

MEMORANDUM

Comfort Lake-Forest Lake Watershed District

To: Board of Managers **Date:** October 20, 2017
From: Mike Kinney
Subject: SWCD Contracts and Ag BMP Framework Resolution

Background / Discussion

For some number of years, the CLFLWD Board of Managers have adopted contracts for services with the Chisago and Washington Soil and Water Conservation Districts so as to compliment the Watershed District (WD) staff in achieving the goals and objectives of the WD. These contracts vary in length from one to two years, and the current contracts will expire at the end of 2017. Presently, District staff is planning to bring these contracts to the November board meeting for adoption.

The recent completion of the Bone Lake Sub-Watershed Analysis (SWA) identified the “Top 50” sites for various best management practices (bmps) within the Bone Lake drainage area. The SWCDs will conduct outreach, contract administration, design, construction oversight and all post-construction activities as needed. So as to implement the goals of the District in the most efficient manner, staff is seeking direction on two items so as to leverage services through the SWCDs.

The first item is the framework for implementing the Bone Lake SWA. The Chisago SWCD has had a framework that they have used with the Chisago Lakes Lake Improvement District (CLLID) since 2011 to implement the SWA that was completed for the CLLID. It has been effectively used for the past six years with much success in getting practices installed. For the SWCD, this provides a set funding level, assurance of communicating with landowners of what is an acceptable practice, and a reduced administrative process of requiring WD approval of each practice on top of the SWCD’s own board approval. A copy of this is included in the board packet for reference along with a draft version that we could include as an addendum to the upcoming contracts. We are also interested in adopting such a framework with the WCD contract.

The second item is in regard to the funding of these bmps to be implemented. The District has submitted a CWF grant application for \$240,000 with a required \$60,000 match for construction costs related to these Top 50 bmps. The current 2018 budget has only \$7,500 for agricultural cost-sharing funds with over half of those funds already committed to current projects. Whether or not the District receives a CWF grant, the Board will have to consider a baseline funding amount to be included within the proposed framework discussed above. The SWCDs have successfully leverage local funds to get additional funds from the state and federal agencies for these practices. The Chisago SWCD Manager, Craig Mell, is planning to attend the meeting to discuss what funding levels in 2018 and beyond will be needed to implement enough bmps to meet the District’s goals.

For reference, the SWA report shows that the District would need roughly \$1.5 M to implement the design, installation and 10 year maintenance costs for the Top 50 sites related to the top 50 sites based on P load reductions. If all 50 of these sites were implemented, the total P reduced per year would be 1,322 lbs. These are listed on pages 9 and 10 of the SWA report presented at the July 27th board meeting. Costs per lb of P reduce range from \$195 to \$4,278 for these sites.

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Alternatively, if we took the Top 50 sites based on the lowest cost per lb of P reduced (this is NOT all the same sites of the Top 50 *P loading* sites), the cost would be about \$860,000. These 50 sites would reduce loading by 1,038 lbs of P annually. These 50 sites can be found on pages 11 and 12 of the SWA report. Costs per lb of P reduced for these range from \$195 to \$1,340.

The calculated reduction goals for Bone Lake is currently 497 lbs of phosphorus after the current projects are completed. Thus, the District could in concept focus initially on a smaller subset of the most cost-efficient projects knowing that, historically, roughly only half of these landowners would initially be willing to participate, and then adjust the outreach to those next on the list farther down the road. This would certainly take longer to reach the external load reductions for Bone Lake and there may be missed opportunities as changes in land owners occur since we'll never know if the former owner would have been agreeable to a bmp being installed even if the farmland is being rented out to the same operator.

To put this tiered structure into context, the attached pages 9-12 from the SWA are attached. Again, in theory, there are two approaches to achieving the District's goals for Bone Lake. The sites identified on pages 9 and 10 are the highest loading sites and with only 8 sites needed to achieve the reduction goal for Bone Lake, it could potentially get us there the fastest but the dollar amount is \$523,725.

Alternatively, if we were to focus on the most cost-effective bmp sites, we would need to complete 32 sites and the cost would \$286,736.

