



## Bassett Creek Watershed Management Commission

**Please note time and  
location!**

Regular Meeting & Workshop

8:30 a.m. – 12:00 p.m.

Thursday, July 18, 2013

Medicine Lake Room, Plymouth City Hall  
3400 Plymouth Blvd., Plymouth MN 55447

### AGENDA

#### 1. CALL TO ORDER and ROLL CALL

2. **CITIZEN FORUM ON NON-AGENDA ITEMS** - *Citizens may address the Commission about any item not contained on the regular agenda. A maximum of 15 minutes is allowed for the Forum. If the full 15 minutes are not needed for the Forum, the Commission will continue with the agenda. The Commission will take no official action on items discussed at the Forum, with the exception of referral to staff or a Commissions Committee for a recommendation to be brought back to the Commission for discussion/action.*

#### 3. APPROVAL OF AGENDA

#### 4. CONSENT AGENDA

- A. Approval of June 20, 2013 Meeting Minutes and June 24, 2013 Commission Workshop Minutes
- B. Approval of June Financial Report
- C. Approval of Payment of Invoices
  - i. Keystone Waters, LLC – June 2013 Administrator Services
  - ii. Barr Engineering – Engineering Services
  - iii. Amy Herbert – June 2013 Secretarial Services
  - iv. D'amico-ACE Catering – July 2013 Meeting Catering
  - v. GTS – Watershed Summit Assistance and Facilitation
  - vi. Wenck – June WOMP Station Operation
  - vii. Kennedy & Graven – Legal Services through May 31, 2013

#### 5. NEW BUSINESS

- A. Consider Proposal for Fish Survey of Sweeney and Twin Lakes
- B. Dispute Resolution Request from Cities of New Hope and Golden Valley
- C. Set TAC Meeting and Agenda
- D. Discuss BCWMC Meeting Time
- E. Consider BCWMC Projects for Clean Water Fund Grant Application

#### 6. OLD BUSINESS

- A. Discussion and TAC Recommendations Regarding Completed P8 Model
- B. Receive Update on Next Generation Plan Development
  - i. Draft Next Generation Plan Steering Committee Meeting Notes (7/1/13)
  - ii. Link to Channel 12 News Coverage of Summit: <http://youtu.be/4EVEam8jSPk>
  - iii. Update on Development of Plan Sections
- C. JPA Amendment Next Steps
- D. Reschedule Watershed Tour

## **7. COMMUNICATIONS**

- A. Administrator's Report
- B. Chair
- C. Commissioners
- D. Committees
- E. Legal Counsel
- F. Engineer

## **8. INFORMATION ONLY (Information online only)**

- A. Upcoming Events and Notices
- B. Links to Water Related News Articles
- C. Grant Tracking Summary and Spreadsheet
- D. Response to Comments on Upper Mississippi River Bacteria TMDL
- E. Commission Letter to FEMA
- F. New videos by MDNR on groundwater and results of study on groundwater usage in Twin Cities at: <http://mndnr.gov/groundwater>
- G. Clean Water Summit September 12<sup>th</sup> at Arboretum:  
[www.arboretum.umn.edu/2013CleanWaterSummit.aspx](http://www.arboretum.umn.edu/2013CleanWaterSummit.aspx)

## **9. ADJOURNMENT of REGULAR MEETING**

## **10. COMMISSION WORKSHOP on Next Generation Watershed Management Plan**

- A. Discussion and Refinement of Draft Commission Goals

### **Upcoming Meetings**

- **Monday July 29<sup>th</sup> – TAC Meeting – 1:30 – 3:30 p.m.** Golden Valley City Hall

### **Future Commission Agenda Items list**

- Develop fiscal policies
- Develop a post-project assessment to evaluate whether it met the project's goals
- Medicine Lake rip-rap issue over sewer pipe
- Presentation on joint City of Minnetonka/ UMN community project on storm water mgmt
- State of the River Presentation
- Presentation by Claire Bleser and Kevin Bigalke on Chloride

### **Future TAC Agenda Items List**

- Develop guidelines for annualized cost per pound pollutant removal for future CIP projects
- Stream identification signs at road crossings
- Blue Star Award for cities
- Emerald Ash Borer and how ash tree removal should be considered during restoration projects (Rainbow Tree Care has offered to give a presentation)
- Look into implementing "phosphorus-budgeting" in the watershed – allow "x" pounds of TP/acre.
- Discuss issues/topics arising Next Generation Plan process.



## Bassett Creek Watershed Management Commission

### AGENDA MEMO

Date: July 10, 2013

To: BCWMC Commissioners

From: Laura Jester, Administrator

**RE: Background information on 7/18/13 BCWMC Meeting & Workshop**

1. CALL TO ORDER and ROLL CALL

2. CITIZEN FORUM ON NON-AGENDA ITEMS

3. APPROVAL OF AGENDA – ACTION ITEM

4. CONSENT AGENDA

- A. Approval of June 20, 2013 Meeting Minutes and June 24, 2013 Commission Workshop Minutes – ACTION ITEM with attachments
- B. Approval of June Financial Report - ACTION ITEM with attachment
- C. Approval of Payment of Invoices – ACTION ITEM with attachments
  - i. Keystone Waters, LLC – June 2013 Administrator Services
  - ii. Barr Engineering – Engineering Services
  - iii. Amy Herbert – June 2013 Secretarial Services
  - iv. D'amico-ACE Catering – July 2013 Meeting Catering
  - v. GTS – Watershed Summit Assistance and Facilitation
  - vi. Wenck – June WOMP Station Operation
  - vii. Kennedy & Graven – Legal Services through May 31, 2013

5. **NEW BUSINESS**

- A. Consider Proposal for Fish Survey of Sweeney and Twin Lakes – ACTION ITEM with attachment *At the 6/20/13 Commission meeting, staff was directed to 1) repeat a request to the MDNR to conduct fish surveys of Twin and Sweeney Lakes and 2) if that request was unsuccessful, to solicit a proposal for fish surveys by a private company. The MDNR is not able to conduct fish surveys of Twin and Sweeney Lakes due to funding and staffing cuts. MDNR staff recommended Blue Water Science to conduct fish surveys. Steve McComas of Blue Water Science submitted a proposal for these surveys and will be present at the meeting to answer questions. No other proposals were sought.*
- B. Dispute Resolution Request from Cities of New Hope and Golden Valley – ACTION ITEM with five attachments *The cities of New Hope and Golden Valley are requesting dispute resolution by the Commission regarding an intercommunity drainage issue and the need for cost sharing on a Phase 2 study. (This issue was initially on the 9/20/12 Commission agenda but was taken off the agenda due to continuing discussions among the cities.) The five attachments include letters from all three cities, the dispute resolution process from the Watershed Plan, and a timeline of events. The Commission should consider appointing a committee of 3 Commissioners or alternate Commissioners (from cities other than those in dispute) to make recommendations in this matter.*

C. Set TAC Meeting and Agenda – **ACTION ITEM no attachments**

*The TAC requests that the Commission set a July 29<sup>th</sup> TAC meeting with the following agenda items (as discussed at the 6/20/13 Commission meeting): a discussion of appropriate development review fees, schedule for updating the XP-SWMM and P8 models, and feasibility study process improvement.*

D. Discuss BCWMC Meeting Time – **DISCUSSION ITEM no attachments**

*Chair Black recommended a discussion of appropriate Commission meeting times noting that the current normal meeting time of 11:30 a.m. may not be working for several Commissioners or alternate Commissioners. Perhaps there is a different time of day that works better for the majority.*

E. Consider BCWMC Projects for Clean Water Fund Grant Application - **DISCUSSION ITEM no attachments** *Engineer Chandler notes that Clean Water Fund grant applications are typically due in mid-September, before the September Commission meeting. The Commission could discuss applying for a grant for projects like the Briarwood/Dawnview or Four Seasons Mall water quality improvement projects.*

## 6. OLD BUSINESS

A. Discussion and TAC Recommendations Regarding Completed P8 Model – **ACTION ITEM with attachments** *Engineer Chandler will review the development and uses of the P8 model and the TAC's recommendations regarding its maintenance. Attachments include a 3-page memo summarizing the model that includes the TAC's recommendations, and a 17-page memo with full details. The TAC recommends that the Commission accept the P8 model (per their 6/6/13 meeting).*

B. Receive Update on Next Generation Plan Development – **INFORMATIONAL ITEM**

*Next Gen Plan Steering Committee Chair Linda Loomis and Engineer Chandler will provide updates on the Plan development. The workshop immediately following the meeting will focus on goals development for the Plan.*

- i. Draft Next Generation Plan Steering Committee Meeting Notes (7/1/13) - **attachment**
- ii. Link to Channel 12 News Coverage of Summit: <http://youtu.be/4EVEam8jSPk>
- iii. Update on Development of Plan Sections

C. JPA Amendment Next Steps – **DISCUSSION ITEM – no attachment**

*The Commission should discuss the next steps needed for amending the JPA to extend the term to January 1, 2025. There may be new input from cities presented at the meeting to consider in this discussion.*

D. Reschedule Watershed Tour – **DISCUSSION ITEM – no attachment**

*The Watershed Tour that had been scheduled for 6/24/13 was cancelled that morning due to extensive storm damage and flooding within the watershed. The Commission should consider rescheduling the tour for an August or September date.*



**7. COMMUNICATIONS – INFORMATIONAL ITEMS**

- A. Administrator's Report - **attachment**
- B. Chair
- C. Commissioners
- D. Committees
- E. Legal Counsel
- F. Engineer

**8. INFORMATION ONLY – INFORMATIONAL ITEMS with documents online**

- A. Upcoming Events and Notices
- B. Links to Water Related News Articles
- C. Grant Tracking Summary and Spreadsheet
- D. Response to Comments on Upper Mississippi River Bacteria TMDL
- E. Commission Letter to FEMA
- F. New videos by MDNR on groundwater and results of study on groundwater usage in Twin Cities at: <http://mndnr.gov/groundwater>
- G. Clean Water Summit September 12<sup>th</sup> at Arboretum:  
[www.arboretum.umn.edu/2013CleanWaterSummit.aspx](http://www.arboretum.umn.edu/2013CleanWaterSummit.aspx)

**9. ADJOURNMENT of REGULAR MEETING**

**10. COMMISSION WORKSHOP on Next Generation Watershed Management Plan**

- A. Discussion and Refinement of Draft Commission Goals – **DISCUSSION with attachment**

*Next Gen Plan Steering Committee Chair Linda Loomis and Barr Engineering staff Greg Williams will facilitate a discussion regarding the draft goals for the Watershed Management Plan. All Commissioners, alternate Commissioners, TAC members, review agencies and other stakeholders are encouraged to participate.*

**Upcoming Meetings**

- **Monday July 29<sup>th</sup> – TAC Meeting – 1:30 – 3:30 p.m. Golden Valley City Hall**



## Bassett Creek Watershed Management Commission

### Minutes of the Regular Meeting

June 20, 2013

Golden Valley City Hall, 11:30 a.m.

#### Commissioners and Staff Present:

Crystal	Alternate Commissioner Guy Mueller	Robbinsdale	<i>Not represented</i>
Golden Valley	Commissioner Stacy Hoschka, Treasurer	St. Louis Park	<i>Not represented</i>
Medicine Lake	Commissioner Ted Hoshal, Secretary	Administrator	Laura Jester, Keystone Waters LLC
Minneapolis	Commissioner Michael Welch	Attorney	Charlie LeFevere, Kennedy & Graven
Minnetonka	<i>Not represented</i>	Engineer	Karen Chandler, Barr Engineering Co.
New Hope	Alternate Commissioner Pat Crough	Recorder	Amy Herbert
Plymouth	Commissioner Ginny Black, Chair		

#### Technical Advisory Committee (TAC) Members/ Other Attendees Present:

Derek Asche, TAC, City of Plymouth	Linda Loomis, BCWMC Next Generation Plan Steering Committee Chair
Jeannine Clancy, TAC, City of Golden Valley	Richard McCoy, TAC, City of Robbinsdale
Lois Eberhart, TAC, City of Minneapolis	John O'Toole, Alternate Commissioner, City of Medicine Lake
Perry Edman, TAC, City of St. Louis Park	Liz Stout, TAC, City of Minnetonka
Christopher Gise, Resident, City of Golden Valley	Dave Tobelmann, Alternate Commissioner, City of Plymouth
David Hanson, Alternate Commissioner, City of Golden Valley	

## 1. CALL TO ORDER AND ROLL CALL

On Thursday, June 20, 2013, at 11:34 a.m., Chair Black called to order the meeting of the Bassett Creek Watershed Management Commission (BCWMC) and asked for roll call to be taken. The cities of Minnetonka, Robbinsdale, and St. Louis Park were absent from the roll call.

## 2. CITIZEN FORUM ON NON-AGENDA ITEMS

No citizen input.

## 3. AGENDA

Chair Black requested that item 7D – Approval to Submit Major Plan Amendment for 90-day Review – be moved up in the agenda to item 5B under Public Hearing. She requested the addition to the agenda item 6C – Approval for the Administrator to exceed \$5,000 for the month of June. Chair Black also requested the deletion of item 7E – Reimbursement to Meadowbrook Elementary for 2010 Project – and said that the item will be placed on the Commission’s July agenda. Commissioner Welch moved to approve the agenda as amended. Alternate Commissioner Mueller seconded the motion. The motion carried unanimously 6-0 [Cities of Minnetonka, Robbinsdale, and St. Louis Park absent from vote].

## 4. CONSENT AGENDA

Commissioner Welch moved to approve the Consent Agenda. Commissioner Hoshal seconded the motion. The motion carried unanimously 6-0 [Cities of Minnetonka, Robbinsdale, and St. Louis Park absent from vote].

[The following items were approved as part of the Consent Agenda: the May 16, 2013, BCWMC meeting minutes, the monthly Financial Report, payment of the invoices, and approval of the Roles and Responsibilities document.]

The general and construction account balances reported in the Financial Report prepared for the June 20, 2013, meeting are as follows:

Checking Account Balance	\$637,783.21
<b>TOTAL GENERAL FUND BALANCE</b>	<b>\$637,783.21</b>
<b>TOTAL CASH &amp; INVESTMENTS ON-HAND (6/12/13)</b>	<b>\$2,453,923.18</b>
CIP Projects Levied – Budget Remaining	(\$3,058,546.26)
Closed Projects Remaining Balance	(\$604,623.08)
2013 Anticipated Tax Levy Revenue	\$986,000.00
Anticipated Closed Project Balance	\$381,376.92

## 5. PUBLIC HEARING

- A. Public Hearing.** Chair Black stated that the Public Hearing was opened at the May 16<sup>th</sup> Commission meeting and continued through to today. She called for comments.

Mr. Christopher Gise, resident of Golden Valley, thanked Administrator Jester and the Commission for the response to his inquiry about the proposed Twin Lake alum treatment. Commissioner Hoshal brought up comments he received from a resident regarding the aquatic invasive species called the gizzard shad that the resident has seen in Sweeney Lake. Commissioner Hoshal described the problems that the gizzard shad could pose to the alum treatment if the fish was also in Twin Lake. He said that the Commission needs to find out the status of that fish in Twin Lake. Commissioner Hoshal said that he would like the Commission to learn more information about this issue before it takes action on the project. The Commission discussed the possibility of undertaking a fish survey or further investigating to see if recent fish survey data exists. There was discussion of carp in Twin Lake. Engineer Chandler commented that the presence of gizzard shad or carp in the lake would not preclude the use of alum treatment but may affect the dosage required.

Chair Black closed the public hearing at 11:57 a.m. Chair Black said that further discussion could continue as part of the next agenda item.

- B. Approval to Submit Major Plan Amendment for 90-day Review.**

Administrator Jester suggested that she and the Commission Engineer gather more information about a fish survey on Sweeney and Twin Lakes and bring the information in front of the Commission at the July meeting. Commissioner Hoschka recommended a cost-benefit analysis on conducting a fish survey. Attorney LeFevere noted the schedule of the CIP [Capital Improvement Program] process and said that if the Commission wants this project on its 2014 CIP, then at its July meeting the Commission would need to set the public hearing date for the project. Chair Black noted that the Commission isn't tied into conducting this project even if the Commission moves ahead today with approval of submitting the Major Plan Amendment to BWSR [Minnesota Board of Water and Soil Resources] for the 90-day review. Attorney LeFevere responded to questions about the funding of CIP projects and project feasibility reports and about the expending of funds. Engineer Chandler remarked that if the Commission spends money toward a project and wants to be reimbursed for those costs, the Commission would need to include those costs as part of its total project cost calculation and either include that cost in its levy request or decide that those costs would come from the Commission's closed project account.

Commissioner Hoshal moved to approve submitting to BWSR the Major Plan Amendment request for the 90-day review. Alternate Commissioner Crough seconded the motion. The motion carried unanimously 6-0 [Cities of Minnetonka, Robbinsdale, and St. Louis Park absent from vote].

Commissioner Welch moved to approve directing staff to obtain information and, if possible, a proposal for a fish survey on Sweeney and Twin Lakes and to bring the information to the Commission for consideration at its July meeting.

