should questions arise.

RIPRAP & SHORELINE EROSION PROTECTION

No DNR permit is required to install natural rock riprap and associated filter materials where there is a demonstrated need to prevent erosion or to restore eroded shoreline, when there is a demonstrated need for such work if:

1. the rock is sized appropriately with the erosion potential of the wave or current action of the particular water body, but in no case shall the rock average less than six inches in diameter or more than 30 inches in diameter;

2. the rock is placed so that it conforms to the natural alignment of the shoreline zone;
3. the finished slope, as measured on top of the rocks, is not steeper than three to one (horizontal to vertical);

4. no materials are placed more than six feet waterward of the ordinary high water level, unless the commissioner determines that this dimension may be measured from another point due to the particular nature of water levels of the public water;

5. the total length of shoreline to be affected does not exceed 200 feet for public waterbasins or public water wetlands or five times the width of the public watercourse measured at bank full conditions;

6. the riprap does not cover emergent vegetation, unless authorized by an aquatic plant management permit;

7. the riprap does not obstruct navigation or the flow of water;

8. a filter, consisting of crushed rock, gravel, or suitable filter fabric material is placed underneath the rock; and

9. the rock and any filter material are free from organic material, soil, clay, debris, trash, or any material that may cause siltation or pollute the waterbody.

The preference is to have projects meet the DNR conditions for when a DNR permit is not required. However, it is recognized that site conditions vary and that it is not always feasible or practical to meet those conditions. In addition to the requirements of the rules, the following standards apply:

1. Shoreline stabilization techniques (i.e., bioengineering) using aquatic vegetation and native upland plants is encouraged and can include a variety of techniques, including: willow wattling, brush layering, willow-posts, etc. The project shall not involve cribs or other techniques that encroach on the shoreline, streambank profile or floodway.

2. A separate Aquatic Plant Management (APM) permit shall be obtained (no fee) for each site involving aquatic plantings to monitor plant source, species and planting location. This provision shall not apply when the project consists only of slope protection using woody species such as willow and dogwood.

3. Placement of ungrotled, natural stone riprap only shall be authorized under this section. Placement of the rock riprap shall be for erosion control only. Placement of rock for cosmetic purposes is NOT authorized.

4. The minimum finished slope shall be no steeper than 2:1 (horizontal to vertical). Any rock/boulder stabilization project with a proposed finished slope steeper than 2:1 shall be evaluated in accordance with the conditions for Retaining Walls.

RETAINING WALLS
Retaining walls shall be discouraged; however, they may be permitted if the following conditions are met:

1. Existing or expected erosion problems shall preclude the use of riprap shore protection with a finished slope of 2:1 (horizontal to vertical), or more gentle, due to steep banks, nearby structures or other extenuating circumstances.

2. Adequate engineering studies shall be performed of foundation conditions, tiebacks, internal drainage, construction materials, and protection against flanking.

3. The facility shall not be an aesthetic intrusion upon the area and is consistent with all applicable local, state, and federal management plans and programs for the water body.

4. The minimum finished slope shall be at least 2:1 (horizontal to vertical). Any structure/boulder stabilization project with a proposed finished slope steeper than 2:1 shall be evaluated in accordance with the conditions for retaining walls.

DOCKS AND MOORING FACILITIES
No DNR permit is required to construct, reconstruct or install a dock, floating or temporary structure, watercraft lift, or mooring facility provided:

1. the structure or mooring facility will not constitute a hazard to navigation or public health, safety, and welfare (as determined by the DNR);

2. the structure will allow the free flow of water beneath it;

3. the structure or mooring facility is not used or intended to be used as a marina (commercial mooring of 7 or more watercraft where commercial ancillary services common to marinas are provided [e.g., fueling, pumping]);

4. the structure or mooring facility is consistent with or allowed under local land use controls, as determined by the local government land use authority;

5. the length of the structure is limited to that necessary to accomplish its intended use, including reaching navigable water depths;
6. the structure, other than a watercraft lift or watercraft canopy (fabric only), is not more than eight feet in width and is not combined with other similar structures so as to create a larger structure;

7. the structure is not designed or intended to be used for human habitation or a boat storage structure; and

8. the structure must not include walls, a roof (other than a fabric cover for a boat lift), or sewage facilities.

Any proposed dock or mooring facility which does not meet the above criteria, must meet the conditions in one of the following project categories or a separate DNR permit is required:

1. The proposed project must represent the minimal impact solution to a specific need with respect to all other reasonable alternatives.

2. The project will involve a minimum of encroachment, change, or damage to the environment, including but not limited to fish and wildlife habitat, navigation, water supply and storm water retention.

MARINAS
All marinas (commercial mooring facilities for 7 or more watercraft where commercial ancillary services common to marinas are provided) would normally require a DNR permit, but may be allowed under this General Permit, subject to the following criteria:

1. The size and shape shall be designed in a compact fashion so as to blend in with the surrounding shoreline and so that all mooring and maneuvering activities can be normally confined to an area bounded by the property lines as extended into public waters while minimizing the surface area occupied in relation to the number of watercraft to be served.

2. The project shall be consistent with all local land use controls, as determined by the appropriate city.

3. The proposed project must represent the minimal impact solution to a specific need with respect to all other reasonable alternatives.

4. The project will involve a minimum of encroachment, change, or damage to the environment, including but not limited to fish and wildlife habitat, navigation, water supply and storm water retention.

BOAT RAMP PROJECTS
No DNR permit is required to construct or reconstruct a boat launching ramp provided:

1. privately owned ramps do not exceed 12 feet in width and do not extend more than ten feet beyond the shoreline or into water more than four feet deep, whichever is less. Excavations of five cubic yards or less, and placement of up to five cubic yards of crushed rock, gravel, clean sand or small stone are allowed in order to provide a stable base or maintain use of the ramp;

2. publicly owned ramps do not exceed 36 feet in width and do not extend more than 30 feet waterward of the shoreline or into water more than four feet in depth, whichever is less. Excavations of 200 cubic yards or less, and placement of up to 80 cubic yards of crushed rock, gravel, clean sand, or small stone are allowed in order to provide a stable base or maintain use of the ramp. The use of coffer dams constructed of metal sheet piling or other portable materials is allowed to construct and maintain public boat launching ramps if all materials are completely removed from public waters within 30 days of completion of the project; and

3. the ramp is constructed of gravel, natural rock, concrete, steel matting, or other durable inorganic material not exceeding seven inches in thickness.

The preference is to have projects meet the DNR conditions for when a DNR permit is not required. However, it is recognized that site conditions vary and that it is not always feasible or practical to meet those conditions. In addition to the requirements of the rules, the following standards apply:

1. The proposed project must represent the minimal impact solution to a specific need with respect to all other reasonable alternatives.

2. The project will involve a minimum of encroachment, change, or damage to the environment, including but not limited to fish and wildlife habitat, navigation, water supply and storm water retention.

REMOVAL OF STRUCTURES
Removal of structures or other waterway obstructions provided:

1. The original cross-section and bed conditions shall be restored insofar as practicable.

2. The structure shall be completely removed including any footings or pilings, which obstruct navigation.

3. The structure does not function as a water level control device.
Bridges, Culverts, Intakes and Outfalls
The bridge or culvert crossing must meet all applicable floodplain requirements of the community.

1. This permit shall apply only to those projects that are designed under the supervision of a registered professional engineer. Any project not meeting all conditions of the permit or any project the Department identifies as having the potential for significant resource impacts is not authorized herein. Rather, such projects must be submitted as separate individual permit applications.

2. The permittee shall contact the Department of Natural Resources’ Area Fisheries and Wildlife Managers to determine opportunities to enhance habitat prior to commencing any work authorized by this permit.

3. No construction of temporary channel diversions or placement of fill below OHW for temporary work pads, bypass roads, or coffer dams to aid in construction of any authorized structure is allowed unless specifically approved in writing by the Division of Waters.

4. Permittee is responsible for maintaining or improving existing navigation to meet public needs for use of and access to public waters.

5. No change in the existing flowline/gradient shall occur unless specifically authorized in writing by the Division of Waters.

6. For the replacement of existing structures, stage increases for the regional, 1% chance (100-year) flood may be allowed up to that created by the existing structure provided there are no structures in the reach affected by the stage increase. For new structures, the maximum increase in the regional flood is 0.5 foot (provided it will not materially increase flood damage potential) or the more restrictive provisions of a local government floodplain ordinance. Stage increases in excess of these thresholds must be approved in writing by the Department.

7. A hydrologic/hydraulic data report shall be provided for each project by the permittee. This report, along with one set of construction plans, must be submitted to the Regional Hydrologist at least 15 working days prior to commencing construction for written approval.

8. The use of coffer dams to aid in construction of any project is not allowed unless specifically authorized in writing by the Division of Waters.

9. Upon completion of the authorized work, the permittee shall submit representative photographs and any as-built surveys, as appropriate, of the project area to DNR Metro Region Waters (1200 Warner Road, St. Paul, MN 55106-6793).

10. Temporary dewatering for construction, in excess of 10,000 gallons per day or one million gallons per year, is authorized by this permit provided the following conditions are met:
   a. A plan for the dewatering shall be submitted to the Regional Hydrologist for written prior approval.
   b. All necessary erosion and sedimentation control measures shall be taken to prevent transportation of sediment.

Storm Water Sediment Removal
This permit authorizes the removal of sediment build-up at storm water outfalls and constructed or natural swale outfalls provided that such removal does not alter the original alignment, slope, or cross-section of the beds of Public Waters.
PERMIT NO. 97-6113

☐ APPROPRIATION AND USE OF WATER
☒ WORK IN THE BEDS OF PUBLIC WATERS

HAS BEEN ISSUED TO

Riley-Excelsior Bluff Creek Watershed District

By the COMMISSIONER
MINNESOTA DEPARTMENT OF NATURAL RESOURCES

EXPIRATION DATE 11-30-2010

POST CONSPICUOUSLY AT PROJECT SITE
Date: August 9, 2013
To: Cities, Counties, Met Council, and State Review Agencies
From: Claire Bleser, Riley-Purgatory-Bluff Creek Watershed District
Re: Minor Plan Amendments – 45-Day Comment Period

The Riley-Purgatory-Bluff Creek Watershed District is proposing two separate minor plan amendments to its 2011 Comprehensive Watershed Resources Management Plan.

The first amendment is for the development of a cost-share program. The District’s sections 7.10.1 and 7.10.2 (Low Impact Development Program) provide strong support for the District’s cost-share program. The District believes that there is benefit to the District and its stakeholders to develop and provide more detail about the structure and procedures for the cost-share program, and accordingly have prepared a proposed new section 7.10.3 for this purpose. Changes were also made to the District’s Executive Summary.

The second amendment is for changes and additions to the District’s regulatory plan. The District has a unique capacity to harmonize regulatory protections for all water resources and address gaps in the regulatory framework. The proposed amendment aims to develop and support a regulatory program in the District. Proposed amendments are included in the executive summary, section 1.4.1 and section 7.8.1 and section 7.8.2. Please note that page numbers do not follow strikeout and guidelines.

Enclosed are the affected sections of the plan showing the proposed changes. The full plan is available on the RPBCWD website: www.rileywd.org.

MCWD will be accepting comments on these two amendments until September 25, 2013, after which a public hearing will be scheduled.

Please direct any comments or questions to Claire Bleser at:

Riley-Purgatory-Bluff Creek Watershed District
8080 Mitchell Rd
Eden Prairie, MN 55346
cbleser@rileywd.org

Sincerely,

Claire Bleser
Planning is the key to restoring water by identifying problems and opportunities for improvement. The Overall Plan adopted in 1973 focused on flood control. The Water Management Plan adopted in 1996 identified existing and potential ecological uses. This Plan lays out the projects needed to restore our waters while protecting the flood control measures and ecological uses previously established. This third generation effort reflects the commitment to a “Conservation Ethic” developed over the District’s 40-year history to locally respect and preserve our water heritage.

Envision our community with restored and protected waters. Past and present Managers were and are uniquely committed to this vision. The managers intend this plan to be another bold step towards this future.

CITIZEN FOCUSED, RESOURCE-SPECIFIC MANAGEMENT

The Managers use the following guiding principles in management of the Riley Purgatory Bluff Creek Watershed District:

- **“One Water” Resource Management** – Making improvements at the “top” of the watershed will have downstream benefits that assist implementation of future projects.

- **Citizen Leadership and Priority** – The tax-payers who fund the District’s programs must be recognized in District decision-making. The current and desired uses for the District’s water resources will drive priorities of the Managers.

- **Resource Specific** – Detailed goals and plans for improvements to the uses of lakes and streams enable the creation of best-value solutions that maximize benefits. Any delays in attacking resource problems result in genuine costs to uses of water.

- **Restore and Protect** – Cooperation with project partners on the local, state, and federal levels will achieve the greatest benefit for restoring and protecting water uses. A clearly defined role for each participant creates opportunities for shared benefits and eliminates the potential for duplication of effort.

- **Measurable Benefits** – This Plan establishes uniform systems for classifying and evaluating use of District waters – particularly by aquatic communities, recreational users, and wildlife. By applying State systems, the Managers will be better enabled to identify paramount water resources and appropriately manage them.

In summary, restoring and protecting water uses is the highest priority. Citizen leadership, a focus on best-value solutions, and cooperation with watershed partners will create the greatest opportunity to affect change. The Managers of the Riley Purgatory Bluff Creek Watershed District intend this Plan to be another meaningful step toward our vision for a community of restored and protected waters.
VISION FOR IMPLEMENTATION

The Conservation Ethic described in Section 2 of this Plan provides guiding principles for management of the Riley Purgatory Bluff Creek Watershed District. Utilizing these principles and the previous accomplishments of the District, the Managers have created a vision for implementing this “3rd Generation Plan”:

The Riley Purgatory Bluff Creek Watershed District will achieve sustainable uses appropriate for each water body of the District. Achievement of this vision will result in:

- Waters dominated by diverse native fish and plant populations,
- Lakes with water clarity of 2 meters or more,
- Delisting of half of all impaired (303d) lakes or stream reaches,
- An engaged and educated public and scientific community participating in adaptive management activities, and
- Implementation of a regulatory program to efficiently and effectively improve, protect and manage the water resources of the District. Regulatory recommendations necessary for municipal, county, and state authorities to sustain the achieved conditions.

A “ONE WATER” STRATEGY FOR LONG-TERM RESTORATION

The District is now emphasizing water resource restoration. Instead of focusing primarily on individual problems in each lake and stream reach, the District is adopting a “One Water“ management strategy. Interdependent waters with common problems will be managed as a single system. For example, if the outflow from Lake Ann contributes to a problem in Lake Riley, then Lake Ann needs to be part of the solution. The “One Water“ emphasis is centered on taking positive actions through projects that have clear immediate benefits to the individual waters in the system as well as broader long-term benefits to the watershed as a whole. This approach is true to the District’s heritage, tradition, and Conservation Ethic.
Riley Purgatory Bluff Creek Watershed District

Watershed Management Overview

2010 Projects Shown

Round Lake Water Quality Improvement Project
Lotus Lake Volume Control and Reduction Project
Red Rock Lake
Staring Lake

Riley Creek Watershed
Bluff Creek Watershed
Minnesota River

Lake Lucy
Lake Ann
Lake Susan
Lotus Lake
Silver Lake
Red Rock Lake
Purgatory Creek

Lake Ann Water Quality Improvement Project
Lotus Lake Water Quality Projects
Rice Marsh Lake Winter Fish Kill Prevention
Expanded Invasive Species Project
Ongoing TMDL Assessment

Riley Creek/Highway 10 Improvements – Minnetonka Petitioned Project

Lake Lucy
Lake Ann
Lake Susan
Lotus Lake
Silver Lake
Red Rock Lake
Purgatory Creek

Purgatory Creek Recreation Area
Riley Creek Watershed

Lotus Lake and Mitchell Lake Water Quality Projects

Purgatory Creek/Highway 10 Improvements – Minnetonka Petitioned Project
Watershed Issues

The discussion above gives insight into the District’s vision and strategy in regard to management of the watershed. The description of issues below provides context for the District’s short-term and long-term goals (as described in Section 2) and implementation priorities (as described in Section 7).

Regulatory Roles and Responsibilities

Municipalities within the Riley-Purgatory-Bluff Creek watershed have established and implement an impressive array of water resource protection ordinances. At the same time, watershed organizations have a unique capacity to harmonize regulatory protections for all water resources and address gaps in the regulatory framework. The District will work with watershed cities and counties, as well as state and regional agencies, to develop an efficient and effective regulatory program that achieves these goals. Municipalities in the District carry extensive regulatory and permitting authority. The District has worked with municipalities to further clarify responsibilities and eliminate confusion about respective roles. Regulatory responsibilities are held by municipal and state agencies for issues such as: land use, ground water, stormwater management, and wetlands management.

The District will also continue to undertake a non-regulatory role that enables resource-specific studies and restoration efforts which supplement the water resources regulatory system roles of other agencies.

Communication Between Watershed Partners

The District recognizes that many “partners” are necessary in the creation and implementation of long-term, sustainable solutions for improved water quality. Federal, State, and Local governments, clean water organizations (such as Lake Associations), property owners, and local businesses are all representative of the wide variety of stakeholders involved in water quality solutions.

Stream Flows and Erosion

Many of the stream (also referred to as creeks in this Plan) problems identified are a product of creek flows. For Riley, Purgatory, and Bluff Creeks, flow has been identified as a problem from both a low-flow and high-flow standpoint. Some of the related issues include: low-flow conditions, upland infiltration of runoff, erosion, and maintenance of native aquatic habitat.

Lake Eutrophication and Water Quality

All lakes in the District that are identified by the MPCA as impaired are listed due to nutrient, eutrophication, and biological indicators among others. One of the fundamental issues driving these lakes’ impairment is high levels of phosphorus. The District considers three potential sources for the introduction of phosphorus: external (from the watershed), internal (in-lake processes), and indirect external (from upstream lakes).

Biological Resources

The biology of aquatic ecosystems is one of the critical factors in maintaining water quality integrity. Healthy biological systems help sustain water quality. From a managerial perspective, the promotion of native plants and animals represents an opportunity to establish self-sustaining systems that retain water quality at little cost.

Recreational Uses

Many of the District’s lakes are relied upon for a variety of recreational uses, including swimming, fishing, water skiing, and canoeing.
WATERSHED DISTRICT GOALS

Long-Term Goals

Long term goals are overarching goals which do not change from year to year or even plan to plan. The District’s long-term goals are in keeping with its vision and national and state goals and policies. Significant progress towards these long-term goals should be demonstrated through the 10-year term of this plan:

- **Long-Term Goal 1.** Improve water quality to fully support swimming in designated lakes.
- **Long-Term Goal 2.** Improve water quality to fully support designated uses for water bodies and remove water bodies from the Minnesota Pollution Control Agency list of impaired waters.
- **Long-Term Goal 3.** Preserve vegetation and habitat important to fish, waterfowl, and other wildlife while also minimizing negative impacts of erosion.
- **Long-Term Goal 4.** Maintain control of floodwaters and limit the impact of runoff quantity and rate on receiving water bodies.
- **Long-Term Goal 5.** Alter stormwater hydrographs (streamflow) through infiltrative strategies that reduce peak discharge rates and overall flow volume.
- **Long-Term Goal 6.** Include supportive actions in District project development and implementation toward ongoing Hennepin and Carver County groundwater planning and implementation.
- **Long-Term Goal 7.** Support municipal enforcement of the Wetland Conservation Act, including proactive participation in implementation of WCA requirements on District projects and use of the District watershed model to assist in the identification of high priority wetlands for protection, restoration, or potential wetland banking opportunities.

Short-Term Goals

Short-term goals are the intermediate goals that serve as guidelines towards the completion of the District’s long-term goals and vision. Substantial achievement of these goals is expected in the first half of the plan’s 10-year term:

- **Short-Term Goal 1.** Address or eliminate the impact of common carp on eutrophication in District lakes.
- **Short-Term Goal 2.** Develop a sustainable Communications Program that enables proactive actions by District citizen leaders and related partners to participate in project implementation and share costs.
- **Short-Term Goal 3.** Complete a watershed model for each of the three creek watersheds to assist in providing feedback regarding oversight of regulatory implementation. This model will also be used to identify project opportunities aligned with long-term goals, including phosphorus management, runoff management, and erosion control.
- **Short-Term Goal 4.** Develop a higher level of cooperation with municipalities and other watershed partners; this may include the development of cost-share programs and coordination of planned expenditures for addressing watershed issues.
- **Short-Term Goal 5.** Determine external, internal, and upstream waters loading contributions to the phosphorus budget of District lakes; work to reduce and manage phosphorus loading to District lakes through clearly defined projects according to respective sources and the District One Water Management Approach.
COOPERATIVE APPROACH TO WATERSHED MANAGEMENT

Regulation plays a very important role in managing water resource problems. For instance, municipal land use planning and zoning powers are invaluable in ensuring that used by municipalities to avoid incompatible land uses are compatible with the surrounding environment. City planning and zoning also establish best practices for preventing avoiding potentially harmful drainage patterns that may pollute our waters. However, effective watershed management entails both regulatory and non-regulatory approaches. The cities in the watershed effectively regulate to ensure proper erosion control is a requirement of significant development and redevelopment projects. Cities also implement some critical stormwater management requirements.

