

**CARNELIAN-MARINE-ST. CROIX WATERSHED DISTRICT**  
**Regular Minutes June 24, 2015**

**Managers Present:** Kristin Tuenge, Steven Kronmiller, Dave De Vault, Eric Lindberg, Tom Polasik, Wade Johnson and Andy Weaver

**Others Present:** Jim Shaver (administrator), Carl Almer (EOR), Susannah Torseth (Lawson Law), John Bower (May Township resident), Mike and Pam Smith, Christine Maefsky and David Altman (Scandia residents) and Steve Murphy (consultant)

Manager Tuenge called the meeting to order at 6:35 p.m. She recognized outgoing Manager Steve Kronmiller, who has served on the board for 12 years, of which four were as president and five as treasurer. He has recently spent a great deal of time working on the Log House Landing project and has been a mentor to her.

**1. Approve Agenda**

**Manager De Vault moved to approve the June 10, 2015 agenda as amended. Seconded by Manager Polasik. Motion carried 6-0.**

**2. Oath of Office to New Manager Johnson**

After being introduced by Manager Tuenge, Wade Johnson stated that his reasons for joining the board are for the fun of it and because he is preoccupied with dealing with water issues. He and his family have lived on Square Lake Trail for the past three years. He has done many things mostly related to natural and water resources and he works for Minnesota Department of Natural Resources (DNR). On behalf of the DNR and the Board of Water and Soil Resources (BWSR), he coordinates an evaluation effort for the Land, Water, Lakes amendment. Manager Tuenge administered the oath of office to Mr. Johnson.

**3. Public Comments**

John Bower stated that his neighbor to the north is finally willing to do a best management practices (BMP) project that the District recommended about 10 years ago. After spending about \$400 a year to add gravel that washes into lake, the neighbor realized a BMP might be more cost effective. Mr. Bower asked, and Administrator Shaver agreed, to contact the neighbor about possible solutions, better locations for the improvements and the District Cost Share Program. In response to Mr. Bower's permit questions, it was noted that the Gruber permit has not been closed out and the Marshall permit violations were delegated to Dennis O'Donnell of Washington County. Mr. Bower reported that the Marshall property is a lake property with no erosion control. The few trees the Marshalls put in are now gone and the Marshalls are adding a patio and concrete. Mr. Bower noted that, as a volunteer lake monitor, the lake is a bit worse this year for clarity. The water levels were up again in May and the levels are near the no wake restriction level. He will talk with Bill Voedisch about the restriction and enforcement. He also reported sunfish and crappie fish kills that are sometimes weather related and might be due to a virus.

**4. Project Updates**

**a. Log House Landing (LHL) —Board Action**

Manager Tuenge thanked Manager Kronmiller and she and Manager Kronmiller thanked Administrator Shaver and Mr. Almer for assistance; community members Pam and Mike

Smith and Christine Maefsky for their work and research and consulting engineer Steve Murphy for expertise on road alternatives for the LHL project.

Manager Kronmiller summarized the LHL process from the District asking the city of Scandia to fix the road erosion to protect the water bodies, to the city receiving a Minnesota Department of Transportation (MnDOT) grant, to the city appointing the Citizen Advisory Committee, to the city agreeing to hear new recommendations from a citizens working group. After four months of study, the citizen's working group determined sediment loading, of four-10 tons per year from the road surface, is affecting water quality. Observations indicated that road gravel is washing into a single, non-operational culvert and flowing into Gilbertson Creek. A recent regrading of the road has diverted some of the sediments. At the St. Croix River there are two primary pollution sources: sediments from the boat ramp and sediments from the northeast corner of the landing parking lot.

As with the Citizen Advisory Committee (CAC), the working group looked to find solutions that would minimize the environmental impact, preserve the trees and the historic character and protect the water resources at a cost that is inline with the size of the problem. Some of the 39 fixes recommended include: regrade the road surface to a 4% slope, restore the berm, install planks at the LHL, recrown the landing so water is diverted from the launch, add two retention BMPs to slow water and trap sediments, add a natural barrier around the landing, adopt a road and stormwater maintenance plan and restore the creek and river banks.

In addition to researching the fixes, the group researched road surface types, focusing on surfaces approved by MnDOT for Minnesota roads. Four options for surface types were considered. Costs were based on county estimates, as well as estimates from the Tiller Corporation and local contractors.