## 6. NEW BUSINESS

**A. Discussion of Possible Commission Policy Regarding Feasibility Studies.** Commissioner Welch opened the discussion as the request for consideration of a policy came from him. Engineer Chandler provided background on how the Commission has handled feasibility studies in the past. Chair Black commented that the Commission has followed a process but it does not have a policy in place regarding feasibility studies. Commissioner Welch described his position that he thinks it is critical that the Commission, as the entity that makes decisions that lead to and result in levying across all cities in the watershed, should be the entity to analyze options. He said that he thinks it is crucial that the Commission go through each project with a public process of considering the options before honing in and deciding to pursue an option. He said that he thinks it is a process that needs to happen very consistently in order for the Commission to exercise its due process to the taxpayers of the watershed before the Commission decides to impose costs on them to do a project in the watershed. There was extensive Commission discussion of the issue, with concerns raised about a new process adding a layer of complexity for the cities. Commissioner Hoschka noted that cities also answer to the taxpayers.

Ms. Clancy commented that the cities maintain the Commission projects and so at some point the cities need to be given some level of voice at the table on how the projects are maintained and about the responsibility of the project. She said that if the Commission doesn't listen to the cities' voice during the feasibility study, then it is a concern. Alternate Commissioner Tobelmann asked whether there is a consistent expectation of deliverables in terms of the feasibility study. Chair Black responded that there are no formal criteria and said that the Commission could look at creating two sets of criteria: one set about how the Commission selects the consultant to prepare the feasibility study and a set of criteria or specifications to be included in every feasibility study.

Commissioner Welch said that the discussion about the project options should take place here in this public forum in front of this public body. He also commented that often the Commission is presented with a final feasibility study at a meeting, after no previous review of the study and asked to decide at that meeting on the option to move forward. Commissioner Welch noted that TAC and city perspectives are always considered and part of the discussion.

The Commission continued its discussion about this issue. Chair Black summarized that some commissioners want the Commission involved earlier in the feasibility study process so that the Commission has input on what will be studied as part of the feasibility process. She said that she would like the June 11<sup>th</sup> memo regarding this subject from Administrator Jester that was included in the meeting packet to go to the TAC. Chair Black said that she would like the TAC to look at the CIP process and to discuss how the items in this memo could be incorporated into the Commission's CIP process. The Commission agreed to this direction. Commissioners Hoschka and Welch had comments about the Commission's feasibility study process and the need for transparency.

### B. TAC Recommendations:

- i. **2014 Budget Items.** Mr. Asche said that this would be discussed later in the agenda during the Commission's budget discussion.
- ii. **Watershed-wide P8 and XP-SWMM Models.** Mr. Asche reported that the presentation on the models at the last TAC meeting was good and that the TAC was pleased with the models. He noted that the TAC memo lists four recommendations about the models for the Commission to consider.



The Commission discussed the recommendation about periodic updates to the XP-SWMM model. Mr. Asche said that the TAC is looking for Commission direction about how often the model should be updated.

Attorney LeFevere brought up an item for Commission discussion regarding whether costs of updating the model could be part of the Commission's permit fee structure or part of the capital project costs. Ms. Eberhart suggested the approach of updating the model annually before TMDL reporting, instead of episodic updating. A presentation of the completed models will come before the Commission at their July meeting.

Administrator Jester noted that Ms. Eberhart had some changes to the TAC memo included in the meeting packet. Ms. Eberhart described the changes. Administrator Jester said that she would incorporate the changes to the document.

- C. Approval to Exceed \$5,000 Monthly Administrator Budget for June.** Chair Black provided an explanation for the request. Commissioner Welch moved to approve up to \$6,000 for the Administrator costs for the month of June. Commissioner Hoshal seconded the motion. The motion carried unanimously 6-0 [Cities of Minnetonka, Robbinsdale, and St. Louis Park absent from vote].

## 7. OLD BUSINESS

- A. Consider Draft 2014 Commission Budget.** Chair Black went through the line items that have changed since the last Commission discussion of the 2014 budget. There was discussion of the budget and discussion of the Commission's annual practice of reimbursing 2.5% of its CIP levy amount to its administrative account. There was discussion of the Commission's fund balance, and Chair Black said that she would like the Budget Committee to discuss the Commission's procedure of how it rolls over funds from year to year and how it is documented. Commissioner Welch moved to adopt the 2014 budget as proposed. Commissioner Hoshal seconded the motion. The motion carried unanimously 6-0 [Cities of Minnetonka, Robbinsdale, and St. Louis Park absent from vote]. Commissioner Welch requested that the Commission's budget memo clearly state that the Commission's permit fees are for covering the costs of the Commission's permit review work and are not a revenue stream. Chair Black asked that the question of appropriate development review fees be discussed by the TAC.
- B. Receive Update on Next Generation Plan Development.** Administrator Jester and Plan Steering Committee Chair Linda Loomis provided a summary of the Commission's June 13<sup>th</sup> Watershed Summit and the Committee's recent work. Administrator Jester noted the new section about the Next Generation Plan on the Commission's website. She asked if the Commission was ready to take down the online survey. The Commission indicated yes. Administrator Jester reminded the Commission about its June 24<sup>th</sup> workshop planned for 4:30 – 6:30 (after the watershed tour) and that its July 18<sup>th</sup> meeting would be held at Plymouth City Hall and would start at 8:30 a.m. and may run until noon.

*[Commissioner Welch departs the meeting.]*

- C. Letter from Golden Valley re: Lakeview Park Pond Project.** Ms. Clancy reported that it was determined that the Lakeview Park Pond project couldn't go forward as proposed due to the risks posed by the swamp deposits of the site and the risk of damage to homes adjacent to the project site. She said that the City would like to investigate other projects, such as a wet meadow with underlying drain tile - but no pond in the park, and requested that the Commission leave the project money in the CIP fund for a short period of

time while the City continues looking at other options. Ms. Clancy said that this project brings up the topic of Commission acquisition of easements or properties as part of flood control or water quality purposes. She requested that this topic be a future policy discussion for the Commission. Chair Black said that the Commission could discuss this topic as part of its plan process while the Commission talks about its flood policy.

- D. Approval to Submit Major Plan Amendment for 90-day Review.** See discussion under item 5B.
- E. Reimbursement to Meadowbrook Elementary for 2010 Project.** Item removed from agenda and placed on the Commission's July meeting agenda.
- F. Next Steps with JPA Amendment.** Administrator Jester provided an update and said that three member cities responded with no issues to the communication that the Commission sent out in March. Commissioner Hoshal said that the City of Medicine Lake is planning to submit comments. Administrator Jester asked if the Commission wanted to consider and propose changing its fiscal year to match the calendar year as part of this JPA amendment. The Commission discussed the idea and decided not to pursue such action. Administrator Jester said that the JPA amendment will be further discussed at a future meeting after it receives any further comments from the member cities.

## 8. COMMUNICATIONS

- A. Administrator:** No Administrator Communications aside from the Administrator Report in the meeting packet.
- B. Chair:**
  - i. Chair Black noted that there was an article in the *Sun Sailor* about the Commission's Watershed Summit. Administrator Jester noted that Channel 12 also covered the Watershed Summit, and she will distribute the link to the clip as soon as she receives it.
- C. Commissioners:**
  - i. Commissioner Hoschka reported that she has heard from a resident about confusion as to how to gain access to the Sweeney Lake public access. The Commission discussed the public access. Commissioner Hoschka requested that the Commission draft a letter to the resident that asked her about it. Administrator Jester said that she would write a letter and asked Commissioner Hoschka to forward the resident's address.
  - ii. Commissioner Hoshal brought up a Medicine Lake resident's public safety concern about not being able to get a fire and rescue boat into the lake during periods of low water. He said that there is a possibility that sediment has built up near the boat launch. Commissioner Hoshal asked who should be contacted about dredging in order to keep the launch as a deep water access point. Engineer Chandler said that the problem would need to be definitively determined, but she didn't know whose project it would be. Ms. Loomis said that perhaps the responsibility lies with the county, or whoever owns the fire and rescue craft. There was further discussion about the lake level of Medicine Lake. Chair Black said that this issue will be added to the discussion items for the Commission's upcoming Monday meeting to prioritize issues.

**D. Committees:**

- i. **Update on MPCA [Minnesota Pollution Control Agency] Chloride Project.** Mr. Asche reported that the MPCA is getting closer to completing its metro-wide chloride study. He said that there have been four TAC meetings on the study over the past three years. He said that the MPCA has been testing lakes to see what is and isn't impaired. Mr. Asche said that the feeling is that there are enough impaired lakes out there that the MPCA should be able to develop recommendations regarding salt storage, pre-wetting of roads, calibrating equipment, training, priorities, different software for tracking, and information on different products. Engineer Chandler said that the MPCA has identified in the Bassett Creek watershed water bodies that either exceed or are in risk of exceeding chloride levels and those water bodies include: Parkers Lake, Spring Lake, Medicine Lake, Sweeney Lake, and Wirth Lake. Mr. Asche said that it seems like by the end of this year, the MPCA will have recommendations.
- ii. **Next Generation Plan Steering Committee.** Administrator Jester announced that the next meeting will be held on Monday, July 1 from 4:30 p.m. to 6:30 p.m. at the Brookview Golf Course in Golden Valley.

**E. Legal Counsel:** No Legal Communications

**F. Engineer:**

- i. Ms. Chandler announced that she has the Hydrologic Conditions report from the DNR [Department of Natural Resources] and it states that the drought is over for most of the state.
- ii. Ms. Chandler reported that she has the MPCA's MS4 permit that the MPCA just renewed. She said that the big change is no increase in stormwater volume under average annual conditions for new development and a reduction in stormwater volume for redevelopment.

**9. ADJOURNMENT**

The meeting adjourned at 2:31 p.m.

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Amy Herbert, Recorder

Date

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Secretary

Date



## Bassett Creek Watershed Management Commission

### Commission Workshop to Prioritize Issues for Watershed Management Plan Meeting Minutes

4:30 – 6:30 p.m.

Monday June 24, 2013

Golden Valley City Hall Council Conference Room; 7800 Golden Valley Rd; Golden Valley MN 55427

**Attendees:** Chair Black, Commissioner Hoshal, Commissioner Jim de Lambert, Commissioner Welch, Commission Hoschka, Commissioner Johnson, Alternate Commissioner Goddard, Alternate Commissioner Crough, Alternate Commissioner Mueller, Alternate Commissioner Hanson, Alternate Commissioner Riss, Alternate Commissioner Tobelmann, Alternate Commissioner O'Toole, Plan Steering Committee Chair Loomis, TAC members Eckman, Oliver, Eberhart, and Edman, Administrator Jester, Engineer Chandler, Rich Brasch (Three Rivers Park District), Brad Wozney (BWSR), Karen Jensen (Met Council)

Chair Black opened the meeting at 4:37 p.m. Introductions were made around the table. Administrator Jester reported the results of the ranking performed by watershed residents at the June 13<sup>th</sup> Watershed Summit and indicated this group would be doing a similar activity. She distributed a list of 11 broad topics with more specific issues listed under each topic. Jester noted the issues and topics arose from input by residents and city staff at small group meetings, the online survey, and the Commission's Gaps Analysis. Jester also reported that the results of a Commission self-assessment should be taken into consideration when prioritizing issues. She reported that all Commission programs laid out in the 2004 Watershed Plan were on-going or had been completed. As for CIP projects, she noted some projects had not been done for various reasons. These specific projects should be reconsidered for the Implementation Program in the new Plan, but she didn't think they should be discussed individually at this workshop.

Everyone in the room was given two 1-point dots, two 2-point dots, and two 3-point dots. They were asked to put their initials on the dots and then place the dots on the issues to indicate their desired priorities. The dots were then tabulated for each issue, providing an overall ranking of the issues. Issues in order of ranking (high to low): stormwater runoff and development; water quantity, flooding and water levels; water quality; groundwater; degraded streams and shorelines; lack of education and information, need for behavior change; governance, management and funding; lack of biodiversity (tied with) flood control project maintenance; wetlands (tied with) recreation needs.

The group then discussed the issue of the Medicine Lake dam, noting past Commission involvement, past requests from AMLAC, and recent communication from AMLAC members. It was suggested that the Commission contact the DNR regarding an appropriate course of action for the Commission. There was discussion about the need to address the real problem, rather than the symptoms. If lake usability is the real issue, then an overabundance of aquatic plants and shallow water levels are symptoms of the issue. It was noted that sedimentation can cause shallow water levels. Chair Black indicated it would be good to get everyone involved at the table to lay out all the issues and hear from each other. No decisions were made at this meeting as to how to proceed.

Turning back to the results of the issues ranking, the group agreed the top three issues (stormwater runoff and development; water quantity, flooding, water levels; and water quality) were all related. There

was considerable discussion about groundwater (ranked #4) and how a focus on groundwater would be a departure from past Commission watershed plans. There was discussion about various ways the Commission may get involved with groundwater issues including disseminating information, collecting groundwater data, lobbying the County to develop a regional groundwater strategy, being involved (early in the process) with groundwater management areas. Jensen noted the Met Council is very involved with groundwater issues now (with additional funding from the Legislature); they are currently working on a Metro-wide groundwater model (with Barr Engineering as their contractor). Jensen offered assistance (including informational presentations) from the Met Council as the Commission develops goals and strategies related to groundwater.

Eberhart noted that the issues, as presented at this workshop, are in different categories and may not be comparable as “issues.” She noted that some issues are “resources,” some are “causes,” and others are “results.” The group agreed that as goals and strategies are developed, the more specific issues within each broader category would be considered.

Brasch indicated that from the perspective of Three Rivers Park District, the top three categories (as ranked) make sense and are also related to groundwater. He noted the Medicine Lake TMDL should be implemented and that aquatic plants should be addressed as well. Brasch further noted that there are synergies between the TRPD and the Commission with respect to macrophyte control (especially curlyleaf pondweed) and water quality actions.

There was also discussion about how the cities have many State regulations including NPDES and MS4 permits, as well as pollutant load reduction requirements in TMDLs. Eberhart noted that the Commission could concentrate on the resources themselves and their conditions including erosion, shorelines, and habitat. These are areas where cities don’t necessarily focus efforts and funding. The group agreed the Commission should focus on activities not already being done by cities and/or where the Commission could add value. There was discussion about the recently completed MIDS (Minimal Impact Design Standards) that watersheds could consider adopting.

Jensen reported that Met Council will soon complete a comprehensive report on the water quality of Bassett Creek using data from the WOMP station (including an IBI score for macroinvertebrates). She offered to present the completed report to the Commission. Chandler noted that the Commission has been collecting macroinvertebrate data near the WOMP station for many years and that this data can be shared with the Met Council for their report.

Commissioner Welch noted this Plan should clarify the relationship between the cities and the Commission. A flowchart of responsibilities might be a good way to define the roles. Welch also noted that watershed organizations are different, just as individual cities are different and that exact consistency with adjacent watersheds may not be possible.

There was some discussion about education programs and opportunities within the watershed including the watershed map, improvements for paddlers and other recreational users, and stream identification signs at road crossings. The point was made that the capital projects of the Commission should consider recreational and aesthetic aspects.



