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2015 NATIONAL TRAINING WORKSHOP ON CWA 303(d) LISTING & TMDLS

MAKING THE VISION A REALITY

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FINAL PROJECT REPORT & TRAINING WORKSHOP PROCEEDINGS

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Except where expressly noted, the views expressed in this report and other training workshop materials prepared and assembled by ELI should not be attributed to U.S. EPA, or to other federal, tribal, state, or territorial agencies, nor should any official endorsement be inferred. The information contained in these materials was gathered from many and varied sources, and ELI alone is responsible for errors or inaccuracies.

ELI maintains a companion website for this project: our CWA 303(d) Program Resource Center (<http://www.eli.org/freshwater-ocean/state-tmdl-program-resource-center>).

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I. INTRODUCTION

In early April 2015, the Environmental Law Institute (ELI) convened the *2015 National Training Workshop on CWA 303(d) Listing & TMDLs: Making the Vision a Reality*. This event, supported through a cooperative agreement with the U.S. Environmental Protection Agency (EPA), brought together Clean Water Act (CWA) Section 303(d) listing and TMDL officials from 46 states, Puerto Rico, the District of Columbia, and the U.S. Virgin Islands as well as water quality professionals from the Confederated Tribes of the Umatilla Indian Reservation, the Hoopa Valley Tribe, and the Kickapoo Tribe. The assembled participants learned about approaches for implementing CWA 303(d) Program responsibilities consistent with the CWA 303(d) Program Vision and methods of identifying progress under the new CWA 303(d) Program measures. They also shared information about their current and projected efforts; what assistance they may need; and their perspectives regarding prioritization, assessment of waters, integration with other programs and agencies, alternatives to TMDLs, engagement with stakeholders and the public, and the new program measures with colleagues from other jurisdictions, representatives of EPA headquarters and the ten EPA regions, two representatives of the Association of Clean Water Administrators (ACWA), and a representative of the New England Interstate Water Pollution Control Commission (NEIWPC).

As with similar events of national scope convened in June 2008, May 2009, April 2011, April 2012, April 2013, and May 2014, ELI and EPA intended for this training workshop to provide a forum for program officials to learn about current best practices in listing, TMDL development, and TMDL implementation; to interact with one another; and to share their programmatic ideas (and concerns). To ensure a planning process that would culminate in a workshop attuned to the needs of program implementers at the state, tribal, and territorial level, ELI assembled a Workshop Planning Group (WPG) consisting primarily of state officials. For four months, this group worked through a highly participatory process to develop, shape, and refine: the workshop objectives and agenda; the structure and focus of workshop sessions; and the course materials.

State, tribal, and territorial participants (including members of the WPG) were typically individuals with substantial responsibility in their respective programs, but who were not far removed from day-to-day program operations. Key to this event, like prior ones, was having the right people in the room.

The three-day training workshop, held at a federal facility in a retreat-type setting, was successful by the metrics of sharing useful information, generating new ideas, and building new relationships. Distinct takeaway messages emerged from the gathering; these themes are identified in Part II of this report. The bulk of the report, Part III, contains a detailed, session-by-session summary of event proceedings. Appendices to the report include the event program, a list of participants, a full summary of participant evaluations and comments, and information on ELI's companion website.

ELI continues to build on the momentum and enthusiasm generated by this and the prior years' training workshops through an ELI-administered website for CWA 303(d) programs and through a listserv dedicated to state, tribal, and territorial professionals and designed to increase and enhance interactions among programs.

II. THEMES AND OTHER TAKEAWAYS

From the perspective of ELI staff in attendance, the following are significant themes, points, and observations that emerged over the course of the training workshop (although they do not necessarily reflect complete agreement among participants):

Prioritization is telling a story of what is most important regarding water quality.

- Prioritization is an opportunity to convey intentions as well as challenges and successes.
- Long-term priorities serve as the framework for implementing CWA 303(d) Program responsibilities.
- A clear articulation of the story that the state, tribe, or territory is trying to tell can increase the likelihood of stakeholder and public buy-in and the stability of the priorities through 2022.

There is a tension between accountability and flexibility, and there is a clear need for both.

- The Vision provides states and territories the flexibility to focus efforts and resources where and how they will be most effective in restoring and protecting water quality.
- The new CWA 303(d) Program measures provide the accountability necessary for federal agencies, as well as a basis for dialogue with the public as to why the work is important.
- The new measures offer flexibility themselves—there is an opportunity to change the specific waters prioritized as circumstances require.

The new CWA 303(d) Program measures replace the old “pace” measures, and it is important to seize the opportunity provided by the new measures.

- The new measures are meant to better reflect the entirety of what states and territories are doing with regard to water quality, as well as their priorities for addressing those issues.
- WQ-27 is the measure that tracks “plans in place” to address the long-term priorities of states and territories.
- WQ-28 is the measure that tracks “plans in place” and progress towards “plans in place” within and outside of priorities.

- The visual display of the priorities and measures should aid communication with stakeholders and the public.

The process for the new measures requires little effort from states and territories.