- Option 1: Use the existing gravel road. This option maintains the 14 pullouts and passing lane for emergency vehicles, retains all trees and the historic character and is the lowest cost of the options at an estimate of \$102,000.
- Option 2: Resurface the road using six inches of bound aggregate. The aggregate contains clay that acts as a binding agent. Tiller can produce this mix locally. This option maintains the same road footprint, the trees, the character, the 14 pullouts, and passing lane for emergency vehicles. It is a bit more expensive than Option 1 at a cost of about \$148,000. This option was not presented to the CAC.
- Option 3: Resurface the road using bound aggregate with chloride. This option was not thoroughly explored. A rough cost estimate is \$162,000.
- Option 4: Resurface the road with asphalt. This option addresses the erosion issues. The disadvantages, however, are: during freeze-thaw cycles, rocks will rise and break through asphalt; curb and gutter are needed so pullouts and emergency lanes are not lost; historic and aesthetic features are lost. In January 2013, MnDot, in a published work, recommended not paving roads when funds are lacking for initial construction costs and traffic is 49 or fewer cars per day. The working group took traffic counts in May and June. The average was 3.1 cars per day, including the fishing opener with a count of 30 cars. The cost estimate for this option is \$304,000-371,000.

If a 13-foot road width is maintained, the DNR and MnDOT will not provide grant funds. A wider 20-foot design would be eligible for the funds and complies with fire safety standards. The CAC felt 20 feet was too impactful, would not meet the city's comprehensive plan,

would require removal of 20 trees that are six inches or larger and was the highest cost. The group believes a variance from the 20-foot road could be obtained, allowing for the retaining of grant funds.

For each option, maintenance costs and sediment reduction were explored. On a low-volume road, gravel is 30% less costly to maintain than asphalt and bound aggregate is estimated by Mr. Murphy to be 50% less costly than asphalt. Beltrami County, with over 300 miles of bound aggregate, only does maintenance on the aggregate roads two times a year compared to gravel roads that need maintenance after rain events. Just regrading the gravel road and adding holding ponds and BMPs should reduce sediments by 70%. Using bound aggregate with the ponds and BMPs should reduce sediments by 90%. Phosphorus is not a serious load.

Mr. Murphy, an engineer with expertise on low volume roads and gravel road stabilization, has experimented on many road surfaces for the US Forest Service. He now consults with counties and municipalities on what works with roads. He volunteered his time on this project. Mr. Murphy provided samples of bound aggregate with 1.5% chloride and without chloride. He stated that the chloride stays within the material. The aggregate hardens, so there is very little erosion. In a Forest Service study he did in four states on 12 different roads, using different concentrations of chloride, there was no discernable increase in chloride in adjacent streams. Mr. Murphy clarified that the aggregate with only 5% clay is so dense it sheds water so waterlogging is not an issue.

Discussion included:

- Manager Kronmiller stated that with or without chloride, bound aggregate is a better material. A local price quote for the aggregate is about \$30/ton and calcium chloride is about \$600/ton. For this project about 800 tons of aggregate and 20 tons of chloride would be needed. The percentage of clay needed in the aggregate varies based on its plasticity. The working group recommended in order of preference Option 2, then 3, then 1.
- Manager Lindberg stated that the District should be more specific and make one recommendation. The District's task is to get rid of erosion and in this case sediment loading. Building roads is not the District's task. He favored the bound aggregate with chloride, as a good demonstration and best solution to the problem. With the current surface, there is erosion with each storm event.
- Manager Polasik also stated a preference for bound aggregate with chloride and agreed that this would be a good demonstration project. He noted that there is a higher chemical runoff with asphalt.
- Manager De Vault stated that since the city has to make the decision, the city needs some flexibility. He did not support the hybrid surface because the cost is unknown, but supported Options 2 or 1 and could support the addition of chloride.
- Manager Weaver stated that it is good to know there is almost no traffic, only five tons of gravel erodes each year, phosphorus is not a significant load and neighbors don't want a paved surface. With this information, it makes sense to go with the current surface and talk to Scandia about grading and nurture whatever decision it makes. If Scandia goes with the existing surface and wants to regrade, the District can play a significant role with collection basins, plantings and restoring the river and creek banks. He stated that he has a problem with paying for road surfaces.

