

Missouri Clean Water Commission Meeting
Echo Bluff State Park
Eminence, Missouri

October 5, 2016

Missouri Water Quality Trading Framework

Issue: In response to expressed interest in nutrient trading during the development of the Missouri Nutrient Loss Reduction Strategy, the Department and interested stakeholders have created a framework that will serve as the policy statement on water quality trading in Missouri. The framework defines the major elements that an entity will need to create a trading prospectus. The framework would guide any organization through the process of developing a water quality trading program.

Background: Starting in July 2015, the Department held stakeholder meetings with parties interested in water quality trading. Elements critical to establishing water trading were discussed. The framework envisions a water quality trading prospectus would be developed for each proposed trading program based on the framework. Public comments on the framework were accepted from June 24, 2016 through August 24, 2016. The resulting draft document, as well as comments and responses, are presented for the Commission's consideration.

Recommended Action: The Department recommends the Commission adopt the Missouri Water Quality Trading Framework.

Suggested Motion Language: "I move the Commission adopt the Missouri Water Quality Trading Framework dated October 5, 2016."

List of Attachments:

Missouri Water Quality Trading Framework, October 5, 2016
Responses to Comments on Framework
Comments on Framework

Response to Comments

Association of Missouri Cleanwater Agencies

Comment 1: Point source trading proposals should not need the approval of the Missouri Clean Water Commission (CWC).

Response: During the development of the trading framework it was decided by stakeholders and department staff that approval of discharger specific trading prospectuses by the CWC will provide additional support to trading programs and aid the CWC in achieving their goals for water quality in the state. The CWC has expressed interest in exploring alternative means such as trading for dischargers to overcome water quality challenges. By approving prospectuses, the CWC can ensure this occurs. At some point the Commission may choose to not be directly involved.

Comment 2: The reference to antibacksliding should be deleted from the framework.

Response: The department concurs with this recommendation and has deleted the reference to antibacksliding on page two of the framework.

Comment 3: Clarify antidegradation-related requirements.

Response: According to the Missouri Antidegradation Implementation Procedure (AIP) 2012, antidegradation requirements are triggered for wastewater treatment facilities that increase loading of a pollutant of concern. Should loading for any facility increase beyond 10 % of the facility assimilative capacity or segment assimilative capacity, then a **Tier 2 review** with a demonstration of necessity and social and economic importance of the increase in loading and corresponding lowering of water quality would be required. Hence, a FAC determination could be completed to show that the new discharge loading will be minimally degrading or less than 10% of FAC. Any discharge greater than 10% FAC or assumed to be greater than 10% FAC must undergo the **Tier 2 Review** (see AIP, 2012). For waters with a Tier 1 status for a pollutant of concern, any facility wishing to increase loading of a pollutant beyond the permitted baseline must demonstrate that the discharge does not cause or contribute to an exceedance of water quality standards. An applicant must comply with the Total Maximum Daily Load (TMDL) wasteload allocation, if one exists.

Comment 4: Instream monitoring requirements to identify “hot spots” and to verify whether antidegradation requirements are met serve no point and should be removed.

Response: While the framework was developed for all pollutants of concern, except those the EPA prohibits from trading, we think the comment and the framework mainly address nutrient “hotspots.” In the framework, the word “antidegradation” is used to replace the phrase “water quality degradation” in the general sense in association with “hotspots.” At present, the determination of permit limitations for nutrients that satisfy the requirements of antidegradation

have not been completely established. No water quality standards exist for streams, and therefore limits developed to ensure protection of stream designated uses and existing water quality cannot be developed for nutrients. For these pollutants, stream water quality assessment may be a useful means of demonstrating no degradation of water quality or creation of “hotspots.” For other pollutants with criteria, water quality assessment is a means of gathering the needed existing water quality data to develop those very conservative permit limits that you mention in our comment. Just how much water quality assessment or “monitoring” will be required in any trading program prospectus will have to be reviewed on a case-by-case basis. To learn more about the existing water quality data collection process, please see the Missouri AIP, Page 18, Water quality Assessment Procedures.

In addition, a properly developed trading ratio that uses monitoring data to develop fate and transport factors will reduce the risk of developing “hot spots.” In the case of lake discharges, monitoring data can be used to develop attenuation factors from models that would prevent hot spots from occurring.

Under the trading framework, National Pollutant Discharge Elimination System (NPDES) facilities are potentially allowed discharge limits that are less conservative than they would be without trading. With this flexibility comes the risk that “hot spots”, or localized degradation of water quality, may result. Although there is natural variability in the data produced by instream monitoring, if it is done with regular frequency, that variability can be analyzed to yield a credible and accurate indication of the impairment status of a stream. Also, trends can be identified to determine whether the water quality trading program is meeting its objectives.

Comment 5: A statement in the Determination of Credits section states, “Credits for point source projects will be determined using the best available data from similar systems currently in operation.” Point source loadings and credits should be based on data from discharge monitoring reports.

Response: The number of credits produced from point source systems will be determined based on discharge monitoring reports and permit limits; provided there is sufficient data. Data which covers effluent discharges during all environmental conditions for longer periods provide more confidence when determining credits for a particular point source systems and trading programs. The department can require a point source system to collect more discharge data before approving credits for that system. The language “determined using the best available data from similar systems currently in operation” allows the department freedom to determine credits on a program-by-program basis, utilize modeling if modeling is shown to be reliable, and refine language as more data is collected from active trading programs.

Comment 6: For Publicly-Owned Treatment Works (POTWs) load allocations should take into consideration design capacity as to not strand public investments into facilities.

Response: Baseline loadings for POTWs will be based on NPDES permit effluent limits or TMDLs when appropriate. A POTW must meet permit conditions and it will be up to the POTW to determine whether it is better to invest in upgrading the facility or to purchase credits to meet permit conditions. However, trading is not allowed for the purposes of achieving technology-based effluent limits (TBELs).

MSD

Comment 1: Water quality trading goals should not be limited to compliance with water quality-based effluent limits.