- The NHDPlus catchment approach simply relies on the state or territory's original source data.
- Much of the process for updating the ATTAINS database and calculating the WQ-27 and WQ-28 measures will be done by EPA; the amount of work for states and territories will depend on how they set their priorities and data availability.

Integration, coordination, and collaboration across programs and agencies are not just side objectives; they are absolutely essential to effective CWA implementation.

- These efforts are occurring across CWA programs and across federal agencies, at the federal level and at the state level, and they are taking many different forms.
- Integrating by function, rather than by organizational structure, can help integration efforts survive staff turnover.
- Communication between the NPDES and TMDL Programs has made TMDLs more permit-friendly, and there is still significant opportunity for improvement.
- The Monitoring Program can aid CWA 303(d) priority setting in many ways, including providing data and information, identifying data gaps, identifying monitoring approaches needed to support Vision priorities, and quantifying resource needs for monitoring that is specific to the CWA 303(d) Vision.
- The Monitoring Program also can help meet the Assessment Goal through providing baseline, planning, and effectiveness monitoring data.

In some cases, significant barriers exist to meeting the Assessment Goal.

- The Monitoring Program is tasked with many high-level objectives that can conflict and do not always align with the needs of the CWA 303(d) Program.
- Knowing the details of best management practice installations is important for good effectiveness monitoring regarding nonpoint sources, but accessing this information often requires a good relationship with the Natural Resources Conservation Service.

“Alternatives” are meant for circumstances in which restoration methods other than a TMDL may be more effective in achieving water quality standards, resulting in cheaper clean water faster.

- An “alternative” is a plan and/or set of actions pursued in the near-term that in their totality are designed to attain water quality standards.
- An alternative restoration plan does not eliminate the statutory requirement to develop a TMDL. If the alternative is successful in meeting water quality standards and the water is delisted, a TMDL would not be necessary.
- TMDL development is not to be deferred indefinitely because of an alternative.
- The timing of when to develop TMDLs after alternatives have started depends on the circumstances and on progress made by the alternatives.
- It is important for states and territories to work with their respective EPA regions on alternatives.
- The acronym “LEAP,” Let’s Establish Action Plans, could be a useful replacement for the term “alternatives.”

Engaging stakeholders and the public is not only a goal of the Vision, but it is vital to the implementation and success of the Vision.

- Engaging stakeholders and the public in the establishment of priorities can improve the quality and duration of stakeholder and public participation throughout the entirety of the water quality restoration and protection process.
- The word “priority” can be a communication stumbling block, internally because other programs have their own priorities, and externally because it can suggest that other waters are not important.
- Stakeholder engagement and transparency with the public about why an alternative is being used are critical to its success.

When engaging the public, know the audience, connect the issue to what matters to them, and communicate in ways that work for them.

- The public connects to water best through how they use it, so water quality problems should be explained through the impacts that they have on uses of water where possible.
- Finding easy points of agreement at the outset can keep people together through the more challenging issues.

- Being present on the ground and building relationships with the public can be critical to successful engagement.
- It is important to keep communication simple and direct, focusing on information over data.
- Analogies can be a good way to communicate complex water quality issues and even the roles of the CWA 303(d) Program.
- Using multiple communication platforms, from a website to social media, increases the potential audience.
- A regularly updated website with visual aids, videos, updates on implementation progress, and real-time information can be an effective outreach tool.

Sometimes you have to have faith in what you want to do and just do it.

III. WORKSHOP PROCEEDINGS: SESSION-BY-SESSION DISCUSSION

Following is an overview and detailed discussion of the training workshop, presented session by session. The full training workshop agenda appears in Appendix 1 to this report.

Welcome, Introductions, and Training Workshop Overview

ELI staff opened the workshop by welcoming the diverse range of participants, which consisted of CWA 303(d) Program staff from 46 states (with nearly one-third of them sending a second, and even third participant at their own expense), Puerto Rico, the U.S. Virgin Islands, and the District of Columbia, as well as water quality program staff from the Confederated Tribes of the Umatilla Indian Reservation, the Hoopa Valley Tribe, and the Kickapoo Tribe. The training workshop also included staff from EPA Headquarters and all 10 EPA Regions, a representative of the New England Interstate Water Pollution Control Commission (NEIWPCC), and two representatives of the Association of Clean Water Administrators (ACWA). A complete list of workshop participants, their affiliations, and contact information is provided in Appendix 2 of this report.

Tom Stiles, Kansas, began the opening remarks. Mr. Stiles stressed the need to *carpe diem* (“seize the day”), adding that the Vision allows a state to focus on what is most important, identify objectives for its program and how it will get there. In this instance, Mr. Stiles said upon reflection, perhaps the more appropriate charge would be *carpe onus* (“seize the load”), whether pollutant load, work load, or burden. Yet, he added, it is critical that onus not become onerous; the Vision is supposed to make the CWA 303(d) Program more effective and efficient. Mr. Stiles then proposed a charge of *carpe opus* (“seize the work”). He noted the need to have passion in this field for making a difference, explaining that this program is an opportunity to really make things happen. Mr. Stiles opined that “opus” is not just work, but an artistic composition; it is not just about developing more of the same TMDLs, but in producing plans that meet needs and have an effect ... it is about being innovative and using the right side of the brain. But opus is just the beginning, he said; *magnum opus* (“great work”) is that for which we strive – it is our goal, and this will be our greatest achievement.

