



*American Farmland Trust*

**Iowa Water Quality Trading and Wellhead Source Protection Listening Session**  
**Convened by American Farmland Trust**  
Swan Lake State Park - Carroll, Iowa  
August 12, 2010

**OVERVIEW:** American Farmland Trust hosted a nutrient trading listening session with producers in the Raccoon River watershed. The concept and reality of private markets for environmental benefits generated by well-managed farmland were discussed as well as how these markets might work in Iowa. The group identified barriers to participation, discussed suggestions for structure and format, and identified groups to engage in participation.

**ATTENDEES:** 38 producers plus presenters and support staff (45)

**OPENING REMARKS:** Ann Sorensen, Research Director for American Farmland Trust (AFT) welcomed the group and presented the focus for the day: to explore together the potential for water quality credit markets within the Raccoon River Watershed. The participants introduced themselves and included a wide variety of producers (many farming within the Raccoon River watershed), Iowa Soybean Association, Iowa Department of Natural Resources and USDA Economic Research Service.

**PRESENTATION:** “Improving Conservation and Agricultural Economics with Water Quality Trading,” Jim Klang, Kieser and Associates, LLC (K&A) ([www.kieser-associates.com](http://www.kieser-associates.com)).

**QUESTIONS AND DISCUSSION DURING PRESENTATION**

Q = question from participant

A = answer from K&A and/or AFT

P = participant comment

Q: We’ve been told that we need to add sulfur and boron to our fertilizers. If adding an additional nutrient such as boron or sulfur becomes beneficial to an operation, what is the potential for these additional nutrients becoming a tradable nutrient? When we start talking about trading for water quality, how do new nutrient needs enter into trading market?

A: Since Water Quality Trading (WQT) is a reactive program, a new treatment requirement could potentially create a credit trading opportunity for a specific “nutrient” or ‘pollutant.’ Once a water quality problem is detected, an effluent limit is set and wastewater treatment plants would have to meet that limit as a regulated source in the watershed. WQT may work to help regulated sources meet that limit if the cost margin is right (i.e., the wastewater treatment plant can purchase offsets for that particular pollutant from others in the watershed at a cost lower than

their treatment costs for the specific pollutant). The permit stays with the permitted entity (in this case, the wastewater treatment plant) and the farmer enters into a third party contract to deliver the offsets (similar to a USDA EQIP contract). The lag time between detecting a new pollutant and establishing an effluent limit could be considerable since the pollutant first has to be established as a water quality problem. Although regulations are creating many of the private market opportunities, there are some voluntary models (i.e., Pheasants Forever is willing to pay farmers to install and maintain bird habitat).

Q: The majority of workshop participants are no-till farmers and are already doing what is right, and if current no-till practices do not qualify, what is the draw of WQT and would we have an opportunity to participate in WQT or credit trading? What is the potential? How does the market deal with existing Best Management Practice (BMPs)?

A: Your ability to participate and generate offsets or credits depends on how the policy parameters are set. It is true that in many trading systems and protocols, farmers with many conservation practices already in place may not end up having a practice that qualifies as ‘tradeable commodity’ unless they do something additional that provides value. The idea is to engage all sectors/stakeholders early on in the process to determine the ‘value’ of the BMP or conservation practice and set standards and protocols that incorporate these concerns.

P: We should be honoring no-till farmers as pioneers. They can provide leadership and bring along the late adopters. It is bad thinking to consider no-till as a non-permanent practice and it would be better to grandfather a no-till practice in.

P: Can’t we be more creative and put this kind of practice into the Conservation Security Program (CSP) rather than WQT?

A: Dennis O’Grady, South Nation Conservation, Ontario, Canada set up a program to deal with phosphorus but did not call it WQT. He instead incorporated the same kind of process into the government program (see [www.envtn.org/ETN\\_Workshop.html](http://www.envtn.org/ETN_Workshop.html) for more details). Challenge – is it better to create an out-of-the box program outside of WQT for a local/watershed BMP or conditions?