This becomes apparent in the search for solutions to the problem of non-native, invasive animal- and plant species. Once established in a water system, regulatory programs alone are not likely to result in measurable reductions or the elimination of these species. A non-regulatory approach is needed to create best-value solutions.

The expansion of municipal power over the past four decades clearly suggests that Managers can best provide value by focusing on non-regulatory solutions. In 2007, District municipalities requested, and the Managers accepted, streamlined and simplified local regulatory controls. As of the end of 2007, District municipalities assumed responsibility for land use permitting and administration of the Wetlands Conservation Act. After several years of exercising sole regulatory authority, however, several watershed cities reported to the District that municipal regulation alone was proving insufficient. A watershed approach to potential impacts to water resources – especially from stormwater runoff – is needed. Further, some critical water-resource protections – such as management of work in water resources that traverse municipal boundaries – must be implemented by a watershed organization.

Further, watershed regulations are informed and undergirded by watershed organizations’ uniquely detailed and specific knowledge of hydrological and hydraulic systems. Such information and expertise are helpful to ensure proper integration of water resource protection systems into development and redevelopment projects, especially in areas of the watershed with topography that presents unique challenges. Informed by these considerations, the managers will undertake an update and renewal of the District rules as part of the implementation plan described in section 7 of this plan. At the same time, the Managers recognize that a significant complementary and effective non-regulatory approach to watershed management also is needed.

NON-REGULATORY BEST-VALUE SOLUTIONS

A successful non-regulatory approach will provide a distinctly complementary benefit to regulatory efforts. An example of one such unique partnership exists between the University of Minnesota. In 2008, the Managers partnered with the Legislative-Citizen Commission on Minnesota Resources (LCCMR) and the University to begin a ground-breaking study for the removal and elimination of carp from District lakes. If successful, this project may significantly reduce, avoid, or eliminate regulatory burdens or issues on District lakes.
Once fully implemented, projects like this and other scientifically-supported projects will result in extraordinary benefits, including:

- Best value solutions that effectively and efficiently address watershed problems
- Restored, protected, and stable water resources
- Potential de-listings of impaired waters and minimization of Total Maximum Daily Load (TMDL) implementation costs
- Avoidance of Clean Water Act obligations and ill-considered litigation.

MEASURABLE GOALS AND OUTCOMES FOR INNOVATIVE SOLUTIONS

The existing and potential ecological uses identified through the Second Generation Plan created a very strong foundation for the District’s non-regulatory approach. In further developing a non-regulatory approach, it is important to reassess identified uses in light of current science. For instance, augmenting conventional trophic state goals (such as those based on Carlson Trophic State Index, or TSI) to better measure the health of waters is appropriate. Measures such as the Indiana TSI offer new insights and direction.

Enhanced goals based on quantifiable measures will aid resource-specific solutions and enable the assessment of actions. Measurable goals allow Managers to refine and judge whether best values were actually delivered. This Plan includes “scorecards” that the Managers will be using over the next decade to measure the success of our efforts. The scorecards will also facilitate the annual review of District performance as required by the Board of Water and Soil Resources’ “Performance Review and Assistance Program” (PRAP).

In order to measure success and plan for future solutions, the Managers continue to emphasize a robust data collection program for the watershed. As scientific understandings of the complexity of ecosystems increased during the past four decades, collected data has similarly evolved into increasingly complex samplings, analyses, and reporting. Rather than a log book, data are now compiled and available through the internet and managed in complex database tools. The District is now developing a data warehouse for the long-term management of collected data, allowing for shared access and greater accessibility of available data, which in turn empowers all concerned to collaborate in choosing best value solutions.
Fishable/Swimmable Waters
1. Improved Water Clarity
2. Suppressed Invasive Species
3. Restored Native Aquatic Plants and Fish Communities

Data Collection and Monitoring
Annual, Biannual, and Monthly Reporting

Coordination with Watershed Partners

Problem Identification

LAKES
- Stabilize Hydrology
- Assess Plant, Animal, and Aquatic Communities including chemical, biotic, habitat, and energy factors
- Remove and Manage Carp and Invasive Aquatic Plants
- Restore Native Species
- Reduce Phosphorus: Internal and Watershed Sources

STREAMS
- Assess Habitat, Biological, Water Quality, and Baseflow Conditions
- Identify Opportunities for Improvements of Use (Is there a difference between existing and potential conditions?)
- Restore Native Species
- Stabilize Sediment Load Sources
- Manage Lake Outflow and Other Stream Flow Inputs

Adaptive Management to Promote Water Clarity and Fisheries

Sustainable Use Plan or Regulation

Fishable/Swimmable Waters
1. Improved Water Clarity
2. Suppressed Invasive Species
3. Restored Native Aquatic Plants and Fish Communities

Water Quality Improvement Plan
Riley Purgatory Bluff Creek Watershed District

All projects and activities of the Riley Purgatory Bluff Creek Watershed District relate to one or more points on this process map.
EFFICIENT MANAGEMENT TO LEVERAGE A STABLE BUDGET

The Managers are focused on delivering efficient watershed solutions. At this time when each tax dollar spent is scrutinized, the District has worked to streamline administrative structures leaving the majority of allocated funds available for project expenditures.

General administrative costs are down to as little as 15% of the District budget, the remainder of which is reserved for planned and petitioned projects such as those driven by the TMDL program. This efficiency assures tax payers that their tax dollars are being used to their fullest and that the District remains a stable levy. With the proposed District budget, we estimate the owner of a $272,000 home in the Riley Purgatory Bluff Creek Watershed District will pay approximately $32 a year in taxes to support the efforts of the District. The projects underway in 2010 are shown to the right.

PROJECTS UNDERWAY IN 2010 INCLUDE:
- Mitchell Lake Water Quality Improvement
- Lotus Lake Water Quality Improvement
- Round Lake Water Quality Improvement
- Lotus Lake Volume Control and Reduction Project
- Riley Creek Watershed Fish Barrier and Invasive Species Control
- Data Collection and Reporting
- Preparation of the new “3rd Generation” Watershed Management Plan

This new Watershed Management Plan demonstrates the Managers’ commitment to providing cost-effective solutions that preserve the water resources of the Riley Purgatory Bluff Creek Watershed.

IMPLEMENTATION PLAN SUMMARY

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<tr>
<td>Remove and Manage Carp and Invasive Aquatic Plants</td>
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<td>Restore Native Species</td>
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<tr>
<td>Reduce Phosphorus and Manage Other Inputs</td>
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<tr>
<td>Bluff Creek One Water</td>
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<tr>
<td>Assess Lake and Stream Water Quality Factors</td>
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<td>Reduce Sediment and Manage Other Inputs</td>
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</tr>
</tbody>
</table>

Cooperative projects with the University of Minnesota
GOVERNANCE

Board of Managers
A five member Board of Managers governs the District. One member is supported by the Carver County Commission, the other four by the Hennepin County Commission. Each serves a three year term.

Technical Advisors
The Technical Advisory Committee provides a forum for member municipalities to engage with the District on watershed issues. Each city has at least one representative member on the Technical Advisory Committee. Members of the committee provide input and coordinate with the District on their plans and projects to promote greater connectivity amongst each agency’s respective watershed management actions. With the recent transfer of Wetland Conservation Act administrative and permitting responsibilities from the District to municipalities, the Technical Advisory Committee will play an important role in maintaining communication within the watershed.

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The Citizen Advisory Committee consists of volunteer residents of the watershed. This Committee meets regularly to share input on issues of the watershed and receive updates on District plans and projects. Many of the Lake Associations that are within District boundaries are represented on the Citizen Advisory Committee. Table 1-5 is a summary of the Citizens Advisory Committee membership.

Watershed District Board of Managers

<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
<th>Term Expires</th>
<th>Officers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael J. Casanova</td>
<td>Hennepin</td>
<td>7/31/2013</td>
<td>Vice President</td>
</tr>
<tr>
<td>Jill Crafton</td>
<td>Hennepin</td>
<td>7/31/2012</td>
<td>Treasurer</td>
</tr>
<tr>
<td>Perry Forster</td>
<td>Hennepin</td>
<td>7/31/2011</td>
<td>President</td>
</tr>
<tr>
<td>Philip Kirkegaard</td>
<td>Hennepin</td>
<td>7/31/2011</td>
<td>Manager</td>
</tr>
<tr>
<td>Kenneth WencI</td>
<td>Carver</td>
<td>7/31/2012</td>
<td>Secretary</td>
</tr>
</tbody>
</table>

PUBLIC OUTREACH

The District provides public education through several communication channels. In part through our work with an extensive network of invested public stakeholders (as represented below on the CAC list), the District is actively engaged with the communities we represent. Activities such as the twice-yearly “Evening with the Watershed” and the annual “Managers’ Tour,” and our web application tool (www.rileywd.org), community members are able to access data and learn about the condition of our District’s water resources.

Citizen Advisory Committee Membership

<table>
<thead>
<tr>
<th>Member</th>
<th>Residence/ Representing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Mary Borns</td>
<td>Chanhassen</td>
</tr>
<tr>
<td>Mr. John Bushey</td>
<td>Eden Prairie</td>
</tr>
<tr>
<td>Mr. Steve Donen</td>
<td>Chanhassen, American Water Ski Association</td>
</tr>
<tr>
<td>Mr. Rod Fisher</td>
<td>Eden Prairie</td>
</tr>
<tr>
<td>Mr. David Florenzano</td>
<td>Eden Prairie</td>
</tr>
<tr>
<td>Mr. Greg Halvorson</td>
<td>Eden Prairie</td>
</tr>
<tr>
<td>Mr. David Hemze</td>
<td>Carver County</td>
</tr>
<tr>
<td>Mr. Scott Maeyaert</td>
<td>Chanhassen</td>
</tr>
<tr>
<td>Ms. Sharon McCotter</td>
<td>Chanhassen</td>
</tr>
<tr>
<td>Mr. Jim Nehl</td>
<td>Eden Prairie</td>
</tr>
<tr>
<td>Mr. Bill Satterness</td>
<td>Eden Prairie</td>
</tr>
<tr>
<td>Mr. Joel Settles</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>Mr. Bob Shurson</td>
<td>Eden Prairie</td>
</tr>
<tr>
<td>Mr. Frank Spahn</td>
<td>Eden Prairie</td>
</tr>
<tr>
<td>Ms. Catherine Thimmesh</td>
<td>Eden Prairie</td>
</tr>
<tr>
<td>Mr. John Tyler</td>
<td>Eden Prairie, Muskies, Inc.</td>
</tr>
<tr>
<td>Mr. Mike Wanous</td>
<td>Carver SWCD</td>
</tr>
</tbody>
</table>
GENERAL CONTENT OF REQUIRED LOCAL PLANS

Local water management plans shall be adopted within two years of the approval of the District’s plan. Local plans shall conform to the rules and policies promulgated by the Board of Water and Soil Resources. Minnesota Rules Chapter 8410 outlines the structure (part 8410.0160) and required sections in detail (part 8410.0170). Rather than repeating that content, those rules are incorporated by reference.
SECTION 1

Introduction

The Riley-Purgatory-Bluff Creek Watershed District (the "District") is the watershed planning organization for a 50 square mile portion of the southwestern Twin Cities Metropolitan Area. Marked by 40 years of progressive water management, the District continues to operate with a strong conservation ethic. This conservation ethic is characterized by five principles:

- Focus on “One Water” resource management,
- Reliance on citizen priorities and leadership,
- Determination to restore and protect,
- Creating solutions that are resource specific, and
- Evaluating progress with measurable benefits.

These principles provide a direct link between what citizens want and what government can deliver with a mandate to restore and protect a natural resource all value dearly – our waters.

The District’s conservation ethic serves as the foundation for the watershed management process including watershed plan development, project development and implementation, monitoring, and evaluation. This watershed plan lays out the District’s vision for the next ten years while building on the successful programs of the District’s previous plans.

1.1 Location, Boundaries, Descriptions

The District is located in the southwestern portion of the Twin Cities metropolitan area. The District encompasses an area of 47.3 square miles. There are three secondary watersheds – Riley Creek, with a watershed area of 10.0 square miles; Purgatory Creek, with a watershed area of 31.4 square miles; and Bluff Creek, with a watershed area of 5.9 square miles.

The municipalities of Minnetonka, Deephaven, Shorewood, Chanhassen, Eden Prairie, Bloomington, and Chaska are partially located within the District. Approximately 32.8 square miles of the District lies within Hennepin County and approximately 14.5 square miles lies within Carver County. Other than an area along the southern limits of the District, along the Minnesota River, and the far western portion of the District, the entire District is within the Metropolitan Urban Service Area (MUSA) boundary set by the Metropolitan Council. The District is bounded on the south by the Lower Minnesota River Watershed District, on the east by the Nine Mile Creek Watershed District on the north by the Minnehaha Creek Watershed District, and on the west by the Hazeltine-Bavaria watershed administered by Carver County. The legal and subwatershed boundaries of the District are shown on Figure 1-1.
FIGURE 1-1
1.2 Governance

1.2.1 National & State Policies

Watershed districts and other organizations in Minnesota are governed by multiple water policies at both the national and state level. For the purposes of this watershed plan, these policies can be divided into two categories: Primary Policies and Additional Policies.

Primary policies are those that have a direct impact on the District and its watershed management planning and implementation. The primary policies are often federal and state laws and regulations. Primary policies promote the protection and restoration of District waters to their beneficial fishable and swimmable uses. Primary policies are summarized in Table 1-1.

Additional policies are those that either have an indirect impact or limited impact on the District and its watershed management planning and implementation. This is primarily attributed to policies that address matters that do not exist within the District and are not planned for District waters. An example of this is hydropower policy. There are no hydropower dams located in the District. Given current technology and energy needs, it is neither practical nor necessary to construct a hydropower dam on any of the three creeks in the District. This relegates the hydropower policy to secondary policy status. Table 1-2 summarizes the additional policies.

Water use policies have a direct link to rules and regulations for the waters of the District. Typically rules and regulations spell out how a policy goal or goals is to be achieved or maintained. Minnesota rules and regulations directly impact the District and its watershed management operations. The first is Chapter 8410 – Local Water Management. Chapter 8410 primarily governs the watershed plan requirements, including content, periodicity, and revisions.

Chapter 6120 – Shoreland and Floodplain Management Rules and Chapter 8420 – Wetland Standards and Procedures each govern critical areas adjacent to streams and lakes. The District focuses its efforts in the restoration and protection aspects of both regulations. District municipalities focus their efforts on regulating activities in and the uses of wetlands, floodplains, and shoreland.

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The District focuses its efforts in the restoration and protection aspects of regulations. District municipalities focus their efforts on regulating activities in and the uses of wetlands, floodplains, and shoreland.
TABLE 1-1
Primary National and State Policies

<table>
<thead>
<tr>
<th>Policy</th>
<th>Summary</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination of Discharge of Pollutants</td>
<td>It is the national policy that the discharge of toxic pollutants in toxic amounts is prohibited.</td>
<td>33 U.S.C. §1251</td>
</tr>
<tr>
<td>Swimmable and Fishable Waters</td>
<td>It is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved.</td>
<td>33 U.S.C. §1251</td>
</tr>
<tr>
<td>Water Use Policy</td>
<td>It is the policy of this state, which is blessed with an abundance of water, to promote its full use and enjoyment by all of the people, now and in the future, to promote safety for persons and property in connection with the use of the waters of the state, to promote uniformity of laws relating to the use, and to conform with use requirements of the United States.</td>
<td>Minn. Stat. §86B.001</td>
</tr>
<tr>
<td>Conservation Policy for Rainwater</td>
<td>It is the policy of the state to promote the retention and conservation of all water precipitated from the atmosphere in the areas where it falls, as far as practicable.</td>
<td>Minn. Stat. §103A.205</td>
</tr>
<tr>
<td>Wetlands Policy</td>
<td>The legislature finds that it is in the public interest to preserve the wetlands of the state.</td>
<td>Minn. Stat. §103A.202</td>
</tr>
<tr>
<td>Soil and Water Conservation Policy</td>
<td>Maintaining and enhancing the quality of soil and water for the environmental and economic benefits they produce, preventing degradation, and restoring degraded soil and water resources.</td>
<td>Minn. Stat. § 103A.206</td>
</tr>
<tr>
<td>Water Law Policy</td>
<td>The water law of this state is contained in many statutes that must be considered as a whole to systematically administer water policy for the public welfare.</td>
<td>Minn. Stat. §103A.211</td>
</tr>
</tbody>
</table>
### TABLE 1-2
Additional National and State Policies

<table>
<thead>
<tr>
<th>Policy</th>
<th>Summary</th>
<th>Reference</th>
</tr>
</thead>
</table>
| Regulatory Policy | To conserve and use water resources of the state in the best interests of its people, and to promote the public health, safety, and welfare, it is the policy of the state that:  
Subject to existing rights, public waters are subject to the control of the state;  
The state, to the extent provided by law, shall control the appropriation and use of waters of the state; and  
The state shall control and supervise activity that changes or will change the course, current, or cross section of public waters, including the construction, reconstruction, repair, removal, abandonment, alteration, or the transfer of ownership of dams, reservoirs, control structures, and waterway obstructions in public waters. | Minn. Stat. §103A.201            |
| Hydropower Policy | The public health, safety, and welfare of the state are also promoted by the use of state waters to produce hydroelectric or hydromechanical power in a manner consistent with laws relating to dam construction, reconstruction, repair, and maintenance; and  
The leasing of existing dams and potential dam sites primarily for power generation is a valid public purpose. | Minn. Stat. §103A.203            |
| Groundwater Policy | The responsibility for the protection of groundwater in Minnesota is vested in a multiagency approach to management. The following is a list of agencies that are primarily responsible for groundwater protection:  
Environmental Quality Board  
Pollution Control Agency  
Department of Agriculture  
Board of Water and Soil Resources  
Department of Natural Resources  
Department of Health  
The environmental quality board shall, through its water resources committee, coordinate with representatives of all agencies listed in paragraph (a), citizens, and other interested groups to prepare a biennial report every even-numbered year as part of its duties described in sections 103A.43 and 1038.151. | Minn. Stat. §103A.204            |
### TABLE 1-2
Additional National and State Policies

<table>
<thead>
<tr>
<th>Policy</th>
<th>Summary</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenic River Protection Policy</td>
<td>Certain of Minnesota's rivers and their adjacent lands possess outstanding scenic, recreational, natural, historical, scientific and similar values. It is in the interest of present and future generations to retain these values, and a policy of the state, and an authorized public purpose to preserve and protect these rivers.</td>
<td>Minn. Stat. §103A.208</td>
</tr>
<tr>
<td>Marginal, Erodible Land Retirement Policy</td>
<td>It is state policy to encourage the retirement of marginal, highly erodible land, particularly land adjacent to public waters and drainage systems, from crop production and to reestablish a cover of perennial vegetation.</td>
<td>Minn. Stat. §103A.209</td>
</tr>
</tbody>
</table>

Chapter 7050 - Water Quality Standards governs pollutant concentrations in various waters for different uses. Subsections describing water use classifications, wetlands mitigation, nondegradation, general standards for discharges, and specific standards for uses are summarized in Table 1-3. No District streams, lakes, or wetlands are specifically mentioned by name in Minn. R. ch. 7050 Waters of the State (https://www.revisor.mn.gov/rules/?agency=167) for specific uses (for example, trout stream). Therefore waters in the District by default are assigned Use Classifications 2B, 3C, 4A, 4B, 5, and 6 (Minn. R. 7050.0430) as their designated, beneficial uses. This shouldn’t be confused with the other regulatory use of unlisted to describe waterbodies that are not on Minnesota’s impaired water list.

### TABLE 1-3
Minnesota Regulations Chapter 7050 - Water Quality Standards

<table>
<thead>
<tr>
<th>Use Classification</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 2B</td>
<td>Cool and Warm Waters Fisheries</td>
</tr>
<tr>
<td>Class 3C Waters</td>
<td>Industrial cooling and materials transport</td>
</tr>
<tr>
<td>Class 4A Waters</td>
<td>Irrigation for Agriculture</td>
</tr>
<tr>
<td>Class 4B Waters</td>
<td>Livestock and Wildlife</td>
</tr>
<tr>
<td>Class 5 Waters</td>
<td>Aesthetic Enjoyment and Navigation</td>
</tr>
<tr>
<td>Class 6 Waters</td>
<td>Other Uses</td>
</tr>
</tbody>
</table>

For the purposes of this plan, the District considers primary use classifications as those currently in use for the District’s waters and wetlands. Secondary use classifications are those uses that apply to the District’s waters, but the regulated activity (industrial use, agricultural irrigation, and so on) is not currently being conducted with the District’s waters.
1.2.2 District Regulation

Through 2007, the District acted as the designated local government unit responsible for enforcement of the Wetlands Conservation Act and Minnesota Rules Chapter 8420 (WCA) for those municipalities that did not previously obtain that designation – namely Eden Prairie, Shorewood, and Deephaven. In 2008, the District officially transferred Wetland Conservation Act administrative authority to these three municipalities, leaving all municipalities within the District boundaries responsible for administration and enforcement of the Act and Minnesota Rules Chapter 8420. The cities have effectively administered WCA, and several have adopted ordinances providing additional wetland protections. The District will continue to provide technical assistance as requested, and would consider acceptance of WCA administration on request of any watershed city to the municipalities on a case-by-case basis.