Mr. Stiles proceeded to break down the training workshop agenda, explaining that prioritization is picking the battles, alternatives is choosing the weapons, and engagement is asking who is with us. He likened integration to the battle scene in *Braveheart*... to hold, hold, and then let loose with a unified effort. Mr. Stiles noted that assessment has become a bigger issue this year and that it has two parts: (1) a means of regularly identifying the work ahead, and (2) a means of demonstrating the difference that has been made by the work accomplished. Mr. Stiles described the breakout sessions as the pinnacle of the week, the opportunity to discuss with EPA the path ahead and map out that road.

Mr. Stiles concluded by emphasizing that, coming out of this week, it is time to start delivering a product. He asked that everyone seize the opportunities of the next few days and leave on Thursday with a plan of where his or her program is headed and how it will get there.

Jim Havard, EPA headquarters, then provided his opening remarks. He noted that he read the CWA 303(d) Program Vision before joining the Program as Acting Branch Chief and that he was very impressed and excited by it. Mr. Havard praised the Vision, adding that it is an excellent program management tool, like an ecosystem management approach, and a means of strategically using resources to protect water quality. With the Vision, he said, we are getting to results and implementation as quickly as possible while following the law; this is a fantastic opportunity for states to tell their story and set their priorities as they see necessary.

Mr. Havard stressed that this workshop offers an opportunity for dialogue, and that everyone should capitalize on that. He explained that EPA is still working on the guidance documents for the measures and integrated reports as well as on tools to help states, tribes, and territories determine their priorities, including the Recovery Potential Screening tool and the WATERSCAPES tool.

Mr. Havard concluded by thanking everyone for coming and stated that he looked forward to the conversations to follow.

Jeff Berckes, Iowa, closed out the welcome session by preparing participants for Thursday's discussion on communications. He explained that the session is designed to tackle real challenges in conveying aspects of the CWA 303(d) Program to the public, stakeholders, and staff of other programs. But, he added, the first step is to identify what issues this group has found challenging to explain, so that we know what is most important to address. He called for participants to submit their communication challenges by Wednesday.

To further elaborate on the concept, Mr. Berckes provided an example of how he presents the concept of a TMDL to a lay audience. He posted a slide of a mule hoisted into the air by the weight of the cargo on the cart it was pulling. Mr. Berckes explained that the mule could run around all day pulling a cart with a few boxes on it, but that there comes a tipping point at which the load on the cart is too much for the mule to do its job. He analogized this scenario to a lake – it can handle some pollution, but there is a tipping point at which too much pollution prevents the lake from functioning properly. Mr. Berckes added that the question is how many boxes is that tipping point, and that is the TMDL.

Session 1: Prioritization

This session featured one presentation, followed by plenary discussion. The intended outcomes of the first session were:

- Participants will learn what progress has been made by other states, tribes, and territories, as well as EPA and ACWA, in implementing CWA 303(d) Program responsibilities consistent with the Prioritization Goal.
- Participants will receive clarification on details regarding the Integrated Reporting memo.
- Participants will learn about examples of processes and factors used to establish priorities consistent with the Vision, and early experiences with them.
- Participants will learn about successful methods for engaging the public when developing and disseminating priorities.

Adam Schempp of ELI began the session with a brief review of the responses from the registration materials regarding the Prioritization Goal of the Vision. He noted that state, tribal, and territorial staff responded to the question “how far along is your jurisdiction in setting priority waters or watersheds” with everything from “complete” to “have not begun the process at this point.” Roughly one-third of respondents felt as though they were finished or nearly finished, with several more revising their respective lists of priority waters at that time. Roughly fifteen percent of respondents suggested that their jurisdiction had identified its approach to prioritization but had yet to fully identify priority waters, while one quarter of respondents wrote that they were in the process of identifying their approach. Only six respondents had not started or were just starting. Mr. Schempp also provided the compiled opinions of participants as to the level of progress that had been made to date on each of the milestones for the Prioritization Goal.

Jim Havard, EPA HQ: CWA 303(d) Program Vision – Prioritization Goal

Mr. Havard began his presentation by reviewing the details of the Prioritization Goal, particularly that state and territorial CWA 303(d) programs identify their priority watersheds or individual waterbodies for restoration and protection, in the context of the state or territory’s overall water quality goals, for the period of 2016 to 2022. He added that prioritization is intended to promote a more strategic use of resources and allow states and territories to tell their respective stories on what is most important regarding water quality. Mr. Havard also explained that the Prioritization Goal is the lynchpin of the Vision because it is the foundation for the other goals; it defines where and what is to be accomplished, and most of the other goals focus on how.