P: I was in a conference in Winnipeg, Canada and heard about trading “bundles of environmental goods” (see: [www.nesh.ca/sl-esh/reports/SLESH-TechnicalReport2.pdf](http://www.nesh.ca/sl-esh/reports/SLESH-TechnicalReport2.pdf) to download a report on water-based payments for ecosystem services or PES). Maybe we should be trading “bundles of environmental goods” (e.g. wildlife habitat, sediment offsets, water temperature, sequestering flood waters, etc.) rather than limiting the credits from a practice to just one environmental benefit to broaden our buyer base. This may be a better fit for Western Iowa. Is it possible to craft a marketplace with a bundle of goods with contracts in mind? Can we take the pieces that we have and know and make them fit the particular watershed one has?

A: Yes, one solution may be to consider ‘stacking’ each environmental commodity, with the potential of attracting different buyers. Currently, AFT and K&A are involved in developing the Conservation Marketplace in Minnesota. Here, the local stakeholder committees we work with are trying to decide whether to bundle the various environmental credits or sell them separately.

It will take several years to set up (see: [www.farmland.org/programs/environment/solutions/upper-mississippi.asp](http://www.farmland.org/programs/environment/solutions/upper-mississippi.asp)).

Q: How much water quality improvement actually occurs in PA where no-till is compensated yearly?

A: It takes a few years to show results. They are using a yearly determination/accounting system. It should be pointed out that a few people feel that everyone should be using no-till anyway (although no-till may not work for everyone). In some cases, WQT might not be a permanent solution but instead can be used to help point sources meet their permit limits during transition periods when they are phasing out plants or waiting for more efficient, cost-effective technologies to come on-line. In every case, WQT must put a margin of safety into the market, requiring point sources to purchase more credits than might be necessary to accommodate those situations where there may be ‘slippage.’

Q: Regarding the Clean Water Act (CWA), isn't what we're already doing as farmers in violation of CWA? What happens if the Environmental Protection Agency (EPA) comes in after five year and decides that what municipalities are paying a farmer to do through a credit trading payment, is now required? Isn't there a danger that what a farmer does now for a payment may become regulated in the future and therefore no longer eligible for payments?

A: The CWA was enacted in 1972 when society thought we could get rid of all pollution through permitting of WWTP (hence the term National Pollutant Discharge Elimination System). For agriculture, only large feedlots are currently regulated and must obtain NPDES permits. Most farmers and all homeowners are exempt from the CWA. The CWA could set a higher requirement if reopened, in effect moving the baseline that sets and determines “surplus” offsets. Farmers would then have to install more practices or improve existing practices to meet the new baseline and generate offsets to sell. If the rules are in place and require a certain practice (e.g. a 16 ½ foot buffer is required in MN), the farmer cannot sell credits from that practice. Politically, no one wants to reopen the CWA; permittees have anxiety about changing to more restrictive language and environmental groups have anxiety about changes that might loosen restrictions. It is important to emphasize that WQT is just one of the tools that can be used to meet a Total Maximum Daily Load (TMDL) or watershed plan—it is not the whole solution. It allows participants to reach their established goals economically. Only farmers inside the watershed, contributing to the problem, can participate and counties and cities have to work together.

Q: How does one define a watershed?

A: Watersheds come in all sizes, from U.S. Geological Survey Hydrologic Unit Code (HUC)12 (maybe 15,000 acres) watersheds up to an eight digit HUC watersheds (that may contain 15 to 20 HUC12 watersheds). The larger a program is, then the more involved it is and the more science you need. When one starts trading over 20 percent of a state (e.g., the Minnesota River), one needs to be confident that “this” BMP has “this” benefit over the entire watershed. Boundaries for a WQT market are based upon the goals that are set. WQT is not allowed to cause a “hot spot” (concentrated pollutants above water quality standards) so usually the seller is located upstream from the buyer. However, the sellers can be downstream of the buyer as long as there

are no local “hot spots.” For other similar ecosystem service programs, like source water crediting (e.g., wellhead protection) a limited area around the wellhead constitutes the market area based on groundwater travel.