Staff will be looking for direction from the Board in proceeding to bring back to the November board meeting revised contracts to incorporate the proposed contract amendment along with a proposed budget. The latter can be revised after the District learns of the results of the CWF grant results in December when the BWSR Board meets.

Attached Pages 7 and 8 of Amendment to 2011 CLLID-CSWCD Contract
Bone Lake Rural SWA tables

RESOLUTION NO. 11/0404-1

**RECOMMENDING APPROVAL OF \$66,000
AS MATCH TO CHISAGO SWCD
CLEAN WATER FUND GRANTS
TO INSTALL BEST MANAGEMENT PRACTICES**

WHEREAS, the Chisago Lakes Lake Improvement District Board Members are authorized to recommend spending for actions that benefit the area within the Lake Improvement District;

NOW, THEREFORE, BE IT RESOLVED, that Lou Sibik, Board Member of the Chisago Lakes Lake Improvement District made a motion to recommend the allocation of a total of \$66,000 from the LID matching funds line item (Goal 3, Objective 4) as match to the Chisago SWCD's Clean Water Fund grants to install BMPs, as projects are approved by the SWCD Board, and with the SWCD providing a monthly update to the LID Board. The \$66,000 is divided as such: \$36,000 from the LID 2011 budget; and \$30,000 from the LID 2012 budget.

The following criteria will be used by the LID board when approving project spending:

For projects needing a total commitment by the LID Board of less than \$10,000

- project is identified in the local SRAs
- project is eligible to receive CWF grant dollars
- project has been approved by the Chisago SWCD Board of Supervisors

For projects needing a total commitment by the LID Board of greater than \$10,000

- project is identified in the local SRAs
- project is eligible to receive CWF grant dollars
- project has been approved by the Chisago SWCD Board of Supervisors
- project must be approved by the LID board
- project must be approved by the Chisago County Board of Commissioners

LID Board Member Bud Kapell seconded the resolution and upon a vote being taken thereon, the following voted:

IN FAVOR THEREOF: Singer, Hugo, Wahlgren, Woodward, DuBose, Sibik, Kapell

OPPOSED: None

Whereupon the resolution was declared duly **passed** and **adopted**.

RESOLUTION NO. 11/0801-3

RECOMMENDATION TO MAKE MATCHING PAYMENTS TO SWCD RE: BMP PROJECTS

WHEREAS, the Chisago Lakes Lake Improvement District Board Members are authorized to contribute to Clean Water Fund Grant Projects

NOW, THEREFORE, BE IT RESOLVED, that Lou Sibik, Board Member of the Chisago Lakes Lake Improvement District made a motion for the LID to authorize matching payments to SWCD without the LID entering into separate contracts with the individual project/land owners.

LID Board Member Bud Kapell seconded the resolution and upon a vote being taken thereon, the following voted:

IN FAVOR THEREOF: Wahlgren, Woodward, DuBose, Sibik, Kapell

OPPOSED: None

ABSENT: Singer, Hugo

Whereupon the resolution was declared duly **passed and adopted**.

Amount of reduction needed to reach 2040 Goal: 526.80 lbs
 Amount of reduction achieved above red line: 569.90 lbs for \$523,725 (8 sites)

