

TRANSCRIPT

USDA's National Water Quality Initiative

Watershed Academy Webcast – July 10, 2012

Speakers

Lynda Hall – Instructor – Chief, Nonpoint Source Control Branch, US EPA

Tom Christensen – Instructor – Regional Conservationist, Central Region, USDA Natural Resources Conservation Service

Jimmy Bramblett – Instructor – Chief of Staff for Regional Conservationists, USDA Natural Resources Conservation Service

Steve Hopkins – Instructor – Nonpoint Source Coordinator, Iowa Department of Natural Resources

Jon Hubbert – Instructor – Acting State Conservationist, USDA's Natural Resources Conservation Service in Iowa

Anne Weinberg – Moderator – Office of Wetlands, Oceans and Watersheds, US EPA

Don Waye – Moderator – Nonpoint Source Control Branch, US EPA

Anne Weinberg

Good afternoon and welcome to today's webcast titled USDA's National Water Quality Initiative. This webcast is sponsored by EPA's Watershed Academy and EPA's Office of Wetlands, Oceans, and Watersheds also known as OWOW. I am Anne Weinberg with EPA's Watershed Academy and I will be moderating that webcast today along with Don Waye of OWOW's Nonpoint Source Control branch. Thank you all for joining us today.

We'll start by going over a few housekeeping items. The materials of this webcast have been reviewed by EPA staff for technical accuracy. However, the views of the speakers or the speakers organizations or their own and do not necessarily reflect those of the EPA. Mention of any commercial enterprise, product, or publication does not mean that EPA endorses them.

Let me move the slide. Okay. Now I want to briefly summarize some of the features of today's webcast. We encourage you to submit questions to our speakers during this webcast. To ask your question simply type in the questions box on your console control panel and click "send". If your control panel is not showing, simply click on the small orange box with a white arrow to expand it. If you have any technical issues you can let us know by also entering them in the questions box to the right of your screen and then clicking on the "send" button. We will do our best to respond to your issue by posting and answer in the questions box. This webcast will be recorded and archived so you can access it in a few weeks after today's live presentation. The archived webcast will be posted on EPA's Watershed Academy webcast page at epa.gov/watershedwebcasts.

That is with a plural. And now we have completed our discussion of housekeeping items, let's kick off today's webcast.

In this webcast you are going to hear about USDA's National Water Quality Initiative, referred to as NWQI, which is focusing on 157 priority watersheds in the United States in 2012. These 157 watersheds were identified with assistance from state agencies, key partners and USDA's Natural Resources Conservation Service, also referred to as NRCS. They are NRCS state technical committees. NRCS is making at least \$33 million in financial assistance available to farmers, ranchers, and forest landowners this year in these priority watersheds to implement conservation practices to improve water quality and aquatic habitat in impaired lakes, streams, and other water bodies. Using funds from the Environmental Quality Incentive Program, also referred to as EQIP, NRCS will provide financial and technical assistance to produce those for implementing conservation practices such as nutrient management, residue management, conservation cropping systems, cover crops, filter strips, and water and sediment control basins. This webcast will highlight how this initiative is working and how you USDA's NRCS is working with state water quality agencies and others to implement this initiative in priority watersheds.

Without further delay, I want to introduce our speakers. Our first speaker is Lynda Hall. She is Chief of the Nonpoint Source Control Branch in US EPA's Office of Wetlands, Oceans, and Watersheds. Lynda has been with US EPA working to improve environmental management and water quality for more than 20 years. She has served in a number of management positions at EPA and this past winter moved to lead EPA's Nonpoint Source Control Branch which has responsibility for managing the Section 319 Nonpoint Source Program.

The second speaker is Tom Christensen. He is the Regional Conservationist of the Central Region at USDA's Natural Resources Conservation Service. Tom has worked with NRCS for over 32 years and served in the number of leadership positions at NRCS. In his current position as Regional Conservationist he is responsible for providing overall direction on NRCS personnel, programs, and activities from the northern Plains and upper Midwest to the Gulf of Mexico. Tom acts as a Representative of the Chief in regional partnerships and initiatives such as the National Water Quality Initiative. He has received many awards during his career including the Presidential Rank Award for meritorious service for senior executives in 2009.

Our third speaker is Jimmy Bramblett and he is Chief of Staff for the Regional Conservationist at USDA's Natural Resources Conservation Service. Jimmy began his career with NRCS in 1990 in Georgia. He has served in a number of positions at NRCS. In addition to his career with NRCS, Jimmy has served for 12 years as an adjunct faculty research scientist with the University of Georgia in the College of Agricultural and

Environmental Sciences conducting economic research on water quality and the water quality modeling.

Our fourth speaker is Steve Hopkins. He is the Nonpoint Source Coordinator at Iowa Department of Natural Resources. Steve has worked in the Section 319 Nonpoint Source Program since 2007 and he has worked closely with NRCS in Iowa on the National Water Quality Initiative. He has worked for Iowa's DNR since 2000 in the drinking water and on-site wastewater programs and previously worked as a county sanitarian, watershed project coordinator, and farmer.

Our final speaker, Jon Hubbert, is the Acting State Conservationist at USDA's Natural Resources Conservation Service in Iowa. He has been involved with the management of water quality initiatives as well as implementation of water quality practices in both NRCS and EPA funded projects. His experience includes 1 1/2 years in Iowa and 25 years in Illinois.

As you see from the slides, we are going to hear from Lynda first to overview water quality issues and the Clean Water Act 319 Program. We are going to hear from Tom and Jimmy about the National Water Quality Initiative in Fiscal Year '12 and in the future. And we are going to hear about Iowa's experience in implementing the National Water Quality Initiative in Fiscal Year '12. And one final note before we get started with their first speaker, we will try to answer as many questions as possible throughout the webcast. However, due to the high volume of participants, not all questions will be answered. In the event that your question is not answered, please feel free to contact the speaker after the webcast. You can access the speakers contact information on one of our final slides for today's webcast.

So with that, we will begin our webcast. Our first speaker is Lynda Hall. She is Chief of the Nonpoint Source Control Branch at US EPA. Lynda, the floor is yours. Take it away.

Lynda Hall

Okay, thank you, Anne, and hello, everyone. Well as Anne said, I will just provide a little bit of context here for a few minutes in terms of some of the challenges that we face nationally with nonpoint source pollution including contributions from agriculture and talk about how the EPA Clean Water Act Section 319 Program is structured to help address some of those challenges and also strike the theme of why it is so important for us to collaborate with our agricultural partners in addressing some of these challenges and how we view the USDA National Water Quality Initiative as an excellent opportunity for getting better quality outcomes by working together.

So to start I'm going to provide just a little bit of context on the national scope of nutrient solution, nitrogen, and phosphorus pollution. This is not the only kind of nonpoint source pollution, of course. The 319 program and state nonpoint source programs deal with

sediment, pathogens, metals, and all kinds of other types of nonpoint source pollution but few pollutants are as pervasive and challenging to manage as excess nitrogen and phosphorus and so it's a very important area of emphasis for EPA and states right now. And this slide helps to illustrate, just in a partial way, the magnitude of the problems that we face. States have listed more than 15,000 nutrient related impaired waters. And you can see the figures here in terms of what that means in terms of miles, acres. I will note that there is good reason to believe this is an under estimate probably by a significant amount without getting into details of why that is. But even with these numbers, obviously very significant number of nutrient polluted waters. Associated with that there are more than 8,000 nutrient related TMDLs or total maximum daily loads that have been completed to date. Those TMDLs have not been implemented to correct the problems but those analysis have been done to identify what pollutant load reductions would be needed to meet the water quality goals in those areas.

So additional sources of information that we have at EPA provide additional context on the scale of the nutrient problem. We have done a number of probabilistic national water quality surveys that add to and amend the data that we get from states on the quality of their water space on their own assessments and these next two bullets are from these national surveys which report that approximately half of assessed streams have medium to high levels of nitrogen and phosphorus and more than 40% of lakes meet those levels.

And then a couple of final figures, 78% of Continental US coastal waters exhibit eutrophication. For some of you that may not be familiar with that term it is basically a condition in which oxygen levels in the water have become quite low due to excess growth of algae and the algae is feeding on excess levels of nutrients in the water. If oxygen levels get low enough, below the 2 milligrams per liter, it goes beyond eutrophication and it is called an hypoxic zone. Very low oxygen levels and there are 168 hypoxic zones that have been identified in US waters. So clearly we have a significant national problem with nutrient levels. And this slide takes a little deeper look at some of the data we have and also identifies the contributions from agricultural nonpoint sources to the nutrients -- excuse me, to the pollution picture that is presented here. So this data comes from state reports to the EPA. These reports happen biannually under 305(b) -- in section 305(b) and 303(d) of the Clean Water Act. States assess their waters and report to EPA on those that meet the water quality standards that the state has identified as beneficial uses of swimming, fishing, and so on, drinking water and then identify those waters that don't meet those standards. And because resources are always limited for monitoring, states are not able to assess all of their waters and so this pie chart illustrates that of all, in this case, of the rivers and streams miles states were able to assess about 27% of those. And then looking at the second pie chart, of the 27% assessed, just over half of those were impaired and about 46% in good shape. And so states further identify as part of this report the known -- where it is known the sources of impairment for the waters that end up on this list and agricultural sources do feature prominently in all of

those lists. So they're the number one source for rivers and streams, number three source for lakes, ponds, and reservoirs, and number nine source for estuaries.

