

**Nutrient Trading Program Notes**  
**March 11, 2016 Meeting**  
**10:00 AM – 12:55 PM**

**Agenda**

1. Introductions
2. Review of Notes from February 26, 2016 Meeting
3. Presentation on the Southern Minnesota Sugar Beet Cooperative trading program
4. Trading Elements
  - a. Extreme Events
  - b. Funding the Clearinghouse and Common Infrastructure
  - c. Trading Ratio
  - d. Adaptive Management
  - e. Ecosystem Services
5. Overall structure of the program
6. Discussion of the proposed structure of the document
7. Draft Document - Overall Impressions
8. Creating a Test Case
9. Working Forward

1. Each member of the group introduced him or herself.
2. There were two references to an April 11 meeting in the February notes; those were supposed to refer to today's (March 11) meeting.
3. Dale Finnesgaard from Barr Engineering presented background material on the Southern Minnesota Sugar Beet Cooperative trading program. The processing plant applied for a permit in 1998 as it wanted to move from spray irrigation to a treatment system with a discharge to a tributary of the Minnesota River. Because the river was listed for low dissolved oxygen at low flow, the Coop was required to offset its discharge in order to receive a permit. The plant established a trading program involving its member growers (using cover crops as the dominant practice) and one cattle operation (using stream exclusion and riparian restoration) with a trading ratio of 2.6:1 and a gradual implementation over five years. The plant needed 5000 credits with one credit equaling a pound of phosphorus. 45% of credits were available at signing, 45% after construction/planting and 10% after vegetation was established for each practice. Cover crops earned 0.2 credits per acre and were also shown to raise productivity by protecting the beets from early season wind and by reducing replanting needed as a result of early growing season failure.

The plant does not discharge during the summer and was able to meet its obligations by trading, though it barely had sufficient trading volume in early years. A TMDL for the river was completed in 2004 with the goal of a 40% reduction in phosphorus. When Lake Pepin was noted as needing nutrient reductions, the plant's 2004 permit expanded the trading area to that feeding Lake Pepin. At this time, the number of credits needed dropped to 2500 because of actual discharge values, but 2.6: 1 trading ratio was kept. Because the cover crops both add to

productivity and help protect water quality, use has expanded and the current trading ratio is effectively 13.7:1, far exceeding the need.

Dale noted that it was difficult to get farmers to sign up at first. One potential contributor to this hesitation was the annual audit requirement on each field engaged in trading. He thought other factors may also account for this hesitancy.

4a. While some extreme events are well-defined, others are more problematic in terms of definition. Point source to point source trades can deal with this using normal wet weather conditions in the permits. If a point source to non-point source trade uses the clearinghouse, this would be accommodated through the part of the trading ratio that covers practice failures. Those proposing point to non-point source trades outside the clearinghouse would need to define and address this in their prospectus.

4b. Funding the clearinghouse and common infrastructure – Joe invited discussion of this topic, not because it needs to be part of the framework, but that it does need to be addressed before moving forward. Among the options presented were grant funding and general revenue to get this started, followed by a more stable funding source. Many participants supported finding a short term source to help develop the program, but wanted to limit costs to actual costs incurred rather than a pre-determined level of effort.

A number of the participants in the discussion questioned how the department determined its estimate of 3 FTE for the program. Joe explained that the figure was an estimate derived in response to the water quality trading rule and that no firm numbers had been developed, partly because the clearinghouse was not well defined at the time of the estimate. The department agreed to share this information through the web site.

4c. The department suggested a trading ratio made up of a set of components. The first would be a delivery ratio that would depend on local factors such as trading area, stream structure within that area and attenuation factors that were appropriate for the area. The second factor would address practice failure and extreme events. (While this factor will be small, it is an important element in that it shows that Missouri has carefully considered this risk.) The final factor is an “uncertainty” risk that reflects the lack of perfect knowledge of practice effectiveness, attenuation, extreme weather impacts, etc. An equivalency ratio would have to be added if multiple forms of a species were involved.

4d. The department again noted that it wished to have some pilot trading programs established to help develop best practices for implementing trading. The department suggested that the framework be revisited roughly two years after implementation to make necessary changes. Each trading program would be expected to provide an annual summary of how its program was working to help inform this discussion. These actions would allow the program to be adapted in response of new information.

4e. Those trading for water quality reasons would be able to claim other credits (such as carbon credits) with the exception that no double dipping would be allowed for other water quality programs.

For example, a mitigation bank could claim the water quality benefits of a project under a trading program or under section 404 of the Clean Water Act, but not both.

There was discussion of the possibility for credit stacking, as opposed to double dipping. This was not resolved. All other elements discussed did not raise concerns.

5. The group discussed the overall structure of the program with a water quality driver, 13 elements and flexibility to fit the range of potential program and the local conditions in Missouri.

1. Goals and Use of this Framework
2. Definitions
3. Common Infrastructure available
  - a. Missouri Soil and Water Information System (MoSWIMS)
  - b. Nutrient Tracking Tool (NTT)
  - c. Clearinghouse
  - d. Attenuation Modeling and Consultation
4. Elective Elements of a Trading Proposal (including those that could be carried out through the clearinghouse)
  - a. Trading Goals (Water Quality Goal) – Element #1
  - b. Trading Area – Element #2
  - c. Trading Type – Element #3
  - d. Species to be Traded – Element #4
  - e. Monitoring – Element #5
  - f. Baseline Performance - Element #6
  - g. Liability - Element #10 \*\*\*
  - h. Tracking of Credits - Element #11 \*\*\*
  - i. Enforcement of Conditions of Individual Trades - Element #12 \*\*\*
  - j. Trading Ratios – Element #13 \*\*\*  
\*\*\* - could be addressed through the use of the clearinghouse
5. Uniform (statewide) Elements of a Trading Proposal
  - a. Time Terms of Trades – Element #7
  - b. Trading Margin – Element #8
  - c. Extreme Events - Element #9
6. References

6. The group then discussed the proposed structure of the document. There was widespread support for moving the definitions to the back of the material and to add a definition of HUC to the list. Joe will do so.

7. The department proposed creating a test case to provide a very rough estimate of how trading might work. There was a suggestion to use the 2013 Geosyntec report and the spreadsheet that were used to generate that report as the basis as they examined the Spring River in SW Missouri and the North Fork of the Salt River in NE Missouri. [http://www.mocorn.org/wp-content/uploads/2012/09/CIG\\_Nutrient-Trading-in-Missouri\\_Feb2013.pdf](http://www.mocorn.org/wp-content/uploads/2012/09/CIG_Nutrient-Trading-in-Missouri_Feb2013.pdf)

Givens: Trading Area: 8 and 12-digit HUC's will be examined

Only PS to NPS trades are estimated  
Species trading: Nitrogen.

The department will create rough estimates of:

- a. The number of practices and credits that would be available in those HUC 8-digit watersheds and HUC-12 digit sub-watersheds.
- b. The attenuation factors on a watershed basis (to provide an estimate of trading ratio).
- c. The cost estimate for credits in these watersheds using point sources to estimate the possible financial side of the equation.

## 9. Working forward

### a. Proposed Schedule

April 15 – Draft of text out

April 29 – Meeting to discuss draft

May 13 – Comments due

May 27 – Second Draft out

June 6 – Last pre-public comments due

June 20 – Draft out to public

July 13 – Clean Water Commission meeting – public hearing

August 20 – public comments due

October 5 – CWC votes on proposed policy

### b. Tasks and assignments

- i. Dedicated editor (single or a few topics)
- ii. Overall editor – consistency, grammar, etc.
- iii. Sounding board
- iv. Sign up in back