Some municipalities in the District have adopted ordinances requiring floodplain protection, erosion and sediment control and stormwater management. The cities’ implementation of their ordinances has contributed to the protection of water resources, but the cities and Managers recognize that the District should contribute its regulatory capacity to the effort as well. The District will bring a watershed-wide regulatory structure and ensure a consistent level of resource protection across the watershed, as required by the Metropolitan Surface Water Management Act. As described more fully in section 7, a rulemaking process conducted in close collaboration with watershed municipalities and other stakeholders to achieve these goals will be a critical component of the implementation of this plan, that effectively negate the application of District rules. All land alteration, grading, and Wetland Conservation Act regulatory controls are now exercised by municipal governments. All District rules remain in place; should municipalities repeal their ordinances, the District would remain positioned to perform regulatory controls.

(For specific ordinances from each of the municipalities, Table 1-4 below provides an overview of applicable ordinances and web site references (as of December 2010) where the ordinances may be found.)
### TABLE 1-4

<table>
<thead>
<tr>
<th>City</th>
<th>Ordinance Reference</th>
<th>Web Site Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chanhassen</td>
<td>City Code Ordinance Chapter 19 Water, Sewers, and Sewage Disposal</td>
<td><a href="http://library.municode.com/index.aspx?clientId=14048&amp;stateId=23&amp;stateName=Minnesota">http://library.municode.com/index.aspx?clientId=14048&amp;stateId=23&amp;stateName=Minnesota</a></td>
</tr>
<tr>
<td>Chaska</td>
<td>City Ordinances Chapter 22 Storm Drainage</td>
<td><a href="http://www.chaskamn.com/new_residents/city-ordinances.cfm">http://www.chaskamn.com/new_residents/city-ordinances.cfm</a></td>
</tr>
<tr>
<td>Deephaven</td>
<td>City Ordinances Chapter 10 – water and sewer</td>
<td><a href="http://www.cityofdeephaven.org/City%20Ordinances.htm">http://www.cityofdeephaven.org/City%20Ordinances.htm</a></td>
</tr>
<tr>
<td>Shorewood</td>
<td>City Code of Ordinances Title 900 Public Right-of-Way and Property&lt;br&gt;Ordinance Title 1100 Floodplain and Wetland Developments</td>
<td><a href="http://www.amlegal.com/shorewood_mn/">http://www.amlegal.com/shorewood_mn/</a></td>
</tr>
</tbody>
</table>

#### 1.2.3 Board of Managers

A five member Board of Managers governs the District. One member is supported by the Carver County Commission, the other four by the Hennepin County Commission. Each serves a three year term.
### TABLE 1-5
**District Board Members**

<table>
<thead>
<tr>
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<th>Term Expires</th>
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</thead>
<tbody>
<tr>
<td>Michael J. Casanova</td>
<td>Hennepin</td>
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<td>Vice President</td>
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<td>Hennepin</td>
<td>7/31/2012</td>
<td>Treasurer</td>
</tr>
<tr>
<td>Perry Forster</td>
<td>Hennepin</td>
<td>7/31/2011</td>
<td>President</td>
</tr>
<tr>
<td>Philip Kirkegaard</td>
<td>Hennepin</td>
<td>7/31/2011</td>
<td>Manager</td>
</tr>
<tr>
<td>Kenneth Wencl</td>
<td>Carver</td>
<td>7/31/2012</td>
<td>Secretary</td>
</tr>
</tbody>
</table>

#### 1.2.4 Citizen Advisors

The Citizen Advisory Committee consists of volunteer residents of the watershed. This Committee meets regularly to share input on issues of the watershed and receive updates on District plans and projects. Many of the Lake Associations that are within District boundaries are represented on the Citizen Advisory Committee. Table 1-5 is a summary of the Citizen Advisory Committee membership.

### TABLE 1-6
**Citizen Advisory Committee Membership**

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<thead>
<tr>
<th>Member</th>
<th>Residence</th>
<th>Representing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Mary Borns</td>
<td>Chanhassen</td>
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<tr>
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<td>Eden Prairie</td>
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<td>Chanhassen</td>
<td>American Water Ski Association</td>
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<tr>
<td>Mr. David Florenzano</td>
<td>Eden Prairie</td>
<td></td>
</tr>
<tr>
<td>Mr. Greg Halvorson</td>
<td>Eden Prairie</td>
<td></td>
</tr>
<tr>
<td>Mr. David Hemze</td>
<td>N/A</td>
<td>Carver County Representative</td>
</tr>
<tr>
<td>Mr. Scott Maeyaert</td>
<td>Chanhassen</td>
<td></td>
</tr>
<tr>
<td>Ms. Sharon McCotter</td>
<td>Chanhassen</td>
<td></td>
</tr>
<tr>
<td>Mr. Jim Nehl</td>
<td>Eden Prairie</td>
<td></td>
</tr>
<tr>
<td>Mr. Bill Satterness</td>
<td>Eden Prairie</td>
<td></td>
</tr>
<tr>
<td>Mr. Joel Settles</td>
<td>N/A</td>
<td>Hennepin County Representative</td>
</tr>
<tr>
<td>Mr. Bob Shurson</td>
<td>Eden Prairie</td>
<td></td>
</tr>
<tr>
<td>Mr. Frank Spahn</td>
<td>Eden Prairie</td>
<td></td>
</tr>
<tr>
<td>Ms. Catherine Thimmesh</td>
<td>Eden Prairie</td>
<td></td>
</tr>
<tr>
<td>Mr. John Tyler</td>
<td>Eden Prairie</td>
<td>Muskies, Inc.</td>
</tr>
<tr>
<td>Mr. Mike Wanous</td>
<td>N/A</td>
<td>Carver Soil and Water Conservation District Representative</td>
</tr>
</tbody>
</table>
1.2.5 Technical Advisors

The Technical Advisory Committee (TAC) provides a forum for member municipalities to engage with the District on watershed issues. Each city has at least one representative member on the TAC. Members of the committee provide input and coordination with the District on their plans and projects to promote greater cooperation amongst each agency’s respective watershed management actions. With the recent transfer of Wetland Conservation Act administrative and permitting responsibilities from the District to municipalities, the TAC will play an important role in maintaining communication within the watershed. Meetings between the District Engineer and the TAC will be held quarterly. Table 1-6 is a summary of the Technical Advisory Committee membership.

<table>
<thead>
<tr>
<th>Member</th>
<th>Representing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Oehme, Terry Jeffery</td>
<td>City of Chanhassen</td>
</tr>
<tr>
<td>Brian Heck, James Landini</td>
<td>City of Shorewood</td>
</tr>
<tr>
<td>Shelly Pederson, Scott Anderson</td>
<td>City of Bloomington</td>
</tr>
<tr>
<td>Lee Gustafson, Liz Stout</td>
<td>City of Minnetonka</td>
</tr>
<tr>
<td>Rod Rue, Leslie Stovring</td>
<td>City of Eden Prairie</td>
</tr>
<tr>
<td>Doug Carter</td>
<td>City of Deephaven</td>
</tr>
</tbody>
</table>

1.2.6 Funding/Budget Overview

Impact on Local Government

An illustration of a levy upon a median-valued $272,000 home is shown on Table 1-7 and 1-8. Those tables also show the comparative levy rates for other units of local government. The table shows that District financing does not disproportionately impact other units of local government. Actual levies could be significantly greater or less than shown amounts because of variations in applicable values and tax rates.

<table>
<thead>
<tr>
<th>Taxing District</th>
<th>Carver County</th>
<th>Hennepin County</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>38.033</td>
<td>40.413</td>
</tr>
<tr>
<td>City</td>
<td>22.993</td>
<td>27.271</td>
</tr>
<tr>
<td>School District</td>
<td>35.505</td>
<td>24.691</td>
</tr>
<tr>
<td>Metro Taxing Districts (Met Council, Mosquito Control, etc.)</td>
<td>4.144</td>
<td>7.154</td>
</tr>
<tr>
<td>Watershed District</td>
<td>1.203</td>
<td>1.246</td>
</tr>
<tr>
<td>Referenda</td>
<td>0.215</td>
<td>0.163</td>
</tr>
<tr>
<td>Total Tax Rate Per $100 Tax Capacity</td>
<td>102.093</td>
<td>100.938</td>
</tr>
</tbody>
</table>

TABLE 1-9
### Estimated Tax Attributed to Watershed District

<table>
<thead>
<tr>
<th></th>
<th>Carver County</th>
<th>Hennepin County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Home Value (approximate example)</td>
<td>$272,000</td>
<td>$272,000</td>
</tr>
<tr>
<td>Net Tax Capacity</td>
<td>$2,720</td>
<td>$2,720</td>
</tr>
<tr>
<td>Total Tax Rate Per $100 Tax Capacity</td>
<td>102.093</td>
<td>100.938</td>
</tr>
<tr>
<td>Total Tax</td>
<td>$2,777</td>
<td>$2,746</td>
</tr>
<tr>
<td>Watershed Share of Total Tax (2009)</td>
<td>$32.72</td>
<td>$33.89</td>
</tr>
</tbody>
</table>

### Ten Year Financing Schedule

The Financing Schedule in Appendix A sets out the expected sources of revenue and expenditures to fulfill the purposes of the District, and sets forth the estimated costs and scheduling of identified projects for the succeeding ten years. The financing schedule may be modified as needed to accommodate new priorities and emergencies.

As described in Section 2.3.3 below, a core approach of the District is to maintain fiscal stability in its operations. This “financial ethic” includes maintaining a stable levy from year-to-year, while maximizing the fraction of the budget that is spent on project implementation. Currently approximately 85 percent of the District budget is spent on project implementation. Thus, less than 15 percent of the budget is spent on administration and management of the District.

Appendix A provides an overview of the ten year project budget for the District. Project descriptions are provided in the Implementation Plan described in Section 7. Projects are typically funded out of either the 509 Levy or the Basic Water Management Levy, therefore the 10-year plan for these funds is presented in the budget. Additional budget information, including all six of the levies available to fund District operations, is provided in Appendix A.

### 1.3 Watershed District History

Throughout its 40 year history, the District has strived to manage its water resources based on its conservation ethic. Its success has been due to a process of continual implementation and improvement, even as its emphasis has evolved over time. This process ensures that each step along the way builds on the last, in terms of knowledge, use and values.
1.3.1 Evolving Emphasis

The District’s emphasis has evolved in response to changes to regulations, its understanding of the science of watershed management, and public perception and needs. Initially, the District focused on floodplain management and other aspects of flood control. The next phase of its evolution saw the emphasis on ecologic classification of its water resources. Ecologic classification led the District to determining what conditions could be attained for individual lakes and stream reaches. These use attainability analyses (UAA) included plans on how to improve existing conditions for the individual lakes and streams.

The District is now entering an emphasis on water resource improvement. Instead of focusing primarily on individual problems in each lake and stream reach, the District is adopting a “One Water” management approach. Interconnected waters with common problems will be managed as a single system. For example, if the outflow from Lake Ann contributes to a problem in Lake Riley, then Lake Ann needs to be part of the solution. Indeed, as part of the upstream component, Lake Ann should be addressed prior to Lake Riley in those cases where an upstream to downstream approach is warranted.

1.3.2 A History of Adapting to Change

The District was established as the Riley-Purgatory Creek Watershed District on July 31, 1969, by the Minnesota Water Resources Board acting under the authority of the Watershed Law. Bluff Creek was added to the district in June 1984. The District’s general purpose was to protect the public health and welfare and provide for the provident use of natural resources. This was accomplished through planning, permit issuance, flood control, and conservation projects with a primary focus on flood control.

The first watershed plan or Overall Plan was published by the District in 1973. The Overall Plan remained in effect until 1995. During this time, the District addressed flood control by delineating a 100-year floodplain for all streams and tributary lakes, implemented flood control, lake level control, obstruction removal projects, and regulated flood plain encroachments in those municipalities that did not have flood plain ordinances. The success of the District’s flood control efforts were clearly seen in 1987. Metropolitan Minneapolis-St Paul experienced what is commonly called the 1987 Superstorm on July 20 – 24. This was composed of two high volume rain events that caused flash flooding throughout the region. Within the District, several neighborhoods and dozens of homes were impacted with flood damage, and reports of severe erosion or road wash out were noted in extreme cases. Overall flood control was successful, especially given the historic circumstances.

New regulations in 1992 brought a major change in philosophy to water management organizations in Minnesota. Characterization with an eventual goal of restoration replaced...
the philosophy of simply addressing flooding and trying to hold the line on water quality. This change in philosophy transformed the expectations of state regulators, municipalities, and citizens for what the District could and should accomplish. With the second generation watershed plan produced in 1996, the District’s emphasis started to change to ecological classification and eventually use attainability.

The District’s UAAs, developed over the course of the second generation plan, were watershed planning analyses used to formulate approaches to improve water quality conditions at various lakes and streams within the District. The purpose of each UAA was to meet the water quality standards of the current designated uses of the specific lake or stream. The UAAs were intended to serve as a “TMDL equivalent.” With some modification and a public hearing process, the studies could be adopted.

The EPA defines a UAA as a structured scientific assessment of the factors affecting the attainment of a water body’s designated use or uses. EPA UAAs can be used to change a designated use, resulting in the application of a different set of water quality standards. The District’s UAAs all assume that the designated uses of various lakes and streams can be achieved and present a plan on how to reduce pollutants. A summary of the District UAAs completed from 1996 to present can be found in Section 1.3.4.

This third generation plan reflects the District’s emphasis on “One Water.” The next ten years will see the District address more problems at a holistic, stream watershed level. The “One Water” emphasis is centered on taking positive actions through projects that have clear immediate benefits as well as broader and more long-term benefits to the whole watershed. This approach is true to the District’s heritage, tradition, and conservation ethic.

### 1.3.3 Moving from Regulations to Restoration Projects

A noteworthy period in the District’s history was the transition of regulatory responsibilities from the District to the municipalities. Early in the period of the Second Generation Plan, the Managers proposed various rules for the District, focusing on different aspects of water quality and quantity management. Municipalities did oppose the proposed rules in 2000 and 2003, particularly the infiltration aspects. However, after that initial opposition, each of the District cities acknowledged need for incorporating essential aspects of the proposed rules into municipal ordinances, overcoming their initial opposition. This municipal change in perspective really took hold as part of their regulatory and planning, non-degradation and otherwise, programs through their storm water pollution prevention programs adopted under the general permit issued by the Minnesota Pollution Control Agency under the MS4 program (Phase II, NPDES). The cities of Eden Prairie, Chanhassen, and Minnetonka participated in the non-degradation planning specially required by the Agency. These efforts were further supplemented by the construction activity permit issued by the Minnesota Pollution Control Agency, which now regulates all development and re-development to one acre of disturbance.
The Managers acknowledged these very significant municipal efforts by re-visiting the issue and conferring with each municipality concerning the District regulatory program. After conferring, the Managers deemed they could reasonably rely upon municipal and State permitting programs and avoid further duplication and cost. Each of the District municipalities adopted land use regulations governing floodplain, shoreland, and land alteration activities. As a result of these conferrals and the change of circumstance, the Managers felt that regulatory responsibilities were best kept within municipal control and that current regulations appear adequate for treating those aspects of water pollution.

Due to the regulatory powers of the District cities and the State there would be very serious question as to the validity of further District regulation. Under the Watershed Law, the Managers may control the use and development of land in the floodplain and may adopt, amend, or repeal rules to control encroachments, the changing of land contours, the placement of fill and structures, and the placement of encumbrances or obstructions, and may require a landowner to remove fill, structures, encumbrances, or other obstructions and restore the previously existing land contours and vegetation. However, these rules “apply only in the absence of county or municipal ordinances” regulating those items. Minn. Stat. § 103D.335 Subd. 19.

Regulatory strategies are the primary responsibility of the State and the municipalities, freeing the District to concentrate on non-regulatory strategies for specific resources. The District retains secondary responsibility for regulatory strategies just as the municipalities retain secondary responsibility for non-regulatory strategies.

The District and municipalities coordinate formally through semi-annual meetings and informally through other meetings and telephone conversations. Coordination between the groups is essential for maintenance of oversight of each group’s activities. The feedback loops created by this coordination provide opportunities for ongoing analysis of the adequacy of watershed strategies and assessment for additional gaps in the coverage of watershed issues. The division of responsibilities for watershed management is shown in Figure 1-2, below.
The Metropolitan Surface Water Management Act recognizes that there are two distinct aspects to water management issues: surface water and groundwater. Having established an effective means for municipal and watershed planning, the Legislature assigned groundwater planning duties on a voluntary basis to the metropolitan counties. The groundwater resource beneath the metropolitan area is dependent upon and impacted by land uses in several counties. As with its surface water responsibilities, the Metropolitan Council retained comment authority over county groundwater plans. Approval authority was delegated to BWSR, the coordinating authority for water management organizations. Hennepin County’s plan received state approval in March 1994. Although the county has not formally adopted the plan, the county is proceeding with implementation of many aspects of the plan. Carver County’s groundwater plan was approved in August 1992.

After the recodification of state water law, the Legislature in 1990 enacted amendments to the Water Law protecting certain wetlands. The Wetlands Conservation Act again directed BWSR to promulgate rules which were promulgated effective July 19, 1993 as Chapter 8420 of Minnesota Rules (8420 Rules or Wetland Rules).

These rules govern the metropolitan surface water management aspects of the planning process mandated by the Watershed Law.

The District has revised its watershed management plan in accord with the provisions of the Watershed Law, the Metropolitan Surface Water Management Act, the Metropolitan Water Management Development Guide and the approved county groundwater plans. The principal focus of the District is to carry out state law and policies through the planning and project authority of the Watershed Act and the Metropolitan Surface Water Management Act.
1.3.4 2nd Generation Plan Accomplishments

Use Attainability Analysis

Lakes
Use attainability analyses (UAAs) have been conducted for many of the lakes in the watershed district. These UAAs characterized the lakes both in terms of water quality and ecology, identified problem areas and offered solutions. UAAs complete since 1996 include:

- Round Lake (Barr Engineering, 1999a)
- Lake Lucy and Lake Ann (Barr Engineering, 1999b)
- Lake Susan and Rice Marsh Lake (Barr Engineering, 1999c)
- Lake Riley (Barr Engineering, 2002)
- Silver Lake (Barr Engineering, 2003)
- Hyland Lake (Barr Engineering, 2004a)
- Duck Lake (Barr Engineering, 2005a)
- Lotus Lake (Barr Engineering, 2005b)
- Mitchell Lake (Barr Engineering, 2005c)
- Red Rock Lake (Barr Engineering, 2006)

In addition to the UAAs described above, in 1992 the District authorized work on the Staring Lake Outlet – Purgatory Creek Recreation Area Basic Water Management Project. This project was petitioned by the City of Eden Prairie with the intent of providing upland flood storage upstream of Staring Lake. In 2007, the Managers reviewed the project with Eden Prairie staff and determined to close-out the project. The determination was based on evidence of no adverse consequences in the past decade, with the outlet structure upstream at the Southwest Metro Transit Station controlling flows. With the Managers’ close-out action, plans to construct the Staring Lake outlet have ceased.

The District has begun development of a Purgatory Creek SWMM model, starting at the most upstream segments near Lotus Lake. As the model is developed, the Staring Lake area will be incorporated. If at that time, the model demonstrates a need for an improvement to the Staring Lake outlet, the Managers will be open to another petition for a project.

Findings from the completed UAAs are summarized in this watershed management plan. Currently no other UAAs are scheduled to be completed by the District.

Creeks
A UAA for Purgatory Creek was completed in 2004 (Barr Engineering, 2004b). Its findings are summarized in the Purgatory Creek section of the Appendix D to this watershed management plan. The District is currently preparing a SWMM5 hydrologic and hydraulic model of Lotus Lake and Purgatory Creek that will further the analysis done in the 2004 UAA. Currently no other stream UAAs are scheduled to be completed by the District.
In 1997, the City of Chanhassen petitioned the Managers to undertake a basic water management project to protect Bluff Creek prior to anticipated development in the area. Subsequent rulemaking proceedings by the Managers designed to institute stormwater management practices were unsuccessful – rules were not adopted by the District. Consequently, the petitioned project was not implemented. Since that time, Interstate Highway 212 has been constructed through Chanhassen and across Bluff Creek, substantially altering the corridor and further enabling land development around and in the stream corridor. Given the passage of time and change in environment, the Managers passed a resolution to dismiss the petition in 2007. However, the District remains committed to considering future municipal petitions for projects which may arise from an approved TMDL study plan.