(UNAUDITED)

Item 4B.  
BCWMC 7-18-13

<b>BEGINNING BALANCE</b>	<b>12-Jun-13</b>	<b>637,783.21</b>
<b>ADD:</b>		
<b>General Fund Revenue:</b>		
Interest (Bank Charges)	(5.03)	
<b>2013-14 Assessments:</b>		
CRYSTAL	27,424.00	
MINNETONKA	24,920.00	
<b>Permits:</b>		
Studio M Architects	14000 Carlson Pky	1,500.00
Nordic Ski Foundation	Grade Trails	1,000.00
<b>Reimbursed Construction Costs</b>	4,444.66	
	<b>Total Revenue and Transfers In</b>	<b>59,283.63</b>
<b>DEDUCT:</b>		
<b>Checks:</b>		
2544 Barr Engineering	June Engineering	37,775.20
2545 Amy Herbert	June Secretarial	1,629.65
2546 Kennedy & Graven	May Legal	1,722.80
2547 Keystone Waters LLC	June Administrator	5,847.88
2548 GTS Educational Events	Facilitate meeting	2,022.60
2549 D'Amico Catering	July Meeting	171.10
2550 Wenck Associates	WOMP-June	237.46
	<b>Total Checks</b>	<b>49,406.69</b>
<b>Outstanding from previous month:</b>		
2488 Henn Cty Dept Envir Ser	2012 Riverwatch	2,000.00
2539 Judy Arginteanu	Planning article	50.00
2543 Ted Hoshal	Education Supplies	106.21
Meadowbrook School	2009 Exp-Grant	992.08
<b>ENDING BALANCE</b>	<b>10-Jul-13</b>	<b>647,660.15</b>

	2013/2014 BUDGET	CURRENT MONTH	YTD 2013/2014	BALANCE
<b>OTHER GENERAL FUND REVENUE</b>				
INTEREST EARNED (BANK CHARGES)		(5.03)	(29.62)	
ASSESSMENTS	515,045.00	52,344.00	511,502.00	3,543.00
PERMIT REVENUE	48,000.00	2,500.00	27,300.00	20,700.00
REVENUE TOTAL	563,045.00	54,838.97	538,772.38	24,243.00
<b>EXPENDITURES</b>				
<b>ENGINEERING</b>				
ADMINISTRATION	120,000.00	13,650.13	62,120.76	57,879.24
PLAT REVIEW	60,000.00	6,896.00	35,532.28	24,467.72
COMMISSION MEETINGS	14,250.00	2,372.52	7,033.63	7,216.37
SURVEYS & STUDIES	10,000.00	2,618.00	7,742.00	2,258.00
WATER QUALITY/MONITORING	40,000.00	1,879.86	11,636.71	28,363.29
WATER QUANTITY	11,000.00	1,557.39	4,250.79	6,749.21
WATERSHED INSPECTIONS	7,000.00	861.78	3,175.94	3,824.06
ANNUAL FLOOD CONTROL INSPECTIONS	15,000.00	0.00	0.00	15,000.00
REVIEW MUNICIPAL PLANS	2,000.00	0.00	0.00	2,000.00
ENGINEERING TOTAL	279,250.00	29,835.68	131,492.11	147,757.89
<b>PLANNING</b>				
WATERSHED-WIDE SP-SWMM MODEL	0.00	488.00	488.00	(488.00)
WATERSHED-WIDE P8 WATER QUALITY MODEL	0.00	344.00	9,967.00	(9,967.00)
NEXT GENERATION PLAN	40,000.00	4,072.98	12,234.84	27,765.16
PLANNING TOTAL	40,000.00	4,904.98	22,689.84	17,310.16
ADMINISTRATOR	50,000.00	5,752.50	22,806.82	27,193.18
LEGAL COSTS	18,500.00	1,563.60	7,156.34	11,343.66
AUDIT, INSURANCE & BONDING	15,225.00	0.00	9,550.00	5,675.00
FINANCIAL MANAGEMENT	3,045.00	0.00	0.00	3,045.00
MEETING EXPENSES	2,750.00	171.10	1,292.18	1,457.82
SECRETARIAL SERVICES	40,000.00	2,331.71	16,485.41	23,514.59
PUBLICATIONS/ANNUAL REPORT	2,000.00	0.00	1,947.50	52.50
WEBSITE	2,500.00	0.00	201.00	2,299.00
PUBLIC COMMUNICATIONS	3,000.00	0.00	984.18	2,015.82
WOMP	17,000.00	402.46	5,139.59	11,860.41
EDUCATION AND PUBLIC OUTREACH	14,775.00	0.00	6,268.64	8,506.36
WATERSHED EDUCATION PARTNERSHIPS	15,000.00	0.00	3,500.00	11,500.00
EROSION/SEDIMENT (CHANNEL MAINT)	25,000.00	0.00	0.00	25,000.00
LONG TERM MAINTENANCE (moved to CF)	25,000.00	0.00	0.00	25,000.00
TMDL STUDIES (moved to CF)	10,000.00	0.00	0.00	10,000.00
GRAND TOTAL	563,045.00	44,962.03	229,513.61	333,531.39

	Current	YTD
Construct Exp	4,444.66	518,505.55
Total	49,406.69	748,019.16

Cash Balance 6/12/13			
Cash		1,449,124.40	
Investments:	RBC - Federal National Mortgage - 0.85% - Callable 5/23/14	1,004,798.78	
<b>Total Cash &amp; Investments</b>			<b>2,453,923.18</b>
Add:			
	Interest Revenue (Bank Charges)	(29.94)	
	Investment Interest		
	Tax Levy	494,438.66	
<b>Total Revenue</b>			<b>494,408.72</b>
Less:			
	CIP Projects Levied - Current Expenses - TABLE A	(1,673.22)	
	Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B	(2,771.44)	
<b>Total Current Expenses</b>			<b>(4,444.66)</b>
<b>Total Cash &amp; Investments On Hand</b>		<b>07/10/13</b>	<b><u>2,943,887.24</u></b>
Total Cash & Investments On Hand		2,943,887.24	
CIP Projects Levied - Budget Remaining - <b>TABLE A</b>		(3,056,873.04)	
<b>Closed Projects Remaining Balance</b>		(112,985.80)	
2013 Anticipated Tax Levy Revenue - <b>TABLE C</b>		494,829.94	
<b>Anticipated Closed Project Balance</b>		<b><u>381,844.14</u></b>	
Proposed & Future CIP Project Amount to be Levied - <b>TABLE B</b>		935,000.00	

**TABLE A - CIP PROJECTS LEVIED**

	Approved Budget	Current Expenses	2013 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget
Plymouth Creek Channel Restoration (2010 CR)	965,200.00	0.00	135.00	933,688.61	31,511.39
Main Stem Crystal to Regent (2010 CR)	636,100.00	0.00	673.50	296,973.53	339,126.47
Wisc Ave/Duluth Street-Crystal (2011 CR)	580,200.00	0.00	484,658.40	537,729.85	42,470.15
North Branch-Crystal (2011 CR-NB)	834,900.00	0.00	439.80	225,760.46	609,139.54
Wirth Lake Outlet Modification (WTH-4)(2012)	202,500.00	85.00	1,098.50	31,240.38	171,259.62
5/13 Increase Budget - \$22,500					
Main Stem Irving Ave to GV Road (2012 CR)	856,000.00	1,588.22	6,673.31	100,465.44	755,534.56
Lakeview Park Pond (ML-8) (2013)	196,000.00	0.00	2,461.95	7,539.50	188,460.50
Four Seasons Mall Area Water Quality Proj (NL-2)	990,000.00	0.00	0.00	70,629.19	919,370.81
	<b>5,260,900.00</b>	<b>1,673.22</b>	<b>496,140.46</b>	<b>2,204,026.96</b>	<b>3,056,873.04</b>

**TABLE B - PROPOSED & FUTURE CIP PROJECTS TO BE LEVIED**

	Approved Budget - To Be Levied	Current Expenses	2013 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget
<b>2014</b>					
Briarwood / Dawnview Nature Area (BC-7)	200,000.00	475.74	1,720.34	1,873.14	198,126.86
Schaper Pond Enhance Feasibility/Project (SL-1)(SL-3)	587,000.00	1,135.00	7,485.00	51,690.46	535,309.54
Twin Lake Alum Treatment Project (TW-2)	148,000.00	1,001.50	7,006.00	8,677.25	139,322.75
2014 Project Totals	<b>935,000.00</b>	<b>2,612.24</b>	<b>16,211.34</b>	<b>62,240.85</b>	<b>872,759.15</b>
<b>2015</b>					
Main Stem 10th to St Croix	0.00	159.20	248.75	248.75	(248.75)
2015 Project Totals	<b>0.00</b>	<b>159.20</b>	<b>248.75</b>	<b>248.75</b>	<b>(248.75)</b>
<b>Total Proposed &amp; Future CIP Projects to be Levied</b>	<b>935,000.00</b>	<b>2,771.44</b>	<b>16,460.09</b>	<b>62,489.60</b>	<b>872,510.40</b>

**TABLE C - TAX LEVY REVENUES**

	County Levy	Abatements / Adjustments	Adjusted Levy	Current Received	Year to Date Received	Inception to Date Received	Balance to be Collected	BCWMO Levy
2013 Tax Levy	986,000.00		986,000.00	491,170.06	491,170.06	491,170.06	494,829.94	
2012 Tax Levy	762,010.00		762,010.00	2,781.43	2,781.43	757,193.79	4,816.21	762,010.00
2011 Tax Levy	863,268.83	(2,871.91)	860,396.92	245.17	245.17	854,878.15	5,518.77	862,400.00
2010 Tax Levy	935,298.91	(4,927.05)	930,371.86	11.85	11.85	927,366.92	3,004.94	935,000.00
2009 Tax Levy	800,841.30	(8,054.68)	792,786.62	66.44	66.44	792,798.83	(12.21)	800,000.00
2008 Tax Levy	908,128.08	(4,357.22)	903,770.86	163.71	163.71	903,887.99	(117.13)	907,250.00
				<u>494,438.66</u>			<u>508,040.52</u>	

BCWMC Construction Account

Fiscal Year: February 1, 2013 through January 31, 2014

(UNAUDITED)

July 2013 Financial Report

**OTHER PROJECTS:**

	Approved Budget	Current Expenses / (Revenue)	2013 YTD Expenses / (Revenue)	INCEPTION To Date Expenses / (Revenue)	Remaining Budget
<b>TMDL Studies</b>					
TMDL Studies	135,000.00	0.00	1,815.00	107,765.15	27,234.85
Sweeney TMDL	119,000.00	0.00	0.00	212,222.86	
Less: MPCA Grant Revenue		0.00	0.00	(163,870.64)	70,647.78
<b>TOTAL TMDL Studies</b>	<u>254,000.00</u>	<u>0.00</u>	<u>1,815.00</u>	<u>156,117.37</u>	<u>97,882.63</u>
<b>Annual Flood Control Projects:</b>					
Flood Control Emergency Maintenance	500,000.00	0.00	0.00	0.00	500,000.00
Flood Control Long-Term Maintenance	573,373.00	0.00	0.00	13,566.33	559,806.67
Sweeney Lake Outlet (2012 FC-1)	250,000.00	0.00	4,090.00	135,857.24	114,142.76
<b>Annual Water Quality</b>					
Channel Maintenance Fund	250,000.00	0.00	0.00	59,718.10	190,281.90
<b>Total Other Projects</b>	<u>1,827,373.00</u>	<u>0.00</u>	<u>5,905.00</u>	<u>365,259.04</u>	<u>1,462,113.96</u>

Cash Balance 6/12/13 1,338,826.40

Add:

Transfer from GF 0.00

MPCA Grant-Sweeney Lk 0.00

Less:

Current (Expenses)/Revenue 0.00

Ending Cash Balance 07/10/13 1,338,826.40

Additional Capital Needed (123,288)

# Bassett Creek Construction Project Details

7/10/2013

## CIP Projects Levied

	Total CIP Projects Levied	2010 Plymouth Creek Channel Restoration (2010 CR)	2010 Main Stem Crystal to Regent (2010 CR)	2011 Wisc Ave (Duluth Str)- Crystal (GV)	2011 North Branch - Crystal (2011 CR-NB)	2012 Wirth Lake Outlet Modification (WTH-4)	2012 Main Stem Irving Ave to GV Road (Cedar Lk Rd) (2012CR)	2013 Lakeview Park Pond (ML-8)	2013 Four Seasons Mall Area Water Quality Project (NL-2)
Original Budget	5,238,400	965,200	636,100	580,200	834,900	180,000	856,000	196,000	990,000
Added to Budget	22,500					22,500			
Expenditures:									
Feb 2004 - Jan 2005	637.50							637.50	
Feb 2005 - Jan 2006									
Feb 2006 - Jan 2007									
Feb 2007 - Jan 2008									
Feb 2008 - Jan 2009	20,954.25	20,954.25							
Feb 2009 - Jan 2010	20,889.00	9,319.95	11,569.05						
Feb 2010 - Jan 2011	114,036.63	30,887.00	11,590.80	34,803.97	31,522.86	2,910.00	1,720.00		602.00
Feb 2011 - Jan 2012	1,183,414.67	825,014.32	235,316.17	9,109.50	10,445.00	22,319.34	71,647.97	1,476.00	8,086.37
Feb 2012 - Jan 2013	367,954.45	47,378.09	37,824.01	9,157.98	183,352.80	4,912.54	20,424.16	2,964.05	61,940.82
Feb 2013 - Jan 2014	496,140.46	135.00	673.50	484,658.40	439.80	1,098.50	6,673.31	2,461.95	
Total Expenditures:	2,204,026.96	933,688.61	296,973.53	537,729.85	225,760.46	31,240.38	100,465.44	7,539.50	70,629.19
Project Balance	3,056,873.04	31,511.39	339,126.47	42,470.15	609,139.54	171,259.62	755,534.56	188,460.50	919,370.81

	Total CIP Projects Levied	2010 Plymouth Creek Channel Restoration (2010 CR)	2010 Main Stem Crystal to Regent (2010 CR)	2011 Wisc Ave (Duluth Str)- Crystal (GV)	2011 North Branch - Crystal (2011 CR-NB)	2012 Wirth Lake Outlet Modification (WTH-4)	2012 Main Stem Irving Ave to GV Road (Cedar Lk Rd) (2012CR)	2013 Lakeview Park Pond (ML-8)	2013 Four Seasons Mall Area Water Quality Project (NL-2)
Project Totals By Vendor									
Barr Engineering	298,446.67	47,863.10	31,435.50	48,811.20	36,727.71	25,776.69	82,791.48	6,338.95	18,702.04
Kennedy & Graven	13,762.40	2,120.10	2,435.25	1,052.50	832.45	2,225.15	1,862.25	1,200.55	2,034.15
City of Golden Valley	738,980.48		255,131.83	483,848.65					
City of Plymouth	911,036.86	861,143.86							49,893.00
City of Crystal	177,815.30				177,815.30				
Com of Trans									
S E H									
Misc									
2.5% Admin Transfer	63,985.25	22,561.55	7,970.95	4,017.50	10,385.00	3,238.54	15,811.71		
Total Expenditures	2,204,026.96	933,688.61	296,973.53	537,729.85	225,760.46	31,240.38	100,465.44	7,539.50	70,629.19

	Total CIP Projects Levied	2010 Plymouth Creek Channel Restoration (2010 CR)	2010 Main Stem Crystal to Regent (2010 CR)	2011 Wisc Ave (Duluth Str)- Crystal (GV)	2011 North Branch - Crystal (2011 CR-NB)	2012 Wirth Lake Outlet Modification (WTH-4)	2012 Main Stem Irving Ave to GV Road (Cedar Lk Rd) (2012CR)	2013 Lakeview Park Pond (ML-8)	2013 Four Seasons Mall Area Water Quality Project (NL-2)
Levy/Grant Details									
2009/2010 Levy	935,000	902,462	32,538						
2010/2011 Levy	862,400		286,300	160,700	415,400				
2011/2012 Levy	762,010					83,111	678,899		
2012/2013 Levy	986,000							162,000	824,000
2013/2014 Levy									
Construction Fund Balance	1,302,990	62,738	2,262	419,500	419,500	21,889	177,101	34,000	166,000
BWSR Grant- BCWMO	652,500	212,250	147,750			75,000	217,500		
Total Levy/Grants	5,500,900	1,177,450	468,850	580,200	834,900	180,000	1,073,500	196,000	990,000
BWSR Grants Received		BWSR Final 4/8/13	BWSR Final 4/8/13			67,500	108,750		

		Bdgt	Exp	Balance
West Medicine	Project closed 6/30/12	1,100,000.00	744,633.58	355,366.42
Twin Lake	Project closed 4/11/13	140,000.00	5,724.35	134,275.65

## Bassett Creek Construction Project Details

Proposed & Future CIP Projects (to be Levied)					
	Total Proposed & Future CIP Projects (to be Levied)	2014 Briarwood / Dawnview Water Quality Improve Proj (BC-7)	2014 Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	2014 Twin Lake In-Lake ULUM Treatment Project (TW-2)	2015 Main Stem - 10th Ave to St Croix
Original Budget	385,000	200,000	37,000	148,000	
Added to Budget	550,000		550,000		
Expenditures:					
Feb 2004 - Jan 2005					
Feb 2005 - Jan 2006					
Feb 2006 - Jan 2007					
Feb 2007 - Jan 2008					
Feb 2008 - Jan 2009					
Feb 2009 - Jan 2010					
Feb 2010 - Jan 2011					
Feb 2011 - Jan 2012	39,632.49		39,632.49		
Feb 2012 - Jan 2013	6,397.02	152.80	4,572.97	1,671.25	
Feb 2013 - Jan 2014	16,460.09	1,720.34	7,485.00	7,006.00	248.75
<b>Total Expenditures:</b>	<b>62,489.60</b>	<b>1,873.14</b>	<b>51,690.46</b>	<b>8,677.25</b>	<b>248.75</b>
<b>Project Balance</b>	<b>872,510.40</b>	<b>198,126.86</b>	<b>535,309.54</b>	<b>139,322.75</b>	<b>(248.75)</b>

	Total Proposed & Future CIP Projects (to be Levied)	2014 Briarwood / Dawnview Water Quality Improve Proj (BC-7)	2014 Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	2014 Twin Lake In-Lake ULUM Treatment Project (TW-2)	2015 Main Stem - 10th Ave to St Croix
<b>Project Totals By Vendor</b>					
Barr Engineering	61,727.50	1,541.24	51,652.26	8,534.00	
Kennedy & Graven	762.10	331.90	38.20	143.25	248.75
City of Golden Valley					
City of Plymouth					
City of Crystal					
Com of Trans					
S E H					
Misc					
2.5% Admin Transfer					
<b>Total Expenditures</b>	<b>62,489.60</b>	<b>1,873.14</b>	<b>51,690.46</b>	<b>8,677.25</b>	<b>248.75</b>