Q: Why is trading for nutrient credits limited to a watershed, while carbon is not?

A: WQT is set up to make sure that the impairment in a targeted water body will improve. Carbon can be sequestered anywhere and still offset greenhouse gases because they accumulate globally in the atmosphere.

Q: Can you use someone like the Chicago Climate Exchange (CCX) to collect nutrient credits?

A: An established or created network can be used to administer the trades, or be the clearing house/broker (e.g., Soil and Water Conservation Districts (SWCDs), certified crop advisers (CCAs), a CCX type entity). The concern is to keep administrative costs below that of the BMP. Farmers may be able to individually negotiate how much they will get paid for a credit but the market determines how many credits a given BMP generates.

Q: Are there any opportunities for farmers who are doing pretty much everything already to participate in these markets? If having to show “improvements” is the caveat, it may beg the issue of how to provide farmers some value for higher cost improvements—those that are generally not economical for farmers to include in their operations.

A: Some BMPs may generate other ecosystem services, providing additional income opportunities outside of WQT if buyers can be found. If it is not economical for a producer to use a given BMP, the market may choose to cover those costs. Some practices take years to “pay off,” (nutrient management for phosphorus can take 10 to 20 years to produce significant reductions; riparian buffers may provide greater benefits after being in place five to 10 years). In these cases, payments could increase over time. There may also be a way to place a greater value on ‘low risk’ producers who have a documented history of providing ecosystem services or nutrient reductions. A buyer may be willing to pay more to a producer with this BMP history because there is less risk in purchasing from this farmer—analogue to a bond rating system.

P: What about considering a two-level contract? Those already doing a good job may not qualify for the ‘transition’ contract, but would start with a ‘credit’ contract. You would set a baseline that would establish a bonus payment.

Q: What units are used in WQT (e.g. credits/acre)? How big of an area does one need to use if the watershed is not the unit?

A: The type of program (WQT versus source water protection) will determine the timing of eligible practices for credit and the geographic scale. In WQT, credits are usually measured as pounds of phosphorus or nitrogen over a critical period. The production of credits has to track with the effluent limit of the wastewater treatment plant and have to help the plants resolve permit issues. In source water protection, such as wellhead protection, credits may be based upon a distance of a 10 year groundwater travel time (maybe 10,000 acres). Other source water

protection programs may be based more on timing and larger areas. Typically, point sources will buy at least 10 percent more credits than what they need.

## **AFT-FACILITATED DISCUSSION**

### **1. OUTSTANDING QUESTIONS**

Q: If we were going to do a WQT feasibility study for the Raccoon River, what would it cost to do one?

A: It depends on how many environmental services you want to consider. The costs would probably fall between \$50,000 to \$100,000 and the study would require collaboration with multiple groups.

Q: The Raccoon River watershed has been identified as a primary nitrogen source for the Mississippi River Basin, primarily from agricultural lands with a porous leaky soil. There are few industries and many small poor communities within the watershed. Therefore, 1) how can WQT work if there aren't enough entities with an ability to pay, and (2) even if they do pay, can we really make a difference in the amount of N reaching the Des Moines water treatment plant?

A: A thriving WQT market may not be possible for the Raccoon River watershed but some of the tools used by WQT could contribute to solutions for the watershed. For example, maybe a few strategic trades between permitted dischargers in Storm Lake (near the headwaters) and agriculture could help reduce the nutrient load in the watershed. It may also be possible to attract more state and federal investments or other environmental service buyers.

P: Why doesn't the watershed get together and be proactive and think outside the box? Why not talk about biological farming, using cover crops and other things? If all converted to farming methods dedicated to improve soil quality, it would help.

P: I have sat on a SCWD board for a number of years. The "easy" folks have signed up already, but nutrient levels are still too high. Now the larger farms have moved into the area and are totally focused on their bottom line, sometimes ripping up terraces to expand their plantings. They will only respond to significant dollars to change this behavior. In Webster County (which is a Mississippi River Basin Initiative (MRBI) designated area project), NRCS still can't get folks to sign up to install conservation practices, even with the MRBI dollars.