Total Maximum Daily Load (TMDL) assessments are currently expected for Bluff Creek and the lower part of Riley Creek, from the outlet at Lake Riley to the Minnesota River. The District’s March 2007 study of Riley Creek, the Lake Riley Outlet Improvements and Riley Creek Lower Valley Stabilization Feasibility Study, provides an assessment and model of the lower portion of Riley Creek and potential stabilization measures for controlling erosion. The study will provide input and background for the development of a future TMDL for lower Riley Creek. The Bluff Creek TMDL project started in 2008. MPCA monitoring efforts in the Minnesota River Watershed will begin in 2014. Funding for an MPCA TMDL effort related to Riley Creek is not on MPCA’s potential project list; as such funding for additional TMDL projects in the District is not expected until 2016 at the earliest. A future TMDL protection plan from MPCA would focus on all waters in the Riley Purgatory Bluff Creek Watershed.

### 1.3.5 3rd Generation Plan Development

The content in this section briefly summarizes the history behind development of this Plan. A more detailed description of the Plan development background is available from the District upon request.

The District began a preliminary planning initiative for this Plan in 2002 by reviewing and participating in proposed rules hearings conducted by BWSR and MPCA. Following this initial review, the District began a formal planning process in February 2005, with special meetings noticed for that purpose. The Managers reviewed all input received from agencies and municipalities before conducting a water management advisory meeting to evaluate the potential impacts arising from management actions.

After several additional topic-specific meetings (for example, TMDL evaluations, NPDES Phase II impacts, District regulations), the District prepared a stakeholder draft of the proposed Plan for agency and municipality review in September 2008. This stakeholder draft generated several additional meetings and opportunities for feedback from Plan recipients, which also included the Technical Advisory and Citizens Advisory Committees.
The ensuing discussions with stakeholders and the Board of Managers led to development of this Plan.

1.4 Watershed Issues

The District’s history, as described above, provides an overview of the problem assessment process that has led to development of this Plan. As required by Minnesota Rules Chapter 8410 (part 8410.0090), the subsections below this discussion provide an overview of the District’s problem assessment. The problem assessment process spanned several years and included several watershed partners along the way.

The first step was conducted as part of the 1996 Water Management Plan. The 1996 Plan included an initial inventory and assessment of the watershed.

Second, analysis of attainable uses was completed under the schedule set in the 1996 Plan. This work was completed during the period 1996 through 2005 and reported in the use attainability analyses and basic water management project engineering reports. The remaining components of that assessment were completion of the SWMM models for Purgatory Creek and Staring Lake. Although data was collected for Staring Lake, the report was not published; its use attainment analysis is now incorporated into the Purgatory Creek One Water project, particularly the work contracted to the University of Minnesota. All creeks and lakes were assessed.

Recommendations of the use attainability analyses have formed the basis of basic water management projects. Perhaps best illustrated in the Lake Riley Chain of Lakes, two projects were completed, in line with findings of the analyses to 1) construct treatment basins (beyond NURP criteria) to treat all inflows and, 2) reconstruct the Lake Riley outlet to abate excessive downstream discharges and harmful high-water conditions. These efforts have continued and are complemented by the ongoing Fish Barrier and Invasive Species Control Project to begin attacking in-lake nutrient discharges and invasive species. To determine that this series of projects were appropriate, P8 models were created for each of the lakes in the Riley Creek chain and connected through a SWMM model. Creek corridor evaluations using the Rosgen physical classification methodology and a habitat evaluation method developed by the Wisconsin Department of Natural Resources were used to complement the modeling efforts.

Assessments like the one conducted for the Riley Chain of Lakes and for all project assessments specifically examined and reported impacts of stormwater discharges on water quality and fish and wildlife resources. Express goals were set forth as to each of these elements in each analysis. Each assessment specifically examined the general impact of land use practices and, in particular, land development and wetland alteration on water quality and water quantity as expressed in comparison of existing and potentially attainable uses.

The corridor and floodplain protections initially imposed by the District and now regulated by municipal ordinance have avoided flooding and stormwater rate control issues within and between communities. The premise of District protections was an “ultimate development” assumption. This assumption presumed all water would get to District lakes and creeks without detention; so the “ultimate development” assumption is very conservative. In fact, detention was provided so there’s added protection above and beyond the freeboard mandated first by District regulation and now by municipal ordinance.
Municipalities of the District follow Agency guidelines and best management practices concerning erosion control. These municipal efforts are subject to further on-going review through the MS4 General Permit, including the storm water pollution prevention program and non-degradation planning. For all feasible and practical purposes, the District judges the combination of municipal and state requirements and oversight are adequate.

This discussion gives insight into the District’s mission and direction in regard to management of the watershed. The description of issues below demonstrates the linkages between District mission, watershed issues, vision, long-term and short-term goals (as described in Section 2) and implementation priorities (as described in Section 7). This categorization of issues is only in broad terms – each issue has interdependencies across categories.

1.4.1 Regulatory Roles and Responsibilities

Municipalities in the District carry extensive significant regulatory and permitting authority. In reinitiating its regulatory program, the District has worked closely with municipalities to ensure efficient exercise of regulatory further clarify these responsibilities and eliminate confusion about respective roles. Regulatory responsibilities are held by municipal and state agencies for issues such as:

- Land use (land alteration, development, and redevelopment),
- Ground water, drinking water, and wellhead protection,
- Stormwater management, and
- Wetlands management (see Appendix F for more on District wetlands).

The District retains a non-regulatory role that enables resource-specific studies and restoration efforts which supplement the regulatory roles of other agencies.

Within this context, cooperation with and oversight of regulators is necessary. The District will work with municipalities (and state agencies) to ensure that all water resource protection in the watershed regulatory program is in alignment with the broad objectives for water quality in the District. Feedback and reporting from this review helps determine the presence of and that any “gaps” in the coverage of watershed issues are addressed. This is especially relevant for the watershed in coming years as the mindset shifts from development to redevelopment of existing land uses. This regulatory framework also applies to the development and implementation of Total Maximum Daily Load (TMDL) studies. For example, the probable causes of fish biota impairment of Bluff Creek are habitat fragmentation, sediment, flow, and metals contamination (as identified by the MPCA’s Bluff Creek Stressor Identification Report). These probable causes will be addressed in more detail in the Bluff Creek Watershed TMDL and Implementation Plan.

1.4.2 Communication between Watershed Partners

The District recognizes that many “partners” are necessary in the creation and implementation of long-term, sustainable solutions for improved water quality. Federal, State, and Local governments, clean water organizations (such as Lake Associations),
property owners, and local businesses are all representative of the wide variety of stakeholders involved in water quality solutions.

As described above, the District relies on citizen priorities and leadership as a key principle of the District’s conservation ethic. For the most effective engagement with these partners, the District needs to maintain a coherent communications strategy that enables the sharing of data, best practices, methods, and plans. This is especially relevant with establishment of the Minnesota Clean Water Fund in 2008. Appendix B of this Plan provides the Communications Plan for the District. This Plan coordinates the avenues of communication between the District and its partners, with several benefits and opportunities to enhance the program anticipated, including:

- Shared knowledge about best practices,
- Identification of cost-sharing opportunities
- Greater citizen participation in District decision-making
- Increased approval of District programs.

1.4.3 Stream Flows and Erosion

Many of the stream (also referred to as creeks in this Plan) problems identified are a product of creek flows. For Riley, Purgatory, and Bluff Creeks, flow has been identified as a problem from both a low-flow and high-flow standpoint. Some of the related issues include:

- Many of the District’s creek segments experience low-flow conditions, such that data samples cannot be taken due to the lack of observable flowing water. Low-flow conditions limit the biological functions of creeks in the District, effectively limiting the potential for restoration of impaired reaches.
- The surface water/ground water relationship, including upland infiltration as a means to reduce runoff from impervious surfaces, and its impact on water quality requires further assessment. The District will cooperate with watershed partners to identify opportunities and strategies to address this issue.
- Erosion and turbidity have been identified as problems in multiple creek reaches, including those identified as impaired for the State’s TMDL program. Creeks entering the bluffs area of the Minnesota River valley are especially susceptible to erosion problems. For those periods when creek flows are high, management of storm water runoff is important to reduce peak flow and take advantage of the opportunity for extending the period of flows beneficial to stream ecosystems (per the above bullet regarding low-flow conditions).
- The presence or lack of aquatic habitat (for example, riparian corridor vegetation) in District creeks provides a feedback loop important toward continued improvements or degradation of creek water quality. That is, the presence of aquatic habitat can provide “momentum” for improvement and a more stable stream ecosystem.

1.4.4 Lake Eutrophication and Water Quality

All lakes in the District that are identified by the MPCA as impaired are listed due to nutrient/eutrophication/biological indicators among others. One of the fundamental issues
driving these lakes’ impairment is high levels of phosphorus. The District considers phosphorus in lakes to come from any of three potential sources, as follows:

- **External Loading (from the lake watershed)** – examples include runoff from impervious surfaces or external inputs such as the use of fertilizers near lake shorelines. The established regulatory system is focused on the issue of external nutrient loading and runoff volumes as a result of existing and proposed land uses.

- **Internal Loading (from in-lake processes)** – examples include the release of nutrients from lake sediments or the die-off of invasive aquatic plants. Ongoing District projects have shown the impact of common carp on this process; carp have been shown to dramatically intensify the problems associated with internal loading. The District’s analysis its partner organizations has determined a “gap” exists relative to the management of internal loading. Other agencies have limited resources to address this issue.

- **Indirect External Loading (from upstream lakes)** – many of the lakes in this District are connected by creeks or underground pipes. Phosphorus flows out of upstream lakes directly into the next downstream lake. The District has recognized this dynamic through its implementation of a “top-to-bottom” project prioritization. Where possible, the District chooses to focus on upstream water quality improvements first in order to create the best possible conditions for future downstream restoration efforts.

Tables 1-9 and 1-10 below provide an overview of the nutrient loading characteristics for District water bodies according to these three categories. Figures 1-3, 1-4, and 1.5 graphically depict these categories of sources.

### 1.4.5 Biological Resources

The biology of aquatic ecosystems is one of the critical factors in maintaining water quality integrity. Healthy biological systems help sustain water quality. From a managerial perspective, the promotion of native plants and animals represents an opportunity to establish self-sustaining systems that retain water quality at little cost.

Several water bodies in the District are impacted by the presence of non-native species (see Tables 1-9 and 1-10 below). Whether it is plants or fish, these non-native species are voracious consumers of resources and often out-compete the native species that promote a healthy aquatic ecosystem. Notable non-native species affecting either water quality or the use of District waters include:

- Common Carp
- Curlyleaf Pondweed
- Eurasian Watermilfoil
- Purple Loosestrife

### 1.4.6 Wetlands

According to National Wetland Inventory (NWI) mapping, there are over 5,000 acres of wetlands in the District (see also Appendix F). In many cases, large wetland complexes exist immediately adjacent to District streams or lakes, playing a potentially critical role in the
achievement of water quality goals for those water bodies. Regulatory enforcement of the Wetland Conservation Act (WCA) is through District municipalities; as such, there is no need for a District wetland banking system.

1.4.7 Recreational Uses

Many of the District’s lakes are relied upon for a variety of recreational uses, including swimming, fishing, water skiing, and canoeing. Beyond the issues already described above that affect recreation (for example, invasive plants limiting the use of motor boats), the following issues have been identified:

- Lake Blue-Green Algae (Cyanobacteria) – short-term exposure (for example, by direct contact while swimming) to cyanobacteria can cause flu-like symptoms

- Mercury and perfluorooctane sulfonate (PFOS) in Fish Tissues – many of the District’s lakes are impaired with a “mercury in fish tissue” stressor. The Minnesota Department of Health has also detected PFOS (a chemical that has historically been used in some manufacturing processes and firefighting) in fish samples from some lakes. As a result, limited consumption of fish taken from these lakes is recommended.
## TABLE 1-10
Watershed Issues Summary – Lake Nutrient Loading Percent Contribution by Source

<table>
<thead>
<tr>
<th>One Water Lakes</th>
<th>UAA Status</th>
<th>Nutrient (Phosphorus) Loading, Percent Contribution by Source</th>
<th>Data Source</th>
<th>Exotic Plant Species</th>
<th>Carp Removal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Direct external (watershed)</td>
<td>Internal</td>
<td>Indirect external (from creek inlet)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>²</td>
<td>³</td>
<td>³</td>
<td></td>
</tr>
<tr>
<td>Riley Creek One Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Lucy ⁶</td>
<td>1999</td>
<td>65%</td>
<td>35%</td>
<td>NA</td>
<td>MBS</td>
</tr>
<tr>
<td>Lake Ann ⁶</td>
<td>1999</td>
<td>33%</td>
<td>32%</td>
<td>35%</td>
<td>MBS</td>
</tr>
<tr>
<td>Lake Susan</td>
<td>1999</td>
<td>54%</td>
<td>39%</td>
<td>7%</td>
<td>MBS</td>
</tr>
<tr>
<td>Rice Marsh Lake</td>
<td>1999</td>
<td>76%</td>
<td>17%</td>
<td>7%</td>
<td>UAA</td>
</tr>
<tr>
<td>Lake Riley ⁷</td>
<td>2002</td>
<td>30%</td>
<td>47%</td>
<td>22%</td>
<td>MBS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>53%</td>
<td>12%</td>
<td>35%</td>
<td>UAA</td>
</tr>
<tr>
<td>Purgatory Creek One Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lotus Lake ⁸</td>
<td>2005</td>
<td>12%</td>
<td>88%</td>
<td>NA</td>
<td>MBS</td>
</tr>
<tr>
<td>Silver Lake ⁹</td>
<td>2003</td>
<td>23%</td>
<td>62%</td>
<td>NA</td>
<td>UAA</td>
</tr>
<tr>
<td>Staring Lake ⁶</td>
<td>Data Comp.</td>
<td>2%</td>
<td>23%</td>
<td>75%</td>
<td>MBS</td>
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<tr>
<td>Duck Lake ¹¹</td>
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<td>22%</td>
<td>78%</td>
<td>NA</td>
<td>MBS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31%</td>
<td>63%</td>
<td>NA</td>
<td>UAA</td>
</tr>
<tr>
<td>Round Lake ⁶</td>
<td>1999</td>
<td>49%</td>
<td>51%</td>
<td>NA</td>
<td>MBS</td>
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<tr>
<td>Mitchell Lake ¹²</td>
<td>2005</td>
<td>15%</td>
<td>76%</td>
<td>9%</td>
<td>MBS</td>
</tr>
<tr>
<td>Red Rock Lake ¹³</td>
<td>2006</td>
<td>39%</td>
<td>29%</td>
<td>19%</td>
<td>UAA</td>
</tr>
<tr>
<td>Hyland Lake ¹⁴</td>
<td>2004</td>
<td>41%</td>
<td>59%</td>
<td>NA</td>
<td>MBS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26%</td>
<td>63%</td>
<td>NA</td>
<td>UAA</td>
</tr>
</tbody>
</table>

1. Data from Use Attainability Analysis (UAA) or 1996 mass-balance study (MBS) for average rainfall year.
2. Loading from lake watershed.
3. Loading from upstream lake.
5. Based on best available information from the University of Minnesota.
6. UAA phosphorus budget unclear or unavailable.
7. 7% of phosphorus loading attributed to atmospheric deposition in UAA.
8. 15% of phosphorus loading attributed to atmospheric deposition in UAA.
9. 20% of phosphorus loading attributed to atmospheric deposition. MBS not conducted on Silver Lake.
10. Source: City of Eden Prairie
11. 7% of phosphorus loading attributed to atmospheric deposition in UAA.
12. UAA indicates mid-summer internal P-loading as high as 63%. 13% of phosphorus loading due to atmospheric loading.
13. 13% of phosphorus loading attributed to atmospheric deposition in UAA.
14. 11% of phosphorus loading attributed to atmospheric deposition in UAA.
### TABLE 1-11
Watershed Issues Summary – Pounds of Phosphorus Mass Loading by Source

<table>
<thead>
<tr>
<th>One Water Water Bodies</th>
<th>UAA Status</th>
<th>Nutrient (Phosphorus) Loading, Mass (lbs) Contribution by Source</th>
<th>Data Source</th>
<th>Minnesota Pollution Control Agency 303(d) List Impairment Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Direct external (watershed) ² Internal Indirect external (from creek inlet) ³</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Riley Creek One Water</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Lucy ⁶</td>
<td>1999</td>
<td>77 40 NA</td>
<td>MBS</td>
<td>Mercury in fish tissue</td>
</tr>
<tr>
<td>Lake Ann ⁶</td>
<td>1999</td>
<td>49 49 66</td>
<td>MBS</td>
<td>Mercury in fish tissue</td>
</tr>
<tr>
<td>Lake Susan</td>
<td>1999</td>
<td>137 84 15</td>
<td>MBS</td>
<td>Nutrient/Eutrophication Mercury in fish tissue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>256 57 24</td>
<td>UAA</td>
<td></td>
</tr>
<tr>
<td>Rice Marsh Lake</td>
<td>1999</td>
<td>139 218 104</td>
<td>MBS</td>
<td>Not Listed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>282 64 212</td>
<td>UAA</td>
<td></td>
</tr>
<tr>
<td>Lake Riley</td>
<td>2002</td>
<td>432 489 95</td>
<td>MBS</td>
<td>Nutrient/Eutrophication Mercury in fish tissue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>238 73 529</td>
<td>UAA</td>
<td></td>
</tr>
<tr>
<td><strong>Purgatory Creek One Water</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lotus Lake ⁸</td>
<td>2005</td>
<td>132 935 NA</td>
<td>MBS</td>
<td>Nutrient/Eutrophication Mercury in fish tissue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>190 509 NA</td>
<td>UAA</td>
<td></td>
</tr>
<tr>
<td>Silver Lake</td>
<td>2003</td>
<td>68 62 NA</td>
<td>NA</td>
<td>Not Listed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staring Lake ⁶</td>
<td>Data Comp.</td>
<td>46 527 1,717</td>
<td>MBS</td>
<td>Nutrient/Eutrophication Mercury in fish tissue</td>
</tr>
<tr>
<td></td>
<td>⁷</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duck Lake</td>
<td>2005</td>
<td>24 84 NA</td>
<td>MBS</td>
<td>Not Listed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>46 95 NA</td>
<td>UAA</td>
<td></td>
</tr>
<tr>
<td>Round Lake ⁶</td>
<td>1999</td>
<td>57 57 NA</td>
<td>MBS</td>
<td>Mercury in fish tissue</td>
</tr>
<tr>
<td>Mitchell Lake</td>
<td>2005</td>
<td>57 300 37</td>
<td>MBS</td>
<td>Nutrient/Eutrophication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>174 130 86</td>
<td>UAA</td>
<td></td>
</tr>
<tr>
<td>Red Rock Lake</td>
<td>2006</td>
<td>82 106 77</td>
<td>MBS</td>
<td>Nutrient/Eutrophication Mercury in fish tissue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>207 141 62</td>
<td>UAA</td>
<td></td>
</tr>
<tr>
<td>Hyland Lake</td>
<td>2004</td>
<td>60 86 NA</td>
<td>MBS</td>
<td>Nutrient/Eutrophication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>73 176 NA</td>
<td>UAA</td>
<td></td>
</tr>
<tr>
<td><strong>Bluff Creek One Water</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bluff Creek</td>
<td></td>
<td></td>
<td></td>
<td>Impaired for turbidity and fish index</td>
</tr>
</tbody>
</table>

1. Data from Use Attainability Analysis (UAA) or 1996 mass-balance study (MBS) for average rainfall year.
2. Loading from lake watershed.
3. Loading from upstream lake.
5. Based on best available information from the University of Minnesota.
6. UAA phosphorus budget unclear or unavailable.
7. Data collection for the Staring Lake UAA was completed without official publication.
SECTION 7
Implementation Plan

7.1 Vision

The Conservation Ethic described in Section 2 of this Plan provides guiding principles for the Managers in management of the Riley Purgatory Bluff Creek Watershed District. Within the context of this “3rd Generation Plan” and previous accomplishments of the District, the Managers have created a vision for implementation of this Plan, as follows:

The Riley Purgatory Bluff Creek Watershed District will achieve sustainable uses appropriate for each water body of the District.

Achievement of this vision will result in:

• Waters dominated by diverse native fish and plant populations,
• Lakes with water clarity of 2 meters or more,
• Delisting of half of all impaired (303d) lakes or stream reaches,
• An engaged and educated public and scientific community participating in adaptive management activities, and
• A District regulatory program integrated with regulatory recommendations necessary for municipal, county, and state programs authorities to sustain the achieved conditions efficiently and effectively improve, protect and manage the water resources of the District.

The District will monitor its performance against this vision as described in Section 7.11.