	Total Proposed & Future CIP Projects (to be Levied)	2014 Briarwood / Dawnview Water Quality Improve Proj (BC-7)	2014 Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	2014 Twin Lake In-Lake ULUM Treatment Project (TW-2)	2015 Main Stem - 10th Ave to St Croix
<b>Levy/Grant Details</b>					
2009/2010 Levy					
2010/2011 Levy					
2011/2012 Levy					
2012/2013 Levy					
2013/2014 Levy					
Construction Fund Balance					
BWSR Grant- BCWMO					
<b>Total Levy/Grants</b>					

BWSR Grants Received



Other Projects						
Total					2012	
Other Projects	TMDL Studies	Sweeney Lake TMDL	Flood Control Emergency Maintenance	Flood Control Long-Term Maintenance	Sweeney Lake Outlet (FC-1)	Channel Maintenance
1,647,373.00	105,000.00	119,000.00	500,000.00	748,373.00 (250,000.00)	250,000.00	175,000.00
163,870.64		163,870.64				
180,000.00	30,000.00			75,000.00		75,000.00
6,949.19				3,954.44		2,994.75
10,249.09	637.20			9,611.89		
113,141.44	23,486.95	89,654.49				
117,455.33	31,590.12	47,041.86				38,823.35
76,184.64	31,868.63	44,316.01				
45,375.25	15,005.25	25,920.00			4,450.00	
12,656.65	168.00	5,290.50			7,198.15	
21,094.00	3,194.00					17,900.00
126,024.09	1,815.00				124,209.09	
529,129.68	107,765.15	212,222.86		13,566.33	135,857.24	59,718.10
1,462,113.96	27,234.85	70,647.78	500,000.00	559,806.67	114,142.76	190,281.90

MPCA Grant  
From GF

Feb 2004 - Jan 2005  
Feb 2005 - Jan 2006  
Feb 2006 - Jan 2007  
Feb 2007 - Jan 2008  
Feb 2008 - Jan 2009  
Feb 2009 - Jan 2010  
Feb 2010 - Jan 2011  
Feb 2011 - Jan 2012  
Feb 2012 - Jan 2013  
Feb 2013 - Jan 2014

Project Balance

7,270,773.00  
572,500.00  
163,870.64  
180,000.00

637.50  
6,949.19  
10,249.09  
113,141.44  
138,409.58  
97,073.64  
159,411.88  
1,235,703.81  
395,445.47  
638,624.64

2.795.646,24

5,391,497.40

Total					2012	
Other Projects	TMDL Studies	Sweeney Lake TMDL	Flood Control Emergency Maintenance	Flood Control Long-Term Maintenance	Sweeney Lake Outlet (FC-1)	Channel Maintenance
223,663.19	104,888.70	94,948.17		9,549.32	14,277.00	
5,907.54	1,164.30	2,902.59		24.75	1,461.15	354.75
140,659.09					120,119.09	20,540.00
38,823.35						38,823.35
3,992.26				3,992.26		
101,598.10		101,598.10				
14,486.15	1,712.15	12,774.00				
529,129.68	107,765.15	212,222.86		13,566.33	135,857.24	59,718.10

Barr Engineering  
Kennedy & Graven  
City of Golden Valley  
City of Plymouth  
City of Crystal  
Com of Trans  
S E H  
Misc  
2.5% Admin Transfer

### Total Expenditures

583,837.36  
20,432.04  
879,639.57  
949,860.21  
177,815.30  
3,992.26  
101,598.10  
14,486.15  
63,985.25

2,795,646.24

Total					2012	
Other Projects	TMDL Studies	Sweeney Lake TMDL	Flood Control Emergency Maintenance	Flood Control Long-Term Maintenance	Sweeney Lake Outlet (FC-1)	Channel Maintenance
163,870.64		163,870.64				
60,000.00	10,000			25,000		25,000
60,000.00	10,000			25,000		25,000
60,000.00	10,000			25,000		25,000
343,870.64	30,000	163,870.64		75,000		75,000

**MPCA Grant**

2009/2010 Levy	
2010/2011 Levy	2010/2011
2011/2012 Levy	2011/2012
2012/2013 Levy	2012/2013
2013/2014 Levy	
Construction Fund Balance 2013/2014	
BWSR Grant- BCWMO	

Total Levy/Grants

935,000  
922,400  
822,010  
1.046.000

1,302,990  
652,500

5,680,900

BWSR Grants Received

550 South Snelling Ave  
St. Paul, MN 55116



Item 5A.  
BCWMC 7-18-13

651.690.9602  
mccomas@pclink.com

## Quote for Fish Surveys in Sweeney Lake and Twin Lake

Date: July 8, 2013

To: Bassett Creek Watershed Management Commission  
From: Steve McComas, Blue Water Science

**Trapnet Fish Survey for Sweeney and Twin Lakes:** To assess the fish population of Sweeney and Twin Lakes, trapnet surveys will be employed. We will use standard sized trapnets (4 by 6 foot frames) deployed for three days and sampled for two days in Sweeney and Twin Lakes. We will compare the number of fish caught per net to previous surveys and to regional averages. In addition, the survey will also allow us to look at the size distribution of the fish species which will give use insight to fish ages, spawning success, and winterkill probabilities.

With these fish surveys we should be able to gage the potential impact of fish on water quality and prepare recommendations for fish management actions.

**Project Activities:** Set trapnets on the first day and then sample the nets for the next two days. Count and record fish lengths daily and prepare a fish survey report for each lake.

Lake	Minnesota Protected Water ID	Size (ac)	Number of Nets to Be Set	Number of Days
Sweeney	27-003500	67	5	1 day to set and 2 days to sample
Twin	27-003502	19	3	1 day to set and 2 days to sample

**Total Quote for both Sweeney and Twin Lakes: \$3,900**



A typical trapnet.



Item 5B. Part 1  
BCWMC 7-18-13

June 18, 2013

Ginny Black, Chair  
Bassett Creek Watershed Management Commission  
3400 Plymouth Boulevard  
Plymouth, MN 55447

Subject: Request for Dispute Resolution

Dear Ms. Black:

In a letter dated August 22, 2012, attached, the city of New Hope, along with Golden Valley, requested the Bassett Creek Watershed Management Commission (BCWMC) provide mediation for dispute resolution for a storm water drainage issue involving the cities of Crystal, New Hope and Golden Valley. This dispute involves recurrent flooding on Terra Linda Drive, Medicine Lake Road, Rhode Island Avenue, and the DeCola Ponds area.

Subsequently both cities asked the BCWMC to place the mediation request on hold so additional discussions could occur between the three cities regarding this issue. Unfortunately, these discussions have been unsuccessful and no progress has been achieved regarding a second phase of the drainage study for the area.

As outlined in the August 22, 2012 letter, the dispute resolution process outlined in the BCWMC Watershed Management Plan calls for the chair or vice chair to appoint three commissioners or alternate commissioners from communities not involved in the dispute to provide mediation. The city of New Hope is therefore requesting the BCMWC begin the process of mediation with the intent of resolving this issue.

Please feel free to contact Chris Long, New Hope Consulting Engineer, Stantec Engineering, at 651-604-4808, or Guy Johnson, New Hope Director of Public Works 763-592-6766 if you have any questions regarding this matter. Additionally, I would appreciate it if you would keep me informed regarding the status of this request. Thank you for your cooperation and assistance.

Kirk McDonald  
City Manager

## CITY OF NEW HOPE

4401 Xylon Avenue North • New Hope, Minnesota 55428-4898 • [www.ci.new-hope.mn.us](http://www.ci.new-hope.mn.us)  
City Hall: 763-531-5100 • Police (non-emergency): 763-531-5170 • Public Works: 763-592-6777 • TDD: 763-531-5109  
City Hall Fax: 763-531-5136 • Police Fax: 763-531-5174 • Public Works Fax: 763-592-6776

cc: New Hope City Council  
Guy Johnson, Director of Public Works  
Tom Burt, City Manager, City of Golden Valley  
Jeannine Clancy, City of Golden Valley Director of Public Works  
Chris Long, PE, City Engineer  
Jeff Oliver, PE, City of Golden Valley City Engineer  
Pat Crough, City of New Hope BCWMC Alternate Commissioner  
Anne Norris, City Manager, City of Crystal  
Tom Mathisen, City Engineer, City of Crystal



August 22, 2012

Ginny Black, Chair  
Bassett Creek Watershed Management Commission  
3400 Plymouth Boulevard  
Plymouth, MN 55447

Subject: Request for Dispute Resolution

Dear Ms. Black:

Together the cities of New Hope and Golden Valley are requesting the assistance of the Bassett Creek Watershed Management Commission (BCWMC) in providing mediation services to help resolve a cost sharing disagreement with the city of Crystal. The city of New Hope approved a cooperative agreement that included cost sharing based on tributary watershed for a Phase 2 study of flooding in the areas of Terra Linda Drive and Rosalyn Court in New Hope; and the intersection of Rhode Island and Medicine Lake Road and DeCola Ponds in Golden Valley (see attached maps).

As you may be aware, flooding of these areas has been a concern since 1978 when the flooding first occurred as a result of a severe storm. These areas have been at risk for flooding since development of the two communities and have experienced flooding a number of times over the years. In 2006, in response to flooding in May of 2006, the city of New Hope developed a report of local flood improvements and installed an overland concrete swale to better control potential flood waters. This swale has improved, but not eliminated, the potential for flooding in the Terra Linda Drive area.

The Barr Engineering Company completed a flood mitigation (Phase 1) study of the DeCola Ponds area and the area adjacent to Medicine Lake Road for Golden Valley in 2012. Along with identifying a number of issues, the tributary watershed, and possible alternative measures to address flooding in these areas, the study also recommended additional study of these alternatives, including the overall benefit and cost effectiveness of each potential solution. The city of New Hope took part in several meetings with the cities of Golden Valley and Crystal to discuss the results of the Phase 1 study as well as to identify the scope of the recommended Phase 2 study and possible cost sharing distribution based upon each city's watershed contribution to the area. Based on those discussions and the percentage of tributary watershed, Golden Valley would be responsible for 50% of the anticipated \$100,000 cost and the cities of New Hope and Crystal would be responsible for 25% each.

## CITY OF NEW HOPE

4401 Xylon Avenue North • New Hope, Minnesota 55428-4898 • [www.ci.new-hope.mn.us](http://www.ci.new-hope.mn.us)  
City Hall: 763-531-5100 • Police (non-emergency): 763-531-5170 • Public Works: 763-592-6777 • TDD: 763-531-5109  
City Hall Fax: 763-531-5136 • Police Fax: 763-531-5174 • Public Works Fax: 763-592-6776



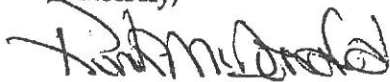
A meeting with the three City Councils occurred in the summer of 2012, where the Decola Pond flooding was discussed. After presenting and discussing the Phase 1 study and the proposed Phase 2 study at a three city joint Council meeting this past May, a cooperative agreement was developed outlining the scope of the Phase 2 study and the cost sharing. Unfortunately, the Crystal City Council voted not to enter into the cooperative agreement with the cities of New Hope and Golden Valley to conduct the Phase 2 study. At this time the city of Crystal believes they are not responsible for any portion of the Phase 2 study cost, or for any portion of potential projects in the future that may help alleviate the flooding issues in the four areas described.

Section 12.1.1.3 Dispute Resolution Process from the BCWMC Management plan states: "If watershed management disputes should arise between the BCWMC member cities, these disputes may be referred to the BCWMC for resolution." As previously stated, we are requesting that the BCWMC mediate the proposed cost sharing for a Phase 2 study based upon the cities storm water contribution to the area. We request that three BCWMC commissioners or alternate commissioners not involved with the dispute, be appointed to evaluate the fairness of the cost sharing.

Based upon the results of the Phase 1 study which, hopefully, will be clarified if a Phase 2 study comes to fruition, the city of New Hope requests consideration of potential future projects aimed at helping alleviate the flooding potential in the DeCola Ponds area also be included in the BCWMC future capital improvement program.

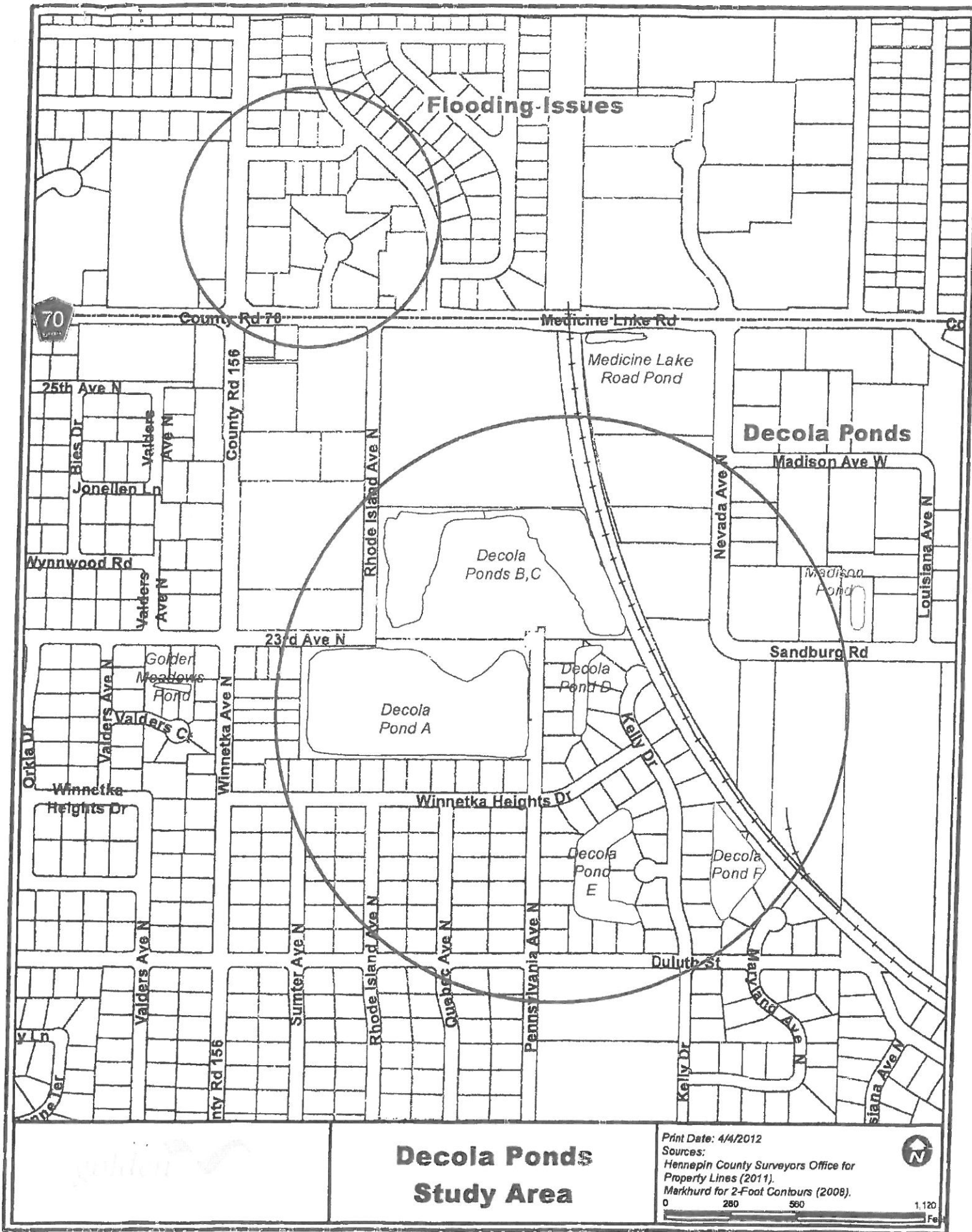
Please feel free to contact Chris Long, New Hope Consulting Engineer, Stantec Engineering, at (651) 604-4808, or Guy Johnson, New Hope Director of Public Works (763) 592-6766 if you have any questions regarding this matter.

Sincerely,



Kirk McDonald  
City Manager

cc: New Hope City Council  
Guy Johnson, Director of Public Works  
Tom Burt, City Manager, City of Golden Valley  
Jeanine Clancy, City of Golden Valley Director of Public Works  
Chris Long, PE, City Engineer  
Jeff Oliver, PE, City of Golden Valley City Engineer  
Pat Crough, City of New Hope BCWMC Alternate Commissioner  
Anne Norris, City Manager, City of Crystal  
Tom Mathisen, City Engineer, City of Crystal



# Decola Ponds Study Area

Print Date: 4/4/2012  
Sources:  
Hennepin County Surveyors Office for  
Property Lines (2011).  
Markhurd for 2-Foot Contours (2008).