And this table is a different way of showing the data, but it also gives you some context here on some of the other sources of impairment that the states have identified. In this case in 2010 reporting cycle. So agricultural sources dominate. They are certainly not alone. We have challenges of atmospheric deposition and several other causes here. But clearly we know in nutrients in particular we have a big, big challenge and we know that agricultural sources do dominate there. So what tools do we have to address that challenge although agriculture is identified here as one word. We know agriculture is not a monolith that it integrates the activities over millions of acres and thousands and thousands of different land owners and so it is a distributed issue and under the Clean Water Act -- under the federal regulations we take primarily a voluntary approach to addressing this issue with the exception of very relatively small number of facilities known as concentrated animal feeding animal operations. So in the federal Clean Water Act at 319 program is the primary program for addressing all nonpoint sources of pollution and I'm going to spend now a couple of minutes telling you a little bit of background about 319 and how it works and then that will help us understand how we can integrate better with NRCS as a conservation program.

So 319 provides grants to states and tribes for technical and financial assistance and other activities described here. We have done many, many projects focused on agriculture under 319 especially on nutrients and pathogens and many of them are coordinated already with the USDA conservation programs. A number of states have very good working relationships between the water quality agencies and state conservationist office. So those relationships are in place in some places and we hope to expand them to the National Water Quality Initiative.

One of the major measures we use to gauge our progress in the 319 program is we refer you to success stories. I mentioned before that states report to EPA on waters that don't meet water quality standards and once they report those waters they are on a list which is called the 303(d) list and one of our success measures is projects that have been successful enough to remove waters from that list to meet water -- by meeting water quality standards. I will talk a little bit more about how we gauge those success is in a minute.

The 319 funding has been used to provide staffing support at state and local levels, planning, technical assistance, it can fund on the ground BMPs, conservation practices, management and, of course, partnership building which is extremely essential to success of nonpoint source projects on the ground.

So here are some of the data on the funding levels for 319. You can see these numbers are not going in the right direction. The nonpoint source pollution problems continue to

grow through increased population and land use changes and our funding has not only not grown but it's going down and consistent with many other federal programs so we definitely have a challenge there. And that is why leveraging with our partners -- one reason why leveraging with our partners is so important. These funds go, for the most part, directly to states through an allocation formula that is in the EPA 319 guidelines. States match this amount with an additional 40% of funds to the 60% federal so that does significantly grow the pot of money that is available for nonpoint source projects. And historically, we have identified 319 funds as either base or incremental funds. Incremental funds are used to develop, implement, monitor watershed projects to address nonpoint source pollution and the base funds can be used for a wide range of activities listed here and I have bolded partnership building and leveraging because that is so important to the success of these projects on the ground. Both because of the resources but, also because of the skills and enthusiasm and commitment that partners can bring.

So that is a great segue to this slide which notes the common goals that 319 and the USDA conservation program have. Our programs are complementary and can work quite well together. We have evidence of that and they are voluntary programs that are fueled by partnership at the local levels and we do although we have distinct goals we have quite a bit of overlap in our goals as well. I think we can build from there. As I noted there are a number of states that have active and ongoing collaborations between the state water quality agencies and the state conservation office and to the extent that consideration -- funding consideration is given to the state's nonpoint source priority pollutants or watersheds or other criteria when state conservation is making a decision, those are taken into consideration.

And the other states relationships may not be as well established and, as I said, I think the National Water Quality Initiative both this year and the one we will be shaping jointly with the USDA in 2013 is a fantastic opportunity to deliver more results where that coordination is already going on and then to help get that coordination going in more states.

And as a testament to how powerful it can be when our programs do work together, I mentioned our nonpoint source success stories and there are 370 of them so far and nearly 30% of those involved collaboration with USDA programs.

Sorry, I just rushed through that slide. This is the link to the nonpoint source success stories if anyone would like to go take a look at them. They are organized by state. They are one page each; they are pretty interesting to skim through if you're interested in taking a look at couple of those especially from your own area.

I wanted to spend just a minute talking about the common attributes we have seen among the 370 nonpoint source success stories. Because again, I think they are informative in terms of how these efforts can work very well with the NRCS conservation program.

So what we have seen through these successes is that a specific nonpoint source problem areas and practices were identified and then projects implemented to address those areas. So through either watershed based plan or a TMDL there was some sense of what would be the critical areas in the watershed, the places where conservation practices or BMPs would have the greatest impact or a more significant impact for water quality benefits. Various watersheds are not created equal and a very important function of planning and doing some analysis is we are much better informed about where practices will have the greatest effect. Nearly all of the success stories were funded by 319 and all of them involve multiple project partners that were providing resources, expertise, elbow grease, reaching out to land owners, and lots of other ways to make these projects successful. Local buy-in was a necessary ingredient as well and often the project partners helped to get that. And then these last two points are important which is these efforts take time. The impairments don't happen overnight and the repairs don't happen overnight either and so you really need partners that will hang in there with you for a few years and get the job done. And then, of course, you need monitoring data to document the improvement.

So segue to the FY12 National Water Quality Initiative you are going to hear a lot from Tom and Jimmy about this in a minute. I will just say some of these features we found that were particularly notable and very exciting which is that the NRCS National Bulletin, which you will hear more about. That is basically the headquarters giving instruction to the state conservation efforts that these investments were to focus on water quality results in high-priority, impaired waters, focuses on nutrient and sediment impairments, and the initiative would select 1-3 watersheds per state and to make that selection based on taking into consideration input from the state water quality agency. And this year 5% of EQIP funds were used and as Anne said, that was \$33 million.

So looking ahead to FY13, we are very excited. We are extremely pleased that USDA moved out ahead this year with the National Water Quality Initiative and FY13 is a joint initiative with EPA and so we will be very pleased to work with USDA to launch that initiative in just a short couple of months and the basic outline is that USDA will continue the investment of equal funds in targeted watersheds and again, you'll hear a lot more about that. And then EPA and states on the 319 or water quality agency side will provide monitoring support to gauge the water quality results as we can see the progress we are making as time goes on. So with that, my remarks are over and we have time for a couple of questions.

Don Waye

Great, thanks for that, Lynda. Really a terrific overview and now we will take some questions for a few minutes. And the first question is: I am wondering what are some of the primary ways that 319 funds might be used to complement NRCS's National Water Quality Initiative.

Lynda Hall

Sure. There are a number of potential ways and I guess I will say by way of context, state nonpoint source programs vary widely. And so one of the great strengths of 319 funds is that they can be used by states in a variety of different ways so I will give a couple of examples but know this is not exhaustive. So one way 319 funds could be used is the development of that watershed based plan I mentioned to identify areas within a watershed, what the pollutant loads are in that area, what practices might most effectively address those loads to get to water quality goals so that is one important thing that 319 funding can provide. 319 also can be used to fund local watershed coordinators. Often these are regional or local water conservation district staff or local NGO staff. And they work within the watershed to coordinate all of the activities that need to happen for projects to go forward and the goals of the watershed based plan to be realized. So they could help, for example, doing outreach to land owners if that that was useful to gauge interest in putting conservation practices on the land, convene meetings with stakeholders to make plans to move forward and that kind of thing. And then as I mentioned, as part of the implementation of 319 projects, there is a monitoring component to gauge the results of that and so that is another potential use of 319 funds, of course, for the National Water Quality Initiative.

Don Wayne

Okay, so that's good. So the monitoring component is a national effort. Do the states have any way to shape that individual -- project applicants have any way to shape the monitoring component?

Lynda Hall

The design of the monitoring component itself I think is a fairly complex topic and probably too complex to get into here. But we are having conversations -- we will be having conversations with the states and with USDA about what the monitoring component looks like for this effort. We want to make sure it is an efficient use of monitoring resources and that we are doing the monitoring where we would expect to see water quality results. So there are a number of considerations that go into the design and execution of the monitoring components that we will be having a lot of dialogue about going forward over these next few months.

Don Wayne

Fair enough. Now one of the participants asked the question: can National Water Quality Initiative funds be used as match for 319 projects? So matching federal to federal?

Lynda Hall

No. No. Federal funds cannot be used as a match.

Don Waye

Okay, so the match has to come from nonfederal sources.

Lynda Hall

That's correct.

Don Waye

Okay, terrific. We've cleared that up. And I know you had listed that some of the causes of nutrient impairments are just unknown. Do you have sort of an idea of what some of the possible causes behind the unknown categorization might stem from?

Lynda Hall

I would hesitate to speculate on that. That information is rolled up to a national level from reports by 50 different states and there could be a variety of reasons why a state might not feel confident in listing a specific source for a particular impairment on a particular lake or stream, etc. So I don't think I would want to hazard a guess on that.

Done Waye

Okay. Very good. And I understand that the 319 program is undergoing some changes and that EPA will be issuing updated guidelines for future 319 grants under the Clean Water Act. I'm just wondering how ag projects might be affected in ways that they weren't in the past?

Lynda Hall

I don't anticipate any significant changes to the type or the substance or the number of agriculture related projects to be undertaken under the new revised 319 guidelines verses under the current guidelines. Many of the 319 program reforms focus on 319 program management and accountability and our ability to deliver and describe results. They don't fundamentally change the way projects can be designed and executed on the ground. So I think states will have a lot of flexibility going forward to design these projects in a way that makes sense for them.