TOP 50 FIELDS – TOTAL PHOSPHORUS REDUCTION

TABLE 1. TOP 50 FIELDS RANKED BY TOTAL PHOSPHORUS REDUCTION PER FIELD

Field Identification	Total Phosphorus Reduction (Lb/year)	Sediment Reduction (Tons/year)	Soil Reduction (Tons/year)	Estimated Cost - Design, Installation, 10 year Maintenance	Cost per Pound of Phosphorus
NBL 07-HH	122.4	84.4	112.4	\$124,911	\$1,021
NBL 14-FF	96.7	91.0	93.7	\$124,388	\$1,286
NBL 07-R	73.0	73.0	82.0	\$108,638	\$1,489
SBL 22-B	68.3	63.8	48.3	\$21,948	\$321
SBL 03-B	60.3	52.0	100.5	\$48,880	\$811
SBL 18-A	55.7	52.2	36.5	\$19,604	\$352
NBL 07-11	54.0	63.0	63.3	\$60,301	\$1,116
SBL 09-A	39.5	34.7	19.2	\$15,055	\$381
NBL 13-Y	39.5	38.8	54.8	\$69,595	\$1,763
NBL 12-SS	39.1	38.5	38.4	\$48,096	\$1,230
SBL 15-B	38.8	45.6	49.8	\$21,057	\$543
NBL 23-PP	37.9	37.9	43.7	\$53,302	\$1,406
SBL 16-A	33.5	35.2	28.3	\$14,767	\$441
NBL 07-NN	32.1	37.8	37.8	\$35,587	\$1,108
SBL 22-C	31.2	33.3	30.1	\$15,853	\$509
NBL 21-TT	27.3	29.1	28.5	\$75,725	\$2,772
SBL 23-A	25.9	22.0	82.1	\$45,048	\$1,737
NBL 23-OO	24.6	25.0	59.9	\$117,773	\$4,797
NBL 23-QQ	23.1	23.1	44.8	\$54,545	\$2,365
SBL 14-B	22.9	23.5	36.7	\$12,985	\$568
SBL 19-D	21.6	21.6	48.5	\$21,407	\$992
NBL 08-S	21.0	19.9	20.1	\$25,699	\$1,225
SBL 19-B	19.1	20.3	86.1	\$31,837	\$1,667
SBL 17-A	18.6	21.9	21.9	\$6,655	\$358
NBL 20-V	17.8	17.8	17.8	\$21,652	\$1,218
NBL 02-MM	17.0	17.0	17.0	\$20,720	\$1,219
SBL 19-A	16.5	16.5	83.3	\$21,407	\$1,297
NBL 19-J	16.2	26.6	14.7	\$30,792	\$1,901
SBL 38-A	16.0	16.0	66.7	\$21,407	\$1,340
SBL 38-B	14.9	17.5	64.5	\$21,407	\$1,441
SBL 03-D	14.7	17.3	17.3	\$5,618	\$381
SBL 02-A	14.4	16.9	49.0	\$14,438	\$1,004
NBL 14-CC	13.7	11.4	12.5	\$17,010	\$1,240
SBL 03-E	13.6	16.0	58.2	\$14,438	\$1,060
SBL 13-A	12.7	14.9	14.9	\$5,068	\$400
SBL 22-G	11.2	11.0	8.9	\$8,756	\$782

SBL 16-F	10.2	8.3	0.5	\$1,991	\$195
NBL 14-UU	10.1	10.7	9.9	\$43,375	\$4,278
SBL 06-A	10.1	11.8	11.8	\$4,368	\$435
NBL 14-DD	9.5	0.6	4.9	\$5,484	\$580
SBL 15-A	9.4	10.6	10.8	\$7,361	\$782
SBL 15-C	9.4	11.0	11.0	\$4,180	\$447
SBL 07-A	9.3	7.7	0.8	\$8,037	\$866
SBL 22-A	8.4	8.8	27.8	\$12,603	\$1,506
NBL 04-Q	7.4	7.4	7.4	\$8,961	\$1,219
NBL 14-BB	7.2	7.2	20.2	\$24,553	\$3,420
NBL 08-T	6.8	1.0	3.8	\$4,889	\$717
SBL 14-A	6.8	8.0	8.0	\$3,493	\$515
SBL 15-E	6.5	6.5	6.5	\$3,593	\$553
SBL 04-B	5.9	6.9	16.0	\$21,408	\$3,635

Amount of reduction needed to reach 2040 Goal: 526.80 lbs
 Amount of reduction achieved above red line: 545.00 lbs for \$286,736 (32 sites)