Mr. Havard then detailed the flexibility in the Prioritization Goal. He noted that there is not a prescriptive checklist of factors, other than statutory factors of the severity of pollution and uses, for setting priorities, leaving states and territories free to use the factor or combination of factors of its choosing. He emphasized that the rationale for prioritization will be specific to each state, tribe, and territory; it will reflect what is important to each of them, respectively. Mr. Havard also highlighted the flexibility in describing priorities, whether by geographic units, pollutants, designated uses, or

other means. Regardless, he added, these priorities eventually will need to be linked to a geographic address. He then provided a few examples to demonstrate the flexibility in setting state priorities.

Mr. Havard drew the connection between prioritization and the legal requirements of the CWA 303(d) Program. He explained that the long-term priorities serve as the framework for implementing CWA 303(d) Program responsibilities, identifying when and for what waters TMDLs, as well as alternative restoration or protection plans, are developed and implemented from 2016-2022. Mr. Havard added that prioritization does not change the requirements of the Program, including identifying impaired and threatened waters, listing those waters, ranking the priority of those waters, and developing TMDLs for those waters.

Mr. Havard clarified the distinction between the priority ranking of impaired waters required by the Clean Water Act and prioritization under the Vision. First, he said, the statutorily required priority ranking includes all listed waters, whereas prioritization under the Vision need not do so and may include waters that are not listed. Second, the statutorily required priority ranking is solely for the development of TMDLs, whereas prioritization under the Vision includes high priorities for TMDL development and may also include priorities for alternative restoration or protection approaches. Third, the statutorily required priority ranking must be undertaken biennially and include a TMDL development schedule for the subsequent two years, whereas prioritization under the Vision need only be done once, although it can be adjusted, and applies on a longer time horizon, 2016 to 2022. Fourth, prioritization under the Vision is not required, but it is the basis for the CWA 303(d) Program measure.

Mr. Havard quickly referenced the importance of the 2016 Integrated Report to prioritization. He explained that states and territories are to include or at least reference their respective long-term priorities, and their rationale for selecting those priorities, in their 2016 Integrated Report. He added that further detail could be included in referenced documents, recognizing that some jurisdictions have been creating stand-alone Vision documents. In addition, Mr. Havard emphasized that priorities are not expected to substantially change from 2016 to 2022, but that there will be flexibility under the measures to reflect adjustments to the priorities.

Mr. Havard also referenced the many tools that EPA has developed to help states, tribes, and territories in the prioritization process. He noted the Recovery Potential Screening (RPS) tool offers over 200 watershed indicators for the lower 48 states and already has been used by 22 states. He mentioned the progress of the Healthy Watersheds Program, including the National Healthy Watersheds Preliminary Assessment and a new grants program that will fund assessments and protection activities. He added that there has been an active effort to better integrate the Healthy Watersheds Program with the RPS tool. Mr. Havard also highlighted the WATERSCAPE tool, which is GIS-based and now final and operational for all fifty States, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. He

explained that previous data layers targeted drinking water, environmental justice, impaired waters, designated uses, impervious cover, incremental nutrient yield, and economic stress, but since last year's workshop, the development team has added data layers for discharges from point sources, habitat, CWA 319 grant activity, municipal separate storm sewer systems (MS4s), and Superfund and RCRA sites.

Mr. Havard concluded his presentation by showing how the prioritization process is linked to other programs, in order to achieve water quality. Starting with prioritization, he explained that the state or territory then will develop plans, whether TMDLs or alternative or protection plans, for those waters. Then will come the implementation of those plans, through CWA 319 projects, NPDES permits, and other methods; monitoring to determine improvement; and ideally meeting water quality standards.

Session 1 Plenary Discussion

A state participant opened the discussion by commenting that political and logistical factors make it difficult in her state to prioritize specific waters up to 2022. Mr. Havard acknowledged the challenge, noting that the list of long-term priority waters may change between now and 2022, but that an objective of the Vision was to have long-term priorities with staying power to define the focus of the jurisdiction's work. He added that this process should be viewed as an opportunity to articulate priorities based on water quality challenges and goals, and how well that is done will influence the engagement of the public and ultimately how much the priorities can weather changes in leadership.

Several other state participants added similar concerns, including staff reductions and the uncertainty of the future complexity of developing TMDLs and getting them approved, making the participants nervous about committing to develop plans for certain waters by 2022. One state participant suggested that a margin of safety be included in the commitment. An EPA headquarters participant responded that there are only three listing cycles between 2016 and 2022, and while it is a longer term than every two years, it is not a projection far into the future. A state participant responded that, for her state, projecting further than five years is impossible; there simply are too many variables at play.

Another state participant suggested that it is not the adherence to the prioritization rationale that is the concern over the long term as much as the identification of specific waters. She explained that bean counters only will care about what waters were prioritized, not their articulation or the story being told, and that this could undermine the intent and benefit of the Vision. She advocated for following the prioritization rationale over the six years, but prioritizing specific waters over a shorter period. She added that predicting two years in advance is easier than six years, especially when using a more dynamic prioritization scheme and one does not yet have all of the information to apply it. Mr. Havard noted that the goal is long-term priorities, even in a categorical way, and another EPA headquarters participant stressed the importance, for EPA, states, territories,

and tribes alike, of articulating what is happening so all are held accountable to the public.