- Manager Tuenge stated that the District generally does not pay for road surfaces. But in this case, the District wants to help Scandia pilot the aggregate to help with erosion.
- Mr. Almer provided input without advocating for or against a surface. His general observations were that either aggregate option is OK, but less so with the hybrid. With Option 1, which utilizes what is out here, he struggles to see how this is a solution that should be on the table. His understanding is that the engineering would be to double the road. But if one takes a step back and looks to the past, before Scandia regraded the road with a slope to the north, it had a crown and drainage went mainly to the north and a bit to the south, draining one half the road width. So when talking about an 11% road, there is only half the distance for water to get to the edge. Now doubling the road slope, the travel distance should be half, but this picks up volume to the south. This now reduces the overall erosion travel distance. In regard to adding two retention ponds and regrading, Mr. Almer responded that regardless of which option is selected, sloping to the north makes a lot of sense. But erosion forces are not lessened without bound aggregate. He stressed that it is not the suspended solids, but the gross particulates that are of concern. With either option you need to weigh if these improvements do enough for water quality. Neither solution will address all of the material coming down. He suggested that the BMPs in the spreadsheet will not adequately address all the issues. He recommended a basin with a smooth surface on the bottom, which might not be aesthetic, but is easy to cleanout. To get a better maintenance picture with respect to life-cycle costs versus just capital costs, he suggested taking a close look at MnDOT BMP comparisons. While locally made materials are good and if you have enough evidence that the bound aggregate is a better surface, then the question is: Is there local capacity to install and maintain the surface or will maintenance revert to old practices? Costs for road maintenance and stormwater management should be quantified. Mr. Murphy responded that aggregate roads need maintenance once in spring and once in fall, but doing it correctly is key. Initially blading and rolling of the road should take one day. After staff is fully trained, maintenance should only take one half day.
- It was further clarified: this is Scandia's project, Scandia is expecting a recommendation from the working group at its July 1 meeting and in February the District approved a motion to pay 25% of the project costs. Administrator Shaver advised the Board not to support the use of any particular surface or connected BMPs. He noted that he and Mr. Almer reported a few months ago that reducing the sediment load (the load divided by the total cost) for \$85,000 was in the realm of other BMPs.
- Managers De Vault and Johnson suggested that doing nothing is also a good option in terms of water quality. Manager Johnson further stated that the District should give a clear message not to put in an asphalt road because removing trees will create more erosion.

**Manager Kronmiller moved to communicate to the City of Scandia that the District supports partnering with the city and agrees to fund up to 50% of either Option 2 the bond aggregate surface reengineered with BMPs up to \$80,000 or Option 1 the existing road surface reengineered with BMPs up to \$50,000 as proposed in attached Exhibits A, B and C. Seconded by Manager Polasik. Motion carried 4-3, with Managers Tuenge, De Vault, Polasik and Kronmiller in support.**

Discussion then focused on supporting BMPs with all road options and communicating no support for a 20-foot road because of the environmental impact.

**Manager Kronmiller moved to communicate to the City of Scandia that the District withdraws its support for partnering financially with the city on the DNR grant for the Log House Landing, but welcomes the opportunity to work with the city on future water quality improvements on the site. Seconded by Manager De Vault. Motion carried 7-0.**

Based on Ms. Torseth's recommendation, it was agreed that Mr. Kronmiller will remain as the project liaison, but a formal motion to appoint him is not needed. Mr. Kronmiller is able to go before the city with the LHL project information, which is in the public record, and report his opinion to the District during public comments. Administrator Shaver will bring issues back to the Board for formal decisions/actions. Mr. Kronmiller agreed to come to Board and give overviews and recommendations and continue to work with Administrator Shaver. The Board commended all for their time dedicated to this project and the information presented.

## **5. Old Business**

### **a. Pollinator Pledge**

Manager Polasik noted one change to the pledge that was passed at the last meeting.

## **6. Project Updates and Work Plan Update—Board Action**

### **a. Plan Amendment Draft with Revisions**

Mr. Almer stated that about 90% of the changes were presented at the May 27 meeting. He highlighted a change related to comment #19 on Section 4f- district rule enforcement. New breakouts and the associated dollar amounts were added. The timeline was extended to keep cost estimates steady and, on average, expenses were increased by about \$20,000 per year. Administrator Shaver highlighted changes to the cost share section including adding categories and renaming the Docket the Cost Share Program Guide. Other revisions related to clarity and cross referencing between sections and adding an aquatics invasive species (AIS) chart at the end of the AIS Appendix. Administrator Shaver and Mr. Almer will work with Mary Peterson of BWSR on minor issues such as the narrative and corresponding expenses.

**Manager De Vault moved to accept the revisions to the Plan Amendment draft and authorize the administrator to submit the draft to BWSR for the 90-day review. Seconded by Manager Polasik. Motion carried 7-0.**

## **7. Next Meeting—July 8**

The next meeting is July 8, 2015 at 6:30 p.m. at the Scandia Community Center. July 14 is the joint watershed district meeting at 6:30 p.m. at the Scandia Community Center.

## **8. Adjourn —Board Action**

**Manager De Vault moved to adjourn at 9:42 p.m. Seconded by Manager Polasik. Motion carried 7-0.**

Submitted by  
Debbie Meister, MMC Associates