Don Waye

Okay, terrific. So there still is that flexibility that we are anticipating. And while we did get a few other questions that have come in it feels to me like those questions are probably more appropriate for NRCS to respond to. So with that I am ready to move on with this segment.

Anne Weinberg

Okay, thank you, Don and Lynda. I'd like to thank you for those great answers. And our next speaker is Tom Christensen of USDA's Natural Resources Conservation Service. Take it away, Tom.

Tom Christensen

Thank you, Anne. I appreciate this opportunity and really appreciate EPA's partnership on this initiative in Fiscal Year 2012. I think as many of you might know we did work closely with EPA at the national level and then through our state conservationists worked with the state water quality agencies in the process to select the local watersheds. At EPA, I would really like to thank Lynda Hall, Tom Wall, and Katie Flahive. Those are the individuals we worked closely with during the development phase and then here at NRCS, Jimmy Bramblett who was the senior adviser to our internal NRCS team which consisted of the state level and national level specialists. So thank you very much to all of those folks that helped to get this off the ground. I'm going to go to the next slide here and I want to present at high cut level, our partnership challenges I view it.

I think you all recognize that we will continue to have population growth of a significant degree. And what you may not realize though is the loss of agricultural land, particularly crop land that has occurred in the last few decades and here you see the statistics on that. 63 million acres of crop land were lost in a 25 year period from 1982 in 2007. So we have this challenge of increasing demand for food which is not going to go away which means more intense land use because we have to produce more out of the acres of that remain. And so there is our biggest challenge that we have to produce safe food, we have to produce a lot of food, and at the same time, we desire these conservation values of healthy soil, clean water, clean air, etc. We think we have some of the answers to this challenge but, certainly there is some innovation yet to be developed and technical requirements and standards, but the challenge lies in implementation.

Let me show you the next slide. What this is from is our national resources inventory and it's taking a look at urbanization in this country in the year 1982. So the darker colors represent the density of urbanization. The orange, the dark orange is more dense. Even the greens represent some level of urbanization. If we go to the next slide, which is 2007, you see the dramatic loss of agricultural land that occurred in that 25 year period, what I referenced earlier. Just to throw another statistic at you, 1/3 of all the land that was developed in the United States was developed in that 25 year period between 1982 and 2007. So again, what this tells us if we are going to produce more food and we are going to produce high-quality food, the land that is going to be producing is going to be doing it in a more intense way and therefore, we have to be even more cognizant of the conservation measures that we want to apply in those lands.

Another view at the priority resource concerns was taken to something called our Resource Conservation Appraisal. This is something we do it the direction of Congress about every five years. The last one was completed a couple of years ago and this particular slide represents the information through surveys with the state technical committees who advise our state conservationists and then also the local working groups which are components of the state technical committee. The thing I wanted to point out here is if you look at the far left you see water, sediment, and nutrients and in the middle of

the slide you see soil erosion. Generally, when we are thinking of water quality and especially in the context of this initiative those are the issues we are talking about. And you can see those are still significant issues recognized at both the state technical committee level and certainly the local working group level.

One of the things that we've recognized in USDA and especially in NRCS is the need to better assess the effect of the conservation work that has taken place and then therefore, identify the remaining conservation needs that are out there. And one of those projects is called the Conservation Effects Assessment Project, CEAP. This has been underway since about 2003. Some of the key findings so far on our regional cropland assessments are displayed on this slide. One of the points I will make is that we view the glass as half full, not half empty. In other words, voluntary conservation is achieving results and if we did not have that conservation in place we would see a lot greater environmental impacts. But we also know there's an opportunity to further reduce sediment and nutrient losses through a systems approach supported by conservation planning. We also know that targeting is a key piece of the answer to this equation and targeting the right system of practices on the right landscape is the ultimate answer to getting the kinds of results that we all desire. Again, I mentioned the CEAP project was initiated in 2003. Not only does it have the cropland assessment piece but it has many other components that are basically painting a picture of the effects of the conservation that is on the ground in this country and then the further needs are out there.

Back to the cropland assessment piece. What you'll see on this slide is a map representing the United States and the major watersheds. The watersheds shown in yellow are the ones where we have completed the CEAP cropland assessment reports and those have been released. The Missouri River Basin which is outlined in red is the next one which is ready for release very shortly. But these are monumental pieces for us because they do talk to the effects of conservation practices on cropland.

Here is a look at the four major watersheds where we have completed the CEAP cropland assessment, the upper Mississippi, the Chesapeake Bay, Great Lakes, and the Ohio/Tennessee. There are a couple things I want to point out on this slide. The red represents the percentage of cropland that still has a need for high conservation treatment levels. The blue represents the percentage of the cropland acres that have moderate treatment level needs. So the good part of the answer here is the positive part is that the high treatment acres generally tend to be 20% or less of those watersheds. The part that is still significant challenge is we still see a lot of acres that even need moderate treatment. So in total, we know there's a lot of acres out there that still need some level of conservation treatment and some of those acres it's a high level of treatment that is needed.

The next two slides. This first one is on phosphorus and the next one is on nitrogen. Try to get it at the issue in a very elementary fashion regarding what we call the four R.'s in

applying nutrients. The right rate, the right timing, the right method, and the right placement. This slide only talks to three of those. The right rate, the right timing, and the right method. And I want to refer you to the fourth line down where it says appropriate rate and timing and method. So that is the combination of those three very important things and what this slide is telling us that in these major watersheds somewhere between 20 and 30% of the producers are applying those things in what we would consider the best fashion. So what that shows us is we still have significant challenge in getting the four R's applied properly on cropland. And that is still one of the frontiers, one of the challenges for us as a conservation community. If I go to the next slide you'll see that it is even a bit of a more challenge when it comes to nitrogen. Again, going down to the fourth line across in looking at combination rate timing and method, those are the percentages of producers that are applying those combination of practices the way we would envision them.

So one of the tools we have used in USDA and NRCS to try to be more effective with the conservation dollars that we are afforded is the establishment of landscape conservation initiatives. And these started about three years ago and in most cases under the direction of our Chief, Dave White. There are a number of reasons we pursued this. Obviously, we know that targeting can be more effective. It can also stimulate local efforts and partnerships on a watershed scale, and it certainly is easier to begin to evaluate performance and environmental outcomes when you are dealing on a watershed basis versus random acts of conservation.

This map shows a depiction of our active landscape conservation initiatives across the country. Many of these are waterbased, many of them are water quality based such as MRBI and Chesapeake Bay, the Great Lakes which is funded by EPA, but also many of these are species oriented, wildlife habitat, etc. So we so have quite a variety of initiatives, but they all follow the same principle of trying to target the right practices on the right acres.

A couple of key features of our approach to implementation. Technical assistance is so important to this because you have to have technical assistance to support our reach and facilitate planning, to develop the contracts and agreements, and it has to be trusted and competent technical assistance. NRCS is certainly not the only source of that. There are state agencies, districts, private sector individuals, but I can't stress enough the importance of technical assistance.

Another key element is dedicated funding. We've been fortunate through the last three Farm Bills to have a significant amount of dollars that we can provide for cost sharing assistance and the dedicated funding helps us to accelerate it when we are using it in a small watershed.

One of the things too is when we are looking at these priority watersheds, we are not only doing the targeting of dollars to the watershed but we are also targeting the dollars within

that watershed based on the priority resource concerns, based on our application, and ranking system, and based on the suites of practices that we provide for cost sharing. In addition, and some of these projects we are combining the use of easements in our working land program such as EQIP and these initiatives we also coordinating our sign up periods across the states to generate focus and hopefully greater interests in participating.

In addition, partners are so key to these watershed based projects. They are the ones that can help do the outreach and generate the interest to private landowners. Obviously, we are very interested in consistency across state boundaries because we're dealing with a watershed and water does not care about state boundaries and we want conservation applied consistently. In addition, we've tried to move toward shorter term contracts so we can accelerate implementation and remove some of the variables that prevent implementation over the longer term. And, of course, we've instituted a suite of things related to performance and outcome expectations with these initiatives.

So most central to all of this effort that we are talking about once we have established these projects is conservation planning. This is really nothing more than a decision-making process for the land owner and it is our responsibility to bring them the right technical information, the right alternatives including economic information so that hopefully they are making the right decisions with their land that will have a positive impact on environmental issues including water quality.

And what we are trying to do through that conservation planning process is establish a conservation system. This is the right combination of practices on the right position on the landscape and the right amount and oftentimes too you have to sequence the implementation of these practices sometimes over multiple years but the bottom line is I can't stress enough the importance of a systems approach to conservation, not practice by practice.

I'm going to transition now to Jimmy Bramblett on this last slide here. But as Lynda mentioned, the president's budget has established an expectation for 2013 that we continue this coordination and collaboration with EPA and other agencies that are very much interested in water quality. So we believe that through 2012 we will gain the value of some lessons learned that will be very instrumental in the improvement of this effort for 2013. So with that I'm going to turn it over to Jimmy Bramblett.

Jimmy Bramblett

All right, thanks, Tom. And what I'm going to do is kind of follow a little bit of the information that we've all talked about to this particular point and that is the general principles about why we are doing what we're doing at the National Water Quality Initiative inside USDA. I will give you a little bit of a sense of how we actually did it from the outset this year and then try to leave you with the impartation of the vision of what we

have for the water quality modeling and monitoring into the future and then we have a good example of how that will follow us up to show you in detail exactly how we will try to do this.

