U.S. Environmental Protection Agency (EPA)
Farm, Ranch, and Rural Communities Federal Advisory Committee (FRRCC) Meeting

September 30 – October 1, 2010
The Mayflower Renaissance Hotel
Washington, DC

FINAL MEETING SUMMARY

THURSDAY, SEPTEMBER 30, 2010

Call to Order and Introductions
Dr. Steven Balling, Committee Chair

Ms. Alicia Kaiser, Designated Federal Officer (DFO) for the FRRCC, called the meeting to order at 8:32 a.m., and introduced the Chair, Dr. Steven Balling. Dr. Balling (Del Monte Foods) welcomed members and asked them to introduce themselves and note how their positions and affiliations related to the nexus of water and agriculture.

Welcome and Overview of the Charge to the Committee
Lawrence Elworth, Agricultural Counselor to the Administrator, EPA

Mr. Lawrence Elworth (EPA) expressed his gratitude to the Committee and noted that he had circulated a list of expectations at the previous day's orientation to identify issues for consideration. The meeting's goals are to (1) review multiple case examples of EPA programs in several watersheds; and (2) produce a work plan for the next three meeting sessions consistent with the Committee's charge, and focused on producing a report advising EPA on how best to enhance its efforts in addressing water quality issues related to agricultural production. A great deal of information must be considered on water issues, including technical issues such as terms of delivery and economics. EPA is seeking FRRCC's input on how to craft water policies and programs. Mr. Elworth asked if there were any comments or questions on EPA's expectations for the Committee.

Dr. Janis McFarland (Syngenta Crop Protection), FRRCC member, stated that she intended to review the EPA *FY 2011–2015 Strategic Plan*, the outcome from a recent EPA watershed meeting, and Natural Resources Conservation Services (NRCS) and U.S. Department of Agriculture (USDA) strategic plans and future goals to inform her recommendations.

Ms. Abby Dilley (Resolve), meeting facilitator, commented that the agenda will provide a broad backdrop of EPA issues and asked members to consider what further background information was needed. Mr. Elworth added that if members have background information to share with the Committee as a whole, it could be made available on the FRRCC Web Site. He suggested that members consider the themes and issues that the various presentations have in common; they also should identify other areas or important water quality problems that they wanted to discuss, or on which they would like further information. The presentations are intended to offer FRRCC enough information to determine issues for the work plan and the subsequent report.

Dr. Larry Sanders (Oklahoma State University), FRRCC member, recommended that the academic science viewpoint be considered as well. As he interfaces with policymakers at the federal level, he has found that central to their decision-making is whether to do something or to do something right. Often, they decide to simply do something, because more time and information would be needed to do

something right. Some members may suggest that additional scientific research is needed on some of the issues presented.

Lisa P. Jackson, Administrator, EPA

Mr. Elworth introduced EPA Administrator Lisa Jackson, noting that he had not worked for anyone more insightful, more dedicated to science, or more aware of the importance of agriculture. Administrator Jackson thanked FRRCC members for their service and Mr. Elworth for his leadership. She noted that it was priceless to have thoughtful input from the agricultural community on the intersection of EPA's work and agriculture. She was pleased to be embarking on a greater level of engagement with agricultural communities; EPA understands that it is a time of frustration among rural communities that have been hard-hit by both the economy and global competition. The Agency is working to ensure that every community in this country is more sustainable, prosperous, and healthy. Farmers have a broad impact on daily food prices, widespread environmental effects, and emerging fuel technologies. Progress cannot be made unless EPA and the agricultural community work together to address those issues. The market currently is unable to pass environmental regulatory costs on to consumers. Although there is a growing awareness of sustainability among consumers, she recognized farmers have found it difficult to react to that increased awareness by raising prices.

Interactions with agriculture are off to a good start; Administrator Jackson's team has held many conversations with the agricultural community, including a joint meeting with USDA Secretary Tom Vilsack in which EPA and USDA met with producers and their representatives from the commodity community, livestock, and specialty crop sectors. During Administrator Jackson's tenure at EPA, $190 million in grants have been issued for agricultural projects. The Agency is redirecting resources that deal specifically with rural issues such as the Clean Water Act (CWA) Section 319 Nonpoint Source Management Program. Progress in nutrient pollution cannot be made without dealing with nonpoint source issues. EPA can benefit from the input of representatives of agriculture, conservation associations, nongovernmental organizations, and state and local governments and industry. The FRRCC members' perspectives can mean the difference between addressing water issues in the right manner and working as adversaries. Rural America wants clean water as much as the rest of the country. EPA is encouraged by the relationship the Agency has with USDA Secretary Vilsack and his senior staff.

The agricultural community should be credited with making steps in dealing with water quality issues related to agricultural production. Every milligram of pollution that originates from nonpoint source runoff is an economic disadvantage to farmers, such as the over application of fertilizer. Just like in energy efficiency, there are opportunities to make good public policy and good agricultural policy. EPA understands that it has a trust and credibility gap in rural America. FRRCC not only allows EPA to hear the voice of rural America but allows messages to reach those communities as well. Proven technologies and conservation practices, from cover crops and fertilizer application methods to integrated pest management, can reduce water quality concerns. The challenge is to assist farmers in implementing these practices; a strong foundation of infrastructure with partners at USDA and state programs is available to deliver technical and financial assistance to increase adoption of these practices. The most effective course of protecting the environment is an active partnership among EPA, USDA, and the farmers and their communities. A healthy farm economy and healthy environment are indistinguishable; they must go hand-in-hand. Administrator Jackson again thanked the FRRCC members for their willingness to serve and advise the administration on complex challenges.

Discussion

Mr. Michael Brubaker (State Senate of Pennsylvania), FRRCC member, thanked Administrator Jackson for her leadership and noted that he served as Chair on the Chesapeake Bay Commission for the Commonwealth of Pennsylvania. He noted that a "push and pull" exists between states and the Federal Government. A unique opportunity now exists with people in state government who want to work with the agricultural and environmental communities and take a strong leadership position. They also want to

find a way to be more integrated into the ongoing federal policy processes. Mr. Brubaker and others in state government hope to work with Administrator Jackson's staff to accomplish this. State officials want to be involved to make some modifications to the Watershed Implementation Plans (WIPs) and other best management practices (BMPs). Administrator Jackson responded that she would be happy to meet with Mr. Brubaker. Although EPA takes very seriously its requirement to be the backstop, the next 60 days, before the new WIPs are in, would be an excellent time to work on the issues. Mr. Brubaker added that producers have told state officials in both public and private meetings that they want to exceed aggressive environmental goals.

Dr. Richard Bonanno (University of Massachusetts), FRRCC member, has worked a great deal in the last few years with EPA's pesticide programs, and his best relationship is with the Strategic Agricultural Initiative Program, which has been very important to farmers in New England in examining pesticide programs and pest identification guides. There is a growing need to be more specific about pests because some of the newer technologies require pest identification.

Dr. Robert Burns (University of Tennessee), FRRCC member, stated that he had served on the USDA Agricultural Air Quality Task Force. He stressed the need for cross pollination between the air and water groups within EPA and within the scientific community. When working alone, air or water programs can recommend practices that work well in one media but shift the pollutant load to another media. EPA should examine the issues holistically and consider all potential impacts of policies. Administrator Jackson agreed and noted that EPA makes progress on this issue every year. She added that Dr. Burns' comment about pollution being transferred to another media instead of eliminated is correct; the Agency now is seeing air pollution in areas of the country where it previously had not been a concern.

Ms. Martha Noble (National Sustainable Agriculture Coalition [NSAC]), FRRCC member, commented that EPA has been conducting more systems work that will offer solutions in the long term, instead of just reviewing current practices. EPA has been examining the entire farming system on a landscape level. A more integrated approach will require more work with states and localities, with focus on local and regional solutions. NSAC is taking such an approach, and it would be helpful for EPA. She appreciates what the Agency is doing with regard to total maximum daily loads (TMDLs) and some other approaches, but they become controversial very quickly. Perhaps EPA can begin with systems and ways to improve them rather than moving directly to regulation.

Mr. Lee McDaniel (Harford Soil Conservation District), FRRCC member, thanked EPA for its CWA Section 319 funding for support of technical assistance to the targeted watersheds. NRCS sometimes does not get funding for the technical assistance, and his district's philosophy has been conservation from the ground up. This funding is a great help to their efforts. Administrator Jackson responded that in some areas, EPA has a robust on-the-ground structure but cannot compete with soil conservation districts and the university extension services. Long before EPA existed, these organizations helped farmers and ranchers with conservation. The process works better when there is a clear expectation of how an organization can help; many times it is with education and resources. Although much progress has been made on point source pollution, the major issue of runoff makes this a challenging time. For example, a rash of toxic algae resulted in lake closures this past summer, and people are concerned about runoff. EPA must break the "log jam" in which it is considered the enemy. EPA is not the enemy; rather the Agency strives to improve water quality.

Presentation: Overview of Water Issues
Bob Perciasepe, Deputy Administrator, EPA

Mr. Perciasepe stated that the issue of sustainable communities and the desire to be more relevant applies to rural as well as urban communities. Sustainability in rural communities must involve conservation in farming, ranching, and natural resource utilization. If sustainable communities are an organizing principle for EPA, how should this affect how its programs operate? He thanked members for joining the

Committee and stressed the value of having such a group to serve as a sounding board and to provide vital advice.

The dynamic nature of the landscape in an agricultural area is an important factor for EPA to understand. The Agency is attempting to work more closely with USDA and must find the common currency that will help to accomplish this. The watershed, the acres in the watershed, how many acres are being used, and for what purposes at any given time need to be considered. EPA and USDA can jointly examine farm practices, equipment, and storage structures. EPA must have conversations with USDA and NRCS about what is needed at a certain watershed on average to meet the accountability measures in place. EPA wants to work toward sustainable communities and facilitate a healthy agricultural economy.

Mr Perciasepe noted that he had recently visited a dairy farm in the central valley of California that had built an anaerobic digester for manure, which, in addition to preventing the release of methane into the air, was collecting it to run a generator. The generator produced more electricity than was used by the farm so the excess was sold to the electric utility. In the San Joaquin Air Quality District, however, there is a problem with nitrogen oxide (NO_x) emissions, and the generator was producing NO_x. The District instructed the farm to apply NO_x pollution controls, which cost more than the generator itself. How can such a situation be reconciled? Is there a method to offset the NO_x systemwide or to compel the utility to pay for some of the pollution controls? Mr. Perciasepe expressed his enthusiasm that conversations are ongoing to identify solutions that are beneficial to the farmer and the environment.

From a water quality perspective, TMDLs are designed to examine pollutants at the watershed level. In addition, the CWA Section 319 program and all of the conservation programs through NRCS could be organized to take full advantage of what the growers are doing already. One of Mr. Perciasepe's jobs as Deputy Administrator is to strengthen EPA's relationship with the USDA because that connection is important to make some of these programs work and to find creative solutions to such problems.

Discussion

Mr. Steven McNinch (Western Plains Energy), FRRCC member, appreciated Mr. Perciasepe's comments about digester issues as an example of how an action can benefit one program and yet be penalized by another. Mr. Perciasepe responded that he believed a solution to this problem can be found.

Mr. Tom McDonald (JBS Five Rivers Cattle Feeding), FRRCC member, noted that he had been trying to obtain a permit for a gassifier. Farms are trying to implement green and proactive projects, but regulatory issues are sometimes difficult to overcome. Mr. Perciasepe responded that the solution may be system-wide. Mr. Elworth added that process models are being examined throughout the entire system. Mr. G. Douglas Young (Spruce Haven Farm and Research Center), FRRCC Deputy Chair, commented that EPA concluded that a process-based model for emissions was needed.

Mr. Perciasepe stated that the coarse particulate matter standard now is attained in the Central Valley of California because growers changed the way they disk their fields, which was creating large amounts of dust. Agricultural equipment manufacturers have designed and now are implementing different kinds of disking devices to prepare for the next crop. Disking usually is a dusty operation that requires a larger, more powerful tractor that digs deeper into the soil, but not deep enough to damage the drip irrigation system. The solution is very expensive, and USDA has provided some funding to offset these costs. The payback is a 10 percent reduction in the number of back and forth trips across the field, which saves on fuel and decreases the dust and loss of soil.

Mr. Omar Garza (Texas Mexico Border Coalition), FRRCC member, noted that the CWA Section 319 program has been very successful in the Texas border region. That program reduces pollution entering the reservoirs and particularly the lakes where the river is dammed up. Decision-makers should add more funding to this program, with a greater percentage of it directed to reservoirs. Mr. Perciasepe noted that this would be difficult given the budget realities the Agency is facing during the next few years. Even

though EPA will have a tight budget, the Agency has been targeting agriculture and sustainability of rural communities. Many hundreds of millions of dollars are being placed into programs for infrastructure in small towns around the country to keep systems modernized. The CWA Section 319 program will just be "frosting on a cake" of other programs and sources.

Dr. McFarland thanked EPA's Office of Research and Development (ORD) for working with the U.S. Geological Survey (USGS) to make substantial progress on land management mapping and in developing models to identify and protect vulnerable areas. As more technology develops, it is important that there be an underlying basis for determining how to improve water quality at the watershed level. Continued progress by scientists on the tools to assess vulnerability, surface water, and runoff would be very useful and it would help inform the next steps that need to be taken for water quality improvement. Mr. Elworth added that there are varying levels of understanding as to how TMDLs work. The next presentation will provide some background on how they work using the Chesapeake Bay as the operating illustration.

Rich Batiuk, Associate Director for Science, Chesapeake Bay Program Office (CBPO), EPA

Mr. Batiuk stated that the CBPO held 16 public meetings on TMDLs the previous year to ready the Chesapeake Bay watershed for its "pollution diet." At a West Virginia meeting, more than 350 producers were in the audience, and one held a sign that read "**T**ake **M**om and **D**ad's **L**and." The producers were concerned about the Federal Government influencing what the growers did with their lives on a daily basis. The CBPO will be going out again within 3 weeks to conduct 18 public meetings and 50 stakeholder meetings, 20 with agricultural groups across the six-state watershed.