Q: Does putting a dam in help, maybe turning the area into recreational area and taking farmland out of production?

A: The answer is complicated. Basically nitrogen goes into an aerobic environment and emerges as nitrate. It has to be held in oxygen depleted water for some time to denitrify. But for ponds to sustain fish populations, they need to be oxygenated. Also, small dams are good sediment basins—but they may impede fish migration.

Q: Can we ever get ahead of the problem when there is a continued/increased practice of tiling (installing drain tiles to remove excess water from soil subsurface) into the watersheds?

A: We need to look at incentivizing control of water volume—drainage practices such as controlled drainage, water quality flow and rate, exchanging flow and rate changes as metrics.

Q: What happens to credits during the dry years?

A: Sometimes markets switch to trades between point sources (point-to-point trades). You have to assess whether WQT with nonpoint sources is right for water flow regimes.

P: Water belongs on the hill where it falls—not where it flows or quickly moves and not in ponds. Ponds won't work for long.

## 2. FACILITATOR QUESTIONS

***ISSUE: How do you balance late adopter and early adopter issues and needs, while at the same time, encouraging late adopters to adopt better management practices? Is it participating in regular conservation programs? Participating in trading type programs?***

A: This is a very complicated. We've been dealing with this issue for over 20 years in the Raccoon River watershed. We tried organized watershed programs, SWCDs with programs of incentives and cost share funds and education demonstration models with early adopters and innovators, in the early 1990s. Now we've evolved to the point where farmers are using new technologies to optimize management on farms because they are driven by their profit/loss margins. They adopt the best performing practices (the N 4 focus of nutrient management—rate, time, form and placement). This is further complicated by site-specific parameters—what works on one farm or one watershed does not work necessarily work in another. Farmers need to collect performance data on their farm—which comes to efficiency and the bottom line. Unfortunately, efficiency may not lead to an environmental outcome. The Raccoon River watershed is complex (30+ inches of rain a year, corn, soybean, livestock, lots of tile lines) so it is a very leaky system. The main driver for farmers is to produce food (crops) so they are striving to maintain the productive capacity of their systems. To reduce N, we're now using wetlands and placing bioreactors on tile lines. The Raccoon River TMDL requires a 40 percent reduction in N. Sites like Storm Lake have spent over \$1,000,000 to monitor water quality over the last decade and now the city of Storm Lake is the highest discharger sub-watershed (which is 4 permitted point discharger). The city is going to have to spend \$5,000,000 for a nutrient treatment upgrade to protect the headwaters. We should be talking to them because they will have to increase wastewater fees to citizens to pay for this.

Q: What is being measured?

A: Nitrate is what is being measured. The only nitrate standard we have is the drinking water standard. We don't have numeric nitrogen standards but those will come. We don't know when the Iowa DNR will enforce the TMDL and crack down on the point source community. However, farmers will need to have confidence in the strategies we employ. We have spent a lot

of dollars in the Chesapeake (to finance voluntary nutrient management plans) without seeing results.

P: Why don't the long-time no-tillers join forces? We need to accomplish a tremendous transition. In the case of no-till, it takes a long-term transition commitment. If after three years, no-till does not show results, farmers are likely going to give it up. We also have the challenge with absentee landowners to work with their renters to adopt no-till. It takes awhile before no-till really pays dividends in better soil quality. Additional challenges include the need to educate urban audiences and the need to address absentee landowner rental rates. Is there a way absentee landowners can "force" their operators to change their tillage practices? And can we entice absentee landowners with WQT market benefits?

P: There are a variety of ways to cause or force change. For example, it is now really tough to buy anhydrous ammonia from dealers in the Raccoon River watershed before October when the temperatures start to drop. Fertilizer suppliers are having an impact because they are not willing to sell it to you until the temperatures are low enough—per recommendations for 'safe' application of anhydrous ammonia.