But as we've talked about to this point we really wanted to accelerate our funding in the 12 digit watersheds. And just in case anybody does not have a good handle on a 12 digit watershed, they average in size from 10,000 acres up to 40,000 acres. And for those of you familiar with the District of Columbia its 39,000 acres so that's about the size of the watershed we are talking about with respect to focusing these funds and looking specifically at four types of water bodies. One, a water body that is impaired which means it's on the 303(d) list. The second is a water body that is threatened which means that it's working its way to be listed on the 303(d) list. The third is the water body that has a TMDL plan in place because of being listed on the 303(d) list. And forth is what we will call a critical water body. And if you think about the watershed and you have some smaller segmented watersheds upstream of a listed water, or a threatened water, or TMDL watershed, this is the watershed that may be making the major contribution to the impairment downstream. So those are the four types of water bodies that we focused on with this accelerated funding and the geographic scale that we were looking at when we tried to focus on dedicating these funds.

We've already mentioned that we wanted to try to address agricultural sources. We've chose nutrients and sediments this year because we wanted to get what we were calling the low hanging fruit, so to speak. And I think Lynda mentioned in her outset introduction that we have no less than one watershed per state but no more than three watersheds per state. That was the initial guidance we gave to some of our states -- to all of our states but some of them came back and said we need an exception from the regional conservationist because our watersheds are large, the 12 digits are the same size but, the landscapes are vast and the land owners are large thinking in terms of particularly out West where you have relatively few ranchers over a 40,000-acre segment. So we had some exceptions there. Of course, the overall goal is try to remove streams from the 303(d) list or to prevent others from ever being listed in the first place.

The pollutants, I will just mention this again real quick, nutrients and sediment from the left-hand side of this screen you see the various forms of the nutrients that were manifested on 303(d) list that we saw across the country. I will just note that many of the correlating pollutants of pesticides, temperature, and other ag-related pollutants were also in these watersheds as well.

We will talk a little bit about the process. We gave our state conservationist a charge to work first and foremost with the state water quality agencies. And then with that collaboration they in turn would go and visit with their state technical committees. And for any of you that may not be aware, a state technical committee is an interdisciplinary, inter-agency organization that is mandated by a federal rule to help state conservationists

make decisions with respect to Farm Bill implementation. So they were part of the consultation process and the recommendations that were given to state conservationists. A state conservationist made the final decision and then passed that decision up to the regional conservationist for concurrence in that way for the selection process.

The systems approach that we talked about earlier were core and supporting practices. The core and supporting practices were practices that were identified by pollutants. So for example, we know that nutrient management has a positive impact on nutrient losses at the edge of field. And so we had a matrix of all of our 165 conservation practices and the specific pollutants they address. In addition to that, there are supporting practices like an edge of field border that would support that core practice. And what we encouraged through our ranking process was that applicants sign up and work to apply core and supporting practices which we call a systems approach to conservation practices. In addition to that, we have five conservation activity plans. These are plans to take a more strategic look at the different types of issues on farms and nutrient management, pest management, irrigation management and the like.

We have typically with our conservation programs far more demand than we have supply. That is far more demand for the dollars that we have in relation to the dollars we have to fund projects for. So we do a two-step approach in trying to select applicants with whom we develop conservation plans and contracts for the conservation practice implementation. The first step is to screen applicants. And we have a high, medium, and low category. The idea here is that applicants in the high category will be ranked first before we ever move into ranking applicants on the medium category. And this slide gives you a sense of what it takes to be an applicant in the high category. We wanted someone that did have a core set of conservation practices and all the practices would be in the watershed and of course, some of those practices would be on at least 25% of the acres within the application area. Once we screened all of the applicants from high, medium, and low we moved into ranking those, particularly those in the high category first and I'm not aware that we actually ever made it to the medium category to ranking of those applications.

But, the ranking process includes three sets of questions. National questions, state questions, and local questions. And the national questions account for 25% of the ranking score, the state questions account for 50% of the ranking score, and the local questions account 25% of the ranking score as well. You can see on this slide that the national questions are the same throughout the country and that is for consistency whether it's a National Water Quality Initiative, Air Quality Initiative, our general EQIP funding pool. National questions are consistent across the country. State questions for most programs and most initiatives are generated at the state level. But, in the case of the National Water Quality Initiative we generated the state questions at the national office again, with the desire and an eye toward consistency. We wanted to make sure that those questions were helping address some of the resources and concerns that we've spoke about earlier

in this webcast. The local questions in the National Water Quality Initiative were developed at the state level and they were developed again in consultation with the state technical committee.

For the National Water Quality Initiative, I mentioned earlier that we have a suite of 165 conservation practices. Not all of those conservation practices have an impact on water quality. And so we do -- we did identify which of those water -- which of those conservation practices do have an impact on water quality and then we also had a regionalization of our payment schedule and the reason that we do a regionalization of our payment schedule and this is the amount of money we would pay to an individual land owner for a specific practice. The reason we do regionalization is for the purpose of consistency again. If we have too much variation out there we find a situation where one state might be paying more for what the same practice compared to a different state and that raises questions about the efficiency of the work we are doing and the governments intent to have a low-cost approach to address those resource concerns. There were a few occasions and we did allow some waivers where individuals and states or rather states submit a request to the regional conservationists for our Deputy Chief of Programs to have a modification to these practices. A few of those were granted but not all.

This next slide here shows the timeframe that we started the program and that we implemented the program. You can see here we began with our coordination at EPA on February 23rd. We actually had a team that developed the guidance from the middle part of January to the middle part of February. So all of the information that we are doing and trying to accomplish and implement this year was done within a four week period. After that we began our coordination with EPA, OMB, the Department of Agriculture, and many others to implement the program. Through April we gave our states an opportunity to work with the state water quality agency, select their watersheds, and make their recommendations about those selected watersheds back to the regional conservationist caucus. We went out with a public announcement on May the 8th, invited individuals within these targeted watersheds and selected watersheds, and approved watersheds, invited these individuals to come in to our field offices and sign-up to participate in the National Water Quality Initiative. We had two cut off periods. The last of which was June the 15th. And then just last week we had our obligation deadline. Now very critically, the obligation deadline being two weeks after the application deadline is a little bit of a tight time period. What happens with our field office is that gives them two weeks to develop a conservation plan and also develop a set of contracting documents and then round land owners up for signatures and approvals before we can actually complete the obligation process. So even as of today we are not 100% complete with the obligations but we are nearing that 100% mark.

And the last bullet on this slide has to do with outcome training. Something that we are probably most excited about over this National Water Quality Initiative and I have got several sites dedicated to this and so I will talk about this a little further into the webcast.

This slide right here is a picture; it's not intended to be read. It's a picture to illustrate the collaboration that we've had in this whole initiative. It basically it is a listing of 303(d) listings for sediment and nutrients by a watershed, by state across the country. It's actually a very massive database. And then in addition to this there is also a set of data from USGS which includes nutrient and sediment loadings by watershed from the SPARROW model. So on the one side we have the problems within our watershed as identified by water quality modeling and then on the other side we have the potential loading by a watershed from water quality modeling. I said modeling of the 303(d) list but it's actually monitoring. And then SPARROW loadings are based off the modeling. This information basically was used by state conservationists, state committees, state water quality agencies to help select which watershed they would pursue for this initiative.

In the end there were 162 watersheds submitted. Five of these watersheds were rejected because they were either not a watershed that included the criteria that we were looking for or the pollutants that we were looking for. And we had 157 that were approved. On average there were three watersheds per state ranging from one which was the minimum and you might recall me mentioning that in a few cases we would go up to seven watersheds or above three with regional conservationist approval. And Texas had seven watersheds. Of these 157, 137 of those were on the 303(d) list or contained 303(d) listed water bodies.

This map here shows the watersheds, the scale of which is very difficult to see because again, we are showing you a national map and we are talking about an area no larger than the District of Columbia. And so we have a couple of examples just to kind of help put this in perspective.

The first one is in Texas. Keep in mind that the highlighted watersheds are the seven watersheds that were selected and to put that in a little bit of a scale you can see north of this project area is the Dallas and Fort Worth metroplex. So 740,000 eco watersheds right there. This could be up to 250 or 280,000 acre project area in the state of Texas.

Another example just again to try to put the scale and context is from South Dakota. On the right-hand side you can see the state of South Dakota. You see their selected watershed and in the larger map you see how it covers just a portion of the four counties there.

A few more statistics here about the watersheds that were selected. We have 128 of those 157 have currently have water quality monitoring stations there. 82 of them have 319 projects. 68 of them are landscape conservation initiatives like the Mississippi River Basin or the Great Lakes restoration area or the Chesapeake Bay. And then 27 of those 157 have all three of those combined.

As Lynda mentioned at the outset, we have dedicated \$33 million to this effort. This slide shows the breakdown by state and the investment by state. The state conservationists were given the opportunity to add to the 5% that they were required of their original allocation, they were given the opportunity to add to that and several states did do that. But they were not given the opportunity to take away from those funds. So if they were not able to use all of the money allocated to their state, they were instructed to return those funds so we could redirect those to other states where the National Water Quality Initiative funding was needed. We have had states request additional funding for the National Water Quality Initiative.