Mr. Batiuk explained that a TMDL is a calculation of a pollutant load that assures that, when implemented, an impaired segment will attain and maintain all applicable water quality standards. TMDLs are calculated by adding: WLA (waste load allocation), which is the sum of all point sources; LA (load allocation), which is the sum of all nonpoint sources including natural background; and a MOS (margin of safety), which accounts for uncertainty about the relationship between loads and water quality. Point sources are permitted and regulated, but nonpoint sources are not regulated at the federal level. The MOS accounts for a piece of the "pollution pie" that must be set aside in case the WLA and LA are not calculated correctly. When making allocation decisions, the source of the pollutant, controllability of the pollutant, regulatory authority to control the pollutant, cost of each allocation option, certainty of water quality impact in receiving water, reasonable assurance that the allocation can be met, and stakeholders' objectives all must be considered. EPA is not proficient at implementing TMDLs because there has been little time to think about their implications. Mr. Batiuk added that the CWA does not require a cost benefit analysis for a TMDL.

TMDL allocation must take into account point sources, nonpoint sources, MOS, and reserve capacity (to account for growth), but the CWA does not require an implementation plan to accompany the pollution diet. To complete the listing process of impaired waters, states must: identify waters not meeting water quality standards, establish priorities for TMDLs, develop a schedule of TMDLs within 2 years, and provide a long-term plan to complete TMDLs within 8 to 13 years from the first listing. If EPA disapproves of the state list, it has 30 days to develop a list for the state. TMDLs are implemented through the CWA; point sources are permitted through EPA or states with delegated authority, and nonpoint source restrictions are primarily implemented through state and local NPS management programs.

The impact of a pound of nitrogen or phosphorus pollution varies by its location in the Chesapeake Bay Watershed, and this fact must be built into the allocation process. The July 1, 2010, draft allocation was 187.4 millions of pounds of nitrogen per year, but the actual figure was 189.7 million pounds; for phosphorus, the figures were 12.42 million pounds and 14.22 million pounds, respectively. Progress has been made, however, and nutrient management on millions of acres is captured in the figures. The differences since 1985 are in part a result of detergent bans and decreased use of lawn fertilizers. Wastewater treatment plants are close to limited technology and therefore cannot be part of the pollution diet. The millions of turf grass farmers in the Chesapeake Bay Watershed must be included, however.

In terms of implementation of the TMDLs, there are eight WIP elements: nutrient and sediment target loads; current program capacity; mechanisms to account for growth; gap analysis; commitment to fill gaps such as policies, rules, and dates for key actions; tracking and reporting protocols; contingencies for delayed or incomplete implementation; and a detailed appendix supporting bay TMDL allocations.

Commitments to reduce pollution in the Chesapeake Bay have not been met, and the Agency must determine how to remain accountable to the public. The role of agriculture in this endeavor is important. With respect to agriculture, TMDLs: (1) ensure that all sources get their share of the reduction responsibility, (2) focus on regulated point sources as a result of reasonable assurance, (3) fully account for and credit non-cost-shared conservation practices on private lands, (4) create the potential for a large marketplace for nutrient trading, and (5) provide a measure of certainty for producers.

Discussion

Mr. Brubaker commented that BMPs not funded by the state or Federal Government often are not captured. One reason these BMPs may not be captured is the reluctance of landowners to report activity that has occurred on their land. Understanding why that reluctance exists could be the first step in eliminating it. Mr. Batiuk responded that in the late 1980s, work was started with Pennsylvania, Maryland, and Virginia, and later included West Virginia, Delaware, and New York colleagues to develop systems for tracking conservation practices for the agricultural community, urban storm water, and 480 significant wastewater treatment plants in the Chesapeake Bay region. Numerous issues were encountered, such as whether to contact the conservation districts or the state departments of agriculture. EPA has found that USGS, which is thought to be more of an objective science organization than EPA, can be an effective middle broker to capture information on the conservation practices at the farm scale, merge them to a subcounty, subwatershed scale, and provide information to all six states, including the NRCS and Farm Service Agency cost-sharing programs. All six states agreed to make this information available electronically through the National Environmental Information Exchange Network. EPA has partnered with NRCS and the National Association of Conservation Districts to determine the next step. Mr. Elworth added that, based on information from a National Association of State Departments of Agriculture meeting, there was a question as to whether voluntary practices are discounted. Mr. Batiuk commented that the issue of verification was important, but both voluntary and cost-sharing practices should be captured.

Mr. Dennis Treacy (Smithfield Foods), FRRCC member, noted that the model was very controversial in Virginia because it seemed to be setting a moving target. He asked for an update on the model and how it works. Mr. Batiuk responded that a suite of models was used to develop a guide. Given that air provides approximately 30 percent of the nitrogen that comes into the system, an air quality model is needed. A watershed model is the best way of determining the different sources in the bay watershed; however, the model is only as good as the available datasets. It is calibrated by in-stream monitoring data. The partnership has agreed to apply the suite of current models during Phase I of WIPs. A new version of the watershed model should be available next year, but the overall pollution diet for the Chesapeake Bay will not change. There may be some shifts, however, in the distribution between the source sectors, such as more heavily urbanized areas and agricultural areas.

Mr. McDaniel stated that the legacy sediments behind the dam on the Susquehanna River will at some point in the future reach capacity, bypass the dam, and go straight to the Bay. Is EPA paying attention to this issue? Who has jurisdiction over this? Mr. Batiuk responded that there are a series of dams, but only the Conowingo Dam still is holding back sediment. The Conowingo Dam could last 15 to 25 years but its sediment filtering ability will erode; this issue was recognized in the TMDL, and EPA will ask for public comment. The models and how EPA looks at the Bay system are calibrated to the amount of sediment coming into the system now. If that amount changes, an allocation must be placed on the Conowingo Dam, which will impact a small piece of Maryland, a large piece of Pennsylvania, and the whole of New York from which sediment flows into the Susquehanna River. Another legacy issue involves mill dams,

which have 10 to 20 feet of legacy sediment in small creeks and rivers. EPA must determine how to restore those streams and prevent them from flowing into trout streams or impacting the bay grasses. Dr. Sanders mentioned that damage to the environment tends to increase when there are budget problems at state and federal levels, and this will be the situation for the next few years. Is it part of EPA's strategy, because of possible cutbacks, to accelerate the move toward nutrient trading? Mr. Batiuk replied that nutrient trading is expanding to the agricultural side; it already had been in place in Virginia and focuses on the water treatment plants. Pennsylvania has focused less on water treatment plants and more on producers. Several of the states have programs within their WIPs that describe a major manner in which they are going to meet their TMDLs. Many would like to see whether the marketplace will help to achieve the loads. EPA expressed support if more assurance could be given.

Dr. McFarland noted that after growers implement filter strips, riparian strips, or stream bank restoration, they often ask her organization how much it will cost to maintain these BMPs over time. Do the plans take into account the support required to maintain them once the growers have paid the initial cost share to put the practices in place? Mr. Batiuk responded that most of them do not, and EPA is trying to be as clear as possible to states, producers, and municipalities. The Agency wants to understand how operation and maintenance will be accomplished; EPA has asked for plans to conduct this work and has tried to capture it in models. Some of the practices will become more effective over time. The long-term relationship must be determined, and the infrastructure must be in place for BMPs to continue.

Ms. Noble noted that USDA environmental quality incentives programs have decreased the amount of conservation planning and the length of contracts. Now, there is cost-sharing on a 1-year contract, which for most practices will not achieve much. When doing these kinds of models, is EPA discounting for a way a program is structured? This also is a way for producers to feed back information to USDA and legislators on what is going to be effective and whether programs will be the basis of water quality trading. Mr. Batiuk answered that models and tracking systems are not quite at that level of sophistication, but that is a goal. EPA would like to ensure that it is accounting for the practices in full and providing lifespans for those practices that have them. The governors of the six states and the EPA Administrator have agreed that every 2 years they will describe to the public the programs that will continue into the future, future needs, and how capacity will be built, so that if one of the programs fails in the next year, there will be a contingency plan. If there is not going to be enough cost-sharing out in the field, how can the structure be built to make the practices continue? On a 2-year basis until 2025, EPA will incrementally implement 60 percent of the pollution diet by 2017 and 100 percent by 2025. The 2-year milestones will require accountability for funds, infrastructure for legacy sediments, precision farming, and feedback to NRCS on whether the money has been effective within the previous 2 years.

Discussion: Focus on Chesapeake Bay Water Issues
Moderator: Suzy Friedman (Environmental Defense Fund), FRRCC Member

Ms. Friedman noted that the speakers in this session would describe current activities in the Chesapeake Bay with a particular look at agriculture. It has taken a great deal of effort to make significant progress in cleaning up the bay, and many complexities, controversies, and challenges have been encountered. She hoped that the lessons learned shared with the members would be useful.

Chuck Fox, Senior Advisor to the Administrator, EPA

Mr. Fox stated that EPA is trying something in the Chesapeake Bay that has never been tried anywhere else in the country with the hope of achieving the goals of clean water and viable agriculture. The Chesapeake Bay program was started in 1983 after a $27 million study found that the Bay suffered from excessive nutrient enrichment or eutrophication. Governors wrote an additional agreement in 1987 and pledged a quantitative 40 percent reduction of nitrogen and phosphorus in the Chesapeake Bay; in the year 2000, they signed an agreement that pledged to achieve water quality standards by the year 2010. This included a caveat that if these goals were not met by 2010, a TMDL would be developed. Water quality standards were not met, and now it is incumbent on EPA to institute a TMDL.

A TMDL is the expression in numeric terms of the amount of a pollutant that can be in water to achieve water quality standards. A TMDL will determine a number called a waste load allocation for point sources, and the final TMDL will be issued by December 2010. A draft TMDL was published on September 24, 2010. On the nonpoint side of the ledger is the load allocation, which considers all other sources. EPA has an obligation to work closely with the states, which are producing WIPs (i.e., their strategies for achieving the TMDL). The first draft WIPs were received from the states on September 1, and the second draft will be received on November 30, 2010. The comment period is just beginning; there will be a number of public meetings, and the process will be transparent.

The 2009 numbers on nitrogen and phosphorus pollution are a reflection of monitoring and modeling data. Agriculture is responsible for roughly one-half of the nitrogen and phosphorus present, and animal operations account for approximately one-half of that. EPA conducted an evaluation of state WIPs: seven jurisdictions provided draft WIPs, and they were tiered in four categories of quality and reasonable assurance. Two important goals were to 1) achieve the load caps in all 19 basin-jurisdictions and 92 segments and provide a high level of reasonable assurance that nonpoint source controls will be achieved, and 2) permitting programs will result in point source reductions. None of the WIPs provided full assurance that the programs identified will achieve the nutrient and sediment reduction targets in all respects by 2017 or 2025; a variable level of assurance requires variable levels of federal backstop actions. Problems in the WIPs included: no strategy for filling recognized program or resources gaps, few enforceable or otherwise binding commitments, discrepancies between implementation programs and strategies described in a WIP, reliance on pollution trading programs with no commitment to adopt critical trading drivers such as new regulations, and few dates for key actions and program-building milestones.

EPA found that Maryland and Washington, DC did well. Deficiencies in other states led to backstop actions. If the state provides EPA with a plan that will not achieve water quality standards, EPA has a legal obligation to produce a TMDL that will achieve water quality standards. The conundrum is that EPA can regulate only point source pollution. If EPA does not believe that the state plan is sufficiently stringent in the nonpoint source sector, the Agency must make the point source sector more stringent. Backstop actions are based on assessments of the states' programs. The amount of backstop actions was limited. Virginia saw moderate backstopping action: further reduction in sewage treatment plants, not quite to the limit of technology, and additional reductions on the municipal stormwater sector. Some assumptions were made about converting animal feeding operations (AFOs) into concentrated animal feeding operations (CAFOs). Other states such as New York, Pennsylvania, and West Virginia fell into the category of high backstopping. In these cases, a TMDL would be developed and made available for public comment. This included much more stringent reductions on wastewater treatment plants down to the limit of technology as well as additional actions in the municipal and AFO/CAFO sectors.

EPA would prefer not to implement the TMDLs. The challenge is to work closely with state counterparts to create a plan that meets the numbers (WLA and LA) test as well as the test for reasonable assurance, including establishing achievable plans for point and nonpoint sources.

Russell C. Redding, Secretary, Pennsylvania Department of Agriculture

Mr. Redding thanked members for their time, and noted that animal agriculture is the leading industry in Pennsylvania, and two-thirds of the state falls within the Chesapeake Bay watershed. For the past 25 years, Pennsylvania was one of the first states with mandatory nutrient management plans and the first state that had an EPA-approved CAFO plan. Pennsylvania already has done much to control water pollution, but regardless of the work, time, and money spent, the state is only halfway to its goal. The state is proud of what it has accomplished but Pennsylvania still is not meeting goals in reducing nitrogen, phosphorus, and sediment in the Chesapeake Bay. Part of Pennsylvania's near-term discussions need to focus on what has been done and what can be done to close the gap to achieve a nearly 50 percent reduction of nitrogen.

Pennsylvania, however, is not losing sight of coequal goals. If the problem was examined only in the context of water quality, the problem could be solved. If it is examined in two dimensions, considering water quality and viable farms, it becomes more difficult. Decisions the state will make in the next 30 to 60 days will make this the most defining moment for production and animal agriculture in Pennsylvania and will cast what the state does toward the coequal goals for the next 15 years. Nitrogen was reduced by one-half in 25 years, and the next one-half has to be reduced in 15 years: that is three crop rotations. A plan for meeting this goal required a good deal of thought from the Pennsylvania Department of Agriculture, which had to make some tough decisions about where to invest its resources. People must trust that Pennsylvania is doing the right thing; officials literally had to go into the kitchens of some of these farm communities to discuss the plans. Many farms in Lancaster County are Plain Sect farms, and they do not take public money or have many written plans.