TOP 50 FIELDS – COST PER POUND TP REDUCTION

TABLE 2. TOP 50 FIELDS RANKED BY COST PER POUND OF TOTAL PHOSPHORUS REDUCTION PER FIELD

Field Identification*	Total Phosphorus Reduction (Lb/year)	Sediment Reduction (Tons/year)	Soil Reduction (Tons/year)	Estimated Cost - Design, Installation, 10 year Maintenance	Cost per Pound of Phosphorus
SBL 16-F	10.2	8.3	0.5	\$1,991	\$195
SBL 22-B	68.3	63.8	48.3	\$21,948	\$321
SBL 18-A	55.7	52.2	36.5	\$19,604	\$352
SBL 17-A	18.6	21.9	21.9	\$6,655	\$358
SBL 09-A	39.5	34.7	19.2	\$15,055	\$381
SBL 03-D	14.7	17.3	17.3	\$5,618	\$381
SBL 13-A	12.7	14.9	14.9	\$5,068	\$400
SBL 06-A	10.1	11.8	11.8	\$4,368	\$435
SBL 16-A	33.5	35.2	28.3	\$14,767	\$441
SBL 15-C	9.4	11.0	11.0	\$4,180	\$447
SBL 22-C	31.2	33.3	30.1	\$15,853	\$509
SBL 14-A	6.8	8.0	8.0	\$3,493	\$515
SBL 15-B	38.8	45.6	49.8	\$21,057	\$543
SBL 15-E	6.5	6.5	6.5	\$3,593	\$553
NBL 11-E*	5.5	1.2	3.7	\$3,104	\$566
SBL 14-B	22.9	23.5	36.7	\$12,985	\$568
NBL 11-A*	4.8	2.5	0.1	\$2,802	\$579
NBL 14-DD	9.5	0.6	4.9	\$5,484	\$580
SBL 03-C*	5.1	6.1	6.1	\$3,055	\$594
SBL 14-D*	5.2	5.2	5.2	\$3,218	\$615
SBL 09-D*	4.6	5.4	5.4	\$2,905	\$634
SBL 07-F*	3.7	2.2	0.2	\$2,591	\$706
NBL 08-T	6.8	1.0	3.8	\$4,889	\$717
SBL 22-G	11.2	11.0	8.9	\$8,756	\$782
SBL 15-A	9.4	10.6	10.8	\$7,361	\$782
SBL 03-B	60.3	52.0	100.5	\$48,880	\$811
SBL 09-E*	4.3	3.6	1.8	\$3,574	\$831
SBL 18-C*	1.9	1.0	0.2	\$1,655	\$853
SBL 07-A	9.3	7.7	0.8	\$8,037	\$866
SBL 16-C*	0.3	0.2	0.1	\$264	\$942
SBL 05-C*	2.6	2.1	0.2	\$2,519	\$984
SBL 19-D	21.6	21.6	48.5	\$21,407	\$992
SBL 02-A	14.4	16.9	49.0	\$14,438	\$1,004
NBL 07-HH	122.4	84.4	112.4	\$124,911	\$1,021
SBL 03-E	13.6	16.0	58.2	\$14,438	\$1,060

NBL 07-NN	32.1	37.8	37.8	\$35,587	\$1,108
NBL 07-11	54.0	63.0	63.3	\$60,301	\$1,116
NBL 07-KK*	0.9	0.1	0.6	\$1,060	\$1,153
SBL 05-B*	4.0	4.7	13.3	\$4,705	\$1,188
NBL 20-V	17.8	17.8	17.8	\$21,652	\$1,218
NBL 02-MM	17.0	17.0	17.0	\$20,720	\$1,219
NBL 04-Q	7.4	7.4	7.4	\$8,961	\$1,219
NBL 08-S	21.0	19.9	20.1	\$25,699	\$1,225
NBL 12-SS	39.1	38.5	38.4	\$48,096	\$1,230
NBL 14-CC	13.7	11.4	12.5	\$17,010	\$1,240
SBL 16-E*	3.4	2.2	1.2	\$4,304	\$1,273
NBL 14-FF	96.7	91.0	93.7	\$124,388	\$1,286
SBL 19-A	16.5	16.5	83.3	\$21,407	\$1,297
SBL 07-G*	3.5	2.6	1.1	\$4,596	\$1,325
SBL 38-A	16.0	16.0	66.7	\$21,407	\$1,340

*These fields do not rank in the top 50 when ranked by total phosphorus reduction and do not have a profile included in this report.