The following slide here talks about 319 and the collaboration that was mentioned earlier. These are just some specifics. We are aware of \$19 million in those watershed -- that combination of National Water Quality Initiative and 319 projects. \$2.3 million of that \$19 million was for monitoring, 11 million is for financial assistance, similar to the \$33 million that we put into those watersheds for financial assistance. And then there is \$5.6 million there dedicated to technical assistance. So that gives you a perspective of how we actually try to implement the concepts that we have talked about to this point.

I want to turn now to the future and talk a little bit about what we expect as far as outcomes. How are we going to articulate the good things we are doing with this collaboration, with the financial investment, with the human capital investment. We are going to do it using a variety of tools and from the NRCS perspective; the first one we will talk about is the water quality index for agriculture, WQIag. I mentioned earlier that we had three watersheds per state on average participating in this National Water Quality Initiative. What we have asked our states to do is to identify one of those watersheds that we could infiltrate using this water quality index for agriculture to assess the potential improvements for water quality. APEX which is a water quality modeling tool that has heretofore been used at the four digit HUC level so if you think in terms of 12 digit HUC being 39 or 40,000 acres of four digit HUC is multistate. We are working to make this a statistically significant tool that can assess water quality and water quality modeling at the 12 digit watershed level. And then finally, we are looking at implementing some water quality monitoring ourselves which is relatively new for NRCS. We are looking actually at a three tiered approach in doing this. One is adjunct field. Second is working with partners for in stream. And then the third tier is what we call the pour point or the terminus of the watershed or where the water flows at the outlook of the watershed.

So let me make a couple of comments here about the Water Quality Index for Agriculture. It is a qualitative, not a quantitative, but it is a qualitative multivariate metric. Now even though it is qualitative, it does have a number. This is what it is telling you. It is an index; it is a water quality index. And the easiest thing to think of this is if 10 means good and that's the best you can get then 4 gives you a reverence of where you are in your particular field as to where you can be on that particular field given a variety of components that I will mention in just a moment. But, the purpose and the benefits associated with this tool is

that it can help us assess conservation implementation over time and evaluate the effectiveness of conservation practices. Lynda mentioned earlier, one of the challenges with water quality monitoring is the temporal aspect of it. A lot of time activities happen upstream in a watershed and it takes time before those improvements pass through a water quality monitoring station downstream. And at the same time, there are so many variables taking place that it's often difficult to pinpoint and to track exactly where the issues and opportunities are arising from.

We do not claim that this is a panacea for all water quality, it's not a substitute for monitoring, it is not a substitute for actual water quality measurements, but it is a cost-effective and easy to use tool that can be used in every field in which a conservation practice has been installed.

Here are the components that I referenced earlier that basically relate to the physical factors associated with a field which include the soil factors like our slope, our decay factor, our organic matter content, we can look at climatic information as well as vegetation. And then we also get into the management aspects of it. So we look at the nutrient management factors, the tillage management factors, pest management, and some of the irrigation and from there we can develop this index that gives us a score of 0-10. And this slide here basically shows you just a snapshot of the fact it is an Internet database and in this particular case you can see that it is red at the bottom, red meaning as something you go for improvement. And you can see the different categories starting at the top being the components being the physical sensitivity factors and as you work your way down through there you get to the other management activities.

Again, it is subjective. It is based off a lot of science, but it is applied by a number of individuals across the landscape that do have to use professional experience to integrate what those factors happen to be, combine those components, and then apply a weighting scheme in order to develop an index and to interpret that it is correct.

It is one tool, it's not perfect but when used in combination with the other tools we are going to be able to vastly improve that and have a lot more confidence in two, three, five years down the road with the quality of information that we get out of this Water Quality Index for Agriculture.

The second tool is APEX. And I mentioned heretofore we've used it to do statistically significant sampling at a very large scale. We talked earlier about CEAP, this slide shows DEAP. It should be CEAP. It's used basically to assess our Conservation Evaluation Assessment Program and assess the effectiveness of conservation practices. One of the things that makes this model unique is the fact it is done not only in conjunction with what is observed by the modeler, but it's done in conjunction with what is reported as far as management activities through a fairly intensive survey by the landowner or the farm manager themselves. We use this on our national resource inventory sampling points and

just as a qualifier in case anyone is not familiar with our national resource inventory program, Congress has mandated that NRCS report on a five-year basis the condition of our land. This is the program and the tool we use that has spatially referenced and statistically significantly referenced sampling points. In a 12 digit watershed we are talking about 800 different points that will be looked at and be measured for this particular purpose. We are using this basically to characterize watersheds, principally in the Mississippi River Basin and it will also be designed to complement the monitoring side of this equation. So we talked about the Water Quality Index for Agriculture. We've talked about APEX as a modeling approach. Now we want to introduce and talk a little bit about our monitoring efforts.

I mentioned at the beginning it is a three tiered approach where we are trying to look at edge of field and combine edge of field monitoring with in stream monitoring and then also have those spatially referenced with the pour point or the watershed scale monitoring. So the big excitement we have here is the fact that we are seeing for the first time where other agencies are working with us to actually identify the conservation practices that on the ground -- that are being put on the ground. Look at the water quality coming off the land associated in those conservation practices. Measure that in relation to water quality from an ambient water quality monitoring station in stream within the watershed somewhere and then also cross-reference that with all three together with the watershed level at the pour point monitoring downstream. So we were excited about this, but we also have some limitations. What we can do is we can cost share with the producers for the edge of field monitoring, but these are fairly expensive systems and so we need partners to help work and help defray some of the nonfederal costs associated with this and also to help us manage and monitor the other water quality activities within the watershed. NRCS does not do in stream water quality monitoring nor do we do watershed level monitoring. And so it will take that partnership approach in order to make the linkage I described earlier become a reality.

This slide shows you a little bit about just an example of what the water quality edge of field monitoring station might look like. In addition, to try to use this information for improving our Water Quality Index for Agriculture at the field scale, and also to have a better understanding about what's coming off an edge of field in relation to in stream water quality monitoring, a nice additional benefit we get is the fact we can inform the land owner about the activities that they are putting on the land and how to better manage their farm. We call that adaptive management. It is one of the key aspects of trying to help improve water quality at the field scale level.

We've got the Mississippi River Basin basically as our large watershed scale pilot area in which we are working to do this. We are working with other partners within the Mississippi River Basin and to do this three tiered monitoring approach. Again, looking at nutrient, sediment, land use, conservation activities, and trends. We are excited about the fact that not only will these be linked together but the opportunity for the longitudinal or the

temporal or timeframe aspect which we will be able to track a lot of this information as well. This will help us develop a geospatial database of water quality of varying scales and then also make better decisions on how to improve water quality at the scales.

We currently have a variety of teams that are identifying those gaps within the Mississippi River Basin. They are looking at the monitoring needs that we have. Things we have not had to deal with and think of before such as who collects data? How do we manage that data? How do we amalgamate that data to a national scale and report that in addition to the adaptive management that we are trying to do with the individual land owner? And so we will be doing that through the course of the rest of this Fiscal Year and we hope to have a strategic water quality monitoring plan for our edge of field monitoring that we can begin to do for Fiscal Year 2013. So while we are doing a lot of really, really good things there are opportunities for us to improve continually and we can do better next year. Having said that, I'm going to turn it back over to Tom Christiansen.

Tom Christensen

Thank you, Jimmy. I have got a few more slides here I will go through and then we will certainly be glad to take any questions. So in opting to implement in 2012 versus waiting for 2013, we adopted the philosophy of let's take action and learn now versus letting the perfect be the enemy of good. In other words, a much longer development period trying for perfection. So we are in the process of assessing lessons learned. We will be meeting with EPA here very shortly to have further discussions on that. We've had some discussions with state water quality agencies and we'll have more later this month and certainly discussions within NRCS.

We know that in some cases we need to improve the level of our coordination at the state level and certainly we are committed to doing that. We know there were some issues with naming between NRCS and EPA on HUCs and we will certainly solve that issue. We may give consideration to additional pollutants although I don't expect us to go very far off of the sediment and nutrient initiatives but bacteria and things like that will be given consideration. And certainly we will begin this process earlier because we will be dealing with the full Fiscal Year versus part of a Fiscal Year. What is next again, this is part of a multiyear initiative as mentioned by the President in the proposed 2013 budget. Jimmy has done a good job at discussing monitoring when it comes to NRCS' cost sharing on edge of field monitoring, we will be very strategic and judicious about that because where we invest that money and the producer invests that money we want to have a high likelihood of successful monitoring.

In addition, we are still very much focused on outcomes. We probably have the wrong word in that slide. Probably should be assessing outcomes or moving toward measuring outcomes but Jimmy has described some of the tools and processes we are going to use and we are very anxious to learn from the highlighting of the water quality index here in 2012. And then I think it's been recognized that we need to establish some more

incremental measures of success. Obviously, we would like to see waters delisted, etc. and that is the ultimate goal but we need some incremental measures of success to know if we are making good progress.

So opportunities to improve our overall water quality efforts, this is from an NRCS perspective but again, the systems approach that we've talked about and soil health. And I can't say enough about soil health because if you are managing for soil health which means you are managing for the right biology, the right chemistry, the right structure, etc. Then that means the rest of your management system is good and you are providing good water quality, etc. So you will hear a lot more from us about the issue of soil health as the foundation for all conservation work.

In addition, we know the importance of technical assistance and we also know the importance of economics. This all has to make economic sense for the producers so they can maintain that system and they can maintain their operation. We are also very committed to adaptive management. Adaptive nutrient management for example is one of the big opportunities out there and there are some efforts underway with EDF and Iowa Soybean, and other organizations looking at that in earnest.