One of the issues of some concern is the model used to determine the TMDL and its transparency. The model must be dynamic because whatever is not credited in the model will become part of the gap that agriculture must deal with as an industry. It is appropriate to continually examine the model and how decisions are made about the output of the model. How do we give assurance that the model is the most current best thinking? This has been part of the conversation with EPA during the past few months. Agriculture historically has had a relationship with USDA, but now EPA is becoming a new partner. Those who historically have been part of agricultural business must be present in the conversations in the next few months. The relationship between agencies is critical. In the consideration of coequal goals, agriculture is the solution, not the problem. While rushing to close the gap of the remaining 50 percent of nitrogen, it is important to give credit for what already has been done. Also, support for technical assistance is needed. There has to be a nutrient management plan, and farms must have resources for this. EPA's model must be transparent, and the Agency needs to have a structured role for USDA. All conservation practices implemented to date have been done with the help and assistance of NRCS and USDA. Additionally, there must be a safe harbor, because even if Pennsylvania gets everything right, there will be times in the next 15 years during which there will be slippage. There are producers who have gone months without a paycheck, and it is not fair to ask them to "reach into the other pocket"; their survival is at stake. Mr. Redding said he viewed the acronym TMDL as time, money, districts, and leadership.

Discussion

Mr. Ray Vester (E & M Farms Partnership), FRRCC member, commented that it is not that farmers do not trust EPA; rather, farmers do not trust the government. What water standard is to be met in the Chesapeake Bay (recreational or drinking water)? In addition to agricultural sources, where does the rest of the nitrogen and phosphorus come from and how are these additional sources being addressed? Mr. Fox responded that the end points for water quality were dissolved oxygen (DO), chlorophyll, and submerged aquatic vegetation. There is not a single DO number, there are multiple DO numbers based on what different animals need to survive. In terms of other sources of nitrogen and phosphorus, one-quarter comes from sewage treatment plants for large cities, another 20 percent comes from suburban yards, and the remainder comes from atmospheric sources.

Mr. Daniel Botts (Florida Fruit and Vegetable Association), FRRCC member, asked about modeling conducted in Florida, and whether it was outcome modeling and projections based on those outcomes that led to the timelines. Did EPA have confidence in both the modeling and the projections? Mr. Fox responded that there were a handful of models that were 25 years in development at a cost of $50 million. The models are predictive in nature and can estimate the impact of management practices on the amount of nitrate going into the bay and other various measurements. The level of complexity is high; models are monitoring hourly rainfall during 10-year horizons to predict sediment transports into the Chesapeake Bay. The data needs for this model are phenomenal. EPA has generally good data from USDA and state departments of agriculture for government cost-share practices, and it generally is known how many of these practices are going to be on the ground. If a producer decides to put a practice in place without cost-

share dollars, however, this will be missed. One of the huge gaps is that there are no non-cost-share practices assumed in the model, and that is one of the key issues EPA currently is working with USDA to address with agriculture and the model. The conclusions are all approximately the same in terms of the amount of nitrogen and phosphorus that must be reduced.

Mr. Redding noted that the government is excellent at capturing what it pays for but does not give credit in this model for things that are just every day good management practices. These practices need to be translated for model purposes.

Mr. Bill Northey (Iowa Department of Agriculture and Land Stewardship), FRRCC member, asked if the 50 percent reduction of nitrogen in Pennsylvania can be made in the next 15 years. Mr. Redding responded that he thought it could be done, adding that agriculture has never disappointed. The key to accomplishing this is technology, such as on-farm energy and precision feeding. Pennsylvania is committed to reaching the goal, but every person must be involved to achieve it.

Ms. Noble asked about large-scale processing plants, which stand between consumers and farmers. How are they considered in terms of pollution reduction? Mr. Redding replied that they were full partners, and the conversation about reduction could not be held without them. Ms. Noble asked how the cost of pollution reduction could be passed on to the consumer, and Mr. Redding answered that this was a debate that must be held by society, because ultimately, each one of us is driving the food market.

Mr. Brubaker thanked Mr. Redding for his service, noting that he was proud to work with him.

Dave McGuigan, Associate Director, Office of National Pollutant Discharge Elimination System (NPDES) Permits and Enforcement, Water Protection Division, EPA Region 3

Mr. McGuigan explained that EPA was not "out to permit the world"; that is not the federal role nor is it an effective role. EPA depends on strong state programs and must work with industry to accomplish its environmental protection goals.

There are three areas in Region 3 that are significant for total manure nitrogen and phosphorus; these are the centers of concentrated agriculture in Region 3. Delmarva produces poultry, Lancaster County produces dairy, and the Shenandoah Valley produces both dairy and poultry. The areas are very different in both terrain and inhabitants, and individual strategies had to be developed for each. EPA's goals are to ensure that facilities that need NPDES CAFO permits have them and that a framework is in place to ensure compliance with the permits, as well as the enhancement of state agricultural programs.

Mr. McGuigan discussed the three geographic areas mentioned above in depth. As the result of EPA's work in these regions, more than 850 farms in Delmarva have applied for permits, in part because of a partnership with Perdue and the Delmarva Poultry Industry. EPA has determined that flexibility is not always a benefit; farmers wanted clear guidance. He noted that one-on-one interaction is a powerful tool and enrolling the support of industry is critical.

In Lancaster County, EPA's focus was small dairy and CAFO operations. Subwatersheds were targeted for surface and groundwater contamination, and partnerships were formed with conservation districts, the state, and the Plain Sect community. Watson Run in Lancaster was impaired as a result of agriculture, and EPA was able to make progress by meeting with Plain Sect bishops to establish inspection protocols. As a result, every farmer in that community signed up to be inspected. Although most of the farmers were performing regular soil testing, and a high percentage of farms had low till or no till acreage, 80 percent had less than 4 months of manure storage, 85 percent did not have conservation plans, 85 percent did not have manure management, and 66 percent had discharge to surface and groundwater. The drinking water was tested at 19 farms, and 16 had nitrate levels above 10. There is a need for a program to help farmers assess their water quality and discern how to prevent contamination; perhaps the conservation districts' role should be expanded. EPA determined that partnership with conservation districts and community

leaders is critical to success. Lack of evaluations has led to high noncompliance, so the conservation districts' role should be expanded to achieve water quality goals.

In the Shenandoah Valley, EPA's goal was to evaluate the state program and its compliance with federal and state requirements. Poultry operations were under a Virginia Pollution Abatement (VPA) permit and were functioning well. Additionally, 95 percent of the swine operations in Virginia fall under some sort of state or federal regulation, but only 10 percent of dairy farms fall under any regulatory program. EPA concluded that the VPA is extremely effective and should be expanded to small dairy, but the VPA program only inspects permitted facilities. Inspection is needed to realize program goals.

In summary, inspection programs realize programmatic goals and are an important component of establishing reasonable assurance. Effective programs for small dairy inspection must be developed, and partnerships with industry and the community are important. The farm community drinking water quality is a significant concern.

Discussion

Mr. Elworth noted that Mr. McGuigan had spent numerous days meeting with Plain Sect farmers and bishops in Lancaster County; if he had not invested this time, the effort would not have succeeded.

Mr. Lawrence Clark (Farm Pilot Project Coordination), FRRCC member, asked whether the public meetings held during the TMDL process will focus on backstops or new innovations to address the targets. Mr. Fox responded that public comment will address all relevant issues, but the backstops will get a lot of attention. EPA does not consider the TMDL as the most logical common sense endpoint but the Agency thought there was no choice but to propose this given their obligation under the law. One interesting aspect of the TMDL will be setting caps below current levels and requiring offsets for any new or expanded discharges of nitrogen or phosphorus. Pennsylvania and Virginia already have trading programs. The future will see the development of trading programs with multiple goals, providing a lot of potential for new technologies. The models include suburban lawns as well as many non-cost-share BMPs that are calibrated periodically based on monitoring data. Any BMP enacted since 2007 when the last calibration took place, however, might not be credited. Most of the available data suggest that the suburban use of fertilizer is a significant source of urbanized area runoff.

Mr. McNinch asked if the U.S. Department of Energy (DOE) was involved in the process. Mr. Fox replied that DOE is not currently involved, but that there is a large opportunity for DOE in the process.

Referring to the December 2009 TMDL consequences letter that discusses what EPA might do if the states cannot comply with the TMDL regulations, Mr. McDaniel asked how depriving the states of EPA funds will help the Chesapeake Bay. Mr. Fox responded that the letter discussed a series of actions that fall under EPA's authority. It is a series of actions that the Agency does not want to invoke, however, and EPA has made that clear to the states. The first round of consequences includes issuance of a TMDL that reallocates the state's loads if EPA does not believe them to be achievable. He could not imagine a scenario in which there would be a withholding of state funds for clean water, which is item 10 on a list of 10 consequences.

Mr. Brubaker reiterated Mr. Elworth's compliment to Mr. McGuigan, adding that the Plain Sect bishops had kept him fully informed of Mr. McGuigan's activities. He thanked EPA for respecting the culture of the area. One of the backstops is a ban on phosphate detergents, and Mr. Brubaker had sponsored a bill on this issue in the Pennsylvania assembly before it became a mandate passed by unanimous vote. That law reduced total phosphates entering the sewage treatment facility by 7 percent.

Dr. McFarland stated that there is increased awareness of the impact of sediment and turbidity because of a recent rule developed for a state housing development. It currently is linked to litigations that are on hold. Mr. Fox said he was not familiar with the rule; Mr. Elworth said that he would provide the

information to the Committee. Mr. Fox stated that EPA has often been accused of targeting agriculture, but currently it is being accused of targeting development. Agriculture's pollution numbers are decreasing significantly, but the urban sector's numbers are increasing. This was a rulemaking for construction activities to specifically reduce runoff from urban and suburban settings. Sediment ponds will require chemical additions so that they do not create runoff.

Mr. George Boggs (Whatcom Conservation District), FRRCC member, commented that if EPA imposes a TMDL, then existing point sources would be required to meet the best technology standard, and new point sources would still be limited. This appears to set the stage for nutrient trading so that the urban areas or industrial areas could then provide resources to the agricultural sector to adopt conservation practices. Mr. Fox answered that if there is a new or expanded source of pollution in the bay, there will be an incentive created to purchase the pollution credits. These incentives will tend to flow from urban/suburban areas to agriculture, because the cost per pound produced to agriculture is much less, and EPA is hoping these trades will happen. EPA is not allowed to issue any permit that will cause or contribute to violation of water quality standards. The Agency, however, issues permits for sewage treatment plants that are discharging nitrogen and phosphorus into the Chesapeake Bay, which already is impaired because of nitrogen and phosphorus. That permit only is legal through the context of the TMDL. EPA has said that it is allowing this discharge to occur because it is confident (reasonably assured) that nonpoint source reductions will be forthcoming. EPA does not have permitting authority over nonpoint sources but has an obligation to hold point sources accountable, which is why it wants to ensure there is sufficient reduction of the nonpoint sources. He added that EPA has regulatory and statutory authority to designate CAFOs; Mr. Fox said he has yet to see a farm that does not meet the definition of a point source.

Mr. McDonald commented that if EPA capped the loading in the bay from new additions and new sources, the Agency would be effectively capping livestock production in the area; farms could simply go out of business, and reductions would be achieved by stopping the source. Mr. Fox hoped that scenario would not be the outcome. Trading programs that are emerging would set a baseline above which trading is not allowed; a farmer might have to have a certain number of practices ongoing before being allowed to trade any additional increments.

Dr. McFarland asked Mr. McGuigan whether the states have discussed the need for more resources to meet the goals. Mr. McGuigan confirmed that they had such discussion, but noted that there will never be enough resources. States and EPA must figure out strategies such as targeting efforts so that farmers believe they have a reasonable probability of being visited. Enforcement and penalty is necessary to provide a motivation for compliance. If that program is effective, fewer inspectors will be needed and fewer farms will have to be visited.

Mr. Fox added that the resource question is fundamental to the fact that the air is cleaner today than it was 25 years ago. Consumers pay for cars with catalytic converters, low volatile organic compound (VOC) paints, and gas from pumps with adapters to prevent VOCs from being released. Environmental regulations were imposed on the private sector by EPA, with the net effect that the cost of goods and services incorporated the cost of pollution control. Water pollution has not worked that way. Farmers are struggling and dairy farms are going out of business. It has been assumed that the cost of pollution control for agriculture was a government responsibility through cost-share programs with USDA. With the declining federal budget, how can the cost of pollution control be included in the price of meat, eggs, and milk over the next 5 to 10 years to replace the decrease in federal spending. This is one of EPA's complex challenges.

Mr. Elworth noted that technical assistance and the federal support for technical assistance are topics that the Committee should address. It is important to have enough money to help the farmers implement conservation practices that will work and adequate funding for EPA to verify the environmental impacts.

Mr. Clark remarked that Mr. Redding, in defining TMDL, had defined the "L" as leadership. Conservation districts are leaders working on these kinds of projects; he asked for an explanation about the need for their role to expand. Mr. McGuigan responded that he was only familiar with a few conservation districts, but they play an important role, especially in Pennsylvania. That role means ensuring some sort of accountability, and currently, accountability is missing. Conservation districts provide technical assistance to the farmer, but they do not proactively visit the farmers and tell them what the law requires. The conservation districts say that they prefer to be the farmers' friend rather than police the farmers' activities. Sometimes being a friend, however, means informing farmers that they need to take steps to remain in compliance. Mr. Elworth added that he was part of a project designed to develop conservation plans for the farmers in the Lancaster County Conservation District, and this effort had a significant impact. It allowed NRCS and the district to determine the cost of conservation practices. It would be difficult to overestimate the value of both the conservation plan and the process of sitting down with the farmers to discuss the plans.