7.2 Watershed Management Strategies

Watershed solutions need to address two different but related sets of elements. The first are the watershed approaches described in Section 2.3.3. These elements include the following:

• Top of the Watershed to the Bottom
• Address Issues not Addressed by Others
• Petitioned Projects
• Adaptive Management
• Pilot to Full Scale
• Resource Conservation
• Public and Stakeholder Participation

The second set of elements is composed of the classic elements of watershed management strategy. These involve addressing the fundamental issues associated with achieving swimmable and fishable waters.
• **Chemical Strategies.** Address both the chemical sources of water impairment and their removal. Removal can come at the source (storm flows), somewhere in the conveyance system, or at the receiving waterbody (for example, alum addition). These may also address biogeochemical interactions, such as managing the release of nutrients from a lake bottom by altering sediment conditions.

• **Biological Strategies.** Address both the control of undesired plants and animals, such as non-native species and the enhancement of desired plants, animals, and habitat, such as fisheries management. Biological strategies are interconnected to both chemical strategies and hydrologic strategies.

• **Ecological Strategies.** Address the effects of ecosystem structure on water quality. Ecological strategies seek to shift lakes to plant-dominated clear water states via fisheries management or plant restoration. Ecological and biological strategies will tend to be linked, and also consider energy sources affecting water bodies (such as wind mixing of lakes).

• **Hydrologic Strategies.** Address the impacts of water flow through the watershed system. These impacts can be at either end of the flow spectrum, not enough (loss of baseflow) or too much (flooding or undesired high storm flows). Alteration of stormwater hydrographs through infiltrative strategies is one of the long-term goals identified in Section 2.3.2.

• **Governmental Strategies.** Address all aspects of government regulation, participation, and political will to implement improvement strategies.

### 7.3 Prioritizing Watershed Management Solutions – Project Selection Criteria

The combination of the District’s watershed approaches and strategies are used to prioritize the potential solutions summarized previously. The District has used a qualitative approach to project prioritization. Under this approach, the Managers and the Engineer consider the range of projects, their impact on water quality, and cost. In 2007 this qualitative process was used to determine the District’s projects for the next decade. Projects were discussed by the Managers at public meetings and stakeholder input was solicited and considered.

The following water resources protection and restoration projects were selected by the Managers in 2007, and appear below in the Watershed Solutions section of this Plan:

• **Fish Barrier and Invasive Species Control**
• **Lotus Lake Outlet and Volume Control/Reduction**
• **Mitchell Lake Water Quality Improvement**
• **Lotus Lake Water Quality Improvement**
• **Lake Riley Outlet Improvement** (NOTE: This project was completed in 2009)
• **Lake Susan Shoreline Restoration**
• **Duck Lake Recreational Access**

Based on feedback from agency partners, the Managers have chosen to incorporate project selection criteria into this Plan as a basis for the determination of future projects. Such
projects will be consistent with the watershed solutions identified below and be in addition to projects identified for implementation.

Future project selection decisions will be made based on an assessment of the following criteria:

- Water Quality Improvement
- Water Quantity Management
- Habitat Improvement
- Floodplain Improvement
- Recreational Enhancement
- Fisheries Management
- Cost Effectiveness (relative cost versus relative benefit)

If necessary, the Managers may apply weighting to help differentiate the importance of certain selection criteria. This weighting exercise would be conducted prior to the development of potential future projects.

### 7.4 Watershed Solutions

The District’s understanding of lake and other watershed processes was significantly expanded in 2008 and 2009. This has already had an influence on watershed solutions, very much in keeping with the watershed approach of adaptive management. Carp management, for example, within the Riley Creek Watershed requires prevention of winter fish kill in Rice Marsh Lake, Lake Susan, and Lake Lucy. Winter fish kill results in the reduction of fish populations that otherwise would feed on carp larvae and fry. When a winter fish kill occurs, carp populations rebound and destroy the gains made in carp removal. No lake within the Riley Creek watershed can be successfully managed for carp on an individual basis.

As depicted in the Water Quality Improvement Plan graphic, lake solutions will progress in a hierarchal manner. This hierarchy enables the District to make improvements that will not be overshadowed by larger lake water quality concerns.

The product of this progression of methods is swimmable, fishable lakes with greater water clarity than is currently found in District lakes during the summer. Movement in the process goes from top to bottom, although some efforts could conceivably proceed in parallel (for example, controlling invasive aquatic plants while restoring native plants).

The Plan’s planned watershed solutions have been updated from the above presented 2007 list and are described below. Each watershed solution identified below has a corresponding line item shown in Appendix A (10-Year Budget).

#### 1. Fish Barrier and Invasive Species Control

The emphasis is still on fisheries control in the form of common carp and non-native vegetation control in the form of curlyleaf pondweed, Eurasian milfoil, and purple loosestrife.

**Common Carp Management**
Carp are significantly more detrimental to lake water quality than previously understood. Their destruction of ecological systems by rooting deeply into lake bottoms for food, increases turbidity and nutrient release and eradicates native submerged aquatic vegetation. The impact of carp is potentially the primary contributor to internal loading as well as the presence of non-native vegetation.

The primary focus of carp management continues to be in the Riley Creek watershed. University of Minnesota studies in 2009 have revealed Rice Marsh Lake as an important northern pike (*Essox lucius*) breeding area. This means that the original planned fish barriers for carp upstream and downstream of Rice Marsh Lake would harm the northern pike fishery. Therefore, carp control has been expanded to the entire watershed with studies beginning in 2009 in Lakes Ann and Lucy. The presence of an already functional DNR velocity barrier to carp in Riley Creek downstream of Riley Lake will prevent reinvasion of the Riley Creek watershed from the Minnesota River.

Carp management within the Riley Creek Watershed is composed of ongoing carp tracking, netting, and recruitment. While Rice Marsh Lake has been identified as the principal breeding area for carp, Lake Lucy may also be a breeding area. It is now recognized that successful recruitment of carp only occurs after a winter fish kill in a breeding lake. Rice Marsh Lake and Lake Lucy will be provided with winter aeration/oxygenation systems to prevent winter fish kill and prevent additional carp recruitment. These systems will be extended to any lake in the watershed that is identified as a breeding area in the future.

During the period of 2010-2012 all lakes in the Riley Creek One Water will be monitored for carp at least twice per month. A manual on carp control will also be produced as part of this effort. The manual will then be applied and validated, or changed as necessary, on the Purgatory Creek watershed, which also has a major carp infestation that affects water quality. The need for a carp barrier for Purgatory Creek will be evaluated and considered as part of this effort. The Purgatory Creek One Water carp management project (budgeted as part of the Lotus Lake Water Quality Improvement Project) is slated to begin in 2011 and continue to 2014.

### Non-Native Vegetation Management

Curlyleaf pondweed and Eurasian milfoil are present to varying degrees in almost all of the District’s lakes. These non-native submerged aquatic vegetation (SAV) negatively impact lake water quality and recreational values and tend to block the growth of slower growing native SAVs. The District plans to continue to use mechanical harvesting for control of curly leaf pondweed and management of Eurasian milfoil.

In 2009 through 2011, a pilot plant restoration/invasive plant management project is being conducted in Lake Susan in conjunction with the University of Minnesota. This project will
evaluate the potential for long-term vegetation management. One of the long-term goals of this project is to study control of Eurasian milfoil with native milfoil weevils.

Another non-native plant that has become a problem in the watershed is purple loosestrife. The District with potential assistance from DNR plans on developing a sustainable control of loosestrife using beetles.

2. Lotus Lake Outlet and Volume Control and/or Reduction

Stormwater entering Lotus Lake causes rapid increases and subsequent decreases in lake levels. This results in eroding shoreline and additional nutrient loading. The first step is to better understand the influence of runoff volumes on Lotus Lake’s level and the extent of bounce caused by stormwater events. The District is currently building a SWMM5 model that includes the lake and the immediate downstream portions of Purgatory Creek. This model will better define the influences on lake level. The lake residents have been contacted to gather their input regarding issues and experience with lake level fluctuations and runoff concerns. The next step will be to evaluate the impact of outlet modification alternatives as well as identifying hydrologic improvements.

Long-term, the hydraulic model is another step toward completion of a watershed-wide hydraulic model. Completion of a District-wide model, through ongoing activities of this project, is anticipated for 2015. The model will provide several benefits to the District, including: improved ability to assess potential project opportunities and benefits, tools to evaluate projects after their completion to measure benefits that have been realized, greater ability to work with and facilitate project and existing condition scenarios with municipalities, and modeling capabilities to better understand nutrient and hydraulic dynamics in the watershed. Consistent with the District’s potential solutions identified in Table 7-1 below, the hydraulic model exercise is complementary to and may facilitate development of a Watershed Pollutant Loading Model. Additionally, the model will be used by the District to help identify high priority areas for wetland restoration, enhancement, and banking opportunities. The District will work with the TAC as the model is completed in order to facilitate the exchange of information and interpretation of results. Data from the model will also be available through www.rileywd.org.

3. Mitchell Lake Water Quality Improvement

The District plans on following a long term plan that primarily focuses on internal loading. Mitchell Lake does not have a carp or volume control problem. The two primary solutions are non-native plant management and controlling phosphorus release from the lake bottom sediment.

Goals Addressed:
EQB Watermarks A, B, E, F, G, I
DNR Strategic Conservation Agenda – Healthy natural systems provide clean water and other ecological, economic, and recreational benefits.
MPCA 2008 Strategic Plan – W.2, W.3
District Goals – STG 5 LTG 3
Non-Native Vegetation Management
As indicated elsewhere, the District will manage non-native plants with mechanical harvesting. Despite significant invasion from curly leaf pondweed and Eurasian milfoil, there remains a diverse and extensive native plant community in the waters of Lake Mitchell. Evidence to date indicates a positive response to mechanical harvesting of curly leaf pondweed. Harvesting of milfoil maintains navigation in selected areas of the lake. The long-term plan for milfoil is to use biological controls. This will likely be based on the outcome from the Lake Susan study involving native milfoil weevils.

Internal Phosphorus Load Management
Mitchell Lake will serve as a pilot project to test different technologies that will seek to control internal phosphorus loading by reducing sediment phosphorus release in an anoxic environment. This may involve control via oxygenation, aeration, sediment oxidation or a combination of these methods. If a viable and sustainable solution cannot be identified, the District may consider the short term solution of the use of alum. These methods may be applied in Lake Mitchell or elsewhere in the District as the priorities dictate.

External Phosphorus Load Management
Work being done to reduce phosphorous loads in Round Lake (see description below) will help prevent phosphorous loading of Mitchell Lake. The District will assess additional watershed BMPs with regards to design, construction, and current state of repair. A correction program will be developed to address BMP deficiencies identified in the assessment. As was the case with the internal load management, this will serve as a pilot that can be expanded to other lakes.

4. Lotus Lake Water Quality Improvement
As is the case with many of the Riley Creek watershed lakes, Lotus Lake appears to be heavily infested with carp. Based on work to date on Lake Susan, managing carp to low populations appears to be a critical-path strategy for improving Lotus Lake water quality. The effect of carp removal (scheduled to occur across the Purgatory Creek One Water between 2011 and 2014) is expected to decrease internal loading. The phosphorus balance of the lake will have to be determined in the post-carp environment in conjunction with the SWMM-5 model that is in development to determine the impacts of stormwater events on lake bounce. Control of internal loading, if needed in the post-carp environment, will be based on the findings of the pilot project work being conducted on Mitchell Lake and the lake solution hierarchy described above.

Goals Addressed:
EQB Watermarks A, B, E, F, G, I
DNR Strategic Conservation Agenda – Healthy natural systems provide clean water and other ecological, economic, and recreational benefits.
MPCA 2008 Strategic Plan – W.2, W.3
District Goals – STG 1, 2, 3; LTG 2

5. Lake Susan Shoreline Restoration
This project is intended to restore approximately 1,200 feet of shoreline along the northeastern portion of the lake. Implementation will include development of a softer, ecological shoreline with minimal

Goals Addressed:
EQB Watermarks A, B, E, F, I
DNR Strategic Conservation Agenda – Healthy natural systems provide clean water and other ecological, economic, and recreational benefits.
MPCA 2008 Strategic Plan – W.2, W.3
District Goals – LTG 3; STG 5
use of rip rap. This project will be completed as funds are available.

6. Duck Lake Water Quality and Recreational Access

The edge of Duck Lake and the adjacent narrow roadway is heavily used by citizens for a variety of recreational purposes including walking, bicycling, and fishing. The City of Eden Prairie has asked for assistance in implementing a solution that provides for improved recreational use, particularly access for fishing, and for improved public safety. This project is currently scheduled for the 2024-2025 time period.

7. Round Lake Water Quality Improvement Basic Water Management Project

Stormwater ponds surrounding Round Lake have insufficient volume to handle the storage requirements necessary to adequately remove phosphorous from stormwater that eventually reaches Round Lake. The Project involves upgrading up to three existing storm water management ponds (historically known by the District as ponds M, RLP, and RLE) that discharge into Round Lake. These basins are to be dredged, resulting in increased dead storage capacity to meet the requirements of MPCA. Engineering designs and construction activities were completed in 2010 on ponds RLP and RLE. Work on pond M was deferred due to funding limitations and increased cost of sediment disposal.

8. Purgatory Creek Restoration Basic Water Management Project

The City of Minnetonka petitioned the Riley Purgatory Bluff Creek Watershed District, pursuant to the provisions of the Minnesota Statutes Sections 103D.201, 103D.605, 103D.705 and 103D.905, to undertake a basic water management project for Purgatory Creek. Hennepin County is planning to widen and improve County Road 101 where it crosses Purgatory Creek for the 2012-2013 construction seasons. This project would provide for proper storm water management, correct erosion conditions, improve safety on adjacent trails and roads, and other possible

Goals Addressed:
- EQB Watermarks A, B, E, F, I
- DNR Strategic Conservation Agenda – Healthy natural systems provide clean water and other ecological, economic, and recreational benefits.
- MPCA 2008 Strategic Plan – W.2, W.3
- District Goals – LTG 2; STG 5

Goals Addressed:
- EQB Watermarks A, B, E, F, I
- DNR Strategic Conservation Agenda – Healthy natural systems provide clean water and other ecological, economic, and recreational benefits.
- MPCA 2008 Strategic Plan – W.2, W.3
- District Goals – LTG 1, 4; STG 4, 5

Goals Addressed:
- EQB Watermarks A, B, E, F, I
- DNR Strategic Conservation Agenda – Healthy natural systems provide clean water and other ecological, economic, and recreational benefits.
- MPCA 2008 Strategic Plan – W.2, W.3
- District Goals – LTG 3, 4; STG 4
ecological, scenic, and recreational benefits to the Creek. The Engineer’s report is complete. The District Managers are considering potential implementation options at the time of this writing. Thus, project funding has not been determined and is therefore not included in this Plan.

9. Purgatory Creek Watershed Water Quality Improvements

Findings from the Riley Creek Chain of Lakes projects and the Purgatory Creek Restoration Basic Water Management Project (as identified in Projects 1 and 9 above) will create opportunities for application on Purgatory Creek lakes, notably those that are connected by Purgatory Creek: Lotus, Silver, Staring Lakes, and by association, the Purgatory Creek Recreation Area. Funding has been set aside for study and implementation of projects in these lakes and associated portions of Purgatory Creek.

10. Hyland Lake Water Quality Improvements

Hyland Lake is located entirely within the bounds of Hyland Lake Park Reserve, a Three Rivers Park District park. As such, it is relatively isolated from development. Invasive aquatic plants have been identified as a problem on Hyland Lake and the lake is also listed as impaired by the MPCA for nutrient/eutrophication biological indicators. Opportunities for application of project findings (most notably results from the Red Rock Lake Water Quality Improvements project) should be readily available, and with cooperation from Three Rivers Park District, a tailored program developed for Hyland Lake in 2020.
11. Silver Lake Water Quality Improvements
Findings from pilot projects will serve as a basis for moving forward with water quality improvement initiatives on Silver Lake. Silver Lake is currently not listed as impaired. This project effort is intended to maintain water quality and promote its sustainable achievement in order to avoid listing as an impaired water.

12. Red Rock Lake Water Quality Improvements
Red Rock Lake is the last major waterbody in the Eden Prairie “chain of lakes” that are ultimately connected to Staring Lake during high water conditions. In keeping with the “top-to-bottom” approach to management, assessment and implementation activities are planned for Red Rock Lake late in the term of this Plan. However, initial assessment activities were initiated in 2010. Plant management activities will occur beginning in 2011 due to the overabundance of macrophytes and their affect on use of the lake. Findings from these initial assessment activities will be used in the 2017-2019 period to develop a detailed implementation plan for water quality improvement and management of macrophytes in Red Rock Lake. Improvements made in Round and Mitchell Lakes are expected to have positive benefits on Red Rock; such that the improvements made on Red Rock will provide lasting value to Staring Lake and Purgatory Creek downstream.

13. Staring Lake and Purgatory Creek Recreation Area Water Quality Improvements
Staring Lake receives water directly from the Eden Prairie chain of lakes and Purgatory Creek, representing the most downstream lake in the Purgatory Creek watershed. Many of the improvements completed at the top of the watershed are expected to promote water quality improvements in Staring Lake. Immediately upstream and most directly impacting Staring Lake is the Purgatory Creek Recreation Area, which will be incorporated into the carp and plant management program described above in this Plan (Project #1 above, which is scheduled to run through 2014 after which, the District will implement a phosphorus and aquatic plant management program for the remainder of the project schedule). Results from this management program will be dovetailed into a water quality improvement program for these two water bodies.
14. Stream Condition Assessments

The Minnesota Pollution Control Agency is in the process of revising its stream assessment methodologies. This project will apply MPCA revised methods (currently anticipated to be a Tiered Aquatic Life Use - TALU) to all of the Bluff, Riley, and Purgatory Creek stream reaches along with Rosgen and Ecological Use Classification methods in order to create a bridge from previous assessment methods to the newly recognized methods. This new baseline effort will also serve to assist in the identification of potential municipally petitioned projects for stream condition improvements.

15. Low Impact Development Program

The District has a robust network of Citizen Advisors and other residents invested in efforts to improve water quality in the watershed. The Low Impact Development program will provide assistance to residents of the District for implementation of infiltration projects. The program is aimed at improving the management of stormwater runoff and related sources of impairment through collaborative efforts to design projects and share the costs. See Section 7-10 below for more information about the program and initial plans for implementation.

Watershed-Wide Solutions

Several of the District’s solutions or programs apply across the entire Watershed. For example, Sections 7.6 (Data Collection and Reporting), 7.9 (Communications Program) and 7.10 (Low Impact Development Program), are intended for application across all of the District’s subwatersheds. Other watershed-wide programs not specifically described elsewhere in Section 7 include Plan Preparation (the development of a new 10-year watershed plan), Engineering, and Coordination Services. Additional background on the scope of services in Engineering and Coordination Services is provided in Appendix A.

The District has also set aside funds for “Collaborative Outreach Analyses for Potential Basic Water Management Projects.” As referenced in Section 2.4.2 above, the District has set these funds aside for cooperative identification of projects that match municipality priorities and District objectives.

Additional Potential Solutions

Table 7-1 below provides a menu of additional potential solutions available to the District as part of its implementation plan. This listing of solutions will be consulted for consideration as issues develop in the District.