In addition, innovation is an area that needs to continue to grow. We have conservation innovation grants that provides some opportunity but we've got to push the frontier on innovation both from a technology and approach perspective. We need to further look at our targeting efforts. And we are having internal discussions about this issue of getting to the most vulnerable lakes is very important. Obviously, this continued collaborative commitment to monitoring, modeling, assessment is so important here. And then there are things that are involved such a certainty approaches to water quality. Minnesota for example, I believe kicked off their official task force under the ag commissioner yesterday. Our chief was up there for that meeting. And then we think there is certainly some continuing opportunities for environmental service, economic opportunities.

So the bottom line here is when we are talking about the state of water quality in this country we are really talking about private lands because 70% of the 48 contiguous states is in private ownership and in fact, about 80% of all freshwater either evolves from or crosses private lands in this country and it has got to be a committed partnership effort at all levels local, state, and federal.

To wrap this up, this is what we are after here. We are after farming systems that are certainly more productive than they are now. That are more environmentally friendly and we must have safe food from the field to the table. And to throw another factoid at you, farmers in 1960 produced enough food for about 25 people. Today that same farmer produces enough food for about 129 people. And that demand will going to grow even greater as population continues to grow. So thank you. We will stop there.

Don Waye

Well thank you, Tom and Jimmy, for your presentation. You provided us a great background in the work that NRCS is doing and we do have some time to take some questions from our attendees today. And the first question is about nutrient reduction targets. Do you actually look to establish nutrient reduction targets in National Water Quality Initiative priority watersheds?

Jimmy Bramblett

This is Jimmy. Basically what we do is we work with land owners for nutrient applications and ergonomic rates based off the type of vegetation they are growing. So corn might have a different nutrient requirement than with soybeans or even pasture. And also the soil levels -- the type of soil depends -- has an input on the amount of nutrients and the ability it has to assimilate nutrient applications. So we have worked more for nutrient management at the field level rather than at the watershed level.

Don Waye

Okay, I see. So I guess if they want that to happen then they should probably work on the EPA side, on the 319 side to develop a watershed management plan that has a load reduction target or a TMDL.

So -- and that sort of leads into sort of how you see on the NRCS side what the anticipated role of EPA and state water agencies in the National Water Quality Initiative. For instance, how much influence would water agencies have on selecting the projects?

Tom Christensen

This is Tom Christensen. That's an excellent question. So as we enter into 2013 we certainly want to shore up our coordination at the state level and what I mean by that is our state conservationists and the state water quality agencies. We need to make sure that discussion is occurring early and they are looking at hopefully reaching consensus on the waters that will be selected. One of the questions that is still out there is will we be adding additional waters or concentrating on the same ones. And our preliminary thinking is that we want to leave that to the state level, the state conservationists in consultation with the state water quality agency. And then at the national level we will certainly continue and further enhance our coordination with EPA. As I mentioned, the lessons learned will I think will yield some benefits for us that can lead to some improvements in the guidance for 2013.

Don Waye

So that sounds like we have a good process for determining which watersheds will be the priorities, but sort of at the project level that is strictly an NRCS call correct?

Tom Christensen

Well the use of EQIP funds which are Farm Bill funds requires us to ultimately consult with the state technical committee and the state technical committee and any other agencies such as the state water quality agencies make recommendations but ultimately the state conservationists must make the final decision involving the use of EQIP funds. So that was the case this year and certainly continues to be the case.

Don Wayne

Okay, that is very helpful. And one of the state folks asked: because of the way some states have established a water quality standards, some states do not actually have impairments attributed to nutrients or sediments. They are 303(d) list of impaired waters is dominated by bacteria. Over half of the 303(d) listed streams are impaired by bacteria. Many of which have a livestock contribution. And I know you mentioned this a little bit, but can you go into more detail about how that might be factored in for FY13 National Water Quality Initiative?

Tom Christensen

We actually -- through the process of collaboration with EPA and the state water quality agencies have heard this same information and that is bacteria is a desirable pollutant to focus on in the future. And just as a side note, the NRCS Oklahoma worked with a variety of producers in that particular state -- have been able to work particular water quality agency and get over 15 streams delisted because of bacteria from that state 303(d) list. So with that in mind, we are interested in learning more about the model that they are using in trying to apply some of those concepts into the future. As Lynda mentioned at the outset of this webcast, we actually have gotten out ahead of the game and we wanted to go ahead and jump in and try to initiate this collaboration to do this water. Bacteria, at the outset, is one of those pollutants that it's very difficult to track exactly what the source is, particularly when you get into those mixed, urban, and rural interface environments which you do have dairies and at the same time have waste treatment facilities. And so we wanted to jump in and do this initiative this year, but also not jump in blindly. Jump in with educated activities that we are pursuing toward an eye toward the future looking at that as a potential pollutant as well.

Don Wayne

Okay, great. Well had a number of questions, we are not going to get to them all now but we will have another break for questions after our next couple of speakers and we will open it up for all of the speakers to address as maybe appropriate. So the last question for this segment is -- somebody -- one of the participants note that currently NRCS does not provide state partners with vocational data for specific practices they implement other than on perhaps a county level scale. So how does NRCS expect the state partners to help with monitoring at a field scale level or do they expect them to help out at that level if they don't sort of share that locational information and the practice that needs to be monitored?

Jimmy Bramblett

Yeah, and that's a great question. We regularly get that question actually. There are provisions in the Farm Bill that afford privacy to the individual land owners and so we are bound to honor that privacy which is why we are actually kind of excited about the outcome approach which we just talked and that is we can work with the edge of field information but what to collaborate with the other agencies and strategic locations of the in stream water quality monitoring station as well as help improve the knowledge base for water quality modeling. So we think that this represents a great new opportunity to leverage, collaborate, and further expand the water quality science but at the same time not reveal the individual information that the Farm Bill restricts us from doing.

Don Waye

Well thank you, sir.

Anne Weinberg

Okay, this is Anne Weinberg again. Thank you, Tom and Jimmy, for those answers. I think this webcast has been a tremendous opportunity to collaborate with you further and it sounds like there is going to be more collaboration in the future.

Our next presentation will be a joint presentation by Steve Hopkins who's the Nonpoint Source Coordinator for the Iowa Department of Natural Resources. And then Jon Hubbert, USDA's Natural Resources Conservation Service Acting State Conservationist in Iowa will also talk. So please take it away, Steve. The floor is yours.

Steve Hopkins

Thank you. And this is Steve Hopkins from DNR. We would like to get the first slide rolling, if we can. [off mic comment] Give us a minute while we get that first slide going.

Jon and I are going to play a tag team where we go back and forth and show the different slides. Here is the first slide just to give you some background on the state of Iowa. We currently have 580 impaired waters in the state of Iowa and of those impairments they are predominantly linked to agriculture. That's probably no surprise to the group. In Iowa we have 90% of the land that is privately owned. Of that land ownership, of that 90% of the land privately owned, about 75% of it is cropland. So we obviously have a lot of cropland in the state of Iowa that results in a lot of sediment, phosphorus, nitrogen and bacterial issues in our waters.

The next slide shows a map of the state. This is our impaired waters map. The red squiggly lines are rivers and streams that are listed as impaired. The blue dots are the lakes in Iowa that are currently impaired. It gives you an idea that we have a fairly broad distribution of impairments around the state.

Of the impaired lakes that we have in Iowa the three most common types of impairments are algae, turbidity and bacteria. This is also showing that it's linked to agricultural runoff.

And of the impaired streams and rivers segments in Iowa, the three most common types of impairments are bacteria, biological impairments and fish kill impairments. And again, most of this is related to agricultural runoff.

And with that I'm going to go ahead and turn it over to Jon to give us some information about the NWQI.

Jon Hubbert

On the left side of this slide, you'll see that the National Water Quality Initiative Guidelines included a 3-5 year projects with sediment and nutrient reductions as one of the goals. That goal was again to remove the sediment and nutrients impairments. And then the impairments were to be removed within that 3-5 year timeframe. In contrast, I will turn it over to Steve to cover the 319 project side.

Steve Hopkins

Just to show the differences between how 319 works and how NRCS and this particular program is, our plans in Iowa are typically much longer, the watershed management plans are 10-30 year plans so that shows a difference between the 3-5 year project goal at NWQI.

We had similarities looking at the second bullet in that Iowa plans typically are to reduce sediment and phosphorus reductions similar to our NWQI program goals. But looking at the third bullet, in Iowa we don't have nutrient stream or lake standards although we do have nutrient standards for drinking water sources in the state. So there is somewhat of a program difference between NWQI where the goal is to remove sediment and nutrients impairment. And then looking at the last bullet, we expect that to remove an impairment it would often take longer than 10 years of project implementation before we are actually successful at removing impairments, as opposed to expecting that those impairments could be removed in 3-5 years. And with that I will go ahead and turn it back over to Jon.

Jon Hubbert

This next slide show some of the impaired waters in Iowa. We have just over 100 HUC 12 watersheds that were on the 303(d) list as impaired watersheds. And then moving back to the next slide, I'll turn it back over to Steve and he will pick it up on that.