P: The use of precision equipment to improve the placement of fertilizers is an economic/efficiency issue. It comes back to the bottom line. Bankers will always ask that question. Smaller farmers will use it if it is efficient and economic. How can we make things more affordable to smaller farmer? Technology comes with efficiency. Efficiency can also lead to larger and larger operations because of economies of scale.

P: Agriculture is at a critical point because of demographics and an aging farm population. How will the 50+ year old farmers transition? The next generation transfer may trigger consolidation and more absentee landowners.

Q: In the Raccoon River Watershed, if Storm Lake was required to cut N discharge, what is the potential and or incentive for Storm Lake to become a purchaser? [*Note: Storm Lake's population is a bit over 10,000. Tyson Foods operates a large hog slaughterhouse and meat-packing plant in Storm Lake and Sara Lee has a turkey processing plant*].

A: Storm Lake would have to upgrade their treatment plant and that might be costly. This may be a one-time cost, plus an annual operation cost. The life of upgrade issues may also come into play. The question is if the majority of treatment plants can do a single upgrade, which is one time cost that is cost effective compared to BMPs, what would be incentive for these entities to pay for BMPs or an annual cost (as incurred in a WQT market)? It would probably come down to energy costs as well as technology costs. For small cities, they may be more willing to pay \$10,000 to \$20,000 for credits rather than \$500,000 for technological upgrades. WQT generally works well for small wastewater treatment plants. Yet another example is the Alpine Cheese WQT market in Holmes, Ohio. Alpine Cheese is purchasing nutrient credits from the Amish dairy producers who provide its milk supply rather than installing a very costly upgrade in its infrastructure to deal with a doubling in size. Farmers reduce three pounds of P for every one pound of P the Cheese plant has to reduce. The cheese plant paid for conservation practice upgrades and maintenance for participating farmers. The local SWCD runs the market because they had an existing network and are a trusted entity. The cheese plant was able to defer \$2

million in costs for at least five years. In this case, Amish farmers would not take government funding (e.g., EQIP dollars) but would take these payments because they were private dollars.

P: An ethanol plant is going to need permits to locate. When a farmer realizes that the products one is going to produce may be limited by permitting requirements, then it creates opportunities and possibilities. When buyers and sellers come together, it means there are interests for both. When people who own ethanol plants or packing facilities are constrained by permit requirements, then we may have potential credit buyers.

Q: Why are AFT and K&A here? Do you plan to make money on either feasibility studies or trading markets?

A: No—we have private funding to convene listening sessions such as this one to introduce the issue of ecosystem service markets but it is up to you to decide if these markets will work for Iowa. AFT's main concern is keeping working land in farmland and bringing private sector dollars into agriculture is one way to do that. Kieser & Associates has partnered with AFT to develop several WQT markets and are well known nationally and internationally for their expertise in helping develop emerging ecosystem service markets.

Q: The costs of rural water and sewage are going sky high. How can residents afford higher rates? There is not a lot of money to buy WQT credits.

A: The flip side is that a WQT tool may be able to keep the costs of treating water lower. Coming down the road, there may be additional regulations to that same municipality to limit sewage discharges and storm water run-off.

***ISSUE: What about the impacts of absentee landowners on contracts, contract length, possible participation in WQT markets?***

P: Renters would love longer lease contracts (e.g., five years). Perhaps sharing the WQT credit payment with the absentee landowner might benefit both parties.

P: Farm subsidies have already ratcheted up land costs (and rents). Farm payments are going to have to stay with the land somehow so how do we involve absentee landowners and how do we negotiate longer-term leases?

P: We have to engage landowners and understand their goals. I recently negotiated five-year contracts with five landowners, all older ladies who wanted to hand over their farms to the next generation with better soil quality. I convinced them that improving soil quality is a long-term process, hence the need for a long-term contract.

P: What about absentee landowners who hire farm management companies? They may not listen to the farm management company and may not want to deal with the government and “taxpayer” money. They may be all about getting the most rent dollars, and not soil quality improvements.