Dr. Burns mentioned that there are many areas of agreement but also many areas of disagreement between the agricultural and environmental communities. For the last decade, he has developed and led a comprehensive nutrient management planning and training program through USDA to certify technical service providers to ensure that there are no point source discharges. The claim that there are no farms that do not have point source discharges may be an area of disagreement because there are many deep pit swine facilities where the animals and manure are completely under roof, and there is 14 months of manure storage available. In Dr. Burn's opinion, there is no discrete conveyance that would count as a point source discharge. Mr. Fox noted that tile drains can count because the legal definition of a point source is a manmade conveyance including any pipes and ditches that discharge pollutants into U.S. waters. He added that EPA has a phosphorus index used throughout the Chesapeake Bay watershed. There is much emerging science that suggests that the soils are saturated with phosphorus, which will become a huge issue for nutrient management. Dr. Burns responded that it takes both source and transport vectors to move that phosphorus to water. Development of the phosphorus index did not include enough parties in the dialogue; the most recent version of CAFO regulations state that there is some question about how significantly phosphorus can be controlled through nutrient management plans.

Mr. Archie Hart (North Carolina Department of Agriculture), FRRCC member, noted that 85 percent of farmers in Watson Run did not have conservation plans and asked if these were Plain Sect farmers. Mr. McGuigan responded that he would have estimated that among non-Plain Sect farmers in the conservation district, 50 percent would not have conservation plans; however, 75 percent did not have the required plans. The conservation district should shift the onus to the farmers and establish the expectation that there are regulations to which they must comply. Mr. Hart added that the North Carolina Department of Agriculture is collaborating with the state office of NRCS to use one of its experts to be proactive in this area. Mr. McGuigan noted that this is a very wise approach. The top five BMPs and what it would take to put them in place were discussed with the Plain Sect farmers. Adding fencing and gutters was considered to be workable, but creating buffers was seen as more difficult because a 35-foot buffer on a small farm takes too much land out of production. Winter spreading of manure as a result of inadequate manure storage also was a problem, but farmers were told not to apply it near waterways and in areas of concentrated flow. These compromises are interim measures. Mr. Brubaker asked what portion of the farmers was close to meeting the target even though they did not have a conservation plan. Mr. McGuigan responded that some are close to meeting the target, but 85 percent did not have a manure management plan and were putting manure into Watson Run. The problem with erosion and sediment plans is that they are not water quality-based plans, and they do not consider many of the issues in the production area.

Mr. Boggs stated that there needs to be a confidential relationship between the conservation districts and the farmers. If farmers thought that conservation districts would report what they see at their farms to a regulatory agency, the conservation district agents would not get access to the farms; there would be no trust, and therefore no nutrient management plans. Although conservation district agents want to be the farmers' friend, they need to be more proactive to admonish the farmer to comply with the law. Admonishment does not work well without the credible backstop of a regulatory agency whose job it is to

issue penalties. Mr. McGuigan responded that this is the reason conservation districts must work with the state environmental offices.

Discussion: Focus on Florida Water Issues
Moderator: Dan Botts, FRRCC Member

Mr. Botts noted that a distinguished panel will describe Florida's numeric nutrient criteria (NNC) rule. Florida has been dealing with water quality from an agricultural standpoint for a long time. The state developed a BMP regulatory process to manage nitrates and groundwater. That effort resulted in the development of a program related to the 600,000 acre-agricultural area in the Everglades. An American Indian tribe south of the lake said that Florida was discharging too much phosphorus into water management district conservation areas south of the lake. Florida went through a controversial and adversarial process that led to state legislation called the Everglades Forever Act, which dictated a numeric nutrient standard for phosphorus (10 parts per billion [ppb]). In Florida, the proposing agency must demonstrate the scientific validity of a rule rather than being able to propose a rule with the responsibility to disprove it falling on the impacted industry, and a detailed economic analysis of the impact of any rules that are promulgated must be conducted. There was legislation passed in Florida in 1999 that directed the Florida Department of Environmental Protection (FDEP) to develop NNC for all water bodies in the state including estuarine areas, lakes, streams, and springs. A long public process determined the technical standards regarding how to evaluate impairment for all of the types of water bodies in the state; the law required that they be completed by 2009. The upper reaches of the St. Johns River lacked a standard, and the Agency required development of the standard by October 15, 2010; an extension until November 14, 2010, was allowed. This topic resulted in the most well-attended public meetings ever held by Florida, and there was input from agriculture at the meeting, but this process impacts water treatment and stormwater as well. If EPA adopts a numeric nutrient standard, the state cannot adopt the federal level for 2 years, which puts Region 4 in a tenuous position in terms of its ability to permit.

Ephraim King, Director, Office of Science and Technology, Office of Water (OW), EPA

Florida faces an increasing number of impaired waters as a result of excess loadings of nitrogen and phosphorus. These loadings of nitrogen and phosphorus are directly related to measurable environmental impacts on recreation, fishing, and public health. Florida's challenge does not result from a lack of commitment. Florida's FDEP is tremendous, and the state has a very good regulatory system to deal with nutrient pollution. Currently, the narrative standard that mandates a "balance of flora and fauna" has to be translated into a numeric standard that determines whether a particular water body is impaired. Then, the appropriate targets must be calculated and people asked to reduce loadings. The case-by-case approach is very thorough where it is applied; with more than 1,800 miles of impaired streams, and 20 percent of estuaries impaired, EPA determined in January 2009 that new or revised standards are needed for the State of Florida.

This determination was made in the context of litigation and does not reflect a lack of confidence in FDEP and Florida's scientists. EPA was being sued on the basis that Florida was failing to assure attainment of water quality standards required under the CWA. EPA struggled with the smartest way to move forward and reached the conclusion that what cannot be measured cannot be managed, and until numeric criteria is applied to streams and lakes and coastal waters, it is difficult to know the baseline and what more needs to be done. Florida has a $60 billion per year tourist industry. The state has a population that is projected to grow by at least 50 percent during the next 10 years, and the challenge faced by the state in terms of nitrogen and phosphorus loadings will grow as well. EPA made this determination in January 2009, and entered into a consent decree with litigants in the summer of 2009. EPA agreed to issue a proposed rule in 1 year and a final rule the following year. Under the CWA, once EPA makes the determination that new or revised standards are needed, the proposal has to be issued promptly, and the final rule must be issued 3 months afterward. EPA believes that the consent decree created a structure and a framework that allowed an engaged public process to determine the NNC for Florida. Under the CWA,

these NNC do not automatically apply to anyone but describe the state of nitrogen and phosphorus loadings in a particular stream to offer confidence that the designated use of that stream will be met. When the criteria are finalized in a month, nothing automatically will happen in Florida. FDEP is collaborating with EPA Region 4 to incorporate the criteria into state standards and determine how to manage their NPDES permits and wastewater discharge permits. The CWA has no enforcement authority over agricultural activities. Part of what EPA is hearing in Florida is a larger sense of concern about the obligations inherent in establishment of baselines. The action that EPA is taking will lead to limits in terms of TMDLs, and the Agency hopes that it will strongly encourage the agricultural sector to take the BMP manuals that they developed and implement them across the state.

The proposal includes NNC for streams, which were classified by watershed regions in the state. EPA proposed implementation of four regions around the state and examined all of the data that FDEP had accumulated. The NNC are calculated using the reference division approach, which finds the parts of a particular region relatively unimpaired by human activity and examines associated nitrogen, phosphorus, and sediment levels that are highly likely to yield healthy ecosystems elsewhere in the same region. EPA is confident that this approach makes sense as a basis on which to derive protective nutrient limits. For lakes, the Agency examines levels of chlorophyll *a*, called a response variable, that characterize a healthy lake and note corresponding levels of nitrogen and phosphorus. The chlorophyll *a* level is the target; as long as it is achieved, higher nitrogen and phosphorus levels can be allowed. A controversial issue in the CWA states that when upstream criteria are set, it must be assured that downstream criteria can be achieved. EPA received 20,000 comments in favor of the rule; the people in Florida are incredibly engaged, civil, and supportive. EPA is determined to ensure that the science it uses is logical, well-based, and defensible and that the data are used correctly.

Joanne Benante, Director, Water Management Division, EPA Region 4

The Water Management Division in Region 4 deals with water quality standards as well as monitoring the water quality and listing water bodies on the impaired waters list. Region 4 is supporting EPA headquarters in the development of NNC in Florida. Scientists, modelers, and water quality standards coordinators are on a team working to develop the inland rule that will be issued this year, and a coastal and ocean rule that will be issued in 2012. Region 4 has presented on NNC at the Florida Stormwater Convention, National Ocean and Estuaries Meeting, and St. Johns River Summit. The eight states in Region 4 have delegated water programs, and Region 4 oversees them through CWA grants and the associated work plans. Region 4 provides legal, scientific, and regulatory expertise to the region. The region has been working with FDEP for many years on NNC; in the mid 1990s, Region 4 was working to help the state understand nutrient dynamics and select appropriate water quality modeling tools. The region has helped to design and evaluate BMPs, and provided some funding for publishing the Florida BMP manual. Region 4 has its "RTAG"—the Nutrient Regional Technical Advisory Group—which consists of all the regions in four states, EPA, and other federal partners. Additionally, Florida has a TAC (Nutrient Criteria Technical Advisory Committee), and Region 4 has been involved with this group as well. Each of the states has a nutrient criteria development plan, and Region 4 examines these plans to ensure that states are meeting their milestones. Region 4 has been working with Florida for many years to help interpret the state's narrative and determine whether water bodies are impaired and BMPs are necessary. In the area of science, Region 4 works closely with Florida to develop nutrient sensitive methodologies; one of these, peraphytin, a diatom, is used to determine cause-and-effect relationships (i.e., how much nitrogen or phosphorus will affect a peraphytin).

Florida's narrative criteria currently state that nutrients should not cause an imbalance of flora or fauna, which is quite vague. This narrative has to be translated into a number to determine the target for cleanup. This number determines the WLAs and LAs for a particular area. In addition to water quality issues and nutrient issues, there is collaboration with the state departments of agriculture and the agricultural community. An important issue in Florida is soil fumigates, and Region 4 has worked closely with Florida to arrange listening sessions with agricultural stakeholders regarding mitigation. Strategic agriculture initiative grants have been issued to the state, and there has been work with the City of Miami

and Dade County to replace diesel engines on agricultural irrigation pumps. Additionally, there is a regional agricultural coordinator who is working with the Suwannee River Partnership on voluntary initiatives with the poultry and dairy sectors to reduce nutrient loadings to groundwater. She has coordinated efforts to understand BMPs in Florida and the breadth of BMPs across the state; this will be important as EPA moves to implementation of the NNC.

Mr. Elworth had asked Ms. Benante to talk to the FRRCC about what should be included in the Committee's work plan and report. The FRRCC must address nutrient pollution, including nonpoint sources, and as a federal advisory committee, the FRRCC should advise EPA on how to handle nonpoint sources. The Nutrient Innovations Task Group report is an urgent call to action that assembles the science on nutrients and contains many links to agriculture and nonpoint sources. In terms of BMPs, the science needs to be moved forward and related to the water quality standard. Under the pesticides program, there were many stewardship programs; one example is the Delta FARM, whose mission and goals are to advocate resource management, elevating the industry's environmental stewardship level, and reducing nutrient loads to the Mississippi River.

Drew Bartlett, Assistant Director, Environmental Assessment and Restoration, FDEP

From FDEP's perspective, the Department has been working on NNC for 5 to 7 years, collecting data and working to determine the ultimate number. FDEP believes that NNC are necessary in Florida, but the criteria must be constructed correctly and implemented pragmatically. As FDEP goes through its workshops in Florida, 80 percent of the questions received concern how this will affect producers and how it will be implemented.

The NNC will not restore clean water for Florida; what Florida does with those numbers is what matters. The Florida Watershed Restoration Act (FWRA) follows the CWA with one important last step, a basin management action plan, which is a comprehensive TMDL implementation plan that affects all sources, not just regulated sources. The FWRA authorizes the Florida Department of Agriculture to adopt BMPs for different types of agricultural practices. If the agricultural operation signs up with the state Department of Agriculture through a notice of intent, keeps records to implement these BMPs, and passes inspections, then they have a presumption of compliance with the basin management action plan. BMPs alone, however, do not always achieve standards. If they do not, the state Department of Agriculture can add more BMPs for specific areas. BMP implementation has reduced phosphorus loads by half in the Everglades Agricultural Area (EAA). Modified hydrology also is important; when land is modified, the delivery of runoff from that land to the downstream water body is accelerated.

In the Florida Ranchlands Environmental Services Project, the state-agency-buyers pay rancher-sellers for providing documented water and phosphorus retention services over a fixed-term contract. This involves a competitive contract process in which state agencies request proposals for providing desired services, and projects are selected based on the best opportunity for providing desired outcomes.

Accounting for anthropogenic land uses involves stormwater treatment areas in the Everglades. The BMPs were not adequate to achieve the desired reductions, so the South Florida Water Management District took ownership and treated the water coming off the agricultural land, which keeps the lands in production and pulls together a community effort to protect the everglades. From FDEP's perspective, there is a provision in the EPA proposal that will challenge some of Florida's efforts, and it deals with Downstream Protection Values (DPVs). Florida was adopting lake and stream criteria and was going to attain both through watershed implementation. The application of a DPV on top of that, a more stringent number, presents more difficulties when trying to deal with the watershed approaches/water quality management. Permitting regional discharge as industrial discharge is a concern because the South Florida Water Management District did something that needs to be done in the rest of the state, and the district is experiencing difficulties that will discourage this from happening. An additional challenge is the limit of technology; the progress made in the 1970s on controlling pollution was technology-based.