0 280 560 1,120 Feet



June 17, 2013

Ginny Black, Chair  
Bassett Creek Watershed Management Commission  
3400 Plymouth Boulevard  
Plymouth, MN 55447

Subject: Request for Dispute Resolution

Dear Chair Black:

In a letter dated August 20, 2012 (attached), The City of Golden Valley requested that the Bassett Creek Watershed Management Commission (BCWMC) provide mediation for dispute resolution for a storm water drainage issue involving the Cities of Crystal, New Hope and Golden Valley. This dispute involves recurrent flooding on Terra Linda Drive, Medicine Lake Road, Rhode Island Avenue, and the DeCola Ponds area.

Subsequently, the City of Golden Valley asked the BCWMC to place the mediation request on hold so additional discussions could occur between the three cities regarding this issue. Unfortunately, these discussions have been unsuccessful and no progress has been achieved regarding a second phase of the drainage study for the area.

As outlined in the August 20, 2012 letter, the dispute resolution process outlined in the BCWMC Watershed Management Plan calls for the chair or vice chair to appoint three commissioners or alternate commissioners from communities not involved in the dispute to provide mediation. The City of Golden Valley is therefore requesting that the BCMWC begin the process of mediation with the intent of resolving this issue.

Please feel free to contact Jeff Oliver, Golden Valley City Engineer (763.593.8034) or Jeannine Clancy, Golden Valley Director of Public Works (763.593.8035), if you have any questions regarding this matter.

Sincerely,

Thomas D. Burt  
City Manager

Enclosure

C: Golden Valley City Council  
Jeannine Clancy, Director of Public Works  
Jeff Oliver, PE, City Engineer  
Stacy Hoschka, Golden Valley BCWMC Commissioner  
David Hanson, Golden Valley BCWMC Alternate Commissioner  
Kirk McDonald, City of New Hope City Manager  
Guy Johnson, City of New Hope Director of Public Works  
Anne Norris, City of Crystal City Manager  
Tom Mathisen, City of Crystal City Engineer



7800 Golden Valley Road  
Golden Valley, MN 55427

August 20, 2012

Ginny Black, Chair  
Bassett Creek Watershed Management Commission  
3400 Plymouth Boulevard  
Plymouth, MN 55447

Subject: Request for Dispute Resolution

Dear Chair Black:

The City of Golden Valley requests assistance from the BCWMC in resolving an intercommunity stormwater runoff dispute between the cities of New Hope and Golden Valley with the City of Crystal.

The Bassett Creek Watershed Management Commission (BCWMC) Watershed Management Plan, September 2004 (Plan), Section 1.2 Purpose and Goals of BCWMC, Section 1.2.2 BCWMC Goals, (Page 1.3) states:

...The goals are to:

- Provide leadership and assist member cities with coordination of intercommunity stormwater runoff planning and design.

Furthermore, *Section 12.1.1.3 Dispute Resolution Process*, outlines the process for resolution of drainage issues between member cities. The contested intercommunity stormwater runoff issue involves runoff from all three communities that results in flooding near the intersection of Winnetka Avenue and Medicine Lake Road, as well as in the DeCola Ponds area located downstream of this intersection in the City of Golden Valley (see attached maps).

**Background:**

In recent years, flooding has occurred along and near Winnetka Avenue and Medicine Lake Road following significant rainfall events. These rainfall events resulted in flooding near Rosalyn Court, Terra Linda Drive, and the low point on Medicine Lake Road, which included flooding of the VFW building at the corner of Medicine Lake Road and Rhode Island Avenue. This area of concern is located upstream of the DeCola Ponds in Golden Valley. In 2006, the City of New Hope prepared a report for local flood improvements in Terra Linda area. Subsequent work by the City of New Hope resolved flooding problems for some homes in this area of New Hope, but flooding problems remain in Golden Valley and New Hope. The

development of the DeCola Ponds subdivisions occurred in the mid-1960s and early 1970s. In 1978, a severe storm over the tributary watershed in the cities of Crystal, New Hope and Golden Valley resulted in significant flood damage to homes surrounding the ponds, with most of the damage occurring at the downstream ponds. Flooding has also occurred several times since 1978.

In 1984, a settlement agreement between the City of Golden Valley and the residents around DeCola Ponds resulted in the installation of an outlet valve at the downstream pond that is controlled by the homeowners association. This valve allows the homeowners to draw down the normal water level of the pond in advance of storms to allow for additional storage of storm water runoff. However, even with the ability to control water levels, flooding has still occurred adjacent to the ponds. Under this agreement, the City of Golden Valley is responsible for maintenance of the ponds, including dredging of the ponds as needed.

**Recent Study:**

In January 2011, the City of Golden Valley retained the services of Barr Engineering Company to perform a flood mitigation study in the vicinity of DeCola Ponds, and in the area adjacent to Medicine Lake Road. This study identified a number of alternative measures to address the flooding in these locations. However, the study also recommended additional study of these alternatives and the consideration of other alternatives in the watershed, including the overall benefit and cost-effectiveness of each alternate solution.

During the study process, the cities of New Hope, Golden Valley and Crystal met several times to discuss the progress and findings of the study. These discussions identified the scope of the Phase 2 study, including cost sharing based upon the contributing area to the DeCola Ponds, the most downstream point in the sub-watershed. This issue was then discussed at a meeting of the three City Councils during the summer of 2012. Based upon the discussion at the joint City Council meeting, a cooperative agreement outlining the scope of the Phase 2 study and the cost sharing was developed and approved by the New Hope City Council. The Crystal City Council voted not to enter into the cooperative agreement for the Phase 2 study. Because Golden Valley was identified as the contracting agency, its City Council would consider the Cooperative Agreement and a contract with Barr to perform the Phase 2 study following approval by New Hope and Crystal.

As discussed above, the proposed cooperative agreement included cost sharing based upon tributary watershed. This cost sharing resulted in Golden Valley being responsible for approximately 50% of the study cost, with New Hope and Crystal each responsible for approximately 25% of the study cost. The cost to perform the Phase 2 study is approximately \$100,000. The City of Golden Valley funded the cost of the Phase 1 study, which cost approximately \$70,000.



Chair Ginny Black  
August 20, 2012  
Page 3

**Request for Dispute Resolution:**

Based upon the above discussion, the City of Golden Valley requests that the BCWMC mediate the proposed cost split for the proposed Phase 2 study. The Cities of Golden Valley and New Hope are willing to participate in the study costs based upon contributing watershed areas, while the City of Crystal has stated that it does not feel that it should be responsible for any of the study costs, or for any potential future costs to be determined to resolve the flooding issues.

The dispute resolution process outlined in the BCWMC Plan calls for the BCWMC chair (or vice chair) to appoint three commissioners or alternates from member cities who are not parties to the dispute. Golden Valley requests that the BCWMC follow this process and appoint three commissioners to evaluate the reasonableness of the proposed cost sharing for the Phase 2 study.

Please feel free to contact Jeff Oliver, Golden Valley City Engineer (763.593.8034) or Jeannine Clancy, Golden Valley Director of Public Works (763.593.8035) should you have any questions regarding this matter.

Sincerely,



Thomas D. Burt  
City Manager

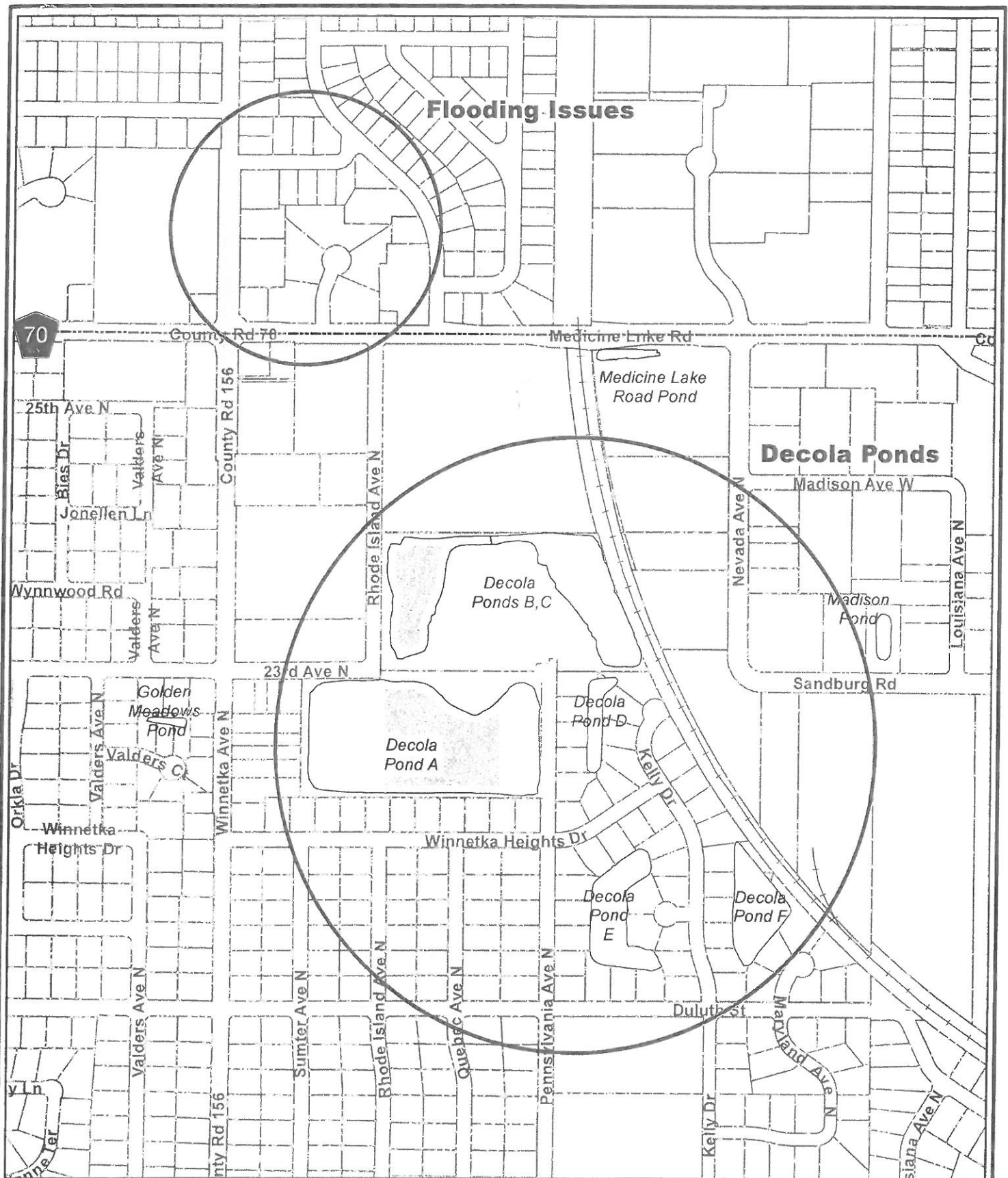
Enclosures

C: Golden Valley City Council  
Jeannine Clancy, Director of Public Works  
Jeff Oliver, PE, City Engineer  
Stacy Hoschka, Golden Valley BCWMC Commissioner  
David Hanson, Golden Valley BCWMC Alternate Commissioner  
Kirk McDonald, City of New Hope City Manager  
Guy Johnson, City of New Hope Director of Public Works  
Anne Norris, City of Crystal City Manager  
Tom Mathisen, City of Crystal City Engineer



## Flooding Issues

## Decola Ponds



## Decola Ponds Study Area

Print Date: 4/4/2012

Sources:

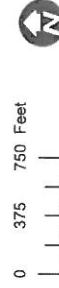
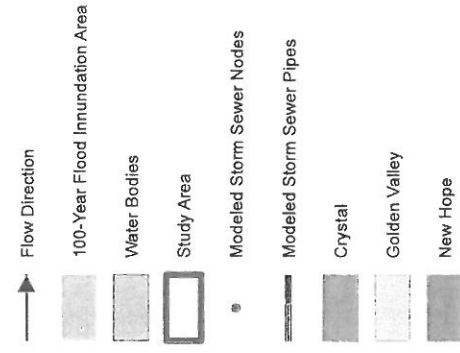
Hennepin County Surveyors Office for Property Lines (2011).

Markhurd for 2-Foot Contours (2008).

0 280 560

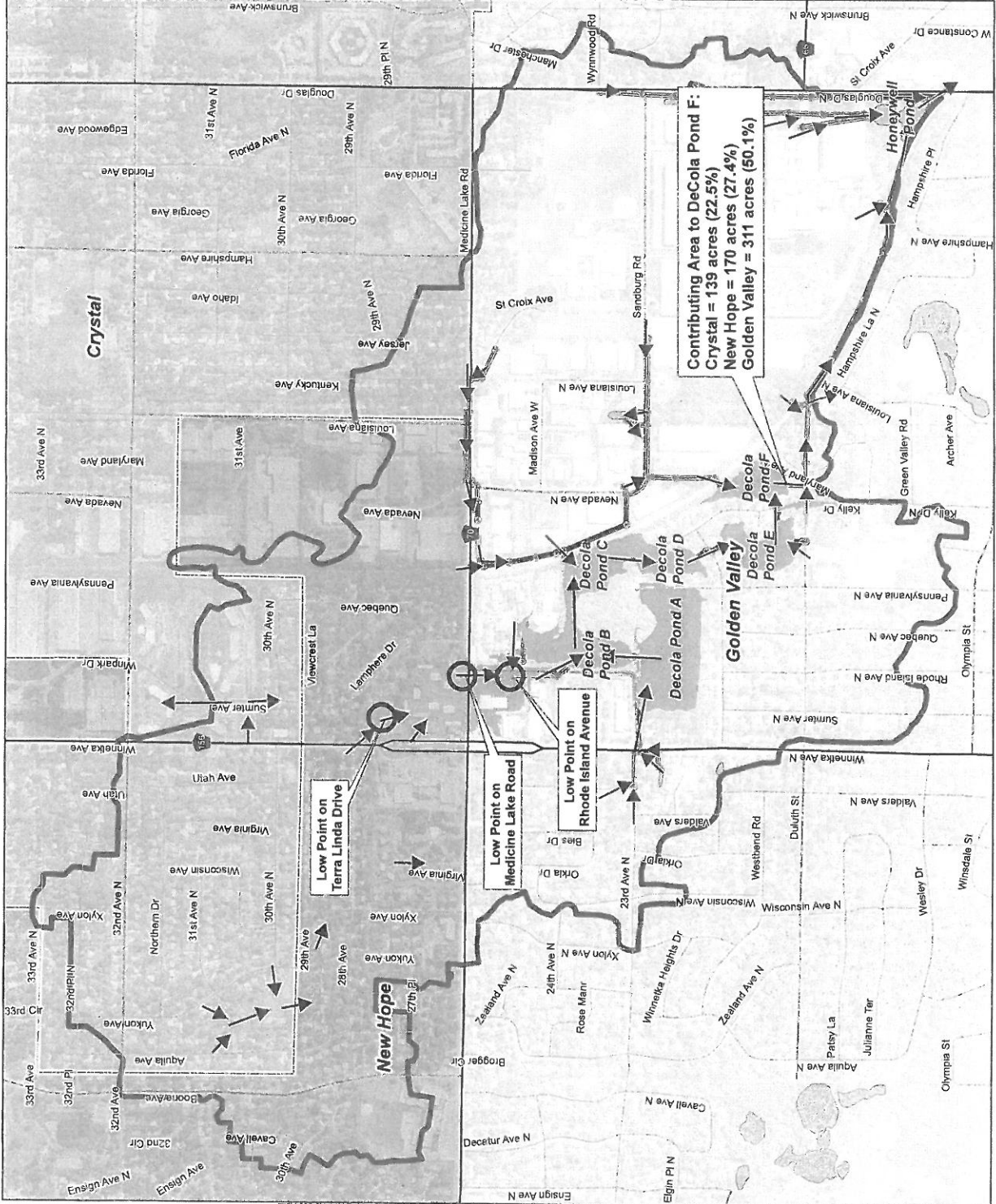
1,120 Feet





Figure

Contributing Areas to Terra Linda,  
Low Point on Medicine Lake Road,  
and the DeCola Ponds





4141 Douglas Drive North • Crystal, Minnesota 55422-1696

Tel: (763) 531-1000 • Fax: (763) 531-1188 • [www.ci.crystal.mn.us](http://www.ci.crystal.mn.us)

May 8, 2013

Mr. Tom Burt  
City Manager  
City of Golden Valley  
7800 Golden Valley Road  
Golden Valley, MN 55427

Dear Tom:

At its May 7 work session, the Crystal City Council discussed the proposed DeCola Ponds/Winnetka & Medicine Lake Road study. The City Council appreciates and values our relationships with our neighbors and wants to maintain our effective working relationship. However, the Council is concerned about:

- The overall cost of the proposed study and proposed scope – could the study be scaled down to be less expensive;
- The true burden that should be attributed to Crystal in that the DeCola ponds issue appears to be a design issue that could have been prevented whereas the Winnetka/Medicine Lake Road intersection issue is a greater community and public safety issue; and
- If Crystal participates, the obligation that creates for Crystal to participate in future remediation.