P: (Agren) Most of our work with absentee landowners has been outside of Iowa. We're currently working with the conservation districts in Iowa to see if it is possible to certify operators so that absentee landowners have confidence in their stewardship abilities—basically giving a stamp of approval to operators. Our survey research shows that landowners are interested in stewardship and land improvements but don't know how to manage what is going on with their land. The landowner may not trust the operator to make those kinds of decisions. The current system serves the operator rather than the landowner. We're trying to work with landowners so we can have both parties come together. The operator does not want to lose access to the land. The landowner does not want to go to operator directly with concerns because of lack of trust or other factors. We have just completed a survey of landowners and operators in the middle Raccoon River watershed and will have the results in the next few months.

P: In all of this discussion, I have yet to hear about cattle and grazing. This is a huge issue. A lot of ground that was formerly in pasture is now being taken out of production and put into row crop farming. We are missing the boat because IA has lost 500,000 acres of grazing ground that generates a lot of income for rural areas while producing less nutrient runoff than row crop farming. This includes a good share of Clark County, Decatur area and the loss of pasture and grazing lands has not helped economic development in that area. We have also lost a lot of land to the Conservation Reserve Program—and that has not helped corn prices or rural America. (Note: the Leopold Center has more information on the benefits of custom grazing in southern Iowa at: <http://129.186.41.143/pubs/nwl/2007/2007-4-leoletter/grazing.htm>)

***ISSUE: Now let's talk about the role of aggregators and third parties for verifying and selling and purchasing credits. How should those roles be allocated? It could be SWCDs, certified crop advisers, agricultural retailers, etc.? Who is likely to be good at what?***

P: What about using AgraGate—Dave Miller and his colleagues at Iowa Farm Bureau who have already been aggregating carbon credits? They already have a proven relationship with producers (see: <http://www.agragate.com/>).

P: We need at least three roles to be filled, perhaps by different entities:

1. A promoter/aggregator (to educate and promote) so do we want this aggregator to have an 'ax to grind?' They are selling something.
2. A technical service provider-type person—especially if we're doing bundled environmental credits—to go out and work with farmers. An aggregator may not have this capacity, so we may need someone to design a package of conservation practices that produce the environmental credits that the farmer can then sell.
3. An independent auditor—separate from both the aggregator and TSP—to be able to tell us if this program/process is working or not.

Q: If we pay these three entities to do all of this, then what is left for the farmer?

A: The BMP design cost is passed on to the purchaser and is part of the consideration of whether WQT is economically feasible. The audit costs are usually borne by third parties, who may or may not pass these costs on to the buyer (e.g., in the Miami Conservancy District WQT

program in Ohio, audit costs are covered by the SWCDs and the Ohio Department of Natural Resources. The Miami Conservancy District (a flood district) actually owns the credits before selling them to the cities. Often the marketing of the program occurs in the farmer-to-agricultural technical service provider interface.

Q: Who pays? In a grain marketing system, if a farmer brings in 18 percent corn and the elevator needs 15 percent corn, the grain elevator pays a lower rate. The Chicago Board of Trade acts as the overarching organization. The Chicago Climate Exchange (CCX) served in a similar fashion for carbon. Who would be the overarching organization for water credit markets?

A: There are several examples. In one, the buyer pays and sets all the credits and handles paperwork and owns the credits they have purchased. A higher volume lowers transaction costs. Smaller watersheds mean higher transaction costs. In the MN project previously mentioned, three committees of local stakeholders are working together to design and implement the trading market: the Policy, Technical (credit estimation and calculations) and Aggregator (handles forms and pulls buyers and sellers) Committees. The market design is building on the existing infrastructure to keep costs down. All work together. The design phase is covered by grants. A mix of grants and credit transactions cover the middle phase. The fully functioning market is supported by credit transactions. Markets should be self-sustaining.

Q: Do you assess institutional readiness for these markets to exist in the feasibility study? Maybe Iowa's institutional capacity doesn't exist.