TABLE 7-1
## Potential Solutions for Plan Implementation

<table>
<thead>
<tr>
<th>Issue Addressed</th>
<th>Potential Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stabilize Hydrology</strong></td>
<td>Outlet and Volume Control/Reduction Modeling and Design</td>
</tr>
<tr>
<td><strong>External Loading</strong></td>
<td>Watershed Pollutant Loading Model Development</td>
</tr>
<tr>
<td></td>
<td>Assess and correct deficiencies in watershed BMPs</td>
</tr>
<tr>
<td></td>
<td>Lake Eutrophication Models</td>
</tr>
<tr>
<td></td>
<td>Construct new BMPs in accordance with the retrofit analysis</td>
</tr>
<tr>
<td></td>
<td>Maintain or upgrade stormwater ponds</td>
</tr>
<tr>
<td></td>
<td>Add new stormwater ponds</td>
</tr>
<tr>
<td></td>
<td>Store stormwater ponds in infiltration basins</td>
</tr>
<tr>
<td></td>
<td>BMP Retrofit Analysis on a Watershed Scale</td>
</tr>
<tr>
<td></td>
<td>Upgrade existing BMPs in accordance with the retrofit analysis</td>
</tr>
<tr>
<td></td>
<td>Preserve or upgrade existing wetlands</td>
</tr>
<tr>
<td></td>
<td>Non-structural BMPs</td>
</tr>
<tr>
<td></td>
<td>Shoreline Restoration/Sediment Abatement</td>
</tr>
<tr>
<td><strong>Internal Loading</strong></td>
<td>Biomanipulation of phytoplankton through fisheries management</td>
</tr>
<tr>
<td></td>
<td>Carp removal and management plan</td>
</tr>
<tr>
<td></td>
<td>In-lake alum treatment</td>
</tr>
<tr>
<td></td>
<td>Control via oxygenation, aeration, sediment oxidation, chemical inactivation of phosphorus or a combination of these methods</td>
</tr>
<tr>
<td></td>
<td>In-lake alum treatment</td>
</tr>
<tr>
<td></td>
<td>Lake Eutrophication Models</td>
</tr>
<tr>
<td><strong>Fish, Wildlife and Invasive Species Management</strong></td>
<td>Carp removal and management plan</td>
</tr>
<tr>
<td></td>
<td>Carp control. Prevent winter fish kill conditions that lead to successful carp recruitment. Winter aeration/oxygenation</td>
</tr>
<tr>
<td></td>
<td>Develop Canada goose management plan</td>
</tr>
<tr>
<td></td>
<td>Fisheries management to develop a sustainable blue gill and northern pike populations</td>
</tr>
<tr>
<td><strong>Aquatic Plants and Invasive Plant Species Management</strong></td>
<td>Control curlyleaf pondweed and/or Eurasian milfoil mechanically</td>
</tr>
<tr>
<td></td>
<td>Control curlyleaf pondweed and/or Eurasian milfoil with herbicide treatment</td>
</tr>
<tr>
<td></td>
<td>Control purple loosestrife with beetles</td>
</tr>
<tr>
<td></td>
<td>Control Eurasian milfoil with biological controls</td>
</tr>
<tr>
<td></td>
<td>. Control curlyleaf pondweed with lime slurry</td>
</tr>
<tr>
<td><strong>Non-Native Vegetation Management</strong></td>
<td>Develop Eurasian milfoil control plan</td>
</tr>
<tr>
<td><strong>Control mercury methylation</strong></td>
<td>Control via oxygenation, aeration, sediment oxidation, chemical inactivation of phosphorus or a combination of these methods</td>
</tr>
<tr>
<td><strong>Cyanobacteria Control</strong></td>
<td>Control cyanobacteria through destratification, sediment oxidation, chemical inactivation of phosphorus or other method</td>
</tr>
<tr>
<td><strong>Debris Jam (Streams)</strong></td>
<td>Remove obstacles (for example, foot bridge)</td>
</tr>
<tr>
<td></td>
<td>Remove log jams and construct riffle in its place</td>
</tr>
<tr>
<td><strong>Eroding Streambanks and Incised Channels</strong></td>
<td>Construct toe protection on the outside bend of the meander to prevent channel from migrating.</td>
</tr>
<tr>
<td></td>
<td>Realign or construct new channel, bypassing the more severely eroded streambanks. The new channel location will also provide room</td>
</tr>
</tbody>
</table>
**TABLE 7-1**

Potential Solutions for Plan Implementation

<table>
<thead>
<tr>
<th>Issue Addressed</th>
<th>Potential Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>to regrade and revegetate eroding slopes.</td>
</tr>
<tr>
<td></td>
<td>Install biologs or rootwads to stabilize toe.</td>
</tr>
<tr>
<td></td>
<td>Install rock vanes to direct flow away from eroding banks.</td>
</tr>
<tr>
<td></td>
<td>Install tile drain in toe to reduce soil moisture</td>
</tr>
<tr>
<td></td>
<td>Install toe protection.</td>
</tr>
<tr>
<td></td>
<td>Monitor site to see if additional erosion occurs and to determine the cause of erosion.</td>
</tr>
<tr>
<td></td>
<td>Remove trees to reduce stress at top of bank.</td>
</tr>
<tr>
<td></td>
<td>Confirm septic systems are functioning properly and are not contributing to erosion.</td>
</tr>
<tr>
<td></td>
<td>Conduct vegetation management to promote ideal vegetation for streambanks.</td>
</tr>
<tr>
<td></td>
<td>Consider the use of vegetated reinforced soil stabilization (VRSS) to stabilize steep bank.</td>
</tr>
<tr>
<td></td>
<td>Conduct vegetation management to promote optimal vegetation for the site</td>
</tr>
<tr>
<td></td>
<td>Partially fill the eroded gully and replant with vegetation</td>
</tr>
<tr>
<td></td>
<td>Place rip rap below culvert to prevent additional undercutting</td>
</tr>
<tr>
<td></td>
<td>Remove exposed geotextile fabric and replace with granular filter to better resist</td>
</tr>
<tr>
<td></td>
<td>Construct stable channel from pond outlet to creek</td>
</tr>
<tr>
<td></td>
<td>Reduce end of pipe erosion potential by providing additional energy dissipation in the form of reconstructing the lower section of the culvert</td>
</tr>
<tr>
<td></td>
<td>Place rip rap below culvert to prevent additional undercutting</td>
</tr>
<tr>
<td></td>
<td>Reduce end of pipe erosion potential by providing additional energy dissipation in the form of large boulders added to the end of the culvert</td>
</tr>
<tr>
<td></td>
<td>Meet with landowner to determine the function of the culvert and abandon its use if possible</td>
</tr>
<tr>
<td></td>
<td>Prevent runoff from running downslope to eroded area around the culvert</td>
</tr>
</tbody>
</table>
7.5 Adaptive Management Plan Development

Adaptive management is a critical part of the District’s One Water management strategy. The adaptive management process captures new information from the watershed as part of the data collection and reporting process. The new information is evaluated and changes to this watershed management plan are made accordingly. Figures 7-1 and 7-2 provide a summary overview of the Water Quality Improvement Plans for lakes and streams, respectively. Within those plans are expectations for adaptive management practices. These adaptive management practices may result in amendments to this Plan. The development of a formal adaptive management plan will allow the District to define the process of monitoring watershed conditions and the methods for making changes to the watershed management plan. The adaptive management plan will drive some of the data collection to monitoring the effectiveness of solution implementation at all levels, watershed, functional unit, and individual water bodies.

7.6 Data Collection and Reporting

7.6.1 Data Collection Program Goals and Priorities

The District’s data collection program is oriented around several goals intended to improve management of the watershed. The goals are briefly described below and provide insight into the development of a new data collection program with creation of this Plan.
Insert Figure 7-1 WQIP Lakes
• Insert Figure 7-2 WQIP Streams
• **Provide a status of Lake and Stream Health** – the data collection program is organized to provide a comprehensive overview of the quality of water bodies in the District in comparison to their corresponding water quality standards.

• **Assess Impacts of Management Actions** – data collected before, during, and after improvement projects will be used as the basis for understanding the relative success of an action.

• **Enable an Adaptive Management Approach to Management** – the lessons learned from results of management actions can be translated into modifications to future projects for an adaptive management approach. As the District learns more about what works and what does not work for meeting water quality goals, future projects can be developed to more effectively target the expected outcomes.

• **Understand Data Relationships** – An important element of the data collection program is to conduct specialized studies during the same years when a rigorous physical and chemical analysis of water quality is done. This allows understanding of any linkages between data such as total phosphorous and biological outcomes such as amount and type of aquatic plants in a lake. Studies of the historical (paleolimnological) characteristics of water bodies provide another important relationship in understanding data results.

• **Satisfy Regulatory Requirements and Share Findings** – The data collection and reporting program is designed to meet the State’s data collection and annual reporting requirements, including by making the data available through the District web application and the STORET program.

With these principles in mind, and with the outcomes of the data collection program since 1996, the new program reflects a need to better balance the incoming data, applications to upcoming projects, and the need for understanding short and long-term trends in water bodies to tailor long-term solutions to them.

### 7.6.2 Streams

The stream water quality monitoring program focuses on:

- Water quality evaluation of the streams
- Management of the streams for ecological use

**Location of Sampling**

The main impediment to stream water quality improvements has been low flow. The number of sampling locations between 1996 and 2006 was not providing the data necessary for management of the streams. Because of the inability of the 1996-2006 sampling program to add understanding to the problems of the streams, the stream sampling locations have been reduced in this Plan from 17 locations to 10 locations, five on Purgatory Creek (including the at the location of three WOMP stations), three on Riley Creek and two on Bluff Creek. The 2008-2020 sampling locations are shown in Figure 7-3. In addition, the data from the WOMP stations at the outlets of Riley Creek and Bluff Creek (not operated by the District) will be incorporated into the data collection program for streams. A photo of a representative WOMP station is provided in Figure 7-4.
INSERT FIGURE 7-3 stream sampling locations
Frequency of Sampling

Stream sampling frequency varies by parameter from monthly to annual monitoring. Water chemistry and flow parameters have been and will continue to be monitored on a monthly basis at each stream station. The water chemistry sampling plan includes one sample each month from ice-out through October. Fisheries, macroinvertebrates, and habitat surveys were completed on an annual basis between 1996 and 2006. These studies will continue, but will be performed at the reduced set of locations.

The District deactivated the three WOMP stations it owns on Purgatory Creek in November 2010. When operating, flow at the streams of the District is can be measured at the WOMP stations every 15 minutes. All data parameters that the WOMP stations are capable of collecting are also collected through the District’s routine field data collection program. As referenced above, there are also WOMP stations located on Bluff and Riley Creeks that are operated by Met Council and the City of Eden Prairie, respectively.

Monitored Parameters

Monitored parameters have included (and will include in the future data collection program) water chemistry, discharge, biological, and habitat parameters. The specific parameters include:

- Water chemistry parameters: dissolved oxygen, temperature, specific conductance, pH, oxidation-reduction potential, total suspended solids, total phosphorus, and turbidity. The parameters focus on water quality conditions and determining factors of the streams’ ecological use.

- Discharge: Measured via instantaneous flow measurements during baseline flow conditions to assess the streams’ ecological use.

- Biological Surveys, including the following done on an average of once every three years for each stream sampling station or where feasible according to stream flow:
  - Fish surveys: Completed to assess the streams’ ecological use and water quality.
  - Macroinvertebrate surveys: Completed to assess the streams’ ecological use and to assess the streams’ water quality (by using a biological index such as Hilsenhoff’s Biotic Index [HBI] or Invertebrate Community Index for data analysis). The HBI is computed by assigning a pollution tolerance rating to macroinvertebrate taxa collected between 0 (low tolerance) to 5 (high tolerance). The HBI represents an average of tolerance ratings weighted by organism abundance at each stream station.
  - Habitat surveys: Conducted simultaneously with the biota survey.
7.6.3 Lakes

Within each sample year, the lake is sampled six times. The first sample is in April, after ice melt, and the remaining samples are collected once during June, July and September, and two samples are collected in August. Additional monitoring is conducted to support specific projects.

The water quality parameter measured by probe (with the exception of Secchi disk include the following:

- Temperature
- Dissolved oxygen
- Oxidation reduction potential
- pH
- Specific conductance
- Phycocyanin (cyanobacteria)
- Ammonia
- Photosynthetic active radiation (PAR)

The water quality parameters measured by laboratory methods in lakes include the following:

- Chlorophyll-a
- Total Phosphorous
- Dissolved (Ortho) Phosphorous
- Nitrate/Nitrite
- Total Kjeldahl Nitrogen
- Ammonia
- Alkalinity, hardness
- Specialized assays (for example, methyl mercury, metals)

Other biological parameters to be sampled include abundance of macrophytes (aquatic plants), phytoplankton, and zooplankton. In addition, sampling for invertebrates and fish has been done on some lakes as part of project-oriented monitoring or use attainability analyses. Fish sampling data is also available from MN Department of Natural Resources studies.

The parameters described above support the classification of lake trophic status for both the Carlson Trophic State Index (CTSI) and the Indiana Trophic State Index (ITSI) classification systems. The District’s use of the ITSI represents an important shift in characterizing lake water quality while also allowing for use of the traditional CTSI in annual reporting. See Section 3.3.2 for additional information about ITSI and how it will be used by the District.

This sampling plan has been adapted to a two-group lake sampling plan, one group of six “priority” lakes and a second group of seven “management” lakes. The priority sampling lakes will be Ann, Riley, Lotus, Mitchell, Susan, and Round. The management sampling set of lakes will be Hyland, Red Rock, Staring, Duck, Lucy, Rice Marsh, and Silver. This categorization is subject to change in accordance with District priorities and findings from
projects. In 2008, additional, project-specific sampling will be done at Lotus Lake, Round Lake, and Mitchell Lake to supplement the routine program described in this section.

Instead of sampling once every 3 years, the lakes will be sampled three consecutive years, with the priority sampling lakes sampled first. This will allow a longer consecutive record to provide a better understanding of trends and cycles. In addition, biological sampling will be backed by water quality sampling during the same year to provide a linkage between the physical/chemical and biological data. Sampling for macrophytes and phytoplankton/zooplankton studies will be conducted at least once for each lake in the three-year cycle of physical/chemical sampling. Fish sampling will be coordinated with the MN DNR fish sampling schedule, and the District will continue to use data produced during the MN DNR fish studies.

Table 7-2 below provides a graphic description of how the first six years of the lake sampling routine would work. According to the principles of the routine program, the District will repeat the cycle of sampling in 2014 by returning to year one (i.e., the 2008 program) of the routine.

### TABLE 7-2

<table>
<thead>
<tr>
<th>Lake Group</th>
<th>Sampled Parameters</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (Six Lakes)</td>
<td>Routine Water Quality (Physical/Chemical)</td>
<td>All 6 lakes</td>
<td>All 6 lakes</td>
<td>All 6 lakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biological (Macrophytes/Plankton)</td>
<td>3 lakes</td>
<td>3 lakes</td>
<td>3 lakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group B (Seven Lakes)</td>
<td>Routine Water Quality (Physical/Chemical)</td>
<td></td>
<td></td>
<td>All 7 lakes</td>
<td>All 7 lakes</td>
<td>All 7 lakes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biological (Macrophytes/Plankton)</td>
<td>4 lakes</td>
<td>3 lakes</td>
<td>3 lakes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: As planned, the six-year cycle repeats itself starting in 2014. Data collection is subject to modification per adaptive management. For example, all five lakes in the Riley Creek One Water will be monitored in 2010, resulting in some shifts of monitoring on other lakes

Habitat assessments for lakes have been performed with the use attainability analyses (UAAs). UAAs were produced for Round Lake, Lake Lucy, Lake Ann, Lake Susan, and Rice Marsh Lake in 1999. Lake Riley was profiled in a UAA in 2002, Silver Lake in 2003, and Hyland Lake in 2004. In 2005, UAAs were produced for Lotus Lake, Mitchell Lake, and Duck Lake.

MN DNR conducted bathymetric (or lakebed topographic) surveys in the 1960s for some of the lakes in the District. These surveys are no longer accurate as sedimentation and erosion over the past 50 years have altered the bathymetry significantly.

The District also is engaged in a preliminary assessment of cyanotoxin characterization (for example, microcystin, saxitoxin) and concentrations in cyanobacteria blooms within District lakes. Cyanobacteria data from 2008 have revealed that World Health Organization guidelines for low to medium risk of cyanotoxin exposure can be exceeded in District lakes.
used for swimming or water sports (Lotus, Ann, Riley, Susan). It is expected that results from the 2009 study will inform future investigations into this little-understood, but potentially significant water quality impairment.

### 7.6.4 Hydrologic and Meteorological Data

The District’s lake level and groundwater monitoring programs began in 1970. The levels of the District’s lakes are monitored on a monthly basis. The levels of the functioning groundwater piezometers are also monitored on a monthly basis. At the time the 1996 plan was published, three groundwater wells were in operation. One of these wells was discontinued at the end of 1999. The two remaining wells are operated by the City of Chanhassen. The District will collect data from Chanhassen as it is made available by the City.

Expanded lake level monitoring is recommended for both priority and management sampling levels. Citizen involvement may be employed in weekly or daily monitoring of lake levels between the spring and fall. Some lake projects may require the installation of an automated data logger to sample lake levels at 15 minute intervals.

The District worked with the City of Chanhassen to install a weather station at Lake Susan in November 2010. The station measures temperature, precipitation, and wind direction/velocity. In addition, the District uses the data collected at the U.S. Weather Bureau Stations at Chanhassen and at the Minneapolis-Saint Paul International Airport as part of the District’s precipitation monitoring program. The three WOMP stations located on Purgatory Creek, which were deactivated in the fall of 2010 and are also capable of measuring precipitation, may be reactivated if the District requires additional precipitation data (for example on a project-specific basis).

The impact of weather variables such as wind direction and velocity are also being assessed by the District. Additional record-keeping and monitoring may be implemented to determine correlations to lake water mixing or turn-over events.

### 7.6.5 Reporting

**Periodic Analysis**

The data collected as part of the monitoring program will be analyzed for trends to evaluate short- and long-term changes in stream conditions. The data analysis will evaluate water quality and ecological use changes in the streams. For lake trends, the use of three-year sampling intervals will provide an opportunity to identify short-term water quality trends and their linkages to biological outcomes in the lake. An annual report is prepared by the District to review water quality trends as identified by the data collection program. All available data are accessible to the public through [www.rileywd.org](http://www.rileywd.org).

**Annual Submission Consistent with State Compatibility Guidelines**

The District complies with state compatibility guidelines and annually submits its data to state agencies, including the BWSR. The District will ensure that water quality data is routinely and consistently provided electronically to MPCA for entry into MPCA’s STORET database.
7.6.6 Monitoring and TMDL Development

The District’s guiding principles and cooperative approach to watershed management extends to future Total Maximum Daily Load (TMDL) development and implementation planning and execution for impaired lakes and streams in the watershed. Recognizing (as shown in Exhibit ES-1 in the Executive Summary, that each participant has a role in watershed management, the non-regulatory approach from the District supports the regulatory efforts of others, including the TMDL process. The District’s water quality and quantity monitoring can support the TMDL process in a number of ways, including:

- Providing data to list or delist an impaired waterbody,
- Identifying potential sources of impairment,
- Filling data gaps in advance of TMDL development, particularly in anticipation of modeling data, and
- Measuring the effectiveness of implementation actions on pollutant removal and flow restoration.

It is the intent of this plan and the monitoring program to work with partner agencies and municipalities, including the Metropolitan Council, in order to better coordinate monitoring activities supporting shared water quality goals. In this regard, the District will coordinate with the MPCA in order to properly align its data collection efforts with those of the MPCA to avoid duplication of effort.

7.7 District Response to Impaired Waters and TMDLs

The Plan is addressing all waters listed as impaired in four specific ways. First, the District has implemented an enhanced sampling effort and continued expansion of its watershed model. These enhancements are shown in part by sediment oxygen demand (SOD) testing, paleolimnological cores, and implementation of the Indiana Trophic State Index, which incorporates all aspects of the Carlson Trophic State Index. This enhanced sampling is being used in several ways. The cores are being used to determine pre-development in-lake phosphorous conditions and water quality. By doing so, the Managers hope to determine if in-lake phosphorous conditions far lower than the recently set shallow lake water quality standards (<60 ug/L TP, <20ug/L chl-A, >1m SD) are feasible and practical. The SOD and Indiana Trophic State Index data are being used to assess and implement restoration to the identified feasible and practical levels. The District-wide model is being developed in phases and currently progressing from the upper reaches of Purgatory Creek towards its mouth at the Minnesota River. Initial models already exist for the Riley and Bluff Creek watersheds; being a combination of XP-SWMM and P8 models. The Purgatory Creek model is being expanded as part of the Lotus Lake Volume Control and/or Reduction project, which is studying lake-watershed infiltration techniques to determine their efficacy in enhancing in-lake water quality management, and the Purgatory Creek Restoration project petitioned by the City of Minnetonka to anticipate changes arising from improvement of Highway 101.

Second, the District has undertaken specific projects, one focused upon control of invasive species (fish and plant) and another on reduction of internal phosphorous releases. The invasive project is showing very positive signs towards sustainably managing invasive
species to control levels which avoid deleterious effects. The initial removals of invasive fish (carp) appear to confirm a 100kg/ha or less level leads to dramatic restoration of spring water clarity and return of plant communities. Given this preliminary result, in conjunction with the University of Minnesota, the Managers promptly ordered an investigation by Professor Newman into re-establishing native aquatic plant species. This work is presently underway in Lake Susan. In Mitchell Lake, plant harvesting and aeration techniques (such as oxygen injection into the hypolimnion for stratified lakes and calcium peroxide or calcium nitrate for mixed lakes) are being studied. The intent of these projects is developing a re-usable approach which will be used for other impaired water bodies. Continuing projects will refine and extend methods currently under exploration, as well as explore other restorative methods based on sound science and engineering practices.

Third, the District has dedicated basic water management funding to respond to municipal petitions arising from approved storm water management program projects, TMDL assessments, or approved TMDL implementation plans. At present, these project petitions are anticipated to be directed towards the impairments noted in the lower creek valleys arising from localized conditions associated with specific storm water discharges. It is expected these petitions, as with the current Minnetonka petition, will be coordinated with County or municipal roadway construction or re-construction. The Managers continue to insist petitioned creek projects advance the attainable ecological classifications set forth in the plan.

Fourth, the District is pursuing a District-wide water management program generally moving from upstream to downstream water bodies. This District-wide approach substantially assures consideration of all water bodies, regardless of impaired listing.

### 7.8 Regulatory Controls and Performance Standards

#### 7.8.1 Regulatory Controls

Section 1.2.2 describes the District’s approach to regulatory controls in detail. The District is committed to ensuring that each City’s regulatory requirements will remain adequate for treating those aspects of water pollution influenced by floodplain, shoreline, and land alteration, and post-development stormwater management activities. To ensure this, the District will periodically review each City’s regulatory controls. The District will conduct annual reviews of municipal Storm Water Pollution Prevention Plans (SWPPP) through requests for an annual report of progress toward SWPPP compliance. Investigations and reporting of non-compliance will also be conducted annually. Other reviews will occur as necessary, such as when the State or a city proposes to change one of its ordinances or regulations.