Discussion

Mr. Botts thanked the presenters for a balanced overview. He stated that science-based nutrient standards will provide more certainty in the planning process, adding that it is better to have scientists set the standards than to have them dictated through the legislative process. The default of 10 ppb was developed because inflow of water into Everglades National Park is 8 ppb. That number has never been violated because the marsh at the end of Lake Okeechobee functions as a stormwater treatment area. Florida law states that public lands cannot be used for stormwater treatment areas. Those stormwater treatment areas got pushed back in to the EAA, which took agricultural land out of production. Every farmer in the EAA pays a $25 per acre Everglades agricultural privilege tax. The taxes go to a fund that helps pay for the maintenance of the stormwater treatment areas. Another tax on agriculturally zoned land is used to provide the research to develop the BMP criteria. Agriculture is paying its way in this process. Certain communities in Florida would like to see the 10 ppb be an "end-of-pipe" standard. It was developed as an interior marsh standard in the EAA. Lake Okeechobee averages between 130 and 170 ppb in the water received for irrigation purposes; it is returned to the system at approximately 55 ppb, and no credit is received for the process of using that water. There is room for creative ways to structure this program to ensure that the funding needed to implement water quality parameters is available, but this must be done in the context of the economic viability of the existing agricultural operations.

Mr. Elworth noted that Florida is unique in that there is no agricultural issue in the state that is not related to a significant water issue.

Mr. King commented that Florida has 10 million acres of agriculture and the state is losing the "nutrient war." He asked the FRRCC to think beyond just doing what is now being done but better. Florida needs a better statewide model to advance loads reduction. It must be understood that the magnitude of the issue is huge, and the solution must go beyond demonstration projects.

Dr. Bonanno asked if the water kept on the ranches involved raising the water table, or if the ponds were tarped ponds, and whether there is a change in the nutrient content while the water is being stored. Mr. Botts responded that the vegetation served as a stormwater treatment area or filtration system; the water leaves the farm cleaner than when it arrives. Mr. Bartlett responded that holding the water in the pond was like having cloudy water in a glass; the pollutants will settle so just holding it has a benefit.

Ms. Friedman noted a pressing need for better, more accessible, and more cost-effective metrics that farmers can use on an ongoing basis to evaluate, adapt, and document their actions. A gap exists in terms of investment in real-time usable metrics by the different agencies. There seems to be considerable focus on financial investments to get things done in the Chesapeake Bay and elsewhere, but no one is providing the needed technical assistance. Mr. Bartlett replied that the term "metrics" could be applied in many different ways. One that most of the operations track is the amount of fertilizer used per acre. The amount of water used is another metric, because there are more precise ways to deliver water. Ms. Benante stated that, in terms of stewardship, it is important to involve fertilizer companies in the process. Mr. Botts added that many metrics are being collected as part of farm management practices, but there is no mechanism to put the information into a reference system because much of it is proprietary.

Dr. McFarland mentioned that complex water management systems are important for agriculture. Will there be different numeric standards for the canals that are in the different areas because of designated uses? She also noted that the reference stream approach was thought to be controversial. If a different approach was used for the standard, how varied are they? Mr. King responded that the standards he had discussed were intended to assure balanced flora and fauna. A state has the ability to change its designated uses, and if it does so, then the numeric criteria needed to meet those uses also changes. It is difficult, however, to change the designated uses in most states. The rule EPA is working on has site-specific adjustment criteria; EPA has taken a certain methodological approach for derived reference conditions and numeric standards. Mr. Bartlett added that Florida had tried to monitor all streams to determine the relationship between nutrients and harm, but there were many complicating factors. The

reference stream approach is controversial because the numbers are tight, and water bodies that exceed them will be considered impaired. Mr. King added that for 25 to 30 years, EPA has had criteria that will react differently to different stream conditions, but in this case, much money is at stake, so there is a call for fine calibration. Fine calibration, however, requires much more site-specific monitoring.

Mr. Robert Carlson (North Dakota Farmers Union), FRRCC member, commented that farmers and ranchers respond quickly to incentives. Is it feasible to try to establish a trading system in which a value is placed on certain mitigating practices? Ms. Benante replied that EPA would encourage trading in a water body. Once a TMDL is established, a trading system can be designed so that the water quality standards within the particular water body are met. Mr. Bartlett added that trading, to be viable, has to have multiple sources; those who have been able to generate credits in the St. John's area have been point sources because they could most economically reduce what they discharged. FDEP has not been able to quantify agricultural reductions easily because nonpoint sources are hard to measure. As FDEP moves into more of the watershed and input to St. John's, the hydrology could potentially be managed to create credits.

Mr. James Ford (Square "O" Consulting), FRRCC member, asked for elaboration on the fee structure paid by the growers. Mr. Botts responded that it was statutorily mandated through the Everglades Forever Act of 1994 when the methodology to pay for stormwater treatment areas was being developed. The water management districts in Florida have taxing authority that can be used for construction and other projects; they also are charged with managing surface water. They volunteered to build the stormwater treatment areas to clean up the agricultural water leaving the EAA, but they needed funding to pay for operation and maintenance. The fee also was used as a hammer for adoption of BMP practices; the fee could reach $100 per acre if BMPs were not met. The other tax on the agricultural land in the EAA was passed by the grower community to serve as a source to develop funds to perform the research to determine how to deal with the numeric phosphorus standards in the EAA. EAA soil is naturally high in nitrogen and phosphorus, and if a nitrogen standard is put in place, it will be interesting to see how it is managed.

Mr. Brubaker noted that although Mr. King had expressed what he thought to be best for Florida, this language might make states nervous. The CWA recognizes and deals with conflicts by letting states set the implementation standards. At what point should the Federal Government be imposing the right balance given the lawsuit versus freedom and flexibility for the states? Mr. King responded that he was not expressing his personal views, but the view of EPA, the CWA, and those who commented on the rule. The CWA gives the states the lead, but the EPA Administrator under the CWA has the authority to oversee the state and, where the state is unable to assure attainment, to help the state. EPA's strong preference, however, is to leave this at the state level.

Dr. Burns noted the following commonalities: everyone is facing reduced resources, partnerships work when there is trust, and long-term behavior changes in agriculture will require BMPs to become standard practices. He requested that EPA consider engaging the land grant system, because the Agency has been a trusted source of science-based information to agriculture for years, and it would be a valuable partner for working toward clean water.

Dr. Lori Berger (California Specialty Crops Council), FRRCC member, asked about the essential body of information to develop BMPs. What commodities were considered, how was this effort funded, and was proprietary information accessed? Mr. Botts responded that the BMP manuals were developed in Florida under statutory authority; several of those involved in its development have not filed their notice of intent because of some of the record keeping requirements, but the minute the numeric nutrient standards becomes law, all farms will file a notice of intent to adopt BMPs. FDEP adopts this by reference, which gives the BMPs regulatory authority. The citrus BMP manual currently is being revised; it will go from a regional manual to an area-wide citrus manual, but there must be an ongoing process for development. The original grant to fund that effort came from Region 4, but it was overseen by the FDEP. The Institute of Food and Agricultural Sciences (IFAS), the land grant system in Florida, was engaged at every step of the way. Guidance documents from IFAS were referenced by approximately 95 percent of the manual.

Ms. Noble pointed out that there are two sets of sources of nitrogen and phosphorus: (1) nutrients that are coming from animal systems, which are very high density; and (2) mined nutrients. In cases where farmers are taking nutrients out of water, they are being credited but they often are able to use the nutrients to grow their crops. Ms. Noble's organization serves as a bridge between sustainable agriculture groups and farmers. The other issue to consider is subsidies. Should farmers get a credit for growing their crops because they are subsidized for picking up phosphorus and nitrogen? Conservation is a big driver of soil erosion control and low till and no till. It may be time to examine conservation compliance and nutrient management. Ms. Dilley commented that Ms. Noble was highlighting themes, which will be discussed more by the FRRCC during the afternoon session.

Mr. Garza commended Florida for its work. He stated that placing additional taxes on what he now pays would raise his taxes to approximately $100 per acre. Because consumers are the beneficiaries of every program, they should be the source of the money to pay for these programs. A campaign is needed to convince consumers to pay more for their agricultural products. Dr. Balling stated that revenue for programs was the "elephant in the room," which likely would be discussed in the afternoon session and the next day.

Plenary Discussion: FRRCC Engagement on Water Issues

Ms. Dilley advised FRRCC members that they should start thinking about "big picture framing" to create the work plan and ultimate report. It will not be an easy task to provide EPA with information to address the issues raised. Members also should consider what further information is needed from EPA or others to foster their deliberations. Issues to be addressed include resources for the programs, needs related to communication and coordination, partnerships, and the balance between clear guidelines and flexibility to apply them.

Mr. McDonald suggested that Mr. King's recommendation to look beyond "doing more of what already is being done" was a good starting point for the Committee. New solutions, however, require new regulatory approaches. The gassifier example illustrated this dilemma. It was an out of the box approach to capturing renewable energy and reducing the methane footprint but was hitting a regulatory hurdle because of NO_x emissions. As a group, the FRRCC must determine how to help the new ideas get traction. If these practices are economically viable, they will fund themselves. If it takes subsidies and money from the outside to make them viable, they will not be sustainable if funding is cut. Flexibility is required in programs as well, because a one-size-fits-all approach is not practical.

Mr. McDaniel agreed that it is important that the FRRCC examine alternatives to the way things currently are being conducted. One problem with the TMDL situation is that it is an input-only philosophy; there must be a way to utilize the nutrients in the water, and the outputs must be considered. Minor research is being conducted but not nearly at the scale of what is needed. Inputs and outputs both need to be recognized within whatever model is being used.

Dr. McFarland asked for further information on research needs. Growers and other stakeholders wish to do what is right, but they must know that standards are science-based. They want to know when their actions might be impairing the waters and they will put standards into practice when they are important. Mr. Elworth responded that a key question is whether the science underpinning a decision is sufficiently credible. The issue of the Chesapeake Bay model continues to be a sticking point. EPA will continue to bring in new data and revise the scientific practices because the issue of credibility is very much a consideration, and adapting to new information or new practices is part of being credible. Dr. McFarland added that reducing the uncertainty is always a benefit, and a great deal of improvement has been seen with voluntary practices.

Dr. Jennie Popp (University of Arkansas), FRRCC member, agreed that producers want to do the right thing. The University of Arkansas has an incredibly effective extension group. There is a question of how

best to educate the farmers, consumers, and regulators. What is the process to engage people in such education?

Dr. Alice Ann Sorenson (American Farmland Trust), FRRCC member, noted that the USDA's Conservation Effects Assessment Project (CEAP) found that 15 percent of the acres in the upper Mississippi area are critically undertreated and need more nutrient management practices. How can these critically undertreated areas be reached?

Ms. Noble stated that NRCS currently is revising its Nutrient Management Standard, Code 590 for land application, and the FRRCC should examine this plan.

Mr. Clark noted that the discussions about Florida and the Chesapeake Bay mentioned many efforts to actively engage people with what is happening on the ground. It is important that EPA work to soften its image. Riding on the coattails of NRCS and conservation districts will help, but it will not solve the image problem EPA has with producers. Australia Land Care provides a good example of how an agency can market itself.

Mr. Treacy commented that he cannot recall a time when there has been a wider gap between agriculture and EPA as the gap that exists today. The Agency needs to pay attention to this issue and work to gain the trust of this community. We heard today that it takes one-on-one conversations in people's kitchens to garner compliance. For the first time, EPA is regulating individual operations and the Agency may need to consider different ways of addressing them to defuse the situation and develop a cooperative effort to address the problems.

Mr. Elworth stated that EPA conducts numerous listening sessions, yet it is argued that the Agency does not conduct many "hearing sessions." EPA needs to find ways to turn these opportunities into something useful for the Agency and the producers.

Dr. Sanders explained that EPA is a "hard sell" to the agricultural community, and this reflects the fear and frustration that was mentioned by Administrator Jackson. Finding ways to improve the producers' trust of EPA would be an important task for the FRRCC. Sustainability has been mentioned, but it should be defined clearly in the report. Agriculture is not a monolith; it may be oversimplifying the situation to discuss what is good for agriculture and what is good for the farmer because outlooks are very different. Land grant universities are available as a resource. Lack of education contributes to the problem, and the extension services are a legitimate resource to help resolve that limitation. Extension services rather than conservation districts may be the best option to educate farmers. There may be instances where the symptom is identified rather than the real problem, and more research may need to be conducted before EPA takes action.

Dr. Burns stated that although it takes trust and people on the ground to make things happen, the process also is very important. The agricultural producers in the watershed have to understand the issues and how they are impacted by them. He pointed out that agriculture relies on clean water to function, but cost will determine whether farmers comply or not. An ongoing commitment is needed to ensure compliance.

Mr. Brubaker commented that Ms. Friedman has been able to develop relationships with producers even though they usually are wary of "environmental defense." Her approach should be studied for possible replication. Australian Land Care, as Mr. Clark mentioned, is a model that works; it is a public-private partnership in which environment and agriculture come together. Second, someone needs to identify useful new technology that is effective and technologies that may not function well. Finally, relationships do count. The first approach to a producer is essential, and most producers want to get an "A" on their environmental report card. Conservation districts and extensions and other resources are extremely well prepared and respected by producers.

Mr. McNinch noted that the technology that farmers are dealing with changes very rapidly. Farmers are extremely trusting people by nature, but once their trust is lost, it is almost impossible to regain. Additionally, it is rare to meet a farmer who does not consider himself or herself to be the first environmentalist on the planet.

Dr. Bonanno said that farmers are reticent to trust the government because they do not know what the government will do next that will impact their livelihood and way of life. Farmers still are not clear on the big issues that should be addressed. Perhaps no manure should be spread in the winter, and fertilizers on lawns should be limited.

Mr. Hart agreed that strong outreach and education are needed, but he emphasized that attitude is a key factor. In some cases, regulators are condescending to people instead of being there to serve the people. Regulators should not go out to slap people's hands. The North Carolina Department of Agriculture developed a brochure on how to keep regulators off farmers' lands. This may be the attitude that is needed for USDA and EPA.