A state participant supported this need for accountability, noting that it is how she secures funding from the legislature—without a goal, she has no staff. She suggested that everyone not be so afraid to fall short of the goal, and to be willing to tell a sad story, such as what happened to prevent a TMDL, to let people know what went wrong and get them on board. Another state participant expressed confusion over the fact that so many other participants are worried about being blamed for things beyond their control. He suggested that they narrow down the scope and tackle what they think they can. He added that, while not perfect, this is a far better approach to the Program than what preceded it. Yet another state participant differentiated the discussion into two views, micro and macro. The macro view, as he described it, is identifying a prioritization rationale, listing candidate waters, and selecting priority waters that the jurisdiction believes it can develop appropriate plans for by 2022. By contrast, his micro view is along the lines of bean counting—strict accountability for meeting the goals selected in 2016 by 2022, and fear of the ramifications for not doing so.

A state participant explained that the Vision was meant to reset the Program measure and address the shortcomings of pace, to allow programs to focus on what is most important to that state, territory, or tribe. He stressed that the Vision Goals cannot be treated as a pass/fail endeavor, that the consequences are minimal, equating them to those for tearing the tag off of a mattress. He suggested that everyone view the next six years as a beta test.

Another state participant expressed concern about the looming 2016 deadline to submit priorities, which she suggested should be approached leniently. Yet another state participant agreed, saying that he wants to do more stakeholder engagement before committing to priorities, but due to the short timeframe, he feels backed into a corner. Mr. Havard acknowledged that different jurisdictions are at different stages of the prioritization process, and he encouraged everyone to get done what they can by October of this year, to use the deadline as motivation.

A state participant questioned the potential consequence of states being compared to one another. An EPA headquarters participant responded by highlighting the importance of each jurisdiction's story; if each jurisdiction is addressing what is most important to it, that will reduce the likelihood of comparison.

A state participant asked about protection plans, approving of the concept but wondering how to do it and how to get credit for it. In response, Mr. Havard explained that protection plans are strategies to keep waters from becoming impaired, but that EPA has yet to develop guidance on their composition or procedures.

Key Points Raised:

- Consistent with the Vision, states, tribes, and territories are expected to identify their priority waters or watersheds for restoration and protection.

- Prioritization is intended to promote a more strategic use of resources and allow states and territories to tell their respective stories on what is most important regarding water quality and how implementation of CWA 303(d) Program responsibilities can support those overall goals.
- Engaging stakeholders and the public in the establishment of priorities is critical, and a clear articulation of the story that the state, tribe, or territory is trying to tell can increase the likelihood of their buy-in and the stability of the priorities through 2022.
- Flexibility and accountability are both important parts of prioritization, and the right balance is important.
- The flexibility to change the specific waters prioritized, and possibly the rationale for prioritizing, over the six year period is important to states, tribes, and territories as circumstances may change and warrant adjustments to the priorities.
- The new CWA 303(d) Program measures have flexibility to reflect changes in priorities.
- Prioritization does not set up a pass/fail scenario.
- Prioritization under the Vision is different from the priority ranking of impaired waters required by the CWA, although some waters likely will be prioritized for both purposes.

Session 2: Assessment

This session featured three presentations, followed by plenary discussion. Intended outcomes of the second session included:

- Participants will learn what progress has been made by other states, tribes, and territories, as well as EPA, in implementing CWA 303(d) Program responsibilities consistent with the Assessment Goal.
- Participants will learn about opportunities for improved coordination between monitoring and CWA 303(d) programs, at the EPA- and state-levels.
- Participants will learn potential designs for baseline and effectiveness monitoring plans.

(1) Traci Iott, Connecticut: The Results of the ACWA Survey

Ms. Iott began her presentation by noting that 48 states, many of them through multiple representatives, responded to the Association of Clean Water Administrators' (ACWA) questionnaire on assessment. She explained that over half of the respondents had responsibilities regarding assessment, the same being true for monitoring responsibilities and listing responsibilities, and nearly that percentage had responsibilities regarding TMDLs. She added that one of the objectives of the survey was to understand the groupings of programs; 21 different combinations were identified.

Ms. Iott said that the survey also was intended to identify the types of monitoring that data collection supports. To that end, she explained that roughly ninety percent of

data collected supports general monitoring, the same being true for baseline monitoring, and a little less than eighty percent of data collected supports trend monitoring. She added that roughly sixty percent of the data is used for either developing TMDLs, following up on activities in support of established TMDLs, or broadly evaluating stressors within the aquatic environment. Ms. Iott also noted that the results of the survey suggest that monitoring efforts focus much more on initial waterbody assessments than development of TMDLs or alternative restoration plans, and evaluation of implementation is a very minor consideration.