The District did not repeal its regulations such that if a City or the Agency were to unexpectedly repeal their ordinances, District regulation would act as a backstop. This provides brief background on the relationship between District regulation and the ordinances that watershed cities have adopted. The District has previously adopted rules to implement a permit program, but suspended the application of these rules and deferred to municipal ordinance enforcement. Based upon the input from the cities, the District will reinstate its permit program. As explained in section 1.2.2, effective protection of watershed resources will require an update to the rules and a strategic reintegration of the District’s regulatory
program into the protections cities and other government bodies have in place. The District will undertake a rulemaking to examine watershed cities’ array of land use controls and ordinances providing erosion control, stormwater management and other water resource protections. The District will identify gaps and regulatory provisions outside of cities’ authority that can only be implemented through watershed rules. In light of this analysis, the District will draft rules that implement – in conjunction with city, county and state permitting programs – the following policies:

**General Regulatory Program**

- Require that any person undertaking an activity for which a permit is required by the District rules to obtain the permit prior to commencing the activity that is regulated by the District.
- Seek to reasonably ensure protection of water resources while integrating flexibility to ensure owners’ use of their property is not unreasonably burdened.
- Seek a high level of cooperation with watershed municipalities and other partners to ensure efficient and effective regulation of potential impacts to water resources.
- Develop and implement clear, bright-line rules, but incorporate enough flexibility into the permitting process to ensure that District regulation does not unreasonably burden property owners’ investment-backed expectations for the use of land.

**Floodplain**

- Regulate to control of floodwaters, ensure the preservation of the natural function of floodplains as floodwater storage areas, maintain no net loss of floodplain storage to accommodate 100-year flood storage volumes and maximize upstream storage and infiltration of floodwaters. (Long-Term Goal 42)

**Erosion and Sediment Control**

- Minimize erosion and alleviate identified erosion problems.
- Preserve vegetation and habitat important to fish, waterfowl and other wildlife while also minimizing negative impacts of erosion. (Long-Term Goal 3)
- Minimize the duration and intensity of soil and cover disturbances.
- Minimize compaction of soil from land-disturbing activities and encourage decompaction of soil compacted by land-disturbing activities.

**Stormwater Management**

- Limit the impact of runoff quality and rate on receiving waterbodies. (Long-Term Goal 4)
- Improve water quality to fully support swimming in designated lakes. (Long-Term Goal 1)
- Improve water quality to fully support designated uses for water bodies, and remove

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2 References are to the Long-Term Goals stated in the Executive Summary (p. 5) and section 2.3.2.
water bodies from the Minnesota Pollution Control Agency list of impaired waters. (Long-Term Goal 2)

- Alter stormwater hydrographs (stream flow) through infiltrative strategies that reduce peak discharge rates and overall flow volume. (Long-Term Goal 5)
- Require that onsite retention and regional water quality treatment systems operate together to provide complete and effective runoff management.
- Provide for nondegradation of surface water bodies in the watershed.
- Encourage the use of Better Site Design, Low Impact Development and other techniques that minimize impervious surfaces or incorporate volume-control practices, such as infiltration, to limit runoff volumes.
- Maximize opportunities to improve stormwater and snowmelt management presented by redevelopment of land.
- Require local governments and developers to manage runoff effectively to minimize water quality impacts from new development, redevelopment and other land-disturbing activities.

**Wetlands**

- Support municipal enforcement of the Wetland Conservation Act and the Wetland Health Evaluation Program, and contribute the District’s watershed model as appropriate to assist in the identification of high priority wetlands for protection, restoration or potential wetland banking opportunities. (Long-Term Goal 7)
- Ensure the preservation of the natural resources, habitat, water treatment and water storage functions of wetlands.
- Achieve no net loss in the extent, quality and ecological diversity of existing wetlands in the watershed.
- Require buffers around wetlands affected by land-altering activities regulated by the District.
- Maintain wetland integrity and prevent fragmentation of wetlands.

**Waterbody Crossings and Structures**

- Discourage the use of beds and banks of waterbodies for the placement of bridges, utilities or other structures, and to protect the hydraulic capacity and floodplain of streams and drainage systems.

**Shoreline and Streambank Improvements**

- Prevent erosion of shorelines and streambanks, and foster the use of natural materials and bioengineering for the maintenance and restoration of shorelines.

**Dredging**

- Regulate the removal of sediment from public waters to mitigate the impacts of stormwater sediment transport and deposition.
Appropriation of Public Surface Waters

• Regulate the appropriation of public waters.

Appropriation and Use of Groundwater

• Analyze the role of the District in the management of groundwater and consider developing and implementing a regulatory approach to ensuring the health and availability of groundwater in the watershed.

Permit Fees

• Charge a minimal permit application fee to increase public awareness of and compliance with District permitting requirements, and reduce enforcement and inspection costs.
• Annual tax levy payments should not be used to pay the costs of ensuring compliance with District rules.
• The District incurs costs for the enforcement of violations of District rules, and persons who perform work in violation of an issued District permit or without a required permit should reimburse the District for the additional costs of enforcement beyond standard permitting costs.

Financial Assurances

• Require a bond or other financial performance assurance with a permit application to ensure adequate performance of the authorized activities and compliance with the District rules.

Reviews of and General Content of Required Local Plans

Concurrent with annual SWPPP reviews, the District directs municipalities to provide an annual Local Water Plan (LWP) compliance report. Municipal compliance will be judged against achievement of planned items. The TAC will be consulted in regard to the LWP review process and preferences for reporting non-compliance and enforcement actions against municipalities.

Any determination of non-compliance will result in more frequent LWP reviews and potential withholding of basic water management funds or participation in grant or similar programs that would be otherwise directed to the local unit of government (LGU).

Procedurally, a measured approach to the determination of non-compliance will be taken by the District, as follows:

1) Specific notice will be given to the municipality, providing a meaningful opportunity for the municipality to respond.

2) If non-compliance continues, a joint meeting of the District and municipal officials will be convened to review the LWP report, the municipal response from Step 1, and to review measures for compliance.
3) If a LWP issue is not resolved, request to BWSR shall be made to facilitate a resolution using its mediation authority.

4) Should mediation fail, the District would declare non-compliance and exercise all available authority to bring about compliance.

The District in cooperation with BWSR staff will provide guidance to assessing and updating the LWP’s in year one of the Plan. The District also permits the Cities to adopt all of this plan by reference into their LWP in accordance with MR8410.0110 Subp. 3. Within one and one-half years of adoption of this Plan in the LGU and after consideration but before adoption by its governing body, each municipality shall submit its LWP to the District for review for consistency with the adopted Plan. The District shall have 60 days to complete its review and approve or disapprove the LWP or parts of the LWP. If the District fails to complete its review within the prescribed period, the LWP shall be deemed approved unless an extension is agreed to by the municipality. The Citizen and Technical Advisory Committees shall have thirty days following submission to advise and assist the Managers in this review. After this period, the Managers may take action after hearing at a regular or special meeting. After approval by the District, the LGU shall adopt and implement its plan within 120 days and shall amend its official controls accordingly within 180 days.

Other reviews will occur as each City announces changes to its LWP.

Local plans shall conform to the rules and policies promulgated by the Board of Water and Soil Resources. Minnesota Rules Chapter 8410 outlines the structure (part 8410.0160) and required sections in detail (part 8410.0170). As allowed by part 8410.0100 Subpart 6, municipalities must assess the local plan annually for needs including periodic maintenance and specify any management program changes needed to accomplish its goals and objectives. Rather than repeating that content, those rules are incorporated by reference.

### 7.8.2 Stormwater and Drainage Design

The District adopts by reference the currently published Minnesota Pollution Control Agency best management practices manual, as amended. The District established target in-lake nutrient concentrations and published those targets in the Lake Management Table of the 1996 plan. Those targets remain the best available performance standards. Since that establishment, though, the Fish Barrier and Invasive Species Control project has shown a significant variable, invasive species, was not considered as part of that establishment.

The study appears to show the likelihood targets could substantially change because carp management and native plant restorations are leading to significantly improved water quality. This significant water quality response may restore assimilative capacity to such an extent loading mandates beyond those achieved through best management practices may not be required or may depend upon alternative water retention strategies. Once the studies are complete the District will have information sufficient to alter the in-lake targets established in the 1996 Plan.

Maximum permissible runoff rates for selected design storms based on considerations such as existing and future flood levels and expected increases in runoff volume with respect to impacts on downstream channels and adjacent development were incorporated through the ultimate development assumptions used by the District for establishing floodplain
encroachments and flood elevations and freeboard requirements. The associated assumptions were considered stress-tested in the 1987 Super-Storm, though there were localized impacts since the storm more than quadrupled the design storm event. Changes to applicable standards await completion of the District-wide hydraulic and hydrologic model. Any suggested changes will be coordinated closely with municipalities.

Design criteria for stormwater outlet structures to address floatable pollutants and to provide for access for maintenance and repair and pond design methodology for nutrient entrapment are addressed by adoption of Agency best management practices manuals, as amended.

No TMDL assessments or implementation plans are in place in the District, thus specific pollutant loads for specific subwatershed do not exist. The District’s efforts are consistent with local, regional, and statewide plans in consideration of MPCA water quality standards. As new information in regard to this pollutant becomes available, the District will re-visit the issue.

Stormwater and drainage design performance standards are an evolving concern. Today’s standards may not be deemed adequate in ten years’ time as the state of the underlying science improves. The District’s approach to standards is similar to that of regulatory controls. The Managers feel that state, regional, and city agencies provide sufficient design standards to adequately control stormwater quality and quantity in the watershed. Adding another layer of standards will serve no purpose other than make design and construction of stormwater management facilities more complex than is necessary. The District is committed to maintaining ensuring that design and performance standards that will remain adequate ensure no degradation in the quality of watershed resources and that the standards imposed by the District rules are supported by sound science and current best practices. To ensure this continuous improvement in the implementation of stormwater management and drainage design standards, the District will periodically review current state and District standards. These reviews will take place at a minimum in the fifth and tenth years of the Plan. Other reviews will occur as necessary, such as when there is a proposed change to the design and performance standards, and the District will revise its regulatory program and rules to ensure watershed resources are protected in an efficient and cost-effective manner.

As the District has become more fully developed, redevelopment of land will become a focal point for volume control and nutrient reduction in stormwater runoff. In line with the periodic review of standards, the District has identified an action item to be a review of redevelopment standards in the District. This action will be initiated within the first three years of Plan implementation.

### 7.9 Communications Program

The District is focused on implementing a strategic public communication program that supports its ongoing efforts to improve and protect water resources. The District accomplishes this through a variety of methods as described below. The audiences range from general public (beyond the District boundaries) messages or stories to targeted small group meetings information about specific areas of interest. Cooperative relationships have been developed with the writers for the local and regional newspapers. Special coverage information is provided to those writers, who are consistently publishing extensive articles.
7.9.1 “Evening with the Watershed”

A highlight of the District communications program is the semiannual meetings known as “Evening with the Watershed”, held in May and December each year. There has been tremendous public response and citizen participation. These events cover such topics as proper shoreland management techniques, data collection and summarization, project reporting, findings and plans for carp and other invasive species management, and lake water quality improvement techniques. The December meeting provides attendees with a review of accomplishments over the past year, including special recognition of residents and businesses who have demonstrated strong commitments to improving water quality.

7.9.2 Local Clean Water Organization and Lake Association Support

The District supports organizations in the watershed devoted to water resource management. These groups are involved in District work through the Citizens Advisory Committee and consistent participation at monthly Manager Meetings. Additionally, the District provides technical guidance to groups requesting support on their own initiatives. Groups and associations formally involved with the District activities are listed in Table 7-3 below.

<table>
<thead>
<tr>
<th>TABLE 7-3</th>
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<tbody>
<tr>
<td>Partner Organizations to the District</td>
</tr>
<tr>
<td>Clean Water Organization or Lake Association and Affiliates</td>
</tr>
<tr>
<td>Mitchell Lake Association</td>
</tr>
<tr>
<td>Lake Lucy Association</td>
</tr>
<tr>
<td>Lotus Lake Clean Water Organization, which includes:</td>
</tr>
<tr>
<td>- Kurvers Point Homeowners’ Association</td>
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<tr>
<td>- Lotus Lake Estates Association</td>
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<tr>
<td>- Near Mountain Association</td>
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<tr>
<td>- Fox Chase Association</td>
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<tr>
<td>- Sunrise Hills Association</td>
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<tr>
<td>- Frontier Trail Association</td>
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</tbody>
</table>
These organizations represent over 1,000 invested partners in the efforts of the Riley Purgatory Bluff Creek Watershed District. District communications flow from the Managers to people directly impacted by, and able to impact positively, the quality of our District’s water resources.

Additionally, the Managers hold an annual “Managers’ Tour” of the District. Partner organizations and agencies are invited to participate in the tour, which provides an in-field overview of District issues and projects. The 2009 tour included participants from the associations listed above, the Citizen’s Advisory Committee, the Technical Advisory Committee, county and state agencies, and members of the general public.

7.9.3 Web Application (www.rileywd.org)

The District has developed a web application for the sharing of all District updates and information. In addition to serving administrative purposes with meeting notices, contact information, and upcoming events; the web application provides users with a searchable database for water quality information. All data from the monitoring program are uploaded to the web application on a monthly basis during the field sampling season. A library of historic reports and other documents is also available for searching.

7.9.4 Educational Materials

The District relies upon the vast library of publications developed by the Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, and University of Minnesota Extension to provide informative and readily available educational materials for residents and businesses in the District. Requests for brochures or related content are handled through the exchange of resource-specific web site addresses from these agencies.

Primary web site locations for resource agency educational materials include:

Minnesota DNR: http://www.dnr.state.mn.us/education/index.html

MPCA: http://www.pca.state.mn.us/education/index.html

University of Minnesota Extension: http://www.extension.umn.edu/Shoreland/order.html

7.9.5 Scientific Community Outreach and Participation

The District shares results of its implementation program with the scientific community and at several annual state and national meetings and conferences including: the annual Minnesota Association of Watershed Districts (MAWD) Meeting and Tradeshow and the University of Minnesota Water Resources Conference. In 2009, the District participated with a presentation in a regional conference on Total Maximum Daily Load (TMDL) issues.

Participation in these events fosters the exchange of innovative ideas and sharing of best practices between watershed resource managers and professionals. The District anticipates the ongoing carp management project to be the source of several presentations to the scientific community. With slight modifications, these presentations will also provide a readily available source of communications for the general public. Such presentations will be made available on the District’s web application as well.
7.9.6 Content of Annual Publication

The following items are part of the annual written communication of the District as part of its information program.

1. Identification of Representatives
2. Current Advisory Committee Members
3. Organization Contact
4. Role in Local Water Management
5. Goals and Policies of Organization
6. Public Meetings
7. Organization Financing
8. Plan Availability
9. Other Information

7.9.7 Communications Plan

The Managers plan to enhance the public communications program. As this Plan was being developed, BWSR invited the District to participate in a series of workshops focused on developing a cohesive public education program for Watershed Districts. Through District participation in these workshops, the Managers’ desire is to enhance the public communications program through the creation of a preliminary “Communications Plan.”

The District has anticipated an enhanced public communications program by allocating an annual budget for this purpose (see Appendix A: 10-Year Budget). The completed Communications Plan will become a part of this Plan, with space allocated for its insertion into the Plan as Appendix B.

7.10 Low Impact Development Program

As described above, the District has established a robust network of actively involved Citizen Advisors. To further leverage this group of engaged residents, the District is developing a Low Impact Development program to effectively implement water quantity and quality improvement projects. Consistent with the District’s “Conservation Ethic” (Section 2.1), this program is focused on the priorities of citizens and will be led by Citizen Advisors.

The Low Impact Development (LID) program is focused on addressing watershed contributions to water quantity and quality problems such as rainfall runoff from impervious surfaces which carry associated nutrients and sediments directly to lakes and streams. This program would target those problems caused by impervious surfaces and runoff through improvements made in cooperation with property owners. Localized projects will enhance infiltration and promote other water management LID best practices for water quality improvement in District lakes and streams.

Citizen Advisors are the crucial connection between the District and its residents who will be asked to participate in the program. This network of Advisors will be provided the tools they need to encourage and obtain property owner enrollment.
Figures 7-6 and 7-7 provide an overview of the subwatersheds in the Purgatory Creek and Riley Creek One Waters. These subwatersheds are combined to form the functional units by which the program will be implemented and managed. The input and leadership of Citizen Advisors will not only be critical to the program’s success, but will also be an important factor toward the long-term program phasing and location of work.
Insert Figure 7-6
Insert Figure 7-7
7.10.1 Low Impact Development Program Background

The District has been a leader in Low Impact Development for years. In 2004, the District partnered with the City of Eden Prairie to construct a rain garden at the Smith-Douglas-More House property (currently operated as a Dunn Bros. coffee shop). All rainwater and snow melt runoff from the parking lot and driveway was directed into the new rain garden. Gauges placed in the rain garden help monitor its effectiveness in managing the site’s stormwater runoff. Monitoring data from 2004 to 2006 have shown that the rainwater garden infiltrates all stormwater runoff from the parking lot and driveway for storms with up to 5 inches of rainfall. As shown in Figure 7-8 below, one storm event in September 2005 dropped 5.75 inches of rain on the site over a period of approximately 18 hours. The garden infiltrated nearly all of the stormwater, with just a small fraction spilling over into the outlet. The rain garden continues to operate effectively today. The success of this garden project provides ample evidence of the potential benefits from a watershed-wide LID strategy.

![Smith-Douglas-More House Rainwater Garden - Infiltration for Storm Event on 9/3/05 - 9/4/05](image)

**FIGURE 7-8**

The District is developing a district-wide SWMM model for hydrologic and hydraulic analyses. The district-wide model will allow for analysis of opportunities (like that at the Dunn Bros. site) to reduce the volume of stormwater discharged to District water bodies and manage fluctuating water levels. Once the model is complete, measures such as infiltration basins, impervious surface reduction, and other LID practices can be analyzed in the model to assist in locating future LID project sites. LID actions taken by the District may also result in reduced discharge of soluble phosphorus to District water bodies. Models
have been completed for Riley and Bluff Creeks; completion of a Purgatory Creek model is the remaining step toward completion of the district-wide model.

In coordination with Lotus Lake projects identified several years ago by the Managers and Engineer, the first portion of the Purgatory Creek model effort has focused on the Lotus Lake watershed. These projects are identified as the Lotus Lake Outlet and Volume Control and/or Reduction Project (described as project #2 in Section 7.4 Watershed Solutions). The goals of the Lotus Lake projects are fully consistent with the goals of a district-wide model and the Low Impact Development program. As such, the District anticipates including the Lotus Lake watershed in its LID program pilot studies. Pilot-scale studies are anticipated at first to enable a most effective district-wide implementation of the LID program.

The Lotus Lake modeling effort has determined that a 2-year, 24-hour storm (approximately 2.5 inches of rainfall over a 24-hour period) results in approximately 56 acre-feet (or approximately 18 million gallons) of water running off of impervious surfaces (including city streets, driveways, and rooftops). As part of modeling, the Lotus Lake subwatershed has been broken down into eleven smaller subwatersheds, shown in Figure 7-9. With over 1900 structures and the associated roadways servicing them in the Lotus Lake study area (see Table 7-4 for a breakdown of structures by subwatershed), it is estimated that properties are directly related to several million gallons of flow to Lotus Lake from each representative storm event.

In order to compensate for the lost infiltration capacity of the watershed, new measures are necessary to create infiltration. For example, more than half of the 18 million gallons of Lotus Lake subwatershed runoff are created by the residential environment; the sidewalks, driveways and rooftops associated with each residential parcel. Figure 7-10 provides an estimate of the potential infiltration impacts of LID in the Lotus Lake subwatershed. As shown, if all structures in the subwatershed were to adopt LID measures, several million gallons of infiltration capacity may be gained in addition to the annual removal of well over 100 pounds of phosphorus that would normally enter Lotus Lake.

The District will work with property owners to enhance the infiltration capacity of their land through a variety of means. Rain gardens often come to mind for increasing infiltration capacity, but other innovative options may be explored based on the property characteristics and owner’s interests.

As Citizen Advisors achieve critical thresholds of interested property owners for each subwatershed, the District will provide assistance in determining feasible measures for each property. These initial designs will provide an assessment of potential costs and watershed benefits. The cost of the constructed solution will be shared between the District and the property owner.