Mr. Ford highlighted the need to widen the scope to a different audience. In May, there was a flood in Nashville, and during and after the flood, people wanted to learn more about the 100-year flood plain. EPA needs to take advantage of such opportunities to tell people not only about flooding but about water quality, for example, to get ordinary citizens involved; this extends to farmers.

Mr. Vester said that he had heard two statements during the discussion with which he did not agree. The first is that the extension agent should go out and tell the farmer what to do, and the second is that the fear of regulators coming to the farm will get farmers to comply with regulators. These are very negative statements and reflect the wrong attitude. The issue is that many farmers do not know what to do, but yet they are expected to follow the rules. Mr. Elworth agreed that the issue of trust could not be overstated.

Dr. Berger noted that it would be useful for this group to identify how it could communicate the consequences if the environmental issues under discussion are not addressed.

Public Comment
Alicia Kaiser, DFO for the Committee

Ms. Kaiser called for public comments.

Mr. Tom Hebert, a consultant with the United Egg Producers, said he works with agricultural groups. He had brought an EPA official and a USDA official in to meet a producers' group, and a person said that they liked the EPA staff member but not the USDA staff member. The EPA official was straightforward, whereas the USDA official said he was there to help the producers. The only thing worse for a farmer than a regulator is a regulator trying to be a friend. He recommended that EPA not try to gain credibility with the farm community by trying to befriend the farmer. There is call for a new model of interaction with the farm community. The challenge that the FRRCC has in working with EPA is that the CWA reflects something desired by many: water that is fishable and swimmable. When the strong desire for pristine water is placed against the production of hundreds of billions of dollars worth of agricultural products, the situation becomes quite complex. EPA has an enormous and difficult job. In Florida, at least one-half of pristine waters will not meet their designated uses under the new standard because of the DPV necessary to achieve the designated uses there. This is a really difficult problem. The underlying disease, of which many symptoms are evident, involves that basic conflict; progress must be made on these issues, although close to the impossible is being asked of agriculture.

Discussion

Ms. Dilley stated the need to think about key themes for the work plan and ultimate report. Regulatory obligations, approach, research, and outreach all have been mentioned. How can the FRRCC approach

these topics, and how can EPA best help the group to provide advice in a report? The charge for this evening is to think about these issues.

Mr. Elworth was concerned about the amount of content that must be addressed the next day so he asked the group to think about the most critical issues, what additional technical or policy information is needed, and finally, what issues must be addressed in the work plan and report. The members were instructed to write comments on these three areas to share the following day.

Ms. Noble asked if the members could communicate between meetings. Mr. Elworth thought Webinars or conference calls could be conducted.

Mr. Brubaker liked the idea of having themes on a white board tomorrow morning so that the group would have an opportunity to weigh in and agree or disagree with the chosen themes.

Mr. Elworth wanted to ensure that the report reflects the Committee's best thinking and that the FRRCC sees the results of having provided the information to EPA.

Dr. Balling asked EPA staff members in the audience to introduce themselves, and Ms. Kaiser recessed the meeting at 6:13 p.m.

FRIDAY, OCTOBER 1, 2010

Opening Remarks

Pete Silva, Assistant Administrator for Water, EPA

Mr. Silva explained that he understood the importance of agriculture to this country. The Office of Water (OW) is governed by two laws, the Safe Drinking Water Act (SDWA) and the CWA; agriculture is not regulated under the CWA, other than the CAFO rule in which CAFOs are considered a point source. The Section 308 CAFO rule will seek more information on AFOs, and the rule will cause some consternation, but EPA will try to minimize its impact. Based on a court case, EPA will have to regulate the discharge of pesticides on or near water, and this has caused some concern because of the perceived expansion of EPA's reach. The Agency held an extensive outreach program with states and stakeholders to keep the framework as small as possible in terms of EPA's coverage of pesticides. Rice and cranberry farmers were concerned and unsure whether they wanted to be permitted. For now, they are not included, but EPA wants flexibility if they choose to be permitted in the future.

Nationwide, runoff is a serious issue because of sediment and nutrient pollution. EPA must determine a way to work with stakeholder partners to address this issue. Mr. Fox talked about the TMDLs and working with the states; OW is working with the states to address nutrient pollution from nonpoint sources, particularly agricultural runoff. Additionally, EPA is working with USDA to be more creative in using the CWA Section 319 funds for the watersheds.

Mr. Silva noted that the Hypoxia Task Force is the hot topic now that the oil spill has been contained. The focus now has turned to restoration. EPA will be the lead on the restoration effort, and OW is leading EPA's effort. How to manage the hypoxia zone in the Gulf of Mexico will be a focus of the restoration effort, as well as trying to control runoff upstream. The Task Force has existed for 12 years, and there has been much discussion but not a lot of action toward resolving the nutrient pollution issue. EPA is getting sued because the states do not have nutrient standards for nitrogen and phosphorus. The standards EPA has developed in Florida are almost the same as the ones that the state was proposing initially. EPA would prefer that the states create their own programs and wants to work with the states to get some reductions, and the Hypoxia Task Force is one area where EPA can make a difference. The Agency has worked with states to set up model nutrient management plans, and work is underway at the federal level with USGS and USDA to get funding to help them create and implement their own nutrient management plans.

Environmental groups have petitioned EPA to create a TMDL on the Mississippi River Basin, which would include approximately 33 states. The main issue from the groups is accountability. EPA must work with the states to create accountability frameworks that are not too onerous but give EPA basic information about progress that is being made once the implementation plans are in place.

Many useful voluntary programs are being conducted on the ground, and EPA must work with states to encourage this, but it cannot be done without USDA. Internally, EPA is working on a strategy for OW to manage all of the programs nationwide and better work with federal and state partners, particularly in the Mississippi River Basin. Mr. Silva spends much of his time on nutrient issues, and even more time will be spent given the focus on restoration efforts in the Gulf. He is interested in accomplishing something positive, which ultimately involves getting individual farmers engaged.

Discussion

Dr. McFarland asked if there is a process for coordinating and strategically prioritizing if there is a match or overlay of different plans managed by OW and USDA. Mr. Silva responded that EPA has tried to coordinate, but states disburse the CWA Section 319 funds, and there may be adjustments needed in the granting mechanisms to try to match them up. EPA needs to ensure that its funds are used for issues that USDA does not cover. Additionally, newer technologies can be used to improve manure management. Dr. McFarland mentioned the development of turbidity standards and asked when the clean water issues are prioritized, how EPA is examining pathogens versus nutrients versus sediment. Mr. Silva replied that sediment contributes to nutrients and tends to be examined in the same way. The pathogens tend to be much more localized, and therefore are local issues, whereas nutrients and sediment are regional or national in scope. Pathogens also tend to be more of an issue on the drinking water side. Nutrients are higher on the priority list, and sediment is part of that.

Ms. Noble was pleased to hear that EPA is trying to turn the Hypoxia Task Force around and get something done, because her group referred to the previous plan as the hypoxia inaction plan. It contained no action steps and no drivers. Meetings have been held for 12 years with no tangible results. The Mississippi River is an orphan, and it is good to hear that EPA will address the issues in the area. Mr. Silva noted that Florida was a driving factor in getting states to the table to try something different.

Ms. Friedman asked, regarding investments in the Mississippi River Basin, if there is a basin-wide support initiative to assist in these efforts similar to the Great Lakes effort. The funding for the Great Lakes is being spent with a specific focus on collaboration with USDA on the technical assistance side and using funds in partnership with on-the-ground entities to provide technical assistance. Mr. Silva responded that EPA had only $17 million total for the Mississippi River Basin, but if the states can get some good programs in place, and show progress, then they can ask Congress for funds to further implement those programs.

Referring to the public comment that advised EPA to be a regulator and be clear about it, Mr. Brubaker said that no one would advocate for not building relationships and partnerships with the agricultural community. That said, is EPA attempting to put a new face on the Agency, such as a softer approach? Mr. Silva mentioned that EPA does not have regulatory authority over agricultural stormwater runoff. Unfortunately, many people do not do things until they are forced to do them; it is human nature. EPA must use regulatory tools more than the Agency would like. Although Mr. Silva would prefer a friendlier, new EPA, unfortunately, it cannot always be that way. EPA wants to be more collaborative, however, and realizes that is necessary to reach its goal of clean water.

Mr. Garza noted that, in many states, there is some infrastructure with which EPA can work. NRCS staff is overworked and probably cannot take on additional tasks. Going through local conservation districts is an excellent idea; the key will be collaboration so that the farmers are not put on the defensive. EPA can work with NRCS and the states and take steps to change its image.

Discussion: Focus on Iowa Water Issues
Moderator: Bill Northey, FRRCC Member

Mr. Northey appreciated the chance to discuss water quality issues in Iowa. Certainly Iowa is unique; although the state's issues are similar to those of the other areas discussed, they also have some differences. Iowa is the number one corn, soybean, egg, hog, and ethanol state. Agriculture is 25 percent of the economy in Iowa; approximately 23 million acres are planted for corn and soybeans each year out of 36 million acres. The panel of speakers will offer some background on what has been done in Iowa and what the future might hold.

Jim Gulliford, Executive Director, Soil and Water Conservation Society

Mr. Gulliford explained that the Soil and Water Conservation Society is a private, non-profit professional society that advocates for sustainable soil, water, and natural resource management with a focus on private, working lands. It is important to the Society that there be a science basis for policy and practice.

There is a need for the Nation's private working lands to provide food, fiber, forage, and fuel for the 41 percent increase in population that is expected during the next 40 years. More land will have to be brought into production and productivity must be increased on current productive lands, or more food must be imported. The second choice is the most likely.

The USDA 2010 CEAP Release shows challenges that are still faced in conservation practices on cultivated cropland: 15 percent have excessive erosion, 25 percent are losing soil carbon, 62 percent require additional nutrient management to reduce nitrogen and/or phosphorus loss from fields, and 5 percent of tile drained lands are protected from nitrate loss. The scientific challenge involves how to produce productively, and what that takes in terms of inputs. Bringing more lands into food and commodity production and continuing current agricultural production activities that have nonsustainable, adverse environmental impacts are not solutions.

The solution model must: improve crop, input, soil and water management systems; improve nutrient management to optimize production and reduce nutrient loss; intercept and address nutrients lost through drainage and runoff; and market ecosystem services from agricultural lands.

Scrub wetlands are effective nutrient-reducing agents in the field and are a natural system that adds a great deal of value in terms of wetland functions appreciated by the agricultural and environmental communities. In terms of accountability, drainage districts need to be thought of as watersheds, and addressed to: assure wetland functions and values are protected, install treatment wetlands to scrub nutrients, improve nutrient management, enhance drainage to enhance agricultural productivity, and document drainage district environmental performance. If true systems are built to address these issues, the watershed approach is to share responsibilities to achieve the desired environmental objectives.

Questions still exist from a research or a monitoring standpoint, and program performance and technology must be measured to: document wildlife implications of wetland establishment, mitigation, and management; address the questions of denitrification—wetlands become nutrient sinks and draining them has implications on landscape hydrology; and determine if precision nutrient management can be a more effective practice in landscapes with enhanced drainage performance. A typical pothole depression looks like an absolute pollutant sink from an agricultural standpoint. Targeted wetland restoration projects look very different and develop highly valued attributes of wetlands.

In conclusion, agriculture must simultaneously address food production and environmental protection on productive agricultural lands. The current model must change because more of the same approach will not be enough to meet the environmental objectives. The change to a new model must be encouraged,

questions associated with the proposed change must be addressed scientifically and simultaneously, and good practices can be improved through adaptive management processes.

Dean Lemke, Bureau Chief, Water Resources, Iowa Department of Agriculture and Land Stewardship

Mr. Lemke noted that Mr. Northey had discussed the role of food production in Iowa; this is not merely an economic engine, but a cultural value. Food production is a worthy and humanitarian goal, and solutions are needed to allow that goal to be achieved as environmental goals are met. Iowa is nutrient-rich, and it is unrealistic to think that this will not have some environmental impact. Iowa's approach to reducing nutrient runoff involves continuing long-standing programs to encourage adoption of traditional conservation practices and developing innovative technologies and programs targeted to reducing nutrient transport to water resources.

The new programs include the Iowa Soybean Association's On-Farm Nitrogen Network, which has conducted more than 3,000 guided stalk nitrate evaluations and more than 1,000 replicated strip trials. The Iowa Learning Farms project conducted by Iowa State University includes crop residue and tillage management demonstrations, education and outreach, and rainfall simulator educational tools. The Iowa Conservation Reserve Enhancement Program Nitrogen Removal Wetlands include 72 wetlands that either have been restored or are under construction or design. The Cedar River Watershed case study is a scenario to reduce nitrate losses by 35 percent (9,200 tons/nonpoint source allocation) while retaining row crop production. Benefits from the Iowa Wetland Landscape System Initiative may include reduction of: nitrate transport, surface runoff overland flow, sediment delivery, phosphorus transport, and nitrous oxide greenhouse gas emissions. The Initiative pilot projects also may increase habitat and ecological service functions of the landscape and act as a market force driver to optimize crop production. Other projects include the Iowa Strategy for Nutrient Reduction (addressing Gulf of Mexico hypoxia) and a Voluntary BMP Adoption/Recognition Program (in conjunction with Iowa agricultural groups).

Mr. Northey added that the next step in addressing hypoxia is to take each part of Iowa, examine the watersheds, and determine what actions it will take to achieve the reductions called for by the Hypoxia Task Force, which are 45 percent reductions in nitrogen and phosphorus.

Ann C. Mills, Deputy Under Secretary, Natural Resources and Environment, USDA

Ms. Mills mentioned that the recent Hypoxia Task Force meeting had been productive, and the group is on a path to concrete results. Real collaboration is needed on the issues under discussion, and it is important to get the FRRCC's input on how to address some of the challenges.