Ms. Iott shifted to the topic of inter-program collaboration, noting that it already is occurring in the majority of states in some form. She said that nearly sixty percent of states reported that staff from all groups meet annually to discuss data needs and coordinate data collection. Ms. Iott also shared that over seventy percent of states reported that staff from each group request assistance from other groups. She added that communication in any form is critical, since collaboration will not improve if the parties are not talking.

Ms. Iott also detailed how data is shared, the most prevalent method being databases. She noted that this does create reliance on and vulnerabilities via the IT department. Ms. Iott said that reports and websites also ranked high, with roughly eighty percent of respondents referencing their reliance on those methods.

Participants in the survey were asked what they believe to be the most significant barriers to collaboration, aside from staffing and funding. Ms. Iott noted that over sixty percent of respondents referenced competing priorities, an unsurprising result when monitoring programs often are trying to meet the needs of several other programs. She provided the example of monitoring in support of CWA 305(b) programs, which use probabilistic results and other data to evaluate the broader water quality picture within a state, as compared to the Vision's focus on specific waters. Ms. Iott suggested that EPA may be able to help with this challenge of competing priorities through inter-program coordination from the top.

Ms. Iott concluded by explaining how respondents perceived the potential impact of the Vision. She said that the most common response, by far, was that there would be no notable change in the setting of priorities or collection of data. Among the respondents who believe the Vision to have a notable impact, she added, the significant majority responded positively.

Ms. Iott characterized the results of the ACWA assessment survey as more positive than not, but that there is still work to be done.

(2) Eric Monschein, EPA HQ: Assessment Goal: Terminology & Perspectives

Mr. Monschein provided a detailed analysis of the Assessment Goal and its milestones. He mused that that he approached the review like an autopsy, but that the analogy fails because the goal is not dead; to the contrary, it is very much alive. Thus,

he changed the analogy to a “benevolent benign MRI.” Mr. Monschein started with the goal itself: “By 2020, States identify the extent of healthy and CWA Section 303(d) impaired waters in each State’s priority watersheds or waters through site-specific assessment.” Drawing from the accompanying text of the goal, he explained that “[t]he purpose of this Goal is to encourage comprehensive understanding of the water quality status of at least each State’s priority areas,” adding that “[a]s a general matter, targeted monitoring is expected to be the primary approach for accomplishing the comprehensive assessment of States’ priority areas.” Mr. Monschein also highlighted two of the goal’s milestones: “States develop plans to complete ‘baseline’ monitoring to gather needed data to assess pre-implementation conditions in priority areas” by 2018, and “States develop plans to complete ‘effectiveness’ monitoring to gather needed data to assess post-implementation conditions in priority areas,” also by 2018.

Mr. Monschein asked the audience what “comprehensive” monitoring means? Does it refer to baseline and effectiveness monitoring? If so, he added, does this mean that they both must be completed to achieve the Assessment Goal by 2020?

To begin to address these questions, Mr. Monschein provided working definitions for types of monitoring. He labeled “baseline” monitoring as that which is performed to allow initial or ongoing assessment of ambient site-specific conditions. He labeled “planning” monitoring, which is not explicit in the Vision, as that which is performed, if needed, to support development of planning documents. He labeled “effectiveness” monitoring as that which is performed to assess ambient site-specific conditions post implementation activities.

Mr. Monschein then addressed the Vision terms/concepts of “comprehensive understanding” and “comprehensive assessment.” He suggested that they are basically interchangeable terms (in the context of the Vision) and that they ultimately include “baseline,” “planning,” and “effectiveness monitoring in priority areas. Mr. Monschein added that striving toward all three types of monitoring likely means that states continue their existing monitoring protocols and assessment methodologies, unless new ones are warranted based on the priorities they select.

With this understanding, Mr. Monschein addressed the specific questions that he raised at the start of his presentation. Regarding the Assessment Goal, he explained, the monitoring that is to be completed by 2020 is baseline monitoring. Mr. Monschein also said that, although the third milestone explicitly mentions only “baseline” monitoring, states also should include “planning” monitoring under this milestone and that the monitoring plans only need to be developed, not implemented, by 2018. He added that baseline monitoring likely is complete or nearly complete for many states, whereas planning monitoring is a work in progress for many. Regarding the fourth milestone on “effectiveness” monitoring, Mr. Monschein clarified that plans only need to be developed, not implemented, by 2018, and that effectiveness monitoring is a work in progress for many states.

Mr. Monschein concluded his presentation by providing a status update for the other two milestones for the Assessment Goal: “States and EPA develop and distribute tools to support consistency in cycle-to-cycle tracking of water quality status” by 2016, and “States and EPA develop and publish approaches to ensure linkage between priority waters and assessment units, and how to roll up different State approaches into a National total” by 2018. He noted that progress is underway on both milestones through the ATTAINS redesign and catchment-based indexing.