Steve Hopkins

As we were looking at the watersheds we were wanting to select for NWQI, we were looking at this particular list of – looking for specifically watersheds where we had an existing nine element watershed management plan, where we had an existing 319 project. And at the third bullet we thought was perhaps the most important, where we had

existing project coordinators that were in place that could sell practices to farmers. We were also hoping that we had existing landowner interest within the watershed selected, that there was existing water monitoring in place so we had baseline water monitoring data and we're obviously very concerned about whether funds could be quickly obligated given the short turnaround time in Fiscal Year 12 with NWQI. And lastly we were really hoping we could select the watershed where there was the potential for water quality improvement and we are very interested in being able to leverage multiple sources of funds through the program.

The next slide shows a map of how we were able to narrow down our list of watersheds. We started by looking at this particular map which is a list of completed nine element watershed management plan areas within the state of Iowa. And actually, the blue areas are the ones that are completed watershed management plans. The green areas are areas where they are working on plans. So we were hoping to at least begin narrowing down our watersheds by focusing on these blue areas where we had completed nine element watershed management plans.

And from that map, we were able to recommend three separate HUC 12 size watersheds. The first one being the Black Hawk Lake watershed of points. We were looking in northwest Iowa. This was fairly new 319 project that was completed in 2011. This not only had a watershed management plan, but it had emphasis of work from various resources including not just DNR, but our Iowa Department of Agriculture and our DNR Lake Restoration Program, so multiple programs were involved in beginning that particular project.

The second one, the Rathbun Lake watershed, within the specifically the lower Chariton subwatershed. This is an existing 319 project that has been in place since 2004. This is what we consider as our flagship 319 project in the state where the watershed management plan had been put together in 2001. They've been working diligently at moving from one subwatershed to another and have a lot of support in that watershed. So we were confident that that would be a good candidate.

The third bullet, Badger Creek Lake, this was actually a newly completed watershed management plan completed in 2012. It did not yet have a Section 319 project. However, the planners did submit a 2012 319 application. We felt confident in particular this was recommended by the Iowa Department of Agriculture as a potential third watershed for us to focus on.

So this gives you an idea of where on the map after we were able to narrow it down to our three watersheds for NWQI. Blackhawk Lake being the watershed up in northwest Iowa, Badger Creek Lake being in the center and then the one at the bottom shows the Rathbun watershed that is the large area and then within the Rathbun watershed within the blue is the lower Southfork Chariton River subwatershed.

Moving on to the program timeline that we had in Iowa, we had ongoing discussions between January and March of 2012 this year between us at Iowa DNR, the Iowa Department of Agriculture and Iowa NRCS discussing details of what we thought might be coming down the road with the NWQI. So we had a lot of discussions in person, on the phone and then finally, after the NWQI guidelines were released in late March, that's when we had immediately met on March 26th between those three agencies, DNR, Department of Agriculture and NRCS and we recommended the three watersheds that were mentioned in the previous slide. And then just several days later on March 28th, those three watersheds were recommended by the state EQIP subcommittee to the state technical committee and with that I will turn it over to Jon.

Jon Hubbert

One additional step we did in Iowa with respect to a state appointed board known as the Water Resources Coordinating Council is we ran the proposal by them for their concurrence as part of our process as well. And this is the actual explanation slide that we used in giving them an idea of not only what watersheds we were moving forward with but what their reasons were behind those recommendations. And then we also answered questions that they had related to why those watersheds were selected beyond what we were able to put on the slide.

The Water Resources Council was convened by the Iowa Secretary of Agriculture and it includes commodity groups, IDNR, which is our state water resources agency and our State Department of Agriculture as well as NRCS and others that are involved in the process and their function is to look at water quality and watershed issues statewide. So that's why we included them in the process.

For the program timeline, we looked at April 2nd, the three watersheds were recommended by the NRCS state technical committee. On April the 24th, the three watersheds were approved by the Iowa NRCS state conservationist. At that time, it was Rick Sims. And then on May 8th, the National Water Quality Initiative program announcement was officially made and we began working more earnestly at implementing the project for the initiative.

With that announcement, we did put together a special map for that. You will note if you can read in really small print that there is a difference between our hydrologic unit name in Iowa for the Black Hawk Lake watershed which its official name with our process is the Wall Lake Inlet. That was not a major obstacle for us. It was just a minor issue related to advertising and getting the word out and we were able to overcome that easily.

For the 2012 National Water Quality Initiative, we ended up with \$750,000 --

Anne Weinberg

Okay, we seem to be having some sound difficulties. Steve are you there? You may need to dial in again. So we are hearing some great information here about Iowa but -- from Steve and Jon, but we have a little technical difficulty. Hang in there with us. We will get that back and we will continue their story.

We are trying to get Steve and Jon to dial back in from Iowa -- back in to the webcast. And meanwhile, we are going to maybe pose a few questions here to Tom and Jimmy about the National Water Quality Inventory while we get Steve and Jon back on the phone.

Don Wayne

So Tom and Jimmy can you -- actually can we here you? Can you say something? [Overlapping speakers] Alright, so some folks have asked what kind of evaluation and reporting will USDA or EPA be doing and when to communicate water quality outcomes of these watershed projects, when will they be available to the public?

Jimmy Bramblett

That's a great question. We mentioned during the earlier presentation we hope to have our field offices trained on how to do the water quality index for agriculture by July the 30th. And so it will take place probably beginning spring of next year or maybe summer of next year. Why so long even for this relatively simple tool? And the answer is when we do a contract with an individual landowner there is a schedule of operations. They don't put all the conservation practices in their contract in right away or even in the first year or even in the first two years. So we will be collecting information from individual landowners as they put their conservation practices on the ground. I mentioned that we have teams right now that are working on how is that we will collect all the data from individual states, get it to one centralized location, reformat that information in such a fashion that we can begin to articulate that out to the public. Along with that as part of the lessons learned and the ways we can offer improvements for the edge of field water quality monitoring activities, we will be doing a similar exercise and that data we will also have a lot more collaboration with EPA and USGS and the systems they use to collect, amalgamate data up to the national level and see how we complement and can further leverage resources into the future. So the earliest times that you can expect to hear back from the initial investment are likely to be toward the end of next winter on into the beginning of next summer from NRCS.

Don Wayne

Okay, well thank you, Jimmy. That's a terrific response. And I think we have Iowa back on the line. So hopefully Steve and Jon are you back?

Jon Hubbert

Yes, we are. We apparently we took a short vacation. [Laughing]

Don Waye

Glad to have you. Go ahead and pick up where you left off.

Jon Hubbert

I'm thinking we left off with this slide but if someone has a better idea we don't know exactly where we cut out. Does this look right?

Don Waye

Sounds good. I think so.

Jon Hubbert

Okay, for Iowa we had \$750,000 in EQIP funds available for 2012, that amounted to \$250,000 per watershed and then we were able on our end if we needed to be able to adjust those funds based on need and based on a project ranking within the specific watersheds. As it turns out, our Black Hawk Lake watershed received 12 applications totaling \$260,000. Our Rathbun Lake lower Chariton subwatershed received 25 applications totaling \$275,000. And our Badger Creek Lake watershed because of some extra effort in the watershed amounted to 41 applications totaling \$812,000 requested. And Steve has just a little bit more he will add on that particular watershed.

Steve Hopkins

Better Creek Lake that third watershed, that was the one that actually did not have an existing 319 Project on the ground so we were concerned as to whether they would be able to go ahead and quickly obligate those funds and as it turned out they were able to deploy extra NRCS staff in the watershed to make land owner contacts very quickly and once the land owners started coming in the door within the county, that was Madison County, the Soil Water Conservation District in Madison County where the Badger Creek Lake watershed is located. They were very effectively able to utilize the watershed management plan and identify the targeted areas for work and use the maps that have been created through the watershed planning effort to identify where the best applications should be targeted and it worked very effectively. So that was a good surprise for us.

For future program considerations, and this is Steve again, just echoing what has been talked about before we are certainly hoping there could be earlier program guidance for NWQI perhaps even in the winter or even before that would give us a lot more time to be able to discuss the program and not have to run as fast as we did in Fiscal Year 12.

The second bullet is that we are hoping that ranking criteria can specifically be targeted to the pollutant of concern within the watershed and there could be points for practices or BMPs in those targeted areas. Specifically we are really hoping that we can target the appropriate practices in the most appropriate areas within the watershed.

Looking at the third bullet, given that we feel that it is difficult to be able to show that we can delist an impairment in such a short timeframe, we are hoping instead we could be setting incremental water quality goals rather than simply the goal of being able to remove an impairment through the program.

We are also hoping to be able to very carefully target using an existing water monitoring plan. I should mention that for areas where we have 319 Projects in Iowa, we automatically set aside funds to put together a separate water monitoring plan that can help not only help us provide baseline information, but also help us to track any water quality changes throughout the life of that project.

And then looking at the last bullet, we are certainly hoping that there could be longer-term or more realistic impairment removal goals affiliated with the NWQI program. And with that, I will go ahead and turn it back over to Jon.

Jon Hubbert

This last slide just kind of summarizes what we feel were the key principles for our success in getting this off the ground and pulling the partnership together to make it work out well. And key among those was teamwork among the partners before, during and after the watershed selection process. The communication within the partnership was strong. The transparency and the sharing of key data layers and our selection process helped to streamline that process significantly. And then focusing on the opportunities rather than on the limitations. There was plenty of room for both, but we chose to focus on the opportunities and we think that made a key contribution to our success so far in the program. We are looking forward to the continued implementation of next year's opportunity as well.