Additionally, the Crystal City Council is committed to long-term improvements which will address storm water run-off to this area. When the Crystal streets contributing water to this area are reconstructed (not anticipated for 20+ years), it is the intention to include rain garden options as well as other design considerations.

Based on these concerns and in recognition of Crystal's commitment to future storm water management work in future street reconstruction projects, the Crystal City Council is prepared to participate in the study with a contribution of \$11,000 towards the total cost of the proposed study.

Thanks for your patience and consideration and as always, please call or email with any questions.

Yours truly,

  
Anne L. Norris  
City Manager

Cc: Tom Mathisen, Public Works Director  
Crystal Mayor and City Council  
Kirk McDonald, New Hope City Manager



## Memorandum

DATE: April 26, 2013

TO: Mayor and City Council

FROM: Anne Norris, City Manager  
Tom Mathisen, Public Works Director

SUBJECT: Study Regarding DeCola Ponds/Winnetka Avenue and Medicine Lake Road Flooding

---

There are flooding issues in the DeCola Ponds and Winnetka Avenue/Medicine Lake Road area in Golden Valley and New Hope. Several years ago Golden Valley hired Barr Engineering to complete a study of possible engineering/public works solutions to reduce or temper flooding in that area. The study report contained several public works solutions which are cost-prohibitive and so, not realistic. Further discussions between Golden Valley and Barr Engineering led to the conclusion the flooding issues needed to be approached as a land use issue which would involve working with neighbors Crystal and New Hope.

Barr Engineering is prepared to do a study of the land use issues, the cost of which would be shared among the three cities (Crystal, Golden Valley and New Hope). Allocation of study costs would be based on the amount of property each city has in the watershed area to be studied:

Crystal	22.5% of area
Golden Valley	50.1% of area
New Hope	27.4% of area

Since Crystal is at the proverbial top of the hill, we do contribute water to this area. In the mid-1990's when the Crystal storm sewer work was done as part of those street reconstruction projects, the idea was primarily to get storm water off roads and driveways as quickly as possible. This doesn't necessarily address managing large amounts of storm water that go to Golden Valley (or anywhere else) with such tools as retention ponds. The only retention pond that Crystal built in this area as is the small ponding area that was created in Yunkers Park.

According to Barr, there are 620 acres contributing to the DeCola ponds flooding issue and the contributors, by land area, are:

Crystal:	22.5%	139 acres
New Hope:	27.4%	170 acres
Golden Valley	50.1%	311 acres

The proposed study would evaluate:

- Reducing impervious surfaces;
- Options for absorbing more water before it gets to Medicine Lake Road and DeCola Ponds area;
- Long term land uses;
- More green space;
- Reduced road widths and parking areas; and
- Acquiring properties that may currently be impacted by flooding.

By participating in the proposed study, there is absolutely no commitment by any of the cities for implementation of any of the recommendations. The proposed study is estimated to cost \$120,000 - \$140,000; Crystal's share would be \$26,000 - \$30,000 and would be paid out of the storm drain utility fund. Attached is the proposed cooperative agreement for the proposed study and a map showing the watershed for the DeCola Ponds area.

Golden Valley and New Hope would like to proceed with the study, including Crystal as a willing participant. If Crystal isn't a willing participant, Golden Valley and New Hope are prepared to request mediation of the issue as provided for in the Bassett Creek Watershed Joint Powers Agreement.

The Council should discuss participation in this project at its May 7 work session.

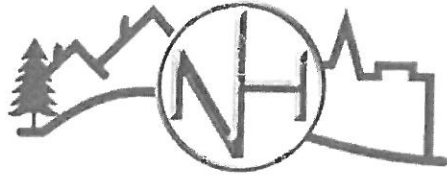
### **12.1.1.3 Dispute Resolution Process**

If watershed management disputes should arise between the BCWMC member cities, these disputes may be referred to the BCWMC for resolution. Although the BCWMC's joint powers agreement does not specifically give the BCWMC the power to decide such disputes, the BCWMC will hear the disputes and endeavor to reach a mutually agreeable solution whenever possible. Under the joint powers agreement, the BCWMC's findings and recommendations would not be binding unless the parties to the dispute wish to make a prior agreement to that effect. The BCWMC has established the following policies regarding the procedures for the hearing of such disputes:

1. The BCWMC will mediate inter-community disputes relating to watershed management problems within the Bassett Creek watershed.
2. Disputes will be referred to a committee of three BCWMC members or alternate members from member communities who are not parties to the dispute. Members will be appointed by the BCWMC chair or vice-chair, which will also appoint one of the three members as the chair of the committee.
3. The committee chair will call a meeting where each party to the dispute will be allowed to present its suggestions to resolve the dispute.
4. The committee may consult with the members of the BCWMC staff and will prepare findings and recommendations to resolve the dispute.
5. The committee's recommendation will be presented to the full BCWMC, which may accept, reject, or amend the recommendation before forwarding the findings and recommendations to the parties of the dispute.



# Memorandum



**To:** New Hope City Council  
**From:** Kirk McDonald, City Manager  
**Date:** July 10, 2013  
**Subject:** Medicine Lake Road and DeCola Ponds Flood Mitigation Study

---

Listed below is a brief recap of the events that have taken place over the last year regarding this issue.

1. Golden Valley completed initial study with Barr Engineering.
2. Study presented at May 7, 2012, joint meeting of three city councils.

Recommendation to proceed with cooperative agreement for Phase II study, with cost share based on percentage of area in each city that is tributary to the area, as follows:

Golden Valley	50%	\$58,000
New Hope	27%	31,784
Crystal	23%	<u>26,216</u>
Total		\$116,000

3. New Hope approved cooperative agreement on July 23, 2012.
4. Crystal did not approve agreement.
5. New Hope, along with Golden Valley, submitted request to Bassett Creek Watershed for dispute resolution on August 22, 2012.
6. Crystal requested a meeting between the mayors, city managers and public works staff to try and work out differences before the dispute resolution proceeded. The three cities met on September 27, 2012, at Golden Valley City Hall.
7. Crystal City Council discussed matter at their October 11 work session. They requested that study share costs potentially be based on runoff volume from each city. Barr Engineering performed that analysis with the following results:



	<u>New calculation</u>	<u>Original calculation</u>
Golden Valley	46%	50%
New Hope	31%	27%
Crystal	23%	23%

Based on this type of calculation Crystal's contribution remains the same, Golden Valley's decreases, and New Hope's increases.

8. Crystal again reviewed the revised calculations and is not supportive of participating in the study.
9. The Crystal City Council discussed the issue at their work session of May 7, 2013, and responded they would contribute \$11,000 towards the study (\$15,216 less than the original portion of their cost).
10. New Hope and Golden Valley see no option except to proceed with dispute resolution process.

The Phase II study will not obligate any city to future capital improvements; it will identify long-term solutions for land use planning, etc. that the cities can take into consideration.

The original cost of the study (7/17/12) was \$116,000. With the delay in the approval process, an updated cost estimate has been provided for the study (4/11/13) in the amount of \$136,000.

cc: Guy Johnson, Director of Public Works  
Pat Crough, Bassett Creek Alternate Representative



## Memorandum

**To:** Bassett Creek Watershed Management Commission

**From:** Technical Advisory Committee

**Subject:** Summary of P8 Model and Recommendations

**Date:** July 9, 2013

The Technical Advisory Committee (TAC) forwards the following summary and recommendations to the Commission for its consideration, based on the June 6, 2013 TAC meeting discussion of the completed watershed-wide water quality (P8) modeling. The June 5, 2013 "Bassett Creek Watershed-Wide Water Quality (P8) Modeling Study" memo from Barr Engineering Company includes the details about the project and recommendations for future use and refinements.

### 1. Watershed-Wide Water Quality (P8) Modeling

The P8 (Program for Predicting Polluting Particle Passage through Pits, Puddles and Ponds) model predicts the generation and transport of stormwater runoff rates and pollutants in urban watersheds, including the influence of treatment practices. From 1993 through 2000, the Bassett Creek Watershed Management Commission (BCWMC) constructed water quality (P8) models to model total flow and phosphorus loadings to lakes and streams within the Bassett Creek watershed. At that time, the models were used to evaluate stormwater treatment requirements associated with meeting the BCWMC lake water quality goals. Later, the P8 models were used to evaluate treatment methods for meeting the approved Total Maximum Daily Load (TMDL) allocations for phosphorus for Medicine, Sweeney and Wirth Lakes.

This water quality modeling project was initiated in 2012 by the BCWMC to update the existing Bassett Creek P8 models and to create a watershed-wide P8 model. Eleven P8 models, including approximately 600 ponds and wetlands, were created from the updated modeling. The updated models include all known treatment practices completed as of summer 2012. The models simulate the quantity/quality of stormwater runoff discharged to Bassett Creek between 2001 and 2011. The model results were compared with the Bassett Creek WOMP station monitoring data as a check on the model calibration.

### 2. Uses of P8 Model

A major use of the watershed-wide P8 model is to target, prioritize and track the progress of the BCWMC and the MS4s towards Total Maximum Daily Load (TMDL) implementation for impaired water bodies. This applies to impaired water bodies within BCWMC, and downstream of Bassett Creek (such as the Upper Mississippi River bacteria and the South Metro Mississippi total suspended solids (TSS) TMDLs).

**Bassett Creek Watershed Management Commission**

7800 Golden Valley Road | Golden Valley, MN 55427 | [www.bassettcreekwmo.org](http://www.bassettcreekwmo.org) | Established 1968

Crystal | Golden Valley | Medicine Lake | Minneapolis | Minnetonka | New Hope | Plymouth | Robbinsdale | St. Louis Park

It is expected that the P8 modeling will be useful in the future development of the Bassett Creek Watershed Restoration and Protection (WRAP) study. Such a study would include preparation of TMDLs for the remaining impaired waters in the watershed and preparation of protection plans for selected non-impaired waters in the watershed.

The updated P8 model can also be used to estimate the loading reduction that will be achieved by proposed or completed projects, which dovetails into the MS4 Permit/TMDL reporting. The proposed or completed projects could include those that come under BCWMC review (e.g., development projects) and BCWMC CIP projects.

Future updates and the addition of greater detail to the models should be performed or reviewed by the Commission as needed. Two areas of potential revision to the P8 modeling were identified during the cities' and MS4s' preliminary review of the updated mapping:

- A portion of the Crane Lake watershed (in Minnetonka) that did not drain directly to Crane Lake now drains to Crane Lake. This should be revised in the next update of the P8 model.
- The drainage patterns in the Hidden Lake area, southwest of Medicine Lake (in Plymouth) need to be evaluated to address conflicting information.

### **3. Recommendations**

The TAC recommends that the BCWMC maintain the P8 model and be the official “keeper” of the model. Either the BCWMC or the member cities could revise the P8 model. If the member cities revise the model, the BCWMC should review and approve the revised model; upon BCWMC approval, the revised model would become the new version of the P8 model. This way the BCWMC will always have the most recent version(s) of the model, which will help to reduce confusion regarding model versions.

The TAC also recommends that the BCWMC update the P8 model annually, in anticipation of TMDL reporting for MS4 permits. The model would be updated based on best management practice (BMP) information provided by the member cities, capital improvements completed by the BCWMC, and development/redevelopment projects completed in the watershed. The BCWMC would develop a summary report regarding the model results that the member cities could use for their MS4 reporting. The TAC further recommends that the TAC develop guidelines for the types of BMPs to be included in the P8 model updates and the schedule for performing the updates.

#### **Recommendations**

1. The TAC recommends that the BCWMC maintain the P8 model and be the official “keeper” of the model. If the member cities revise the model, the BCWMC should review and approve the revised model.
2. The TAC recommends that the BCWMC update the P8 model annually, in anticipation of TMDL reporting for MS4 permits. The member cities would provide the BMP information to be included in the model. The model would also include completed BCWMC capital

improvements and development/redevelopment projects completed in the watershed. The first update should also a) incorporate the drainage changes in the Crane Lake watershed, and b) resolve the conflicting drainage pattern information in the Hidden Lake area, southwest of Medicine Lake.

3. The TAC recommends that the BCWMC develop a summary report regarding the model results that the member cities could use for their MS4 reporting.
4. The TAC recommends that the TAC develop guidelines for the types of BMPs to be included in the P8 model updates and the schedule for performing the updates.



## Memorandum

**To:** Bassett Creek Watershed Management Commission  
**From:** Barr Engineering Company  
**Subject:** Bassett Creek Watershed-Wide Water Quality (P8) Modeling Study  
**Date:** June 5, 2013  
**Project:** 23/27-0051.13

## Summary

From 1993 through 2000, the Bassett Creek Watershed Management Commission (BCWMC) constructed water quality (P8) models to model total flow and phosphorus loadings to lakes and streams within the Bassett Creek watershed. This water quality modeling project was initiated in 2012 by the BCWMC to update the existing Bassett Creek P8 models to allow for their use in tracking the progress of the BCWMC and the MS4s towards Total Maximum Daily Load (TMDL) implementation for impaired water bodies, not only within BCWMC, but also downstream of Bassett Creek. When projects are proposed and/or completed, such as projects that come under Commission review and Commission CIP projects, the updated P8 model can also be used to estimate the loading reduction that will be achieved by the projects.

Eleven P8 models, distributed throughout the Bassett Creek watershed, were created from the updated modeling to simulate the quantity and quality of water discharged to Bassett Creek during stormwater runoff events. Approximately 600 ponds and wetlands were included in the P8 modeling, watershed-wide. The P8 modeling results were then compiled and compared to the available stormwater monitoring data from the Bassett Creek WOMP station during the water year monitoring periods between 2001 and 2011 to determine whether changes to the modeling were warranted for calibration.

This memorandum presents the results of the model calibration comparison, provides recommendations for future model use and refinements and describes the water quality modeling methodology.

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## Model Calibration

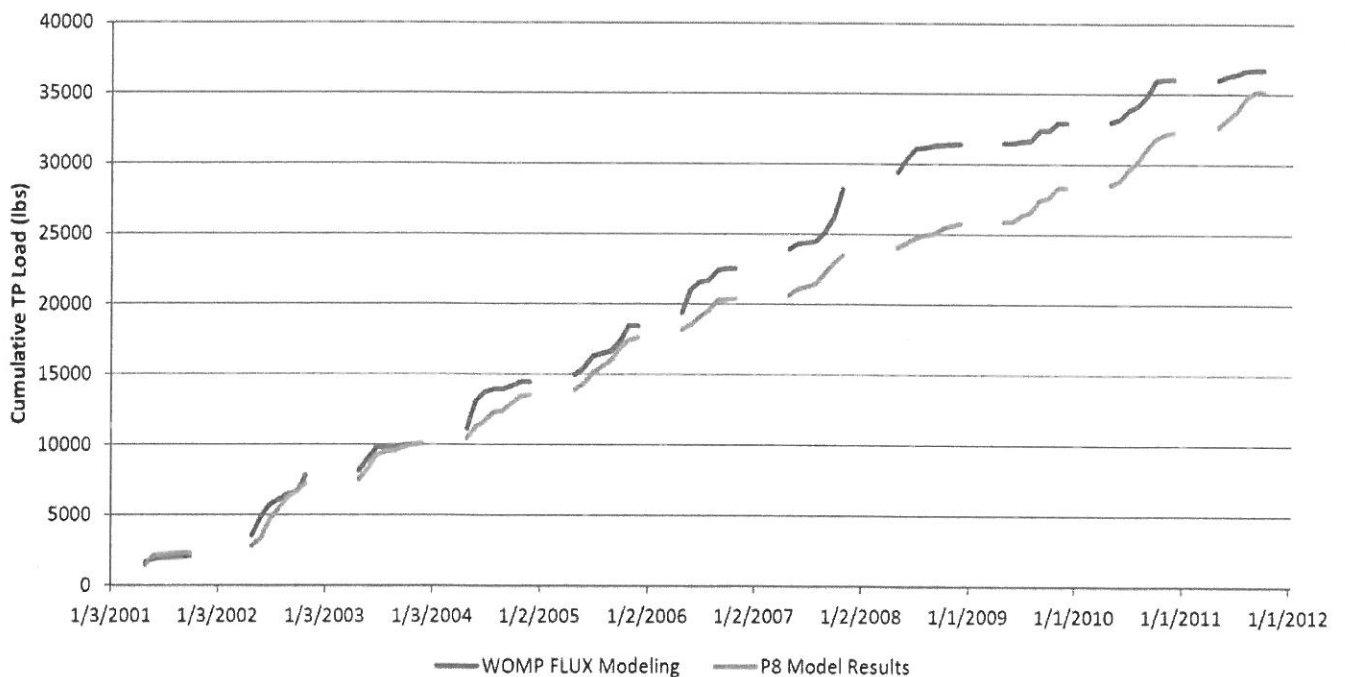
Updated P8 modeling was recently performed during completion of three Total Maximum Daily Load (TMDL) studies (Sweeney Lake, Wirth Lake, and Medicine Lake). The P8 parameters used for the TMDL modeling were generally used for this study because the P8 model calibration or optimization performed for each TMDL project was based on smaller-scale monitoring data. Barr also developed hourly precipitation and daily temperature files to represent the period 2000 through 2011 based upon measurements at the Watershed Outlet Monitoring Program (WOMP) station located on the Main Stem of Bassett Creek at Irving Avenue. The Irving Avenue WOMP station daily flow data and the Metropolitan Council's completed FLUX modeling were compiled to determine observed flow volumes and pollutant loadings for the 2001 through 2011 water years, based on the monitored monthly and annual estimates.