(3) Susan Holdsworth, EPA HQ: Elements of a State Water Monitoring and Assessment Program

Ms. Holdsworth, Chief of the Monitoring Branch, focused her presentation on working with the Monitoring Program to support the Assessment Goal and its milestones. She began with a historical perspective to demonstrate their mutual and long-standing interest in improving coordination. One of the goals of the National Monitoring and Assessment Vision from 2002, she explained, was integrated monitoring programs that support decision making and meet Clean Water Act, Safe Drinking Water Act, and state objectives as well as generate data that are accessible and of documented quality, use strategic combinations of monitoring designs and assessment tools, and coordinate among monitoring partners.

Ms. Holdsworth described the elements of a state water monitoring and assessment program. She characterized a monitoring program strategy as a living document that describes how the state or territory will address the remaining program elements and includes a timeline for incremental progress and annual milestones in CWA Section 106 grants/PPAs. She added that the strategy covers all waters and all waterbody types, but that priority waters can be covered in special sections or throughout the strategy.

Ms. Holdsworth continued by detailing the high-level monitoring objectives: determining water quality status and trends, identifying impaired waters, identifying causes and sources of problems, implementing water management programs, and evaluating program effectiveness, as well as achieving any additional objectives of the state or territory. She suggested that those participants working on identifying priorities should start here and dig deep. She recommended thinking seriously about what questions need to be answered.

Ms. Holdsworth said that the next element, the monitoring design, is intended to support the objectives. She added that there are several types of monitoring designs, different ones to draw upon to address different questions and needs. Just as important as the designs, Ms. Holdsworth explained, are the indicators of water quality. She noted that some indicators are pollutant-specific and others are more comprehensive, with supplemental indicators used for a specific watershed or to follow up on a specific impairment.

Ms. Holdsworth highlighted the importance of quality assurance and how it improves a program's ability to collect samples at the right frequency and right locations. She also drew attention to data management and accessibility. She noted the different types of data that are used, including the significance of geospatial data for transparency, by visually demonstrating the what and where that is critical to connecting people to problems. Ms. Holdsworth stressed the need for accessibility, to be able to share information with other programs and organizations, which also improves the tracking of progress as well as changes in needs and priorities.

Ms. Holdsworth listed the remaining key elements of a monitoring program as data analysis/assessment, reporting, programmatic evaluation, and general support and infrastructure. Focusing on the last of these elements, she noted the importance of identifying what resources are being brought to the table to address the needs and the gaps that exist. She praised the results of the ACWA survey because they demonstrate that communication is occurring around data collection and its support of decision needs, and that many programs are involved in discussing what is necessary to make monitoring most effective.

Ms. Holdsworth concluded her presentation with detail as to how state and territorial monitoring programs can participate in priority setting. She highlighted their ability to access available data and information, identify implications of priority options on data gaps and monitoring activities, define monitoring objectives and approaches to support Vision priorities, and quantify resource needs for monitoring specific to the Vision. Ms. Holdsworth added that, if the state or territory is addressing priorities on a rotating basis, the monitoring program can help determine which basins to address first.

Ms. Holdsworth's parting suggestion was to take time to determine whether the baseline is sufficient, how to move forward with controls, and how to track effectiveness.

Session 2 Plenary Discussion

A state participant asked how to balance the pressure to assess all of the state's waters with the expectation of the CWA 303(d) Program Vision to focus on priority waters. He explained that, in his state, headwaters are becoming priorities, and the focus on these remote waters will detract from the monitoring effectiveness for other waters in the state. Ms. Holdsworth acknowledged the challenge, noting that it is important to recognize the give and take. She added that the objective is not for states to ignore other waters for the purpose of priority waters, but that there is good reason to focus more resources on priority waters. She suggested trying to keep the cost of both efforts low through efficiencies, such as using statistical surveys for whole-state coverage and site-specific assessments focused on effectiveness monitoring only at the right place and time after controls are implemented.

A state participant sought clarification on the expectations regarding effectiveness monitoring, specifically its timing. Mr. Monschein explained that the Vision does not explicitly identify when effectiveness monitoring needs to occur, and thus states and territories can decide what makes sense for them. He commented that EPA views the matter as a case-specific one, noting that frequent reviews will be logical for some waters and impairments, while longer intervals may be appropriate for others. Ms. Holdsworth added that which control activities have been implemented and how far along they are makes a difference as well.

Another participant detailed his state's approach, saying that they build the effectiveness monitoring into their rotating basin approach, reassessing the water the next time they are back in the basin. He stressed the value of building aspects of the Vision into existing program structures and appreciated the flexibility to do so. Yet another state participant expressed concern that her state does not have a rotating basin approach, so there is no clear approach to effectiveness monitoring. Ms. Holdsworth noted that many states are in a similar situation.

A state participant asked whether the working definition of "effectiveness" monitoring may be too limited because it assumes ambient monitoring. She suggested that ambient monitoring would be insufficient for her purposes, instead needing BMP effectiveness monitoring throughout the watershed in order to adequately apply adaptive management principles.