<table>
<thead>
<tr>
<th>Subwatershed (See Figure 7-9)</th>
<th># of Structures</th>
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<tbody>
<tr>
<td>1</td>
<td>122</td>
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<tr>
<td>2</td>
<td>107</td>
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<tr>
<td>3</td>
<td>112</td>
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<td>112</td>
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<td>82</td>
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<td>6</td>
<td>118</td>
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<td>7</td>
<td>300</td>
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<td>112</td>
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<tr>
<td>10</td>
<td>634</td>
</tr>
<tr>
<td>11</td>
<td>110</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1905</strong></td>
</tr>
</tbody>
</table>
Insert Figure 7-9
7.10.2 Future Implementation and Potential Benefits

The Low Impact Development program will be available for the entire Riley Purgatory Bluff Creek Watershed. As a complete watershed model becomes available, the District will be able to target specific long-term opportunities for the program. In the interim, the District will leverage one of its greatest assets, an active group of citizens and Citizen Advisors, to direct cost sharing dollars and identify pilot program opportunities across the watershed. Some portions of the District have a robust network of involved citizens. One of the first steps of program implementation will be to establish a process for engaging with and developing more Citizen Advisors. An anticipated benefit of the Low Impact Development program is an expanded and fully representative group of Citizen Advisors to the District.

Prior to implementation of the program, the District will prepare and make available on www.rileywd.org, a list of criteria for project selection. These criteria will also aid in the development of metrics for project tracking and evaluation. The District will consult with the TAC as part of this process. The Low Impact Development program evaluations will become part of the District’s annual scorecard evaluation process as described in Appendix C of this Plan.

The Lotus Lake subwatershed example is indicative of the extensive financial commitment the District is prepared to make for the Low Impact Development program. At approximately 1,300 acres, the Lotus Lake subwatershed represents less than five percent of the surface area of the Riley Purgatory Bluff Creek watershed. This is a long-term program.
that serves as a critical piece of the District’s water quantity and quality improvement program. Additionally, this program will also enable a deeper level of cooperation and coordination with the District’s municipal partners to cost-effectively achieve their regulatory obligations for stormwater management. The implementation of these LID solutions has tremendous long-term benefits that will far outweigh the cost of implementation.

7.10.3 Cost-Share Program

In developing and implementing its Low-Impact Development program, the District has consulted its Citizen Advisory Committee and Technical Advisory Committee to enhance the District’s understanding of needs and opportunities for voluntary stormwater-management retrofits and upgrades. With the benefit of this input, the District has further developed its cost-share program to provide financial assistance for best management practice implementation to local units of government, private property owners, nonprofits, lake and homeowners associations and other interested parties. The pursuit of the Low-Impact Development program outlined in section 7.10.1 has led the District to organize its cost-share program to identify and develop opportunities presented by several specific stakeholder groups:

- **Local Government and Commercial Stormwater Remediation Projects** – aimed at bolstering capacity for installation for water-quality improvement practices in conjunction with projects such as municipal street reconstruction, stormsewer retrofits, school property improvements and commercial property projects.
- **Lake Associations, Homeowners Associations and Nonprofits Projects** – designed to tap into the knowledge such organizations have regarding opportunities and priorities for stormwater-management practices in their geographic areas of concern and their potential to ensure installation of shoreline and streambank restorations, rain gardens, filter strips, pervious surfaces and restoration of wetlands.
- **Single-Family Residential Projects** – designed to support individuals’ interest in contributing to the overall goals through restoration of residential shorelines and streambanks, installation of filter and buffer strips, restoration of wetlands, construction of rain gardens and use of pervious surfaces.

In each case, participants’ contributions of in-kind and monetary resources will ensure that multiple District strategies are addressed: improvement of watershed resources, increasing awareness of the vulnerability of watershed resources, increasing familiarity with and acceptance of solutions to improve waters, and fostering water resource stewardship. In addition, participants will commit to long-term maintenance of practices developed under the program, increasing the chances of the success of the practice and securing the benefits to be achieved by the program. The District will also commit technical assistance in review of project design and construction inspection to help ensure that practices are constructed and implemented in locations and according to designs that are suited to conditions and thereby are more likely to succeed. The District will annually assess outcomes of the cost-share program to determine whether alterations or additions to the focus areas is warranted.
Program Authority and Administration

The cost-share program is authorized by the mandate of Minnesota Statutes chapter 103B to assess challenges to the health and sustainability of water resources, then develop and implement a plan that deploys multiple strategies to address the identified challenges. The program will also make a significant contribution to the accomplishment of several of the goals identified in sections 2.3.2 and 2.3.3 of this plan:

- Long-Term Goal 1 – improve water quality to fully support swimming in designated lakes;
- Long-Term Goal 2 – improve water quality to fully support designated uses for water bodies and remove water bodies from the MPCA list of impaired waters;
- Long-Term Goal 5 – alter stormwater hydrographs (streamflow) through infiltrative strategies that reduce peak discharge rates and overall flow volume;
- Short-Term Goal 2 – develop a sustainable Communications Program that enables pro-active actions by District citizen leaders and related partners to participate in project implementation and share costs; and
- Short-Term Goal 4 -- develop a higher level of cooperation with municipalities and other watershed partners; this may include the development of cost-share programs and coordination of planned expenditures for addressing watershed issues.

While expenditures for capital construction typically require documentation in the District’s capital improvements program (through plan amendment when necessary), the District will administer its cost-share program through an adaptation of the project-development process that amply provides for a transparent public process that provides thorough review and a full opportunity for input from public agencies, watershed residents and other interested parties. This process recognizes that the element of capital construction is sometimes incidental to other purposes of demonstrating innovative stormwater management or promoting water resource stewardship at the neighborhood and property owner scales. The District also recognizes that local government or commercial projects can present important opportunities to incorporate highly effective best management practices that are beyond what would otherwise be required by regulation. In other cases, such as for shoreline or streambank stabilization, action is required to address public infrastructure, land or ecological values at risk. The timing of these programs thus typically is externally driven, in the one case by opportunity and in the other by need. Accordingly these programs must be administered so that they can meet these externally driven timelines as the need arises.

- Guidelines for specific awards and procedures for the administration of the program (e.g., application requirements, the cost-share agreement forms to be entered by program participants) will be reviewed and adopted (and amended as necessary) by the Board of Managers in a public meeting.
- The Citizens Advisory Committee will utilize these guidelines to review cost share applications and make funding recommendations to the Board of Managers.
• The Board of Managers will review and approve all cost share applications. Prior to approving a cost share award in excess of $10,000 for capital construction, the Board of Managers will hold a noticed public hearing according to Minnesota Statutes section 103B.251.

• Annual funding for the program will be set by the Board of Managers through the statutory budget process.

• Where an award will be made for an infrastructure project required to meet stormwater regulations, District funding will not exceed the incremental difference between the cost of District-supported innovative stormwater management methods and the baseline compliance cost.

• Demonstration and education benefits will be promoted through program requirements for educational signage and reasonable access for public viewing.

**Program Funding Source and Financial Impact**

The District will fund its cost-share programs from the *ad valorem* property tax levied annually on property within the watershed, as well as through other funding sources such as regional, state or federal grants. The budget for the cost-share programs in 2013, including all sources will be $300,000, of which approximately 50% is from the District’s *ad valorem* levy. This funding will not be a significant burden in the District’s annual budget. The Board of Managers will annually set the budget for the cost-share programs in a manner that meets the programs’ needs and prudently aligns with the District’s overall financial capacity.

The program will provide a financial benefit to other local units of government in the watershed because it will either directly enhance municipal projects’ capacity to manage stormwater or it will indirectly reduce stormwater infrastructure maintenance and management costs, by developing treatment capacity on other entities’ properties – or both. Awardees, including local units of government, will assume maintenance and other obligations that will involve cost, but this burden is the result of a choice to seek District cost-share funding.

**7.11 Measuring Success: Plan Implementation Scorecards**

In order to most effectively implement the plans described in this section, the District must carry out a comprehensive assessment of its performance on a routine basis. Through this assessment, the District will monitor its technical performance and compliance with duties assigned by law. For this reason, the District has created two “scorecards” to monitor its performance over the course of this plan. The first is oriented around BWSR requirements through the “PRAP” program while the second is focused on efforts as directed by this Plan. More information on each scorecard is provided below.
7.11.1 BWSR Performance Review and Assistance Program (PRAP)

Minnesota Statutes Chapter 103B.102, subdivision 3 requires BWSR to prepare “an analysis of local water management entity performance” each year. In response, BWSR developed the Performance Review and Assistance Program (PRAP) to track the general performance of all local governmental units involved in local soil and water conservation and management. BWSR developed a list of performance standards for metro watershed districts (see Appendix C for a draft copy of the scorecard). The basic standards are assessed annually by BWSR, while a more detailed review is conducted by BWSR once every five years. This District will monitor all activities on the BWSR scorecard on an annual basis as a means to simplify and facilitate the BWSR five-year review. At minimum, this annual review will cover PRAP “Level I Annual Compliance.” However, the District intends to review and report against the entire PRAP checklist on an annual basis to be prepared for future BWSR staff review.

7.11.2 District Plan Implementation Scorecards

This Plan creates a “One Water” framework that provides the basis for all District activities. Accordingly, the District has developed scorecards to measure its progress based on the “One Waters” of the District.

The scorecards will provide an ongoing measure of the District’s progress against the vision described in Section 7.1 on two fronts:

1) Are we doing what we planned to do? – This Plan provides a list of projects or “solutions” in Section 7.3 and a detailed data collection program in Section 7.5. Our scorecard will be used to assess our success in completing these efforts. The scorecard will also serve as a record-keeper for the rationale behind any deviations from the Plan (for example, collected data may indicate a different course of action is appropriate, per the adaptive management approach described in Section 7.4). The scorecard will help us to document the decision-making process.

2) Are we improving water quality? – As stated on the first page of this Plan’s Executive Summary, “restoring and protecting water uses is the highest priority” of the District. Our second scorecard provides an overview of the critical factors that will demonstrate success. Physical, chemical, and biological factors (such as, water clarity, phosphorous, and fish populations, respectively) provide measurable standards against which we can monitor progress.

See Appendix C for draft scorecards the District will be using over the course of this Plan.

7.12 Amendments to Plan

This Plan will extend through the year 2020 and shall remain in effect as revised and amended until the Board of Water and Soil Resources (BWSR) approves any future plans.

7.12.1 General Amendment Procedure

Any person may propose to the Board of Managers an amendment to the Plan. The Board of Managers may then initiate the amendment procedure. All amendments to the Plan must...
adhere to the review process provided in Minnesota Statutes Section 103B.231, subdivision 11, except when the proposed amendments constitute minor amendments and:

1. The District has held a public meeting to explain the amendments and published legal notice of the meeting twice, at least seven days and 14 days before the date of the meeting;

2. The District has sent copies of the amendments to the affected local units of government, the Metropolitan Council, and the state review agencies for review and comment.

3. The BWSR Board has either agreed that the amendments are minor or failed to act on them within 45 days of receipt of the amendments.

7.12.2 Minor Amendments to Capital Improvements
Amendments to an approved capital improvement program may be considered to be minor plan amendments if the following conditions are met:

1. The original plan set forth the capital improvements but not to the degree needed to meet the definition of ‘capital improvement program’ as provided in Minnesota Statutes Section 103B.205 Subdivision 3; and

2. The affected county or counties have approved the capital improvement in its revised, more detailed form.

7.12.3 Form of Amendments
Unless the entire document is reprinted, all amendments adopted by the District must be printed in the form of replacement pages for the plan, each page of which must:

1. On draft amendments being considered, show deleted text as stricken and new text as underlined.

2. Be renumbered as appropriate.

3. Include the effective date of the amendment.

7.12.4 Distribution of Amendments
The District must maintain a distribution list of agencies and individuals who have received a copy of the plan and shall distribute copies of amendments within 30 days of adoption. The District will consider sending drafts of proposal amendments to all plan review authorities to seek their comments before establishing a hearing date or commencing the formal review process.
Manager’s Discussion

13.a AIS Plan

Staff would like to request that $15000 allocated in the AIS Education and Outreach funds be utilized for the development of an AIS District Plan. Staff would like the board to accept the release of an RFP for an AIS District Plan.

13.b Rulemaking

Staff needs direction from the board as to whether the District should pursue a general permit – Please find following a memo from Legal in regards to this matter.

Staff needs direction from the board on whether the District should develop buffer rule provisions for streams and/or lakes, in addition to wetlands. The board directed staff to develop proposed RPBCWD rules based on the Nine Mile Creek Watershed District rules, which require buffers around wetlands only. The Riley-Purgatory-Bluff Creek watershed has particular, unique soil characteristics and erosion problems on small tributaries. The scope of the draft streambank and shoreline rule has been enhanced (from the NMCWD rule) to protect against erosion and sedimentation associated with these small tributaries (as well as larger waterbodies). Staff recommends that the buffer requirements on waterbasins (i.e., lakes) and/or streams and small tributaries (i.e., creeks), as well as wetlands should incorporated under the Buffer Rule.
Riley Purgatory Bluff Creek Watershed District
Rulemaking Technical Advisory Committee meeting
Eden Prairie City Center – June 26, 2013

Attendees: Kris Langley, RPBCWD Citizens Advisory Committee, Liz Stout, Minnetonka; Leslie Stovring, Rod Rue, Mary Krause, Eden Prairie; Terry Jeffery, Chanhassen; Steve Segar, Bloomington; Melissa Jenny, U.S. Army Corps of Engineers; Mike Wanous, Carver County Soil & Water Conservation District; Bob Bean, Deephaven; Joe Mulcahy, Metropolitan Council; Jennie Skancke, Department of Natural Resources.

Staff: Claire Bleser, District administrator; Scott Sobiech, District engineer; Michael Welch, District counsel; Lindsey Albright, Jeff Anderson, District interns.

Introduction
Claire Bleser welcomed everyone and reviewed the agenda for the meeting. She said the group is not going to review changes to the Erosion and Sediment Control Rule from last month’s meeting because of the Minnesota Pollution Control Agency’s issuance of the new municipal stormwater general permit and imminent release of the new construction stormwater permit. She said staff and the new District engineer, Barr Engineering, will review the new permits and see if any changes to the District rule are warranted. She said today the group will continue its review of the Wetland Buffers & Stormwater Management Rule and look at the Shoreline & Streambank Crossings Rule and the Dredging & Sediment Removal Rule. She said that the plan amendment supporting the rulemaking process will be issued for formal review soon.

Wetland Buffers & Stormwater Management Rule
Jennie Skancke suggested that watershed staff elaborate on the provision allowing trails within wetland buffers and make more explicit whether paved trails are allowed or not. Bob Bean said that as he again reviewed the buffer rule he found less and less to be concerned about in its provisions. With the allowance for breakaway and ground-level markers at the buffer edge, the rule is workable. He said, though, that buffer should be required only to the maximum extent possible in a linear project area. Rod Rue said that with the prohibition on fill or debris in the buffer there would be no way to build in a roadway. Michael Welch clarified that the restrictions on activities that can be undertaken in a buffer apply after the buffer has been created; that is, after a permitted project has been completed. Mr. Rue continued, saying that the District needs to balance considerations in areas where there is a narrow corridor – for roadways especially. He said in some places along Flying Cloud Drive, for example, there are bluffs on one side and wetland on the other. The District does not want to require an impact to one resource to add buffer on another one on the other side. He said the rule should include provisions that make it such that a road authority does not need to take out trees to comply with the buffer provisions. Leslie Stovring said that the rule should not require an entity to fill wetland to create buffer or to dig into a bluff to create more wetland buffer. She also questioned whether the District needs section 3.2 of the rule requiring stormwater treatment when the District will have a stormwater management rule. Mr. Welch
explained that there may be circumstances where the District’s wetland rule applies but the stormwater rule does not, and the District wants to make sure that any stormwater runoff running to a wetland is treated prior to discharge.

The group discussed the need for dates defining the growing season for assessment of wetland function and values. There was general agreement that the appropriate growing season should be left to the professional judgment of wetland delineators. Melissa Jenny suggested that the District needed to provide for a definition of ‘growing season.’

Mr. Bean asked how far “downgradient” from a wetland extends for purposes of the buffer requirement (section 3.1). He also asked about a circumstance where a right of way is around an entire wetland, not just adjacent to the wetland. Mr. Welch stated that the rule does not limit the reach of the downgradient provision, but that to be within the operation of the rule the wetland must receive runoff from the site of disturbance; ‘downgradient’ will be subject to reasonable interpretation in the implementation of the rule. In addition, he said where a road surrounds a wetland, buffer would be required only between the project area and the wetland; if the road authority was not working around the entirety of the wetland, it would not need to buffer all the way around the wetland, unless the work caused an impact to the wetland itself.

Attendees suggested that the rule (subsection 3.1f) specify the maintenance requirements that must be detailed in the recorded declaration for buffers.

Terry Jeffrey raised the issue of the District refusing to accept the Local Government Unit’s wetland delineation because it was not done within the dates specified in the rule. Steve Segar add that if the Technical Evaluation Panel accepted the wetland delineation, the watershed should, too. Ms. Jenny stated that the Wetland Conservation Act references U.S. Army Corps of Engineers guidance on timing of wetland delineations. Mr. Welch agreed that the District should accept delineations approved by other entities, but a WCA type and boundary determination does not include a function and values assessment, which is what the District needs to set a buffer width.

**Dredging and Sediment Removal Rule**

Mr. Welch introduced the Dredging and Sediment Removal Rule and requested comments. Mary Krause said that cities often conduct minimal removals at outlets and do so in accordance with Minnesota Pollution Control Agency standards. She questioned whether the District needs to permit these types of removals. Mr. Welch pointed out that the rule applies only to removals from public waters; the typical stormwater pond would not be subject to the rule. He added that this rule, along with the Shoreline & Streambank Improvements and Waterbody Crossings rules, are designed to create the basis for the Department of Natural Resources to issue a general permit to the watershed district. He stated that the board of managers has not, however, determined that it wishes to seek a DNR general permit. Ms. Skancke said the DNR is discussing changes to its administration of general permits, including collecting fees from watershed organizations and others that hold them for the DNR permit that is issued as a function of watershed permit issuance.
Ms. Stovring asked whether there would be a threshold included in the rule. Mr. Welch said as it stands the District has decided not to, but rather requires permits for all removals from public waters. Mr. Sobiech said the District will allow electronic submission of information for permit issuance. The group discussed the length of time needed for some cleanout projects and observed that the requirement in section 3.3 that degradation of or damage to a bank must be repaired within 24 hours may be very difficult to comply with. Mr. Bean pointed out that the provision applies only to damage, not to the permitting work. Mr. Welch stated that the rule requires that the work be conducted in a manner that does not damage the shoreline or streambank, and that damage is caused, it needs to be repaired promptly. Mr. Jeffrey suggested that the provision apply only to impact beyond what was planned for the project itself. Ms. Bleser said that it is important that any impact be stabilized in a temporary way before the project is completed. In response to a question from Mr. Welch, Mr. Jeffrey and others noted that there are dredging projects do take place in the public waters in the watershed.

Attendees agreed that the prohibition on dredging and sediment removal above the ordinary high water level is covered by the prohibition on enlarging a natural watercourse or creating a new channel in 3.2b.

**Shoreline and Streambank Improvements Rule**

In response to a question from Ms. Krause about the provision making the rule applicable to first-order streams, the group discussed the geographic extent of first-order streams in the watershed. Mr. Welch explained that first-order streams are covered because historical information indicates that sediment from such small watercourses contributes significantly to loading in the watershed. Mr. Sobiech showed a map of first-order streams in the watershed. He stated that this is a draft based on a national hydraulic data set and he has noticed some possible errors that will need to be corrected. The group generally agreed that having a map of the watercourses to which the rule applies would be better than just defining the types of watercourses affected. Ms. Jenny stated that the USACE has a methodology for defining first-order streams.

Mr. Rue noted the provision requiring that stabilization can extend no higher than the top of bank and said sometime erosion problems extended beyond the top of bank.

Mr. Bean recommended deleting the specific stage increase amount (0.01 feet) referenced in subsection 3.4 and stated that the limit on the extent of shoreline or streambank that can be stabilized may serve to restrict public-benefit stabilization and restoration projects. Ms. Skancke stated that the DNR permits projects that exceed the limits stated in the District rule.

Mike Wanous said that the workload on the District from this rule could be heavy; there may be a number of applications. Ms. Skancke noted that the DNR will likely want to suggest a change in the wording of section 3.4, having to do with the distance a project can extend from the shoreline into the waterbody.
In response to a question from Joe Mulcahy, Mr. Welch confirmed that the rule strongly discourages retaining walls. The group further discussed the difficulty of defining ordinary high water level for streams.

Definitions
Ms. Krause and Mr. Rue suggested that there are still difficulties presented by the District’s definition of compaction and said the District should further define ‘impervious surface.’ Mr. Bean said that a gravel road that is driven on for some period of time is an impervious surface in his view. Mr. Rue suggested that the District state which surfaces it considers impervious. The group discussed the problem of parks and softball fields, some of which become virtually impervious after long use.

Ms. Bleser said that the District will be looking at the waterbody crossings and surface water appropriation rules at the next meeting. Ms. Bleser said that the District has new data on suspended phosphorus in 61 stormwater ponds in residential areas in the watershed. She stated that this is the result of the first year of sampling and the information was distributed in May to the board of managers.