A: Yes. The goal of a feasibility study is to have enough information so that local stakeholders can make informed decisions. We have found that, in many cases, the SWCDs are really suffering from workloads and don't have the time to get involved in the design phase of building a market. We really need to address this. Often these programs have to be grant-subsidized at the early stages. Sometimes who will own credits and who will implement a program are political decisions. Cities may end up forcing an issue because of potential cost savings (versus a top-down program).

Q: Does Iowa need state trading rules? What is the status of state standards here in Iowa and other states?

A: National Pollutant Discharge Elimination (NPDES) permitting authorities can incorporate trading provisions into permits but these provisions can be challenged so some states want these standards set by law. State rules can be beneficial in that the onus of defending rules falls to the state. The EPA has developed a WQT toolkit for permit writers available at: <http://water.epa.gov/type/watersheds/trading/WQTToolkit.cfm>. The Clean Water Act doesn't directly address WQT and EPA only provides "guidance." So far, eight states have rules and several more states are in the process of developing rules (see the Environmental Trading Network: [http://www.envtn.org/State\\_Programs\\_Rules.html](http://www.envtn.org/State_Programs_Rules.html)), but rules can vary. Both MI and OH have rules, but the MI rules are very prescriptive and do not provide enough flexibility so they can discourage the development of markets. If the state is going to draft its own WQT rules, they need flexibility balanced with codified reliability.

## **CONCLUDING REMARKS**

Agren: We're continuing to work on the Raccoon River master plan with the Iowa Department of Natural Resources and we're considering different implementation initiatives and what needs to occur before we can get the best implementation in place. Can WQT and environmental credit markets have a place in this? It is too soon to tell.

American Farmland Trust: We'd like to thank everyone for their participation. The proceedings of this listening session will be posted on our website and we hope to facilitate more discussions about private markets, how they operate and what they can contribute here in Iowa in the near future.

## AFT Nutrient Trading Listening Session

Swan Lake State Park

August 2010

### Agren Concluding Thoughts

There were several issues uncovered in the listening session that appear to significantly limit the application of a water quality trading program in the Raccoon River Watershed.

- 1) The first and most obvious limitation is a lack of demand for nutrient credits. In other words, who are the credit buyers? There are relatively few point sources of nutrients in the watershed. Successful examples of water quality trading generally involve the permitted, point source community purchasing credits from the non-permitted nonpoint source community. About 90 percent of nutrient loading in the Raccoon is allocated to non-point sources. An opportunity may exist in the future if NPDES permit holders in the watershed begin to “outgrow” their existing permits. Two other scenarios that could make a water quality trading program more relevant in the Raccoon would be the development and enforcement of nutrient standards in Iowa or the development and enforcement of wastewater permits for communities with a population under 10,000 people.
- 2) Perhaps less obvious is the lack of farmers in the position to sell nutrient credits in the watershed. A guideline of water quality trading is that a seller must first meet a baseline reduction before they are eligible to sell any nutrient credits. The baseline is most commonly set by the TMDL implementation plan. In the Raccoon, the TMDL implementation plan calls for a 40 percent load reduction for nitrate, with about 90 percent of that allocated to agricultural sources. Therefore, for a farmer in the watershed to be eligible to sell credits, they would first need to meet a 40% reduction themselves. Likely most cropland farmers in the tile-drained landscape of the Raccoon Basin would struggle to meet the 40 percent baseline. Producers who put in large-scale treatment such as nutrient removal wetlands, or those who operate grazing operations, may be exceptions.
- 3) If at some point a market (both buyers & sellers) exists, infrastructure to administer the program will still be a limiting factor. This may be best attempted in a localized area and administered through an organization such as a local SWCD.

While there are several limitations to a full water quality trading program, there may be certain concepts of the program that could be applied in the Raccoon. For example, a one-time trade with a permitted wastewater system that is experiencing rapid growth may be beneficial to both the buyer and seller and result in a significant, economically sustainable load reduction to the watershed. Alternately, there are tools used in water quality trading that may have applicability in the watershed. For example, a scoring system could be adopted to prioritize or target practices.