Response: The department has revised the framework to include the language “or other water quality goals” at the end of sentence two under element one. The framework now reads, “The trading program must have a clearly defined water quality goal that serves as the reason for the establishment of the program. This goal should be tied to the compliance with Water Quality-Based Effluent Limits or other water quality goals.” Additionally, the department concurs that trading to meet the water quality goals of Missouri’s Nutrient Reduction Strategy are appropriate under this framework.

Comment 2: Limiting the carryover of credits to one year will eliminate incentives for early adopters who may otherwise make nutrient reductions before they are required. The framework should be revised to indicate that credits can be carried over for up to five years which corresponds to NPDES permit terms.

Response: At this time the department is unable to agree that credits banked greater than one year prior to use would meet the targeted water quality goal of a trading prospectus. If in the future a trading prospectus focuses efforts on a water quality goal that can justify banking or stacking of credits greater than one year, the department believes the flexibility to approve such a prospectus exists.

Comment 3: Requiring a Sampling and Analysis Plan (SAP) in every water quality trading prospectus is unnecessary. Element #5 indicates that a SAP must be included as part of any trading program which you said instream monitoring may not always be necessary. The SAP requirement should be modified as: “A SAP must be included in the water quality trading prospectus for approval, if instream monitoring is determined to be necessary based on considerations included below.”

Response: The Department agrees with this comment and has changed the framework document accordingly.

Comment 4: The definition of baseline should be modified to the following, “The expected minimum level of performance with regard to pollution discharge. Only reductions of a pollutant beyond this level are eligible to be traded. For example, a point source’s baseline will be its

permit limit or long-term average effluent quality without pollutant removal in the absence of a limit.”

Response: The department concurs with this language change but it is important to note that setting a baseline at current discharge performance is only applicable when seeking to meet voluntary water quality goals or commitments in accordance with the nutrient reduction strategy.

Comment 5: The framework would benefit from less detail on uncertainties and trading ratios – this should be better addressed in the procedures document where guidance could be provided for addressing uncertainties in a trading prospectus.

Response: Potential participants in water quality trading needs to be presented with an accurate and complete accounting of the commitments that they would make. Putting this information in a procedures document or prospectus may lead to a perception that the Department is downplaying the uncertainties and liabilities involved. It is important that buyers and sellers of credits are fully aware of the risks involved. Elements #10 and #13 do not specify amounts or percentages of credits that would be required to meet these provisions. They leave that to applicants to determine, based on details of the trading prospectus. It is anticipated that the procedures document will provide appropriate guidance.

Comment 6: Credit stacking should be addressed in the procedures document, not the framework.

Response: The department finds value in keeping the paragraph as it is written in the framework. The paragraph acts as a placeholder and reminder for those utilizing the framework, whether it is department staff or entities, to be consistent across the state. The specifics of any project falling under this consideration should certainly be included in a procedures document or prospectus for a particular area, but the general paragraph will remain in the framework. Compensatory mitigation required as part of the CWA Section 404 or 401 programs helps replace functions and values lost due to project impacts at streams, wetlands or other jurisdictional waters. One cannot earn trading credits for the portion of a project replacing a lost resource. As the framework eludes, should an entity wish to pursue credit stacking for different programs, review by appropriate agencies can help guide the entity for the common goal of water quality protection contained within distinct programs of the Clean Water Act.

Comment 7: You list additional references for consideration.

Response: The department acknowledges that the references you provide are beneficial to those crafting trading prospectuses; however, specific reference to support language in the framework was not utilized from the references that you provided. Referencing these in the framework is not appropriate.

Busick

Comment 1: Monitoring parameters are unclear.

Response: The department recognizes monitoring is essential for a productive trading program. Monitoring point source reductions would be direct and reported through present means. Missouri has a long history of supporting conservation practices addressing nonpoint sources, and those related to agricultural sources are monitored directly by local soil and water conservation districts. Reductions from agricultural practices would be estimated by the Nutrient Tracking Tool developed by Tarleton State University, and the integrity of practice performance would be verified. Information on reductions would be developed and reported annually. Such reports would be available to the public, but not contain information tied to specific agricultural producers.

Comment 2: How will the department deal with loopholes and risk? What happens if a project fails to meet performance expectations? Situations could arise where the trading program is taken advantage of causing the potential for more nutrients in the watershed.

Response: A means of managing risk in an approved trading program will be one of the expectations for any successful program. The use of a suite of mechanisms for addressing risk will have to be addressed in the approved program. For instance, the use of uncertainty ratios that are described in the framework can help to compensate for the variability of practice performance resulting from weather and soils, as well as account for time lags between the implementation of a practice and its impact on water quality.

Scenarios such as you describe in your comment are certainly rare cases that the department will have to be mindful of. Department oversight of the approved program hopefully will avoid these situations. Permitted Concentrated Animal Feeding Operations (CAFOs) operate as no-discharge facilities and any release of pollutants is not allowed. The department does not envision any further reduction that could result in credit generation. Similarly, releases from smaller livestock operations are not allowed, and where they occur, they are addressed as compliance matters.

Comment 3: How will water quality trading avoid promoting pollution? If a TMDL is the ceiling, will the clearinghouse not be encouraged to sell credits up to that amount every period? Is there a plan to continually reduce TMDs in order to actually reduce the total nutrient load in a given waterway? How frequently the department will be willing to adjust trading areas? If conservation practices that will generate trading credits are already being funded and implemented through the SWCP without currently offering offsetting pollution credits, is trading encouraging polluting?

Response: A TMDL consists of a waste load allocation (applicable to point sources), a load allocation (applicable to nonpoint sources) and a margin of safety. The margin of safety, whether implicit or explicit, is meant to ensure that the entire quantity of the pollutant in question that is discharged or runs off to a waterbody falls within the limits established by the TMDL. Proper implementation of a TMDL, with or without trading, should reduce the pollutant load to a

level that is supportive of the designated uses of that water body. The amount of credits available will be limited by the sum of the load and waste load allocations. In no case can the amount of pollutant discharged from the combination of all sources exceed that sum.

The point source will be responsible for acquiring enough credits to ensure compliance with the water quality requirement they are trading against. The frequency at which the clearinghouse indicates to the point source they will need to obtain additional credits will be determined based upon the frequency of the water quality requirement. For nutrients, compliance is typically assessed as an annual average concentration or mass.