An increased emphasis has been placed of late on water resources because of Secretary Vilsack's and President Obama's priorities. USDA has started a water team that brings together all agencies in the Department to support the water strategies and goals. USDA plays a central federal role in protecting water; 60 percent of the Nation's surface supply of drinking water is affected by some programs at USDA. The Secretary sees the need to protect resources in a sustainable fashion so that agriculture also may thrive. He also is intent on protecting rural America's economy. This is essential to keep water quality and regional food systems, cultural traditions, and open spaces intact. USDA's strategy is to take an all-lands approach across political and public-private boundaries to target resources in specific watersheds. USDA also is adopting a systems approach to the work being conducted and targeting suites of conservation practices. In addition, the Secretary is emphasizing the idea of leveraging resources across the federal agencies and working with states. The President has charged federal agencies, including USDA and EPA, with protecting the outdoors, and this must include private working lands. The public also wants the federal family to work together, and to take steps to make it easier to collaborate with the Federal Government and seek public input.

USDA will be targeting resources such as California's Bay Delta, the Great Lakes, the Chesapeake Bay, the Mississippi River Basin, and the Gulf of Mexico. Unlike the Chesapeake Bay, where TMDL is the

driver, there is an opportunity to demonstrate how incentive-based conservation can be successful. There are battles being fought in the Chesapeake Bay that have resulted in wasted energy. USDA has to invest significant funds to address the Mississippi River Basin problems. This is a 40-year, $80 million-per-year program in 12 states. The funds are being used for partnership-based conservation efforts. The notion of creating accountability and the capacity to perform monitoring is of key importance. The work USDA conducts must be science based, and the Department is examining ways to use CEAP. The right suite of conservation practices work, and by targeting critical areas, USDA can increase practice effectiveness per acre five times in reducing sediment, four times in reducing total nitrogen, and three times in reducing phosphorus. USDA has had a successful year on the Mississippi River Basin Initiative (MRBI), but could have done better, and is interested in using adaptive management in the Mississippi River Basin.

The goal for Fiscal Year 2011 will be to focus on "MRBI plus," which is a more strategic examination of the issues, bringing the federal partners into the equation, and working with EPA and USGS to create a strategy with the states. By mapping out a more comprehensive strategy, USDA can do a better job of telling a more compelling story of what is being done in the Mississippi River Basin. USDA is committed to expanding its monitoring capacity to create real outputs.

The FRRCC should think about some of the challenges USDA is facing as well. There is pressure, because of population growth, to develop agricultural lands into urban areas. Producers are concerned that the terrain may shift quickly. USDA is considering creation of a safe harbor for producers so they know that if they put a certain suite of conservation activities in place that they will be last on the list for imposition of regulatory measures. EPA can play a role in supporting emerging environmental service markets. Helping USDA and EPA calculate the cost of implementing these regulations (to the producer and to government) is important, as is breaking down silos in the science community to ensure that models are communicated. Additional challenges and goals include creating models and ensuring that they reach producers, simplifying federal programs to make them more user friendly, and becoming more innovative in determining what water planning is needed. The opportunity to demonstrate how these practices can work using Iowa as a state model that has committed tremendous resources is important. USDA can play a role in ensuring that communications reach a broader audience and the Department values its partnership with EPA.

Discussion

Mr. Northey explained that the Iowa Department of Agriculture issued 360 Century Farm (100 years) and 66 Heritage Farm (150 years) Awards in the past year. Farms must work economically to stay in business, but farming is more than a business, it is a way of life. That is why regulators sense a pushback when farmers feel threatened. Compliance is needed to achieve water quality, but such compliance is more likely when there is a partnership with the farmers.

Dr. Bonanno asked Mr. Lemke how nitrogen is recovered, what form it is in, and what can be done with it. Mr. Lemke responded that the tile water containing the nitrate is run into the wetland, which denitrifies it and releases the nitrogen as nitrogen gas. It is similar to a treatment plant technology. The nitrate is not captured.

Ms. Friedman asked about USDA plans for nutrient management innovations that are showing real benefits and its plans to address the technical assistance challenge. Ms. Mills replied that the value of wetlands in some states is clearly appreciated. USDA is examining ways to raise the profile of water as part of what should be examined in the next farm bill. The Soil and Water Resources Conservation Act requires a congressionally mandated report that comes in two phases: (1) resource assessment, and (2) policy recommendations. NRCS conducted a number of listening sessions to create this report, and water was identified as the most important issue. An opportunity exists to ensure that programs are managed to meet water quality goals. A new national nutrient management strategy has been announced that will put a great emphasis on right timing, rate, application, and source. USDA also will be requiring nitrogen inhibitors for use in applying nitrogen fertilizer; however, the question remains how to use

nutrient management practices to greater effect. In terms of technical assistance, there is no doubt that even if OMB were to give USDA the greater share of the technical assistance dollars, the Department would need to be creative to determine how to help its partners. Mr. Northey added that the state had real challenges as well; it may be difficult to do what has been done in the past with limited funds.
Mr. Elworth asked if there is a sufficient number of people trained to provide technical assistance, and if there are sufficient resources to hire them if there is sufficient demand for their services. Mr. Northey responded that the process of developing the technologies was ongoing, and that funding would have to be identified for the effort.

Mr. Brubaker asked if the CEAP report on the Chesapeake Bay would be released within the next few weeks. Ms. Mills responded that it should be available within the next month. Mr. Brubaker added that technical expertise across the private sector is available, and only requires giving personnel clear guidance and empowering them to be a part of the solution. He concurred with the "safe harbor" comment, and believes emerging technologies do not have an efficient process for peer review, release, and identification of failures, and that this should be rectified.

Ms. Noble noted that the MRBI is standing alone with having established its level of accountability, and with less funding available, this may help it receive any available funding from Congress. In terms of the structure of the programs, when NRCS is trying to get partners and leverage funds, the Cooperative Conservation Partnership Initiative is important. Presenters on the Iowa issue mentioned increased production and environmental protection, such as increasing the drainage and examining various wetlands, and her organization believes that these issues should be kept separate. Conservation dollars should not be spent to increase drainage or increase the number of CAFOs. Mr. Lemke commented that the Iowa Department of Agriculture and Land Stewardship had reached out to stakeholder groups on the initiative and has received much support. Regarding adding production to the initiative, improved drainage will not be exclusively for increased production, but is a conservation practice. Fifty percent reduction in surface runoff, sediment transport, and phosphorus results from the change in the drainage. Additionally, it provides market drivers and empowers the private sector. Funds are not going into increased production solely for that purpose, but it does provide tangible benefits. Mr. Gulliford added that growers see both increased production and environmental protection as possible. They consider what they are able to carry out on their lands to achieve the environmental objectives within the business model for their operation.

Mr. Vester appreciated that Iowa was looking into the future. It has yet to be discussed that cost has a very important affect on the farm operator. For a farmer to do something environmentally beneficial, he must know that it will not hurt his production. Farmers must purchase their inputs at retail prices and sell their outputs at wholesale prices, but they will participate in environmental programs as long as their livelihoods are not jeopardized. Mr. Lemke commented that all of the programs administered by the Iowa Department of Agriculture and Land Stewardship involve cost sharing. When landowners have money to invest, there is greater participation in these programs.

Dr. McFarland expressed her excitement about the Iowa project. Syngenta has had the chance to work on many 10-year and longer watershed projects. Once successes occur, others voluntarily join in the effort. In the voluntary programs, conservation practices occur on farms that may not be in the vulnerable areas. Is Iowa targeting the highly erodible lands within the watersheds for improvements? Mr. Gulliford responded that the highly erodible lands are not the areas that have the extensive drainage structures on them. Iowa examined the intensively drained areas and noted that they were treated. Resources, whether in the form of technical assistance or financial incentives, were no longer focused on those areas.
Dr. McFarland asked if the national mapping would overlay with the watersheds that will be prioritized, and whether the watershed planning communities could focus on which of tile drain acreage has a higher impact on the major streams, for example. Mr. Gulliford agreed that this would be done. Dr. McFarland added that it would be useful to track which land had been involved in the voluntary programs.

Mr. Clark asked about a project that had 33 percent participation. Did that level of participation contribute to the success? Mr. Lemke replied that it did contribute to success, and that more farmers participated when they learned that farmers near them were having success in the program. Mr. Clark commended Iowa's initiative on the farmer recognition activities, and noted that they have a multiplier effect in helping to share the message. Mr. Gulliford added that farmers place a high value on the installed wetlands, and they are committed to protecting them.

Mr. McDonald noted that the Iowa initiative is putting numbers to the benefits of conservation practices. At this meeting, the FRRCC has heard about water bodies impaired by nutrients and tighter AFO restrictions on manure management. The latter is a challenge because manure is a relatively low value product, and is competing with commercial fertilizer. Phosphorus is still being mined, yet waters are nutrient-laden. Mr. Lemke noted that as economics change, new technologies will be spurred.

Regarding a comment by Ms. Mills that more incentives had to be found for farmers in a regulatory environment, Mr. McDaniel responded that the Association of Soil Conservation Districts has a pilot program in Maryland called the Farm Stewardship Conservation Assurance Program. In Maryland, there already is mandatory nutrient management for every agricultural operation in the state, and this program is providing certification for farm operators who are good stewards of the land. The certification puts them at the bottom of the list for inspections for mandatory nutrient management programs, and demonstrates that there are farmers doing a good job of stewardship who do not need a permit.

Discussion of Work Plan and Next Steps for Committee

Ms. Dilley noted that a lot of information had been shared with the FRRCC, and the Committee now needed to organize the themes into a work plan. She distributed themes from the previous day's discussion as a starting point. At the end of this discussion, either a plan for the Committee or some strong elements of a plan should be available to organize work during the next months to produce a report that will be useful to EPA once the recommendations are implemented. The Committee needs to determine the problems that it is trying to address and how it can best find solutions based on the different perspectives of Committee members.

Mr. McDaniel asked how much flexibility EPA has to take the FRRCC's advice. Mr. Elworth responded that it is appropriate for the Committee to mention areas where, to work effectively on water quality issues, flexibility would be useful or essential. There may be statutory reasons that EPA cannot be flexible, but the FRRCC should feel comfortable mentioning all areas where flexibility is desired and a response from the Agency should be requested. EPA hopes to have a report from this group that captures its input on the issues presented. It should include what the FRRCC believes to be the best approaches for EPA to take on water quality issues and agriculture. Ms. Dilley noted that some conversation about the specifics of the charge still is merited. EPA is mandated to take certain actions if nutrient levels get too high, and would like advice on improvements so that backstop actions are not required. Also, advice on how EPA can better partner with USDA and other agencies would be useful.

Regarding the charge to the Committee, Mr. Boggs stated that he was not willing to accept that the FRRCC was in a box relative to making comments on the CWA as it applies to agriculture. The current authorities and their limitations should be revisited and recommendations should be made, as some may help EPA in taking immediate steps to address the issue of water and agriculture. Mr. Elworth responded that many people might want to alter the CWA, but it is not within EPA's power to do so. The manner in which EPA identifies and characterizes a problem, however, is within the Agency's purview.

Mr. Garza asked if there were agreements in place between USDA and EPA to facilitate the partnerships under discussion. Mr. Elworth noted that there were numerous ways to accomplish partnerships with other agencies, and not all of them required formal partnerships. A Memorandum of Understanding (MOU) sometimes may be the least effective way to marshal resources. Ms. Dilley added that partnerships were a large theme of the meeting discussions. One manner in which the FRRCC's work

could be organized is around partnerships, either by examining those that are already in place or those that are needed; another topic could be addressing technological innovation and the sorting of the most effective technologies.

Mr. Botts commented that the FRRCC is being asked to advise an Agency that does not have regulatory authority to enforce reduction of nutrients, but instead defers this responsibility to other entities such as USDA through cost-share partnerships. Ninety percent of the work conducted on nutrients, therefore, will not be in response to EPA's actions, but instead will be based on the programs farmers develop to meet the goal of being economically viable. Part of what the Committee needs to do is focus on case studies of successful partnerships, and importantly, how pollution reduction can be accomplished in a situation in which funding is not available. The politics behind the case studies presented was not discussed and must be addressed. Ms. Dilley mentioned that the FRRCC would have to examine whether the themes under discussion will allow members to reach their goal.

Dr. Burns suggested that the report writing could be done at the workgroup level, and workgroup leaders will have to be determined and take responsibility for the work. The instructions distributed to the group note that the Agency is not requesting consensus-based recommendations from the FRRCC. Issue-based parts of the report may or may not be consensus recommendations; they may contain different sides of issues that need to be considered by the Agency. The FRRCC members must agree on the issues and then possibly form groups to write the sections of the report.

Mr. Young stated that dairy farms face numerous issues and capital requirements. When it became clear that EPA was going to regulate dairy farms, the dairy industry organized and developed data and a system in a short period of time and at low cost. Farmers want to do the right thing. Perhaps penalties should be dropped for a few years to determine whether objectives can be achieved. An MOU between the USDA and EPA may be a way to accomplish this.

Regarding the "carrot and stick" theme, Mr. Brubaker commented that a local government in Pennsylvania built a partnership with landowners so that every farm would have a conservation plan. In a very short period of time the landowners voluntarily chose to cooperate. Ms. Friedman added that this was an excellent example, and could be replicable in a number of places. Two key factors made it work: a funding network, and the looming Chesapeake Bay "stick." Dr. McFarland asked if the success was related to the resources, and Ms. Friedman responded that the funds were used for technical assistance to develop the plans for the farmers. Mr. Elworth noted that the funds were entirely private, and designed to engage county-level resources. The township used its own staff to speak to farmers. Mr. Brubaker never believed that there would be imminent fines if they failed in their efforts. Ms. Friedman noted that this project was conducted 3 years ago, so the TMDL that might occur in 2010 was not perceived as a threat to farmers at that time.