While the P8 modeling conducted for the Medicine Lake TMDL was based on monitoring of up to 11 sites in 2004 through 2007 and multiple sites in previous years, it was expected that assimilation of the flow and phosphorus loads in the lake (which cannot be accounted for in P8) could significantly affect the influence that the lake outflow would have on the observations in Bassett Creek at the Irving Avenue WOMP station. As a result, the approach for performing the P8 model calibration check for this study was based on a comparison of the modeling results to the difference in daily stormwater flow and cumulative phosphorus load between the WOMP station and the Medicine Lake outlet. The watershed area downstream of Medicine Lake and upstream of the WOMP station also represents the portion of the Bassett Creek watershed modeling that has undergone significant updates for this study and has not been included in previous attempts for model calibration. Flow data from the Medicine Lake outlet was synthesized from the available water surface elevation data (combination of BCWMC and DNR readings) and the headwater rating curve for the Medicine Lake dam (Barr Engineering Company, 1996). Since P8 was used to simulate stormwater runoff, the daily flow from the WOMP station and the Medicine Lake outlet was subject to a baseflow separation analysis with the Web-based Hydrograph Analysis Tool to differentiate the daily groundwater flow contributions from stormwater runoff in Bassett Creek. The results of the baseflow separation analysis showed that approximately 63% of the annual flow volume in Bassett Creek is derived from groundwater contributions, while the remaining volume is resulting from surface water or stormwater runoff.

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Based on the long-term results, the difference in average daily stormwater flow between the WOMP station and the Medicine Lake outlet was 10 cfs from the P8 modeling and 8.5 cfs from the monitoring data, which is within 18%. Figure 1 shows the difference in the monthly cumulative phosphorus (TP) load between the WOMP station and the Medicine Lake outlet based on the P8 modeling and the Metropolitan Council's FLUX model estimates (from the non-zero, April through November loading data). Based on the long-term results, the difference in the monthly cumulative phosphorus load between the WOMP station and the Medicine Lake outlet was 35,184 lbs. from the P8 modeling and 36,700 lbs from the monitoring data, which is within 4%. The results show good overall agreement between the modeled and monitored stormwater runoff phosphorus loading throughout the 11-year period with slight underestimates of TP load in 2006 and 2007 and overestimated TP load in 2011.



**Figure 1 Simulated P8 Model and WOMP FLUX Model Cumulative Watershed TP Loadings**



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## Recommendations for Future Use and Refinements

The updated P8 water quality modeling provides a key tool for the Commission to use in tracking the progress of the BCWMC and the MS4s towards TMDL implementation for impaired water bodies, not only within BCWMC, but also downstream of Bassett Creek. When projects are proposed and/or completed, the updated P8 model can be used to estimate the loading reduction that will be achieved by the projects. The updated P8 modeling can also be used to evaluate the effect of proposed projects, such as projects that come under Commission review and Commission CIP projects. The development of the model included all known water quality improvements devices and projects that were completed as of the summer of 2012.

It is expected that this modeling will be useful in the future development of the Bassett Creek Watershed Restoration and Protection (WRAP) study. As a result, it is recommended that these models be maintained by the Commission. If the member cities would like to update or change the model, the Commission should review and approve the changes. The updated model would then become the new Commission model. If this recommendation is followed, it is expected that the Commission will need to maintain different versions of the modeling. For example, implementation of proposed best management practices (BMPs) at a given location may require the modeling of multiple scenarios as the project(s) progress from diagnostic study to feasibility stage, and finally, an as-built stage. It is expected that the Commission will need to plan on periodic updates to the modeling to account for watershed, drainage and/or BMP changes associated with new development or redevelopment projects.

Two sources of potential revisions to the P8 modeling and associated inputs were identified during the preliminary review of the updated mapping circulated to the cities/MS4s in the watershed:

- A portion of the Crane Lake watershed was previously identified as landlocked as a result of the Medicine Lake TMDL modeling, but a recent project initiated by the City of Minnetonka included storm sewer and pond outlet construction for several ponds south of Crane Lake. As a result, the P8 modeling developed for this study should be updated to account for the watershed characteristics and pond outlet changes that now allow normal flow routing to Crane Lake.

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- The subwatershed divide and flow direction data used in the model in the Hidden Lake area (southwest of Medicine Lake) conflicts with older DNR information. It is recommended that this area be evaluated in more detail in the future to address the questions about how MNDOT is managing stormwater runoff along Highway 55 and whether a culvert exists along the railroad tracks that would allow for inflow to Hidden Lake from the subwatershed immediately north of the lake.

The model input data for each of the watershed models are stored in a GIS database format that will be maintained for use on future Commission projects and for easy distribution to each of the member cities. This database will also be available to track compliance with TMDL wasteload allocations and TMDL implementation plans.

## Modeling Methodology

The P8 (Program for Predicting Polluting Particle Passage through Pits, Puddles and Ponds) model predicts the generation and transport of stormwater runoff pollutants in urban watersheds. It is important to note that the strength of the P8 model is its use for relative comparisons as opposed to the use of the absolute pollutant loadings associated with each modeling scenario. In other words, P8 is a more powerful tool when the percentage change between a modeling run involving BMP implementation is compared to a baseline scenario that does not have BMPs.

From 1993 through 2000, the BCWMC constructed P8 models to estimate total flow and phosphorus loadings to lakes and streams within the Bassett Creek watershed. This water quality modeling project was initiated in 2012 to update the Bassett Creek P8 models. This resulted in eleven P8 models, distributed throughout the Bassett Creek watershed, that were created to simulate the quantity and quality of discharges to Bassett Creek receiving waters during stormwater runoff events.

Data used to construct the updated P8 models included watershed information (area, curve number, imperviousness, etc.) and device information (permanent pool area, permanent pool volume, flood pool area, and flood pool volume). Sources of information for updating the modeling included data collected from municipalities and other government agencies, information from previously constructed P8 models,

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field surveys, estimation from GIS, and calculations using XP-SWMM (i.e., outlet rating curve calculations).

The P8 modeling methods, including methods to compile information required for model construction, are detailed in the following subsections.

### **Watershed Divides**

The P8 model requires watershed information for each device in the model. The first step in the process of compiling information to construct the updated P8 models was updating watershed divides throughout the Bassett Creek watershed. Data from the previous Bassett Creek P8 modeling project, together with data from government organizations, observation of aerial imagery, and LiDAR and storm sewer data were used in the process. The two primary pieces of information used to update the Bassett Creek watershed divides were LiDAR topographic and storm sewer data used within ESRI Geographic Information System (GIS) software.

LiDAR data are remotely sensed high-resolution elevation data collected by an airborne vehicle. LiDAR implements laser range finding, global position systems (GPS) and inertial measurement technologies to construct detailed elevations of the landscape (natural and constructed). The LiDAR data used to update watershed divides were collected at a resolution of 1 meter and includes reflective surface, last return, bare earth model, and intensity data in separate data files. The LiDAR data were obtained from the U.S Army Corps of Engineers in St. Paul, MN.

Municipalities and other governmental agencies with jurisdiction in the watershed were contacted with a request for storm sewer information. The following agencies provided updated data for the Bassett Creek 2012 P8 modeling project: Minnesota Pollution Control Agency (MPCA), Hennepin County, Minnesota Department of Transportation (MNDOT), Minneapolis, Plymouth, St. Louis Park, Minnetonka, Golden Valley, New Hope, Crystal, and Robbinsdale. The City of Medicine Lake does not have records of storm sewer data and, hence, was unable to provide storm sewer data.

Information from governmental agencies, such as inverts, catch basin locations and lift station locations, were used in conjunction with the LiDAR data to delineate each watershed that drained to a common

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point. Previous Bassett Creek watersheds were used to begin this process and provide a check on the outcomes.

### **Determination of P8 Model Watershed Information**

Watersheds are the source of flow and particles simulated by the P8 model. Watersheds are defined in P8 based upon factors controlling runoff and particle export (total area, impervious fraction, depression storage, SCS curve number for pervious areas, street-sweeping frequency). The model simulates runoff from pervious and impervious surfaces and particle buildup/washoff from impervious surfaces. Watershed runoff and percolation are routed to specified devices. The second step in the process of compiling information to construct the updated P8 models was determining total area, direct and indirect impervious fraction, SCS curve number for pervious areas, and depression storage for each Bassett Creek watershed.

GIS files were used to determine watershed information required for the updated P8 models. GIS files included:

1. Pond location data, obtained from previous projects, governmental organizations, and created from aerial imagery observation
2. Watershed data created from LiDAR and storm sewer data
3. Total imperviousness data obtained from the National Land Cover Database (NLCD) 2006 imperviousness data
4. Direct imperviousness data created only in residential areas by using LiDAR, where available, to determine building areas. In areas where LiDAR was not available, land cover data (NLCD, 2006) was used to determine average building cover per land cover type, based upon known areas with LiDAR. These averages were then applied to areas without LiDAR
5. SCS curve number data (pervious areas only) was determined based upon hydrologic soil groups.

Watershed information required for the P8 model is based upon upland areas, and hence, water bodies within watersheds are not included in the computation of watershed information. Ponds located within watersheds were removed prior to determining watershed area, SCS curve number, and direct and indirect imperviousness. Once a GIS layer of modified watersheds (i.e., watersheds without ponds) was created,

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the watershed area (in acres) was determined by calculating the geometry for each modified watershed in the attribute table. The GIS tool “Zonal statistics as table” was used to determine a mean average of total imperviousness, direct imperviousness, and SCS curve numbers within each modified watershed. Once these were calculated and combined, a table was created consisting of watershed name, area in acres, total imperviousness, direct imperviousness, and SCS curve number. Indirect imperviousness was then calculated by subtracting direct imperviousness from total imperviousness.

### **Determination of Device Information**

In the P8 model, devices (i.e., ponds or other BMPs) collect, store, and/or treat pollutant particles discharged from watersheds. Device information required by the P8 model is based upon factors controlling hydraulic response and particle removal efficiency (i.e., elevation/area table and elevation/discharge tables for up to three outlets: 1= infiltration, 2 = normal outlet, 3 = overflow/spillway). Specific inputs vary with device types. Types of devices used in the Bassett Creek P8 models include:

- Detention Pond (Wet, Dry, Extended)
- General (User-Defined Elevation/Area/Outflow Table)
- Pipe/Manhole (Collector with One Outlet)

In the P8 model, routing from one device to another is accomplished by specifying downstream device numbers for each outlet. A downstream device number of 0 is used to route flow and loads out of the system (to receiving waters). The program keeps track of volume and mass fluxes into and out of each device, as well as changes in storage, with each time step. Program output formats (tables, graphs) summarize this information in various ways. The third step in the process of compiling information to construct the updated P8 models was determining permanent pool area and volume, flood pool area and volume, and outlet size for each device in the Bassett Creek watershed.

GIS files used to determine device information included (1) pond data from previous projects, governmental organizations, and created from aerial imagery observation and (2) outlet data acquired from various governmental agencies and site surveys. All devices that existed as of the summer of 2012 were considered in the development of the model.

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Pond data from previous projects were compiled and then checked to determine whether changes had occurred. Current permanent pool area was measured to determine whether a change in pool size had occurred. When pool size had changed, or previous data could not be found, permanent pool data were determined using LiDAR data at the outlet elevation, if known. If no outlet elevation was known, the permanent pool area was determined by measuring the surface area of the current pool using aerial imagery and/or LiDAR data. If the pond was dry in the aerial imagery or no water surface was visible, LiDAR data was used to manually determine the maximum elevation of the pond before a spillover could occur. The area at this elevation within the basin was then measured to estimate permanent pool area.

Permanent pool volume data from previous studies were used whenever available. When previous data could not be found, the permanent pool volume was determined using a regression formula determined from known pool area and volume data from other ponds in the study. The regression formula estimated volume from a known surface area. If pond bathymetry was known or the pond was dry when LiDAR data was acquired (LiDAR does not penetrate water surfaces) a “pond volume calculator” tool created by Barr Engineering Company was used to determine pond areas and volumes using known outlet or flood elevations, which could be manually determined using LiDAR, if necessary.

Flood pool data from previous studies were used whenever available. When previous data could not be found, flood pool areas and volumes were determined using the “pond volume calculator” tool. Calculations were based upon outlet elevation data when available. When outlet elevation data were unavailable, LiDAR data were used to manually determine the lowest elevation at which the pool would spill over its banks and this elevation was used in the calculation.

Outlet data was determined from previous studies and outlet files provided by various governmental agencies. Where no data was available, site surveys were used to identify outlet sizes. If the outlet was an open channel or ditch with unknown width, this information was estimated by measurement from aerial imagery.

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## **XP SWMM Rating Curves**

The P8 model does not allow the user to enter a multiple outlet scenario for devices (i.e., ponds), but does allow the user to input a user defined rating curve. For general devices (i.e., ponds) in the Bassett Creek watershed with multiple outlet pipes, XP-SWMM software was used to calculate the rating curve.

XP-SWMM modeling parameters used to model watersheds whose devices had multiple outlets include area, curve number, imperviousness, inverts, and outlet pipe. To calculate rating curves for these watersheds, the watersheds were given constant inflows for varying outflow rates. Common constant inflows included one cubic feet per second (cfs), two cfs, five cfs, 10 cfs, 25 cfs, 50 cfs, 100 cfs, 250 cfs, and 500 cfs. The outflows from these watersheds, under constant inflow, were then used to construct a rating curve by comparing the depth of water in the device to the outflow.

## **P8 Model Parameter Selection**

The P8 model version 3.4 was used to predict water, phosphorus, and suspended solids loads to Bassett Creek. The model performs continuous water-balance and mass-balance calculations on a user-defined system consisting of:

- Watersheds (nonpoint source areas)
- Devices (runoff storage/treatment areas)
- Particle Classes
- Water Quality Components

Simulations are driven by continuous hourly rainfall and daily air temperature. Proper development and calibration of the model also requires an accurate assessment of land use and impervious percentages, pond system morphology, flow routing, and water quality monitoring data. After supplying the required input data, the P8 model was used to estimate both the water and phosphorus loads generated from the entire Bassett Creek watershed.

When constructing the updated Bassett Creek P8 models, the standard default parameters were generally used for the models. Exceptions occurred for the following user-defined parameters:



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**Time Steps per Hour (Integer)** selection was based upon the number of time steps required to prevent continuity errors greater than two percent. The default of 4 was used for seven of the eleven Bassett Creek watershed models. Four models required time steps ranging from 6 to 20 to prevent continuity errors greater than two percent. They include: Parkers East & Parkers model = 6 time steps per hour; Sweeney Twin model = 8 time steps per hour; Plymouth Creek model = 10 time steps per hour; and Midstream Downstream Wirth Grimes model = 20 time steps per hour.

**Precipitation** – Barr developed an hourly precipitation file to represent the period 2000 through 2011, based upon measurements at the WOMP station located on the Main Stem of Bassett Creek at Irving Avenue.

**Temperature** – Barr developed a daily temperature file to represent the period 2000 through 2011 based upon measurements at the WOMP station located on the Main Stem of Bassett Creek at Irving Avenue.

**Watersheds** – The watershed information specific to each model was summarized in an Excel spreadsheet and the watershed import function of the model was used to import the spreadsheet into each model.

**Devices** – The device information specific to each P8 model was summarized in an Excel spreadsheet. Visual Basic programming was then used to create a macro in the spreadsheet that summarized the device information in a format that could be inserted directly into the P8 model case file.

**Particle Removal Scale Factor:** The default of 1 was generally used. However, when past model calibration efforts indicated the need for a different value, past modeling values were used in the updated models unless a change in the pond warranted an updated value. For example, recent modeling of Plymouth Creek indicated a particle removal scale factor of 0.25 was needed for wetlands that the creek flows through to attain a match between observed and modeled values. Hence, values of 0.25 were used for these wetlands in the 2012 model. The recent construction of a pond in West Medicine Lake Park warranted an updated value in the 2012 model. Hence, the value of 0 used in the TMDL model was updated to 1 in the 2012 model.

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Table 1 summarizes P8 parameters that differed from default values. Because P8 modeling was recently performed for completion of three TMDL studies (Sweeney Lake, Wirth Lake, and Medicine Lake), the P8 parameters for the TMDL models were generally used for the updated modeling of these watersheds. Table 1 shows the modeling parameters used for the TMDL models as well as the parameters used for all of the updated models developed for this study.

### **Changes to Address Known Data Gaps**

The TMDL modeling developed for device BC107 (directly east of Medicine Lake) in the Medicine Lake Direct watershed did not reflect a high flow bypass for the device. As a result, the high flow bypass was incorporated into the updated modeling developed as a part of this study.