The Soil and Water Conservation Program (SWCP) under the direction of the Soil and Water Districts Commission (commission) offers a cost-share assistance program to agriculture landowners in Missouri to voluntarily implement erosion control and water quality practices on their land. The primary goal of the implemented practices is to reduce soil erosion and improve and/or protect water quality with other associated benefits such as improving the local economy and wildlife habitat. The conservation practices that are implemented to reduce erosion have a measured soil loss calculated at the field level. With reductions in soil erosion, there is a reduction in nutrient runoff since nutrients, especially phosphorus, adhere to soil particles. At this time the nutrient reduction is not being documented nor is a nutrient credit given to the voluntary implementation of the practices. With the nutrient trading program, the nutrient reductions will be tracked for the implemented practices.

For state fiscal year 2017, the local soil and water conservation districts (SWCD) submitted requests totaling \$75.7 million for cost-share funds for local landowners to the commission. The department's appropriation authority for fiscal year 2017 and for other years is not sufficient to cover the statewide need. Although the state and federal partners fund many conservation practices without currently offering offsetting pollution credits, the department does not feel that nutrient trading is a step backward by allowing entities to pollute. When a permitted point source purchases the credit of an implemented cost-share practice, that money will be made available for additional agricultural or possibly urban projects within the same watershed for further reduction in nutrient runoff. Cost-share for landowners is an incentive to implement a conservation practice that may be cost prohibitive, or the cost-share received reduces an associated risk such as loss in crop or livestock production. Funding is an essential component for improving the adoption of both structural and management conservation practices in watersheds that would not otherwise be implemented. Landowners using cost-share always fund at minimum 25 percent of the cost of the practices and also agree to maintain those practices (most maintenance requirements for the state cost-share program is 10 years).

Comment 4: More transparency is needed. The public will not be able to voice their concerns on the development of trading prospectuses in their watershed.

Response: Trading prospectuses will be reviewed and approved through the NPDES permitting process. Every permit has a 30-day Public Notice period where anyone has the opportunity to review and comment. Furthermore, prospectuses will be reviewed and approved by the CWC during open session where the public may offer comments.

Food and Water Watch

Comment 1: Voluntary approaches to water pollution fail to result in cleaner waterways.

Response: CAFOs are regulated by the State of Missouri. All CAFOs must be designed, constructed, operated, and maintained as a no-discharge system. This must be met by having adequate storage volume and sufficient land for application of animal wastes to agriculture fields.

Most other agricultural activities, such as row crop agriculture, are currently not required to meet water quality regulations, and Missouri's proposed water quality trading program does not change that fact. However, the state does offer incentives for an array of conservation practices, including nutrient management plans, through DNR's SWCP. Since 1984, when the Parks and Soils Tax was first approved by voters, the program has been a model for the nation, saving at least 175 million tons of soil, and preventing it from washing into our streams.

Comment 2: Water pollution trading is another failed voluntary approach that also threatens the CWA point source successes.

Response: Missouri's proposed water quality trading does not relieve NPDES permittees of compliance with the Clean Water Act. Trading is not allowed for the purposes of achieving a TBEL. Please note the statement on page 2 of the framework: "Nothing in this policy waives requirements of state or federal Clean Water Law, including antibacksliding and antidegradation provisions."

The commenter's narrative of the Alpine Cheese Company in Ohio fails to mention that a biological and habitat assessment of the Middle Fork of Sugar Creek (toward which the Alpine Cheese facility discharges) indicated significant improvements in fish and macroinvertebrate assemblages between 2007 and 2010, the period in which the water quality trading program was implemented. A follow-up report published in 2014 indicates continued improvement. Both of these reports indicate that the stream is in full biological attainment. It was previously in partial attainment at two out of three sampling locations. This analysis was performed by the Midwest Biodiversity Institute, an entity that is independent of any of the parties involved in the WQT program.

Minor municipal wastewater facilities (with design flows of less than one million gallons per day) face considerably higher costs per gallon to achieve significant reductions in total

phosphorus and total nitrogen than major facilities do. This makes compliance with CWA much more difficult in smaller, and often poorer,) communities.

While water quality trading may not be a perfect solution for addressing water quality issues, it should be considered as a tool that may be applied where conditions indicate a probability of success.

The CWA does not explicitly prohibit water quality trading. It authorizes states to develop water quality criteria, subject to approval by EPA. The objective of CWA is to achieve fishable and swimmable conditions in all surface waters. EPA recognizes that TBELs may not be restrictive enough to achieve water quality goals. That is why it has developed policies and guidance for states to pursue an array of strategies, including water quality trading.

Comment 3: Water pollution trading will result in disparate impacts.

Response: The water quality trading framework requires all parties that wish to participate in water quality trading to provide a prospectus to the CWC. If there is a perception that a trading program will adversely affect a specific community, there will be an opportunity to air such concerns before the Commission.

Water Protection Program
Attn: Travis Lyon
P.O. Box 176
Jefferson City, MO 65102

Dear Mr. Lyon,

While I can understand the logic behind the concept of Water Quality Trading, I am not convinced that trading pollution credits is the answer to protecting and restoring our Missouri waterways. In fact, if the Water Protection Program implements this vague framework, it could actually allow more pollution than what is currently occurring.

This proposed framework leaves many gaps that should be filled in before the WPP should even consider moving forward.

I. Unclear Monitoring Parameters

a) The National Network on Water Quality Trading admits “The performance of nonpoint source ‘best management practices,’ or BMPs, can be variable dependent on factors such as weather, site conditions, and land management. The ability to verify that projects are in place and maintained as promised is critical.” (*Building a Water Quality Trading Program: Options and Considerations*)

Page 5 of the framework describes what might be considered in terms of monitoring vs. modeling. But who will decide that modeling is sufficient for a given project or area? What level of monitoring and reporting will be required to ensure pollution reductions are actually occurring? How often will this reporting occur, and how will it be made available to the public?

b) Will participants be required to submit *completed* SAP's (pg 5)? To whom?

II. Loopholes and Risk

a) What happens if a project fails to meet performance expectations?