With that, we will turn it back to you Anne for questions or otherwise.

Anne Weinberg

Okay, thank you and Jon. We appreciate your information and we are going to have time for some more questions for you all and for other speakers, but I need to see my screen. At this time, I'm going to make a few announcements.

If your question did not get asked today or you would like to contact our speakers, you can find their contact information on this slide, which I hope is showing. We are having a little technical difficulty here but we are going to get the speaker's contact information on the screen soon so again you can contact them after the webcast. Here we go. Okay. So these are all our esteemed speakers that we had. We had a good group today.

And I just wanted to let you know we will be taking a break from webcasts in August. I wish I was going fishing. I'm not sure I'm going fishing, but we will be looking forward to coming back to our next webcast this coming September. Registration will be posted on our

website at epa.gov/watershed webcasts. Also, please check back with us regularly, probably in early September and you can also find archives of our past webcasts there to tide you over in August if you are wanting to listen to something and learn.

And also please don't forget to download the certificate. The certificate can be downloaded from EPA's server through the link on this slide. And you can personalize the certificate with the names of everyone watching from your location. So now we have time for a few more questions for Steve and Jon and our other speakers.

Don Waye

Okay, well terrific and actually most of our questions are probably for NRCS still. I think Steve and Jon did a great job talking about how it's working in Iowa. And I want to focus on next year some folks want to know what the timeframe will be for next year's joint initiative, when would be the next time to start looking to get a project or a watershed available for funding under this initiative?

Tom Christensen

This is Tom Christiansen. I think one of the things we will be doing this month again is meeting with EPA and assessing lessons learned and then having some internal discussions with our state conservationist too. But we would like to put our states in a position to coordinate with the state water quality agencies certainly by early fall if not sooner. Hopefully later summer would be the ideal position. Put some guidance out for them so they can begin that coordination process.

Don Waye

Okay, terrific. And along the lines of lessons learned, do you have any sort of that you are ready to sort of I guess come forth in this forum and discuss in terms of what are some of the possible differences you might expect between this year's program and next year's program?

Tom Christensen

Yeah, I think we have a few of them and, Jimmy, I think alluded to one of those and that has to do with the size of the watershed. That was a little bit more problematic, the 12 digit watershed was a little more problematic in the western states where you have fewer producers in a watershed and so I think we may be looking at the opportunity for some variation on the size of the watershed based on the justification from that state. That would be one example. I think we will always be looking at our practice list and did we afford the right opportunities with the right practices. Another opportunity has to do with the pollutants, the issue of bacteria was another example and those are a few that come to my mind. I don't know.

Jimmy Bramblett

Yeah, and this is Jimmy. I think the other ones that Iowa also reiterated and we kind of talked about it and have a plan to address as well and that is the timeframe in trying to start the process early. One of the challenges we all faced this year was the fact that our Chief made the decision to get in this particular game for this purpose late in the process so actually we did a really good job of getting everything organized and getting states trained and having the collaboration and getting the program implemented this year. So the additional timeframe we expect to afford our state next year will be a tremendous improvement as well.

Don Wayne

Okay. Any word on whether or not it will still remain at 5% of the EQIP funding for target watersheds or are we looking at something potentially higher?

Tom Christensen

That's another decision yet to be made and we will need to be discussed certainly with the Chief of NRCS. But there is no decision yet at this point on the level of funding.

Don Wayne

I know a few folks that might be rooting for higher. So put that in there as an EPA person. But we think it's a terrific partnership and collaboration that we have.

In terms of the monitoring components, how is the monitoring component of the National Water Quality Initiative being coordinated with other national monitoring programs or state or local watershed monitoring programs? I guess another possibility for the national scale -- federal scale would be USGS's nonpoint program. Any coordination there?

Tom Christensen

Well this is Tom Christiansen again, with NRCS. Let me address it from an NRCS perspective. When it comes to water quality, the only piece that NRCS actively cost shares on the edge of field monitoring. And so far we have restricted the use of that practice to the MRBI and select watersheds where the partners through CCPI proposals have described the three tiered approach to monitoring. What we have done though in NRCS is we've taken the step back. We have a moratorium on additional cost sharing of edge of field monitoring as we are revisiting our technical criteria and also revisiting the information such as the citing of monitoring, what are the ideal conditions to get the kind of results we would hope for, that sort of thing. So what we anticipate is shoring all of that up in the next few months and then moving forward in 2013 with some decisions about where we will cost share on edge of field monitoring. So one of the questions that will have to be answered is will we provide cost sharing on that practice in the context of the National Water Quality Initiative. Will we provide cost sharing on it outside of MRBI? So those are decisions yet to be made, but we anticipate within a few month's time being in a position to make those decisions.

Don Waye

Okay. Sounds great. I appreciate that. As one of your slides pointed out there is a number of regional initiatives that NRCS is involved with and prior to FY12 as well. And EPA is involved with some of those initiatives as well particularly with the Chesapeake Bay and the Great Lakes region's and I am wondering if you can kind of explain how this new effort will be coordinated with those other regional programs?

Tom Christensen

Well that's an excellent question too. As you mentioned, we started some of these landscape scale initiatives in NRCS as long as three years ago. And major ones being Chesapeake, Great Lakes, which of course is funded by EPA GLRI funding, and the Mississippi River Basin Healthy Watershed Initiative. We have some others beyond that, but those are the major ones from a water quality perspective. And to give you an idea of scope, here under the National Water Quality Initiative, we mentioned that we funded 157 12 digit HUC's this year. Well under MRBI since its inception in 2010, we have somewhere between 400 and 500 12 digit HUCs that has been funded at an accelerated rate. So probably when you add all of these up across these major watersheds plus NWQI, you are getting close to 1,000 of these small targeted watersheds where we have accelerated efforts underway. And one of the things we are discussing and planning to do here at NRCS is kind of take a step back and take an inventory of that making sure we understand what is going on in each of these watersheds from a resource commitment, from a partnership perspective so that we can talk a little more definitively about these targeted watershed efforts and then further explore the continuing opportunities for collaboration with state water quality agencies, EPA, and others. So we are very interested, for example. We know that some of these water quality initiative watersheds overlap with the major landscape initiatives and we need to do a deeper dive there to find out the nature of that overlap. Is the overlap in the same exact 12 digit watershed? What is being brought to bear there from the initiative versus NWQI versus partners? So that is also on our game plan is to do deeper dive, find out what is going on from a collaborative perspective and find out the gaps and then find out from that the opportunities.

Don Waye

In time for the FY13 awards I suppose?

Tom Christensen

Yeah. We are hoping to do that on an accelerated time frame, yes.

Don Waye

So we will all be busy. Maine and Alaska have a number of watersheds that are very high quality, exceptionally high-value but threatened. Not yet impaired. And I'm just wondering if some of those and other states as well, but those two states really jump out. And I'm just wondering if you have -- if that will be considered for the next round of funding?

Jimmy Bramblett

This is Jimmy Bramblett and what you might recall we talked about during our portion of the presentation is that there were four categories of water bodies that we said were eligible for inclusion in the National Water Quality Initiative. The first were those streams that were on the 303(d) list. That is they have water quality problems. The second was the category of threatened streams and those are ones for which water quality data exists. They are not necessarily listed as impaired, but they are threatened and moving in the direction to be listed as impaired. Those are certainly eligible for inclusion in the National Water Quality Initiative and was part of the criteria for which state conservation had an opportunity to choose as well.

Don Waye

Okay. That sounds good. Do we have time for one more question? All right. We will ask one more question. I'm getting the thumbs up here. And I guess sort of who decides what EQIP practices can be used for each state and how do you determine between core and supporting practices? It's a two-part question.

Jimmy Bramblett

Okay, this is Jimmy and I will take a stab at it first and invite the other NRCS participants to add to it as well. We have a tool that we did not talk about today. We call it CPPE. And what that stands for is conservation physical -- Conservation Practice Physical Effects and each practice we look at a variety of resource concerns, soil erosion, wildlife habitat, air quality, energy savings, water conservation, and water quality. There is an assessment made by our technical specialists and our scientist as to how positive an impact is of each individual conservation practice on all of those resources of concerns. And so that tool basically is a planning tool and the concept of moving from looking at the initial positive or no impact on the resource concern, moving it to a core and/or supporting practice that has to do with the systems approach. We did not talk a lot about this today, but we have a concept we use called avoiding, trapping, and controlling pollutants. And that is we try to make sure that we avoid the movement of pollutants offsite to start with certain types of practices. Just think in terms of pasture and hay and hay land planning or some other kind of vegetative crop residue type of practice that helps reduce soil erosion. People can kind of quickly grasp that. And then if we can't avoid it and we do try to control the movement of that pollutant so if it does move it does not move particularly far. And then in fact, if it does move far and we think it's actually going to be lost off the edge of the field we try to have some other type of a practice like a field border or some other kind of riparian buffer that might trap it and avert that pollutant from ever reaching the stream. So those core practices are the ones that really help achieve those primary functions associated with the positive impacts associated with water quality pollutants.

Don Waye

Well thank you, sir. And that concludes all the time we have for questions. I'll turn it over to Anne now.

Anne Weinberg

Okay, thank you all. At this time I'd like to conclude today's webcast. Thank you, Lynda, Tom, Jimmy, Steve, and Jon for presenting today. And, of course, thanks to everyone who joined us. That ends our webcast for today. Thanks again. Have a good day.