Dr. Burns proposed five areas of focus for the Committee:

1. Process (including improving current access and trying new approaches, flexibility, and clarity);
2. Partnerships (improving partnerships and building trust);
3. Technical details (numeric criteria, the data certainty issue);
4. Resources (ideas on how to continue to deliver in times of diminishing resources); and
5. Impact on production agriculture (unintended consequences, cost-benefit analysis, accountability and verification).

If the FRRCC does not write a report that considers whether and how these regulations could change American agriculture, the Committee would be remiss. Mr. Elworth asked for a clarification regarding resources. Dr. Burns responded that although this was a report to EPA, many of the resources needed to conduct the work discussed will not be coming from EPA.

Dr. Berger asked if information could be assembled in a matrix based on the presentations on the three geographic areas to include: what was at stake, what were the "carrots and sticks," who were the important players, and what were the timelines. Common themes may emerge that could help the FRRCC assimilate the information.

Mr. Boggs suggested the following themes or barriers to changing behavior: farmers need knowledge to change their behavior, economic constraints affect it as well, and values associated with clean water are a consideration that was not discussed. Resilience is another aspect that was not the subject of much discussion. What are the implications on farmers' productivity and the potential impact on feeding the growing population? A sensitivity analysis of the land base should be available. Reasonable methods of treatment are science-based, and EPA must consider what is reasonable to expect of the farmer. The land grant colleges and NRCS can establish this; as long as farmers are doing what is reasonable, they would have a safe harbor.

Mr. Treacy suggested the three topics of money, science and technologies, and approach. USDA discussed numerous funding mechanisms and partnerships, and there was much discussion about how to evaluate technologies to ensure that the best are used. Partnerships are key, and Mr. Treacy wants the FRRCC to be realistic about the partnerships in which EPA is willing to engage. Mr. Elworth responded that partnerships can work. EPA does not have regulatory authority for nonpoint sources in agriculture. The mechanism under TMDL to get some pressure on nonpoint sources is to regulate the point sources. The primary way to get changes in nonpoint source pollution is with partnerships. Mr. Treacy added that the Perdue partnership is a success story. Mr. Elworth noted that to have recommendations from the FRRCC that can be implemented, the Committee should consider the process EPA uses; the Agency identifies solutions, considers partnerships, and engages the regulatory process, and further uses partnerships in the implementation processes. Opportunities exist for partnerships in the documentation and communication of the results of the work conducted.

Dr. McFarland asked whether Dr. Burns, when referring to process, meant the process of watershed management or the process that EPA would be following. Dr. Burns responded that he meant the process of EPA working with agriculture, but that he liked Mr. Treacy's categories. "Approach" could cover partnerships. "Money" could include resources and economic impact on the agricultural sector. Dr. McFarland added that impact also could mean water improvement and the impact on the growers, both of which are measures of success. In terms of resources, she asked how EPA currently was prioritizing its work. Part of this may relate to strategic prioritization by the USDA and how EPA fits into that. Mr. Elworth responded that comments from the FRRCC on how and why EPA prioritizes its resources would be welcome.

Ms. Noble noted that the "rural communities" portion of the Committee's name had not been discussed. The mission for the Agency is protecting the environment and public health. The FRRCC composition seems to be more Midwestern and Eastern; in the West, the issue of the interplay of water quality in agriculture is a significant issue. Mr. Elworth responded that the report would be distributed to the public as well as to EPA, so it would be useful for the Committee to consider place-based issues that need to be discussed.

Dr. Sanders supported the themes suggested by Mr. Treacy, as long as it would be understood that linkages and overlaps will exist between them and that workgroups will need to communicate. It seems that the advisory part of the FRRCC's role is to be reactionary to what already has been planned and decided, but perhaps the role could be more anticipatory of emerging issues. Mr. Elworth replied that the discussion should not be constrained; the presentations were not meant to be the only parameters that could be discussed. Ms. Dilley asked how to frame the discussion so that it would be more anticipatory. Dr. Sanders suggested that the workgroups be given the opportunity to plan future meetings and choose the experts who would present.

Mr. Young suggested three themes: a new approach, adaptation of new technologies, and the acceptance by farmers.

Dr. Popp noted that the group should consider the economic impacts on the producers and on the communities. These discussions must take place in each of the workgroups. Science-based technologies each have certain costs and benefits. Mr. Elworth added that the workgroups could be fluid, and there can be flexibility in how the Committee chooses to operate. Dr. Popp added that under each theme there should be an assessment of the pros and cons and opportunities and barriers.

Ms. Dilley suggested that the process include: identifying and characterizing the problem; identifying/generating options and solutions; engaging the regulatory process; implementing solutions; and documenting and communicating results. If the process is combined with the three themes, a matrix approach to these issues begins to develop.

Mr. McDonald hoped that whatever approach was taken to address water quality could be applied to other issues affecting agriculture. Greenhouse gases and other issues also are important to agriculture, and perhaps should be part of the discussion. Ms. Dilley agreed that other issues are important. Dr. Balling added that water could be considered as a model; water issues will be different in other case studies. Discussions could be expanded, but water should be the focus.

Mr. Botts noted that there was a framework for a document that would drive the thought process to guide where we go from here. If the matrix is constructed and sent to the Committee for comment, what is the timeline for developing a comprehensive outline of the Committee's thoughts so that it can be ready for the next meeting? Ms. Dilley responded that the next steps, such as future meetings, formation of workgroups, and timelines, should be considered within the next several weeks. Mr. Elworth stated that EPA would like more interaction with the Committee in putting together the agenda and presenters for the next meeting. When the matrix is constructed, the question that Mr. McDonald raised about what this means for issues other than water should be flagged. Ms. Dilley suggested that a conference call might be needed if the comments on the matrix are very disparate. If the comments are similar, they should be integrated and a work plan developed.

Ms. Friedman thought the Committee should divide into groups so that on the next call members will be ready to work on their assigned area. Ms. Dilley replied that dividing into groups requires consideration of both the members' interests and the need to get a cross-section of perspectives in each group. Ms. Dilley and Mr. Elworth would want to identify the next steps for the workgroups so that by the next call, the groups would have made similar progress. Ms. Friedman added that it would be helpful to know the suggested length as well as the scope desired for the report.

Mr. Young suggested a show of hands to determine which of the groups the members would be interested in joining. Mr. Botts commented that when the matrix is sent out, there will be some specific questions that need to be defined on each of the issue areas; areas may overlap, but it is important that the content is covered. A second document incorporating comments should be sent to members.

Mr. McDaniel suggested a Webinar as an alternative to a conference call.

Mr. Treacy recommended including an attorney's input into the report to ensure that the FRRCC did not offer advice that would be useless because of the statutes under which EPA operates. Mr. Elworth will ask that attorneys from EPA come to a future meeting and interact with the Committee, but he would not send them a document to review. In response to Ms. Friedman's question about the length of the report, Mr. Elworth thought it would be rather short.

In response to a question from Dr. Sanders, Mr. Elworth stated that Ms. Kaiser should receive any comments from Committee members. Mr. Elworth added that the FRRCC should meet three times in the next 15 months; the next meeting would be held in February 2011. It is helpful to meet in Washington,

DC, because EPA staff members are more readily available and the cost to EPA is less. Ms. Kaiser will send members a list of potential future meeting dates for review.

The FRRCC members decided to review the matrix before choosing workgroups.

Public Comment
Alicia Kaiser, DFO for the Committee

Ms. Kaiser called for public comments. None were offered at the meeting, but Ms. Kaiser distributed comments received via e-mail to the Committee. If members wish to respond to the comments, they should contact Ms. Kaiser.

Closing Remarks

Mr. Elworth noted that serving on this Committee presents an excellent opportunity for members to talk to the Agency about reactions to existing programs and water issues as well as many other environmental issues. He thanked the members for their input.

Dr. Balling thanked the FRRCC members for a robust and professional discussion and thanked the moderators for assembling the panels.

Ms. Kaiser noted that all of the presentations and background materials would be posted on the FRRCC Web Site. The option is available to create a semi-private Web site for any workgroup documents. Members who have materials to distribute to the Committee should send them to Ms. Kaiser.

Dr. Balling lastly thanked Ms. Kaiser and the EPA staff for their work in planning the meeting.

The meeting was adjourned at 12:28 p.m.

Action Items

- ✧ Mr. Elworth will provide the Committee information on a rule developed on the impact of sediment and turbidity related to a state housing development (mentioned by Dr. McFarland).

- ✧ Mr. Elworth and Ms. Dilley will compile a matrix of ideas for the Committee work plan and distribute it to FRRCC members for review along with questions on what else the Committee members will need.

- ✧ Ms. Kaiser will send to the members a list of potential future meeting dates for review.

Farm, Ranch, and Rural Communities Federal Advisory Committee (FRRCC)
September 30 – October 1, 2010, Meeting Participants

Committee Chair:

Steven S. Balling, Ph.D.
Del Monte Foods

Members:

G. Douglas Young (Deputy Chair)
Spruce Haven Farm and Research Center

Peggy Beltrone
Exergy Integrated Systems

Lori A. Berger, Ph.D.
California Specialty Crops Council

George J. Boggs
Whatcom Conservation District

A. Richard Bonanno
University of Massachusetts

Daniel A. Botts
Florida Fruit and Vegetable Association

Michael W. Brubaker
State Senate of Pennsylvania

Robert T. Burns, Ph.D.
University of Tennessee

Robert R. Carlson
North Dakota Farmers Union

Lawrence E. Clark
Farm Pilot Project Coordination

James W. Ford
Square "O" Consulting

Suzy Friedman
Environmental Defense Fund

Omar J. Garza
Texas Mexico Border Coalition

Archilus L. Hart
North Carolina Department of Agriculture

Lee McDaniel
Harford Soil Conservation District

Tom McDonald
JBS Five Rivers Cattle Feeding

Janis McFarland, Ph.D.
Syngenta Crop Protection

Steven R. McNinch
Western Plains Energy

Martha L. Noble
National Sustainable Agriculture Coalition

Bill Northey
Iowa Department of Agriculture and Land Stewardship

David D. Petty
Iowa River Ranch

Jennie S. Hughes Popp, Ph.D.
University of Arkansas

Larry D. Sanders, Ph.D.
Oklahoma State University

Alice Ann Sorenson, Ph.D.
American Farmland Trust

Dennis H. Treacy
Smithfield Foods

Ray E. Vester
E&M Farms Partnership

Designated Federal Officer:

Alicia Kaiser
Special Assistant for Agricultural Policy
U.S. Environmental Protection Agency

EPA Participants:

Karma Anderson
U.S. Environmental Protection Agency
Region 10

Rick Batiuk
U.S. Environmental Protection Agency

Joanne Benante
U.S. Environmental Protection Agency
Region 4

Jack Bowles
U.S. Environmental Protection Agency

Ross Brennan
U.S. Environmental Protection Agency

Ann Carroll
U.S. Environmental Protection Agency

Frances Eagle
U.S. Environmental Protection Agency

Lawrence Elworth
U.S. Environmental Protection Agency

Katie Flahive
U.S. Environmental Protection Agency

Chuck Fox
U.S. Environmental Protection Agency

Damon Frizzell
U.S. Environmental Protection Agency

Lisa P. Jackson
Administrator
U.S. Environmental Protect Agency

Alisha Johnson
U.S. Environmental Protection Agency

Cynthia Jones-Jackson
U.S. Environmental Protection Agency

Mark Joyce
U.S. Environmental Protection Agency

Ephraim King
U.S. Environmental Protection Agency

Van Kozak
U.S. Environmental Protection Agency
Region 6

John Larmett
U.S. Environmental Protection Agency

Sylvia Malm
U.S. Environmental Protection Agency

Andy Manale
U.S. Environmental Protection Agency

David McGuigan
U.S. Environmental Protection Agency
Region 3

Jennifer Meints
U.S. Environmental Protection Agency
Region 8

Roberta Parry
U.S. Environmental Protection Agency

Bob Perciasepe
U.S. Environmental Protection Agency

Ann Pontius
U.S. Environmental Protection Agency

Jeffrey Potent
U.S. Environmental Protection Agency

Daniel Schulson
U.S. Environmental Protection Agency

Pete Silva
U.S. Environmental Protection Agency

Denise Tennessee
U.S. Environmental Protection Agency
Region 4

Rob Wolcott
U.S. Environmental Protection Agency

Allison Wiedeman
U.S. Environmental Protection Agency

Hank Zygmunt
U.S. Environmental Protection Agency

Other Participants:

Drew Bartlett
Florida Department of Environmental Protection

Nathan Bowen
National Association of State Departments of Agriculture

Lloyd Day
Syngenta

Nick DeKryger
National Pork Producers Council

Bob Ehart
National Association of State Departments of Agriculture

Jim Gulliford
Soil and Water Conservation Society

Michael Formica
National Pork Producers Council

Irene Hantman
University of Maryland

Jon Harsch
Agri-Pulse

Tom Hebert
United Egg Producers

John Heltman
Inside EPA

Steve Hensley
USA Rice Federation

Sheryl Kunickis
U.S. Department of Agriculture

Dean Lemke
Iowa Department of Agriculture and Land Stewardship

Sarah Lynch
World Wildlife Fund

Jean Lurie
Pennsylvania Department of Agriculture

Ashley Lyon
National Cattlemen's Beef Association

Keith Menchey
National Cotton Council

Clark Mica
The Fertilizer Institute

Ann C. Mills
U.S. Deparment of Agriculture

Sarah Monke
The Fertilizer Institute

Michael Preston
NRWA

Russell C. Redding
Pennsylvania Department of Agriculture

Bill Satterfield
Delmarva Poultry Industry, Inc.

Burleson Smith
Policy Navigation Group

Tamara Thies
National Cattlemen's Beef Association

Kate Winston
Inside EPA

Jason Wood
AVMA

Support Contractors:

Abby Dilley
Resolve

Mary Spock
The Scientific Consulting Group, Inc.