“The clearinghouse assumes the risk of individual practice failure.” (pg 3 of Framework)
We need a better description of what this means. Does it mean financial risk? If the clearinghouse is the WPP and the SWPC, that is taxpayer money we're talking about...

b) How will the program avoid situations that have occurred in other states where a landowner constructs and professes to operate a CAFO using “best management practices”, receives funding for those BMP credits, but exports the thousands of pounds of manure that aren't tracked? Situations in which the trading program is taken advantage of and the watershed now has (literally) tons more nutrients that could potentially run off application fields.

III. Promoting Pollution

- a) How will this set up not (albeit unintentionally) *encourage* pollution? If the TMDL is the ceiling, will the clearinghouse not be encouraged to sell credits *up to that amount every period*? Is there a plan to continually reduce TMDLs in order to actually reduce the total nutrient load in a given waterway?
- b) “Should the number of credits available approach the number needed to fulfill the requirements of a permitted point source, the clearinghouse shall inform the permittee and work with the department and the permittee to either implement additional credit-earning activities within the trading area or to adjust the trading area (and associated trading parameters) to ensure compliance with the conditions of the applicants permit.” (pg 5 of Framework)

How frequently will the WPP be willing to *adjust* the trading area to allow an entity to pollute?

- c) If the conservation practices that will generate trading credits are already being funded and implemented through the SWPC program *without* currently offering offsetting pollution credits, are we not taking a step backward by allowing entities to pay to pollute?

IV. More Transparency Needed

The framework doesn't describe public involvement for developing individual trading programs. Will the public be able to voice their concerns on the development of trading prospectuses in their watershed? How will this the trading framework be re-opened to public comment to evaluate its effectiveness or failure?

In conclusion, I am concerned that, if adopted, this water quality trading framework will not be enforceable enough to protect our Missouri waterways from pollution, nor will it be accountable to Missouri citizens. The voluntary approach to conservation practices may work to an extent, but not enough to reach long-term water quality goals. This water quality trading just seems to be a different angle—throwing different money—on voluntary improvements, when the state has the power to set higher quality standards and demand prevention of pollution rather than just create a framework for it.

Further, I ask the WPP to extend the public comment date, and publicize—via press, public hearings, and other outlets—the opportunity to comment on *this* framework. I would guess a very small percentage of Missourians are aware of this water quality trading proposal, yet it will affect the future of all.

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August 24, 2016

VIA E-MAIL

Mr. Travis Lyon
Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City, MO

RE: Draft Missouri Water Quality Trading Framework

Dear Mr. Lyon,

Food & Water Watch, a non-profit organization with 22,736 members and supporters who live and work in the state of Missouri, hereby submits the following comments on the “Draft Missouri Water Quality Trading Framework” (the “Framework”) on its behalf and on behalf of the Socially Responsible Agricultural Project. Improving water quality in the Missouri, while reducing nutrients moving downstream to the Gulf of Mexico, is a laudable goal of Missouri’s Nutrient Loss Reduction Strategy, and necessary to meet the targets of the Gulf Hypoxia Action Plan, which include reducing total nutrient loads to the Mississippi River Basin by 45%.

Unfortunately, the Framework as drafted is not likely to result in any significant reduction of nutrients to Missouri’s waterways or to the Gulf as it fails to properly address the industrial agricultural system, which is the primary source of nitrogen and phosphorous to both the Missouri and Mississippi Rivers. Throughout the country, the agriculture industry continues to be the biggest threat to our waterways, yet regulators continue to perpetuate this significant pollution source by enacting a series of failed voluntary measures backed by billions of dollars in federal and state taxpayer dollars. This Framework continues this failed approach by embracing water pollution trading, the latest voluntary tactic applied to industrial agriculture. For the reasons below, Food & Water Watch and our members and supporters strongly urge you to reject water pollution trading as part of Missouri’s Nutrient Loss Reduction Strategy and require mandatory agricultural pollution reduction requirements instead.

I. VOLUNTARY APPROACHES TO WATER POLLUTION FAIL TO RESULT IN CLEANER WATERWAYS

The Framework, as drafted, approaches agricultural pollution with essentially the same voluntary methods that have been employed unsuccessfully for more than 40 years since the enactment of the Clean Water Act (CWA) in 1972. It is filled with references to voluntary conservation practices, in lieu of mandated controls, as a way to motivate industrial agricultural facilities to reduce nutrient runoff from fields and from animal production areas. Given the well-documented failure of voluntary approaches, and the continuing downward spiral of many watersheds across the country caused by industrial agricultural pollution, the probability that the Framework, as drafted, will result in attainment of water quality goals is slim, at best.

At the end of 2013, the United States Government Accountability Office (GAO) issued a report to Congress regarding the CWA and the need to implement changes to the program if the nation expected to fulfill its water quality goals. (<http://www.gao.gov/assets/660/659496.pdf>) The report found:

Because the Clean Water Act addresses nonpoint source pollution largely through voluntary means, EPA does not have direct authority to compel landowners to take prescribed actions to reduce such pollution. In GAO's survey, state officials knowledgeable about TMDLs reported that 83 percent of TMDLs have achieved their targets for point source pollution (e.g., factories) through permits but that 20 percent achieved their targets for nonpoint source pollution. In 1987, when the act was amended to cover such pollution, some Members of Congress indicated that this provision was a starting point, to be changed if reliance on voluntary approaches did not significantly improve water quality. More than 40 years after Congress passed the Clean Water Act, however, EPA reported that many of the nation's waters are still impaired, and the goals of the act are not being met. Without changes to the act's approach to nonpoint source pollution, the act's goals are likely to remain unfulfilled.

The biggest takeaway from this report is that voluntary approaches to water pollution simply do not work to protect water quality. While the GAO report rightfully notes that the CWA currently hampers federal authorities from executing much in the way of mandatory pollution control measures in the nonpoint source sector, which includes some of the agricultural operations in question, there are two important points to make. First, many of the most highly polluting industrial agricultural facilities are not nonpoint sources, but are point source Concentrated Animal Feeding Operations (CAFOs). As such, point source CAFOs are subject to all of the mandated control requirements that are also applicable to other point sources of pollution, and Missouri, as a delegated CWA permitting state is free, indeed obligated, to implement these controls on these point sources of pollution. With respect to CAFOs, it is not the inability of the CWA to forcefully address their pollution problems, but the unwillingness of both the federal EPA and state environmental agencies to implement needed, and mandated, controls.