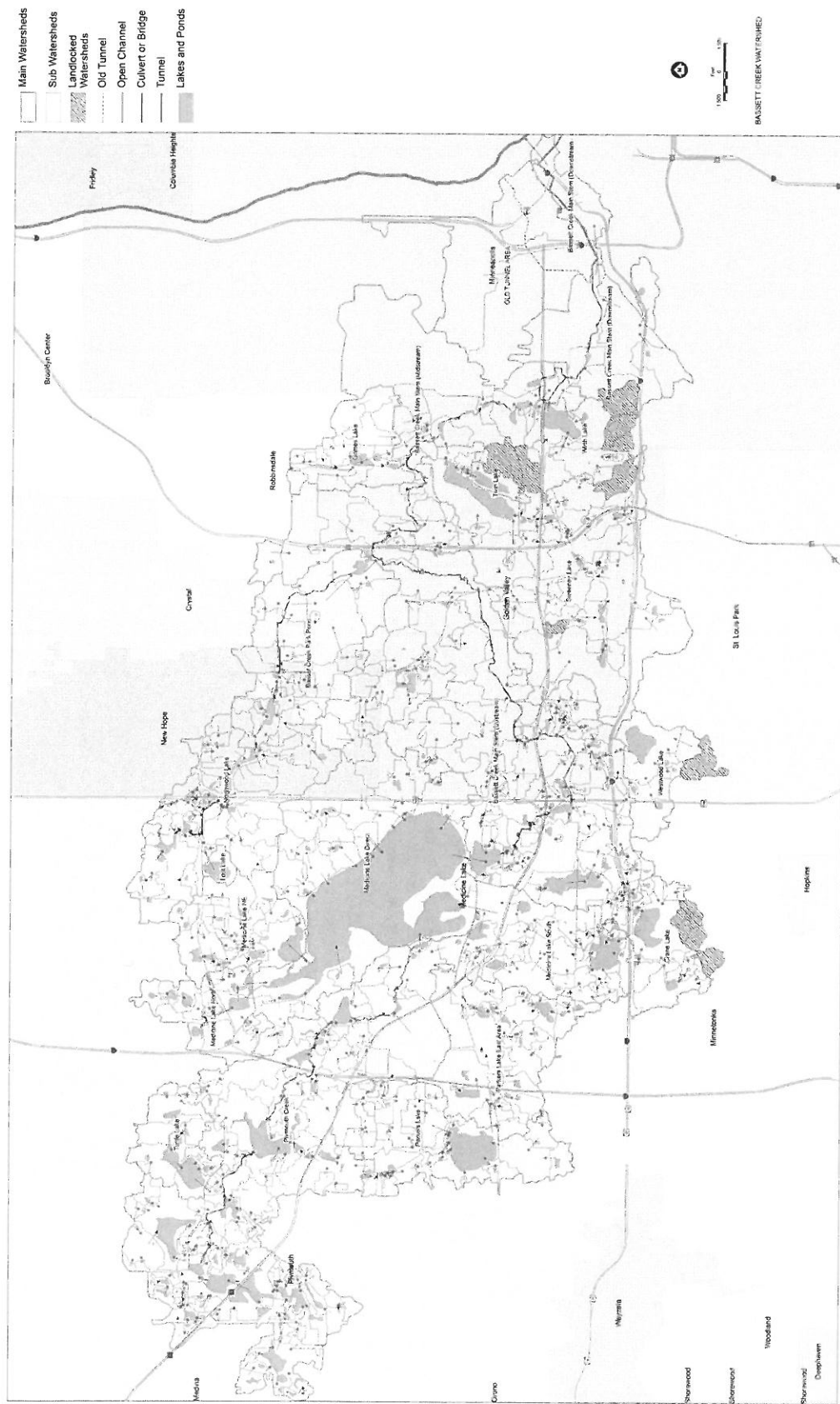
### **P8 Models**

Eleven P8 models were created to model the entire Bassett Creek watershed (flow directions are shown in Figure 2):

- Main Stem Bassett Creek Upstream West
- Main Stem Bassett Creek Upstream East and Westwood Lake
- Main Stem Bassett Creek Midstream and Downstream and Wirth Lake, Grimes Pond, and North and South Rice Ponds
- Northwood Lake and Bassett Creek Park Pond (i.e., North Branch of Bassett Creek)
- Sweeney Lake and Twin Lake (i.e., Sweeney Branch of Bassett Creek)
- Plymouth Creek
- Parkers Lake and Parkers East
- Medicine Lake North
- Medicine Lake Northeast
- Medicine Lake Direct
- Medicine Lake South and Crane Lake

All subwatersheds and all known devices (i.e., stormwater treatment ponds and/or wetlands) were included in the models, except for Plymouth Creek. Because the P8 model has a limit of 75 devices and the Plymouth Creek watershed contained more than 75 devices, the model did not have capacity for all of





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the devices within the Plymouth Creek watershed. Hence, the Plymouth Creek model used in this project only contains the 75 devices deemed most important to the model. Devices located near Plymouth Creek were prioritized over devices located far from Plymouth Creek. Devices located in the downstream section of the creek were prioritized over devices located in the upstream section of the creek. Large devices were prioritized over small devices. It should be noted that all of the devices in the Plymouth Creek watershed were identified and the information assembled and, hence, is available for future use as it is expected that the next version of P8 will accommodate more treatment devices for each model.

### **Watershed Maps**

Watershed maps were created to show the watershed and device network for each of the eleven Bassett Creek P8 models. Each map shows the major watershed and all subwatersheds, flow between subwatersheds, and devices that were in-place as of the summer of 2012 (i.e., shown on a table on each map). Each watershed map is provided as an attachment to this memorandum and the GIS data will be supplied with the final deliverables.

### **Outlet and Pond Surveys**

The P8 model requires outlet information for each device. Although outlet information was available for most devices, field surveys were performed to gather outlet information for 49 devices that lacked outlet information. The field survey consisted of determining outlet type, measuring outlet diameter, and taking pictures of the outlet as well as each device (i.e., pond).

Bathymetric surveys were performed on ponds considered most important to the accuracy of the P8 models. The process for selecting ponds for the survey as well as the pond survey methods are discussed in the following paragraphs.

Ponds within the Bassett Creek watershed with higher phosphorus removal capacities are expected to exert a greater influence on P8 modeling results than ponds with lower phosphorus removal capacities. In addition, ponds with higher phosphorus removal rates may also have a high sediment accumulation rate which, in turn, would cause a more rapid permanent pool volume change than ponds with lower phosphorus removal rates. The eleven Bassett Creek P8 models were run and the modeling results compiled to identify ponds with higher phosphorus removal capacities. Thirty ponds were identified as

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significant ponds that exert a great influence on the Bassett Creek P8 modeling results. Table 2 shows the thirty ponds; these ponds were selected for a bathymetric survey.

**Table 2 Bassett Creek Ponds Field Surveyed for Bathymetry**

<b>Watershed Name</b>	<b>Pond Name</b>
Medicine Lake NE	BC81B
Medicine Lake North	BC29
Medicine Lake North	BC34
Medicine Lake South-Crane	BCBC77C
MidDownWirthGrimes	BC-11113-1
MidDownWirthGrimes	Basin K
Northwood-BassettCreekParkPond	BC-NB1-N
Northwood-BassettCreekParkPond	BC-NB1111-N
Parkers Lake-Parkers East	BCBC59
Parkers Lake-Parkers East	BCBC57
Parkers Lake-Parkers East	ML-PLY-BC44
Parkers Lake-Parkers East	PL-P7
Plymouth Creek	BC-P42
Plymouth Creek	ML-PLY-BC39-1
Plymouth Creek	ML-PLY-BC39F
Plymouth Creek	ML-PLY-BC27A-1
Plymouth Creek	BC18A1
Sweeney-Twin	DNR1A
Sweeney-Twin	Chicago Pond
Sweeney-Twin	Turners Pond
Sweeney-Twin	Spring
Upstream East-Westwood	BC-10-3
Upstream East-Westwood	Decola Pond F
Upstream East-Westwood	Decola Ponds B_C
Upstream East-Westwood	BC-HH1232-0A
Upstream East-Westwood	Boone Ave Pond
Upstream West	BC-HH12322-6
Upstream West	BC-HH12322-9
Upstream West	BC-HH123222-13
Upstream West	BC-HH12322-3A

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The bathymetric field survey determined permanent pool storage volume capacities and gathered outlet structure data (size, type, and elevation). The survey of each pond began by determining whether the pond had an outlet. For each outlet, the type and size were recorded. The field elevation of the outlet was referenced to a benchmark and the elevation for each bench mark was determined at a later date.

If conditions were safe and the pond edge was accessible, the perimeter of each pond at its water edge was recorded using a Global Positioning System (GPS) data logger that tracked latitude and longitude.

The depth from the water surface to the pond bottom at various locations within each pond was physically measured and then added as a field note to a specific GPS location. Sediment type at each depth location was noted if a determination could be made. The overflow location and surface water elevation were referenced to a benchmark using an auto-level and survey rod. The embankment slopes were estimated and digital pictures were taken to provide visual images of the ponds and any points of interest (e.g., outlet).

After the field survey, all field elevations (outlet, water surface, and overflow location) were converted to NGVD 1929 datum. The field data were then processed to determine permanent pool area and volume as well as flood pool area and volume. The pond information from the field survey was then input to the updated Bassett Creek P8 models.





## Bassett Creek Watershed Management Commission

### Next Generation Plan Steering Committee

#### DRAFT Meeting Notes

4:30 p.m ~ Monday July 1, 2013

Brookview Community Center

**Attendees:** Committee Chair Linda Loomis; Commission Chair Ginny Black; Commissioners Ted Hoshal and Wayne Sicora; Alternate Commissioner Pat Crough; Administrator Laura Jester; Engineer Karen Chandler; Greg Williams, Barr Engineering; TAC members Derek Asche and Jeannine Clancy

1. Call Meeting to Order

The meeting was called to order by Chair Loomis at 4:40 p.m.

2. Initial Goal Setting and Discussion

The following documents were provided to the Committee and hence referenced during the discussion:

- Results of issues ranking at 6/24 Commission Workshop
- Notes from 6/24 Commission Workshop
- Results of issues ranking at 6/13 Watershed Summit
- Goals from current Watershed Management Plan
- Goals from other watershed organizations that could be considered

Discussion focused on the results of the issues ranking by watershed residents at the Summit and Commission Workshop. The committee discussed the development of goals to address the pressing issues. The group considered the goals from the current Watershed Plan and goals from other watershed organizations during the discussion. There was a question about how the State review agencies often require "measureable" goals. Jester reported that on recent Watershed Plans she has worked on, review agencies have agreed that goals can be broad but that strategies and policies should be measureable. The following points were made during the goal setting discussion:

General:

- Commission could focus on areas where cities don't have existing requirements such as shoreline protection and improvements.
- Cities already have many requirements through TMDLs and storm water permits. Perhaps the Commission doesn't need separate storm water standards?
- Top priorities should align with top priorities of residents, when possible.
- Flood control project issue should be combined with water quantity issue.

Groundwater:

- Cannot really “manage” groundwater although a goal regarding groundwater is important. Could consider policies on well drilling.

Water Quality:

- The term “beneficial uses” with regards to water quality implies a recreational use. Discussion on referencing State water quality standards rather than beneficial uses or a Commission-developed waterbody classification system.
- Discussed the issue of infiltration and the fact that it addresses both water quality and quantity and how the city of Golden Valley has soils that don’t usually allow for infiltration. There was discussion that infiltration is one of many tools available to improve the quality of storm water runoff and reduce the volume of storm water runoff.

Habitats:

- The public’s perception of degraded habitats may not be accurate. (Local ornithologist has documented over 120 bird species in Medicine Lake area.)

Emerging Issues:

- Commission should address emerging issues such as climate change affecting flood infrastructure.
- Goals addressing emerging issues from other watershed organizations should be considered.
- Language here should be proactive and flexible in order to deal with currently unforeseen issues.
- Commission probably cannot afford to take the lead on Aquatic Invasive Species, but should cooperate and partner with others.

Recreation:

- The current Plan does not include a goal for recreation but recreation is addressed indirectly through other goals that aim to improve water quality and habitats and stabilize water levels.
- Low water levels on Medicine Lake may be better addressed under a recreational goal.
- The Commission should consider going on record stating that daylighting of Bassett Creek is impossible.
- Recreation goals from other watershed plans will be considered.

As time was running short, the Committee instructed Williams and Chandler to continue drafting goals for consideration at the Commission Workshop on July 18<sup>th</sup>.

3. Discussion of Facilitation of July 18<sup>th</sup> Commission Workshop

Loomis will facilitate the discussion at the workshop. Jester will be absent from that meeting. Draft goals (as discussed here and those drafted by Williams and Chandler) should be presented. Goals from the current Plan and the results of Summit and Workshop rankings should be included with meeting materials as reference.

4. Discussion of Plan Materials on Website and TAC/State Agency Input Process

Jester reported the Counsel LeFevere indicated that all planning documents and drafting would be public information. Jester recommended posting planning materials in one location on the Commission website to help lessen confusion about the Plan Development Process. She will work on getting that done.

State review agencies and other technical stakeholders will be invited to all meetings where the TAC is asked for input on the draft Plan components. Jester will again invite them to the June 18<sup>th</sup> Workshop.

5. Adjourn - The Committee adjourned at 6:30 p.m.



Bassett Creek Watershed Management Commission

MEMO

Date: July 9, 2013  
From: Laura Jester, Administrator  
To: BCWMC Commissioners  
RE: Administrator’s Report

I’m sorry I am unable to attend this meeting! I will be back in town on July 25<sup>th</sup> and I will follow up with all necessary items at that time.

Since the last Commission meeting, activities to note include:

- Preparing for but cancelling the Watershed Tour – hopefully this can be rescheduled as much time has already gone into developing the route, map, and handout.
- Preparing for and assisting with the facilitation of the Commission Workshop on June 24<sup>th</sup>. Thank you to all 22 Commissioners, TAC members and stakeholders who attended and prioritized/discussed the issues! It was a very productive evening.
- Finalizing the draft 2014 budget and budget details and distributing documents to member cities.
- Further discussing the need for fish surveys on Sweeney and Twin Lake with the MDNR and seeking a proposal for fish surveys from Blue Water Science.
- Gathering information and corresponding with a concerned resident regarding public access to Sweeney Lake.

The following table provides detail on my activities June 1 – 30.

<p><b>Administration – Correspondence, informational meetings, general administration:</b></p> <p>Phone and email correspondence with various Commissioners, TAC members, consultants and other partners including: S. Virnig, J. Oliver, K. Chandler, A. Herbert, B. Wozney (BWSR), C. LeFevre, T. Hoshal, Chair Black, M. Welch, D. Asche, P. Crough, L. Eberhart, Blake School re: grants, developers, Hennepin Co. Environmental Services re: paper recycling pollution near WOMP site, AMLAC</p> <p>Watershed tour: coordination, receiving registrations, driving tour route, taking photos of sites, developing tour handout, cancelling tour</p> <p>Correspondence to Hidden Lakes Homeowners Association re: public hearing and possible alum treatment; introductory meeting with Alt Commissioner D. Tobelmann, meeting with S. Virnig; coordination/discussion re: public hearing, Major Plan Amendment, Sweeney Lake outlet, Medicine Lake dam and water levels, Twin Lake alum treatment, Hennepin County committee meeting, etc.</p>
<p><b>Administration – Meeting attendance:</b></p> <p>6-4-13 Hennepin County Committee Meeting</p> <p>6-6-13 TAC Meeting</p> <p>6-10-13 Budget Committee Meeting</p> <p>6-11-13 WMWA Meeting</p> <p>6-20-13 BCWMC Meeting</p>

**Administration – Preparing agendas, meeting materials, meeting notes, follow up:**

Draft TAC memo, draft meeting minutes for Budget Committee meeting; develop meeting agendas and materials for various meetings; list follow up tasks

**Administration – Document review and development:**

Review invoices, develop 2014 draft budget and budget details document, draft memo re: feasibility study, develop list of acronyms for new Commissioners

**Administration - Watershed Management Plan Development:**

Develop presentation and refine issues for Summit, coordinate Summit and receive registrations, coordinate with GTS, summarize Summit ranking results, prepare for Commission workshop and Plan Steering Committee meeting, correspond with news reporter

6-13-13 Attend Watershed Summit

6-24-13 Attend Commission Workshop

In the coming month, I plan to work on the following items:

- Gather comments from member cities on 2014 budget document
- Coordinate the Watershed Tour (if rescheduled)
- Prepare for and attend the July 29<sup>th</sup> TAC meeting
- Begin gathering information on existing water monitoring projects/programs in the watershed for use in the development of the Watershed Plan
- Prepare for and attend an Administrative Committee meeting
- Set a Budget Committee meeting to discuss various fiscal policies

In August, I will be on vacation with my family from August 16 – 25. I plan to check emails occasionally for pressing matters and will return non-urgent emails and calls upon my return.