Second, even where agricultural sources of nutrient pollution are nonpoint source, non-CAFOs, Missouri is free to enact state-level controls on pollution even where the EPA cannot. The CWA only ties the hands of federal agencies, not state agencies that seek to go above and beyond federal requirements to protect their waterways.

What the GAO report makes clear is that voluntary approaches to water quality attainment is simply not a path to success. If Missouri is serious about attaining its nutrient goals, then it must abandon the failed approaches of the past, and implement mandatory pollution control requirements in the agricultural sector. In addition, these requirements should also include adequate surface and groundwater monitoring to ensure that agricultural polluters are actually complying with the limits placed on these facilities. Water quality monitoring to ensure compliance with permit limitations is a requirement under the CWA for all point sources of pollution, including CAFOs, and should be part of any plan to bring some level of accountability to nonpoint agricultural sources. This method has been successfully used over the past 40 years

for most of our industrial point sources of pollution — wastewater treatment plants, manufacturing facilities and electric generating plants — and it's the only method that will attain results in the industrial agricultural sector.

II. WATER POLLUTION TRADING IS ANOTHER FAILED VOLUNTARY APPROACH THAT ALSO THREATENS THE CWA POINT SOURCE SUCCESSES

In addition to the issues noted above with regard to voluntary approaches (and water pollution trading is simply another voluntary approach whereby agricultural facilities are further incentivized, as opposed to mandated, to implement conservation practices), water pollution trading brings its own troubling set of problems, not the least of which is that it represents a giant step backwards from our current CWA approach to regulating point sources of pollution.

Water pollution trading — or water quality trading, as it's called by proponents — is an overly complex and convoluted system of pollution control that is subject to mismanagement, unaccountability and ineffectiveness. In addition, it is inherently antithetical to the goals of the CWA; while the Act calls for the elimination of pollution from our waterways, water pollution trading sanctions acceptable discharges of pollution under a market scheme of credit swapping. Even more disconcerting is the lack of polluter accountability built into water pollution trading. Individual polluter accountability is the hallmark of success of the CWA and its implementing regulations, while water pollution trading is designed and implemented so that polluters can evade responsibility for their discharges to our waterways.

Food & Water Watch released the attached report last year, "*Water Quality Trading: Polluting Public Waterways for Private Gain*," which is the first report to ground-truth water pollution trading programs in Pennsylvania and in Ohio, also a Mississippi River Basin state. We hereby incorporate by reference this report into our comments on the proposed Framework.

The Ohio River Basin contributes significantly to the massive, nutrient-caused dead zone in the Gulf of Mexico each summer, accounting for 37 percent of nitrogen loads and 32 percent of phosphorus loads into the Mississippi River and then out into the Gulf. The basin is also home to 53 of these coal-fired power plants, and their impact on already nutrient-impaired waterways is significant.

With the implementation of new Clean Air Act pollution control requirements, the coal-fired power plant industry finds itself in a quandary. New air scrubbing technologies have resulted in a dramatic increase in wastewater discharges of nitrogen and phosphorus from the plants directly into local rivers. Faced with the burden of technology upgrades to reduce or eliminate these nutrient discharges into waterways, the industry turned to the Electric Power Research Institute to launch a water pollution trading pilot program in the basin to relieve the industry of having to upgrade their facilities. In a 2013 technical report entitled *Case Studies of Water Quality Trading Being Used for Compliance with National Pollutant Discharge Elimination System Permit Limits*, EPRI listed the Alpine Cheese Company in Ohio as an example of a successful nutrient trading program.

Alpine Cheese has been misguidedly used time and again by trading proponents as the poster child for water pollution trading. However, the Alpine Cheese trading program is not a success, it is rife with a lack of accountability, ongoing permit violations and no attendant improvement in water quality. In fact, the Alpine Cheese case is a prime example of water pollution trading only in that it underscores all that is *wrong* with this reckless approach to water quality.

In 2005, planning of a water pollution trading pilot program began when the Alpine Cheese Company of Winesburg, Ohio — a point source polluter — wanted to expand its operations. This expansion meant increased amounts of wastewater discharge into local, impaired waterways — primarily Middle Fork Sugar Creek and other tributaries of Sugar Creek within the Tuscarawas Watershed of the Ohio River Basin.

Under a TMDL for Middle Fork Sugar Creek, Alpine Cheese should have been allowed to discharge only 1.23 pounds per day of phosphorous, or 319 pounds each year, via wastewater discharges of 1 milligram per liter (mg/l) of phosphorous at a total wastewater volume of 0.02 million gallons per day (MGD), or 5.2 million gallons per year. However, under its expansion and subsequent participation in the trading program, Alpine Cheese was permitted to increase its phosphorous discharge levels to 3.74 pounds of phosphorous per day, or 972 pounds per year, via wastewater discharges of 3.2 mg/l at a total wastewater volume of 0.14 MGD, or 36.4 million gallons per year. This equates to a 200 percent increase in pounds of phosphorous released into waterways, or a 600 percent increase in phosphorous-containing wastewater discharge over what should have been allowed to protect local water quality.

In exchange for these relaxed standards, the facility paid 25 farms in the watershed to undertake some 90 Best Management Practices (BMPs) or conservation practices in order to make the needed nutrient discharge reductions. The trading program effectively allowed Alpine Cheese to keep discharging pollution on-site, as well as to increase discharges as part of its production expansion, rather than complying with the appropriate NPDES permit limit. This ultimately created an offsetting system to account for the discharges that Alpine Cheese wanted to continue.

The initiative was a joint effort by the Alpine Cheese Company, Ohio State University, Holmes County Soil and Water Conservation District (SWCD) and the Ohio Environmental Protection Agency. The SWCD was the broker between the farms and farmers, and the Ohio EPA. It also was responsible for verifying and monitoring the BMPs to ensure that reductions were happening. The SWCD's oversight role in the trading program was necessitated, in part, because of political interference. In 2005, U.S. Representative Bob Gibbs, then-Ohio Representative of the 97th District, wrote a letter to the Ohio EPA stating his objection to its intended level of involvement in the Alpine Cheese nutrient trading program. He claimed that:

The Ohio EPA insists that they must be given approval in the plan that at any time of their choosing to visit any farm site involved in this Nutrient Trading Program [sic]. Area residents are insistent that for the Ohio EPA to [be] given authority to visit any farm at any time would destroy the program.

The inability of the Ohio EPA to carry out its environmental oversight function was just the first indicator that the Alpine Cheese trading program was not on the right track for success.

As stated, the Alpine Cheese trading program centers around the company paying nearby farms to implement BMPs to generate the credits it will use in place of making on-site reductions in nutrient discharges. However, that the verification, monitoring and transparency surrounding these BMPs were woefully inadequate, brings into question the legitimacy of the entire program.

The Alpine Cheese phosphorous trading plan states that reports on the project will be submitted semi-annually over the five-year trading agreement by Holmes SWCD — the body responsible for monitoring and verifying BMPs — to the Ohio EPA. However, in all of the 1,898 pages of documents that Food & Water Watch received via FOIA requests, there were only two of these semi-annual reports, totaling nine pages. Other information, which may have been information on BMPs, was compiled on a compact disk and could not be fully accessed, or made sense of — not even by Ohio EPA personnel themselves — because of the software used.

The other documents received from Holmes SWCD produced only some 29 pages of sparsely filled-out forms to show for the SWCD’s monitoring and verification of the over 90 BMPs. Many of these documents are barely filled out, or are filled out by hand and are often illegible. They are not even properly labeled in many cases, making it difficult to draw any kind of accurate conclusion about the number of credits generated. Some forms consist of checking boxes and marking “yes” or “no.” Like the proposed Missouri trading program, modeling, not actual monitoring, was used to “verify” that the ag sources were obtaining the pollutant load reductions that they claimed. The lack of in-stream monitoring and paucity of verification reports calls into question whether the verification methods are even accurate.

The lack of oversight becomes even more concerning since the BMP sites are in close proximity to Alpine Cheese, and, with very questionable monitoring and verification, the legitimacy of net reductions in nutrient discharges is highly suspect. If it cannot be said for certain that BMPs are reducing nutrient discharges while Alpine Cheese continues to discharge pollutants above its permit limit, there is an incredible risk of no reductions in nutrient discharges and even net increases in nutrient discharges.

As stated earlier, point source pollution loads to our waterways under the Clean Water Act are subject to monitored and easily verified data. With Alpine Cheese and water pollution trading, we are now allowing a chronic CWA permit violator to swap out these verifiable and measurable discharges for unverifiable and unmeasured credits. Once again, water pollution trading represents a complete erosion of the CWA and its accountability core.

As can be seen in the Ohio case study, water pollution trading has not improved water quality and has allows industrial polluters to discharge more pollution into our waterways. In fact, proponents of trading have never been able to point to a single trading program that has resulted in improved water quality—the fact that trading programs exist seems to be their hallmark of success. Thus, water pollution trading represents the rollback of the Clean Water Act that industry has been seeking for over 40 years.

Some trading proponents, while recognizing the potential pitfalls of trading, argue the remedy is in designing “good” water pollution trading programs, with protective standards and strong

verification and accountability measures. However, not even an ideally structured water pollution trading program can remedy the inherent defects in the approach. As the CWA is currently written, point sources are highly accountable for their discharges, and permit compliance is easily verifiable and enforceable. Water pollution trading allows this transparent, accountable system to be replaced with one that makes it virtually impossible for anyone to ever properly track point source compliance; credits that these facilities rely on are not the product of any measured decrease in pollutant loads from credit-generating agricultural sources, but from complex models filled with variables or, as in the case of Pennsylvania, from questionable manure transport programs that simply move pollutants from one impaired waterway to another.

Trading adherents also ignore that the CWA does not allow for water pollution trading as a mechanism for point sources to avoid permit compliance. The Act's permitting provisions are very clear that each point source of pollution must meet individual permit requirements; there are no allowances in the Act to purchase credits in lieu of compliance. While the Clean Air Act specifically allows for some degree of air emissions trading, efforts to amend the CWA to allow for trading have never passed, nor should they.

III. WATER POLLUTION TRADING WILL RESULT IN DISPARATE IMPACTS

Right now, as our attached report details, water pollution trading mostly involves pollutants like nitrogen and phosphorus, where unsustainable factory farms sell credits to other industrial sources like power plants and wastewater treatment plants so they can continue to discharge these pollutants into nutrient impaired waters. But the inevitable expansion of this market concept has already occurred; Wisconsin now allows for the trading of any water pollutant that is not bioaccumulative, including toxics and carcinogens like benzene. Similarly, Missouri's Framework provides for the trading "of any pollutant allowed by the federal Clean Water Act," although there are some persistent bioaccumulative toxic pollutants that may not be eligible.

As you know, most industrial discharges are located in communities of color and economically disadvantaged neighborhoods. The unavoidable consequence of allowing trading to determine clean water, instead of the more equitable regulatory approach of CWA permit compliance for all sources of pollution, is that these communities will see increases in pollution loads as the financial industry seeks to create a pollutant marketplace out of our waterways and polluting industries simply buy up questionable credits instead of reducing their discharges.

Pollution trading runs counter to the tenets of environmental justice, with the potential to increase exposure to hazardous pollutants for poor and minority communities that are not only already overburdened, but often lack the political capital and opportunities to take on these inherently unfair market-based schemes.

Pollution trading will not improve our waterways or protect our communities. It will not stop giant algae blooms or keep another Toledo disaster from occurring. Furthermore, we will not achieve clean water in Missouri or any nationwide unless we take affirmative steps to properly regulate agriculture and its excessive nutrient pollution problem. We also know, from 40-plus years of CWA success stories with mandatory point source control, that the key to attaining

water quality goals lies in requiring polluters to comply with strict control standards, not simply asking them to please stop decimating our lakes and rivers with their discharges. Missouri's Framework continues with the failings of past decades when it comes to the agricultural sector. As such, it is highly unlikely that the Framework, if implemented as drafted, will result in fewer nutrients in Missouri's waterways or lessen Missouri's nutrient contributions to the Gulf. We encourage Missouri to jettison any trading approach to pollution reduction, since those approaches are both ineffective and significantly undermine our current point source control system. We also urge the state to enact mandatory, not voluntary, pollution control and monitoring mechanisms to force agriculture to stop destroying the Missouri River and other waterways in the state.

Sincerely,

Michele Merkel & Scott Edwards
Co-Directors, Food & Water Justice
Food & Water Watch
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Terry Spence
Consultant
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**Metropolitan St. Louis
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August 24, 2016

Mr. Travis Lyon
Water Protection Program
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

Subject: Public Comments Regarding the Draft Missouri Water Quality Trading Framework

Mr. Lyon:

The Metropolitan St. Louis Sewer District (MSD) would like to submit the following comments on the draft Missouri Water Quality Trading Framework, which Missouri Department of Natural Resources (MDNR or Department) placed on public notice on June 24, 2016. MSD appreciates the time and resources MDNR staff has invested working with stakeholders to develop the Framework document. We believe that the Department's leadership in developing a flexible, voluntary water quality trading program is an important step towards providing alternative and innovative options for meeting water quality goals in an effective, efficient, and equitable manner. However, there are several issues in the proposed Framework that must be addressed to improve the consistency of the document and implementation of the future program. We have outlined our specific comments below.

We appreciate the department clarifying that trading is voluntary.

- 1) Water quality trading goals should not be limited to compliance with Water Quality-Based Effluent Limits.** The most recent version of the draft framework (Element #1 – Water Quality Goal) indicates that trading goals should be linked to compliance with water quality-based effluent limits. We are concerned that including this limitation for credit buyers runs counter to the Framework's stated goals that trading should be efficient, effective, and equitable for all trading partners (page 1). Linking trading to water quality-based effluent limits will eliminate the potential for creating a robust trading market in the near term because it precludes trading to address other regulatory drivers like statewide reduction goals that may be developed under the Missouri Nutrient Reduction Loss Strategy or other future approaches. In the absence of statewide nutrient criteria, only those buyers working under a total maximum daily load (TMDL) scenario would currently be eligible to participate if water quality-based limits are the sole compliance goal. Linking trading goals to water quality-based effluent limits also raises equity concerns for point source buyers because many water quality-based effluent limits are based on nutrient wasteload allocation targets that generally reflect a level of water quality that cannot be achieved even with advanced treatment. Requiring point source buyers to meet a goal that could not otherwise be met in the absence of trading is inequitable.

During the Framework development meetings, many stakeholders indicated that trading to meet nutrient treatment goals or technologies should be allowed under the Missouri program. However, comments submitted to the Department during the public notice period indicate that there is still confusion among some stakeholders on this issue. We acknowledge that EPA's 2003 water quality trading framework policy prohibits trading to meet "existing technology-based effluent limitations." However, we understand that the term "existing technology-based effluent limitations" as used by

EPA refers to federally-mandated secondary treatment standards that are required by regulation. Existing federal secondary treatment standards do not include nutrient limits. We do not believe that EPA's policy would prohibit trading to meet nutrient reduction goals or targets based on various categorical levels of nutrient treatment developed as part of the state's Missouri Nutrient Loss Reduction Strategy or other future programs. Furthermore, EPA's policy does allow for further consideration of the role of trading to reduce implementation costs and increase environmental benefits if new or revised technology-based standards are developed in the future (see Section III.E.4 of EPA's policy).

We therefore request that this section be modified as follows:

This goal should be tied to **water quality goals such as the compliance with Water Quality-Based Effluent Limits or TMDLs (if applicable), statewide or watershed-specific nutrient reduction targets or goals, or technology-equivalent treatment goals. The role of trading will be considered if new technology-based standards are developed and required by state or federal regulation.**

- 2) **Limiting credit carryover, or banking, time to a maximum of one year will eliminate incentives for early adopters who may otherwise make nutrient reductions before they are required.** Element #7 of the draft Framework limits the length of time that a specific water quality credit is available for trading to a maximum of one year. This requirement is unnecessarily stringent and will eliminate incentives for dischargers or agricultural producers who may otherwise wish to make nutrient reductions before they are required through a water quality-based effluent limit, TMDL, or other nutrient reduction plan. We note that achieving early reductions is the first objective of EPA's 2003 Water Quality Trading Policy (see Section II.A. of EPA's policy). Therefore, it is not clear why the Department would include requirements in the Framework that would limit opportunities to make those early reductions.

In their 2003 Water Quality Trading Policy, EPA states that credits must be generated before or during the same period that they are used (see Section III.G.3. of EPA's policy), but they do not limit the total length of time that those credits are available to trade. While limiting credit life to one year may be appropriate where one year is consistent with the underlying water quality standards, it future nutrient drivers and requirements in Missouri are currently unclear. Additionally, nothing in the Clean Water Act precludes banking credits for multiple years to meet statewide or watershed-specific targets or technology-equivalent treatment goals. To maximize the potential for trading and preserve the incentives for dischargers who may want to adopt early nutrient reduction technologies, we suggest revising the Framework to indicate that credits can be carried over for up to five years to coincide with NPDES permit timelines, if consistent with underlying water quality standards.

- 3) **Requiring a Sampling and Analysis Plan (SAP) in every water quality trading prospectus is unnecessary.** Element #5 indicates that a SAP "must be included" as part of any trading program. However, it is doubtful this requirement was meant to apply equally to point to point source trading, as monitoring requirements for point sources would be included as a condition in the National Pollutant Discharge Elimination System permit. Additionally,

instream monitoring requirements may not always be necessary. The need for instream monitoring should only be determined after consideration of the factors already outlined in Element #5.

We therefore request that the SAP requirement within this section be modified as follows:

A Sampling and Analysis Plan (SAP) must be included in the water quality trading prospectus for approval, **if instream monitoring is determined to be necessary based on considerations included below.**

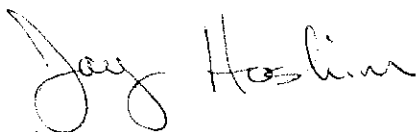
- 4) **In the definition section, the baseline definition should be modified to improve consistency with the term as applied in Element #6. We request the following changes:** Baseline – The expected minimum level of performance with regard to pollution discharge. Only reductions of a pollutant beyond this level are eligible to be traded. For example, a point source's baseline will be its permit limit ~~(calculated as an annual load) in the absence of a water body impairment, TMDL or other restriction.~~ **or long-term average effluent quality without pollutant removal in the absence of a limit.**
- 5) **The framework would benefit from less detail on uncertainties and trading ratios – this should be better addressed in the procedures document where guidance could be provided for addressing uncertainties in a trading prospectus.** If strictly interpreted, the framework could lead to more credit purchases than are necessary to achieve the desired outcome – this would disincentivize trading or make it less cost-effective. For example, Element #10 recommends that the trading prospectus identify how a point source will purchase “reserve (or insurance) credits that can be used to offset the failure of a practice or project within the trading program”. Element #13 includes discussion of practice failures within the context of the trading ratios.
- 6) **Credit stacking may be better addressed in the procedures document as it could prove to be an incentive for future trading programs. It would be best to delete the following** “Nothing in this framework prevents projects involved in trading from earning credits under other programs, except that no project may claim credits within two different parts of the Clean Water Act. For example, a project could not be awarded water quality credits for a project under Section 404 for stream or wetland mitigation and also be awarded the water quality credits within a trading program. Should an entity want to assign the ecological value of a mitigation project for the purposes of Section 404 of the Clean Water Act and the water quality benefits to a water quality trading program, the clear distinction between those two sets of credits would have to be submitted to and approved by both the department and the designated U.S. Army Corps of Engineers office before use.”
- 7) **Additional References for Consideration:**
Geosyntec Consultants, Inc. 2013. Nutrient Trading in Missouri: Critical Policy Factors and Program Recommendations. Available from http://www.mocorn.org/wp-content/uploads/2012/09/CIG_Nutrient-Trading-in-Missouri_Feb2013.pdf [This document addresses trading margins as outlined in Element #8. Neither the 2003 EPA Policy or Willamette report referenced in the current Framework address this topic.]

U.S. Department of Agriculture (USDA) Office of Environmental Markets and the Environmental Protection Agency (EPA) Office of Water, 2016. 2015 EPA-USDA National Workshop on Water Quality Markets. June 2016. [This document identifies need for knowledge transfer and having trading frameworks be "living documents". It also states: "Water quality trading allows sources of pollutants to develop innovative and practical solutions to improve water quality at a lower cost, provide additional resources for conservation, and encourage private investment capital."]

U.S. EPA, 2009. Water Quality Trading Toolkit for Permit Writers. Published August 2007, Updated June 2009. [This document addresses antibacksliding and antidegradation].

If you have any questions these comments, please do not hesitate to contact me at 314-436-8757 or jshosk@stlmsd.com.

Sincerely,

A handwritten signature in cursive script that reads "Jay Hoskins". The signature is written in black ink and is positioned above the printed name.

Jay Hoskins

Program Manager, Environmental Compliance

Borton, Susan

From: Lyon, Travis
Sent: Wednesday, August 24, 2016 2:25 PM
To: Falls, Angela; Osborn, Mark; Hoke, John; Mackey, Collin; Plassmeyer, Chris; Madras, John
Subject: FW: Water Quality Trading Framework

Below are comments from the Association of Missouri Cleanwater Agencies (AMCA).

Thanks,

Travis Lyon

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From: Paul Calamita [<mailto:paul@aqualaw.com>]
Sent: Wednesday, August 24, 2016 2:00 PM
To: Lyon, Travis
Cc: Meghan Morel; Michelle Ashworth
Subject: Water Quality Trading Framework

Mr. Lyon:

Below are the Association of Missouri Cleanwater Agencies (AMCA) comments on the Department's draft trading policy. Please let us know if you have any questions or should you wish to discuss our comments. We appreciate the opportunity to comment and the Department's consideration of our comments.

Paul Calamita
General Counsel
AMCA

C: AMCA Members

1. Point source trading proposals should not need Clean Water Commission approval. Instead, appropriate public notice, technical review, and opportunity for appeal is more than adequately provided through the NPDES permitting process. All point source-related trades should be explicitly addressed in the affected/participating NPDES permits.
2. Delete the reference to antibacksliding in the trading policy as we do not see how it has any application. As long as instream water quality standards are being met (which they should be as part of the NPDES permitting review of all proposed trades) antibacksliding has no application under the Clean Water Act. We note that EPA's regulations may have led to a different conclusion but EPA's regulations are trumped by the Clean Water Act (adopted after EPA's antibacksliding regulations) and that EPA is in the process of including the very specific CWA antibacksliding language in its EPA's national NPDES regulations to make this clear.

3. The Department should clarify antidegradation-related requirements. In most trading scenarios there will be a net reduction from existing point source loadings which drives the trading proposal. Under such a scenario (e.g., all point sources reduce loadings by 10 percent), antidegradation is not implicated. Where trading will be used to allow an increase in loadings from a facility, then an antidegradation review is only necessary for Tier 2 (or 3) waters because in Tier 1 waters, WQS will still be met - obviating the need for a Tier 1 review in Tier 1 waters.
4. We object to the instream monitoring proposed in Trading Element #5 to identify "hot spots" and to verify whether antidegradation requirements are met. Antidegradation requirements will be met as they always are through the very conservative permit limit calculation procedures which predict instream levels. Ambient monitoring will be a hit or miss proposition and cannot be expected to verify the permit calculations given the very conservative assumptions used in those calculations coupled with the significant variability in instream conditions and the natural variability in sample results. Accordingly, the instream monitoring requirements serve no point and should be removed.
5. Determination of Credits. The policy states that the department has the authority to determine the number of water quality trading credits for any project or practice and that "Credits for point source projects will be determined using the best available data from similar systems currently in operation." We are okay with the first part of this sentence as long as the Department will agree to use NPDES sampling and reporting of discharge loads to establish both discharge loads and any credits generated. However, we fail to see why point source credit generation would be "determined using the best available data from similar systems currently in operation." The underlined provision above should be removed. Point source loadings and credits should be based upon certified discharge monitoring reports.
6. Baseline loadings. For POTWs, to the extent practicable, load allocations should take into consideration design capacity so we do not strand public investments into these facilities.

Again, thank you for considering our comments.

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