One state participant asked about the intersection between the Assessment Goal and the Prioritization Goal, and, specifically, about what happens when many of the priority waters are under-assessed or not assessed. He added: what happens if some of the waters are determined not to be impaired; could the priorities be changed; must a protection plan be developed? Mr. Monschein said that, from the survey results, it is not unusual for some priority areas to still need additional baseline monitoring. He explained that this is why the Assessment Goal is staggered, in a way that the timing can accommodate and recognize priorities where more baseline monitoring is needed.

A state participant identified an obstacle to effectiveness monitoring that she has been facing: the inability to know which BMPs have been installed where and whether they are being properly undertaken. Without knowing what is happening on the ground, she said, it is hard to know what is effective and what is not and how best to proceed. She asked the other participants whether they have had success in this regard. Several state participants had positive experiences to share. One state participant stressed the importance of the State Conservationist, noting that progress often is dependent on personalities. Several participants explained the agreements that they have with the Natural Resources Conservation Service (NRCS) (USDA Conservation Cooperator Agreements with States), some with limited permissions to reference the information and others simply with the opportunity to access the information. One state participant clarified that the agreement provides her department with the specific location of BMPs, adding that the collaboration has been very successful. Another state participant expressed the challenges in implementing, let alone establishing these agreements, and

she asked for EPA's assistance in building relationships with NRCS to make it easier. An EPA headquarters participant replied that one of her colleagues presently is working with NRCS and that she will pass along these ideas and requests.

Mr. Monschein summarized EPA's next steps from this session as: (1) states, tribes, and territories will continue the program coordination needed to develop baseline, planning, and effectiveness monitoring plans; (2) they will identify and share any technical or coordination support needed from EPA to develop those plans; (3) ELI will collect and share examples of NRCS MOUs explicitly mentioned during the session and other examples raised after the session; and (4) EPA headquarters will determine the extent to which it can play a role in facilitating such agreements in other states and territories.

Key Points Raised:

- Inter-program collaboration around water quality assessment already is occurring in some form in the majority of states.
- Competing priorities are a significant challenge when it comes to collaboration on assessment.
- The Monitoring Program's high-level objectives are to determine water quality status and trends, identify impaired waters, identify causes and sources of problems, implement water management programs, and evaluate program effectiveness, as well as achieve any additional objectives of the state or territory.
- The Assessment Goal refers to baseline monitoring, which is complete or nearly complete for many states, expecting completion for priority waters by 2020.
- Plans for "effectiveness" monitoring are expected to be developed, though not necessarily implemented, by 2018.
- State, tribal, and territorial program staff should take time to determine whether baseline monitoring data is sufficient, how to move forward with controls, and how to track effectiveness.
- Knowing the details of BMP installations is important for good effectiveness monitoring regarding nonpoint sources, but accessing this information can be difficult and often requires a good relationship with NRCS.

Session 3: Integration and Coordination

This session featured three presentations, followed by plenary discussion. Intended outcomes of the third session included:

- Participants will learn what progress has been made by other states, tribes, and territories, as well as EPA and ACWA, in implementing CWA 303(d) Program responsibilities consistent with the Integration Goal.
- Participants will learn about opportunities to link CWA 303(d) priorities with those of other programs, with a focus on CWA programs.
- Participants will learn about engagement efforts of other programs and the potential for integrated engagement.

Adam Schempp of ELI began the session with a brief review of the responses from the registration materials regarding the Integration Goal of the Vision. He noted that, in response to the question “how far along is your state in fostering effective integration across CWA programs, other statutory programs, and the water quality efforts of other federal departments and agencies to achieve water quality goals,” all participants explained that their respective jurisdictions are integrated with at least some programs or agencies on some matters. Over a third of respondents felt as though they had integrated particularly well with nearly all relevant programs and agencies, and over a third of respondents felt as though they had integrated particularly well with some of these entities but not others. Mr. Schempp also provided the compiled opinions of participants as to the level of progress that had been made to date on each of the milestones for the Integration Goal.

(1) Ruth Chemerys, EPA HQ: Brief Review of the Integration Goal

Ms. Chemerys began her presentation with a slide of the Integration Goal. She said that, as noted in the session on assessment, progress has been made, but there is a long way yet to go. She added that integration is going to have to be the way to do business, a mantra, not just a side objective.

Ms. Chemerys explained developments regarding integration that are occurring at EPA headquarters, focusing on those that are relevant to the CWA 303(d) Program. She noted that a great deal of effort is being placed on integration among the core CWA programs. She provided as examples the TMDL-permits workgroup, efforts to use CWA 319 plans as TMDL elements, and coordination with the Standards Program on policy and implementation, such as CWA 304(a) criteria.

Ms. Chemerys also highlighted cross-program efforts, including the joint memo from the Office of Water, Office of Solid Waste and Emergency Response, and Office of Enforcement and Compliance Assurance on coordination regarding sediment contamination issues, collaborative efforts on the Recovery Potential Screening and WATERSCAPE tools, and a number of data-sharing endeavors. Ms. Chemerys also detailed collaboration occurring across federal agencies, such as EPA’s work with USGS to help identify climate change impacts on various hydrological factors like flow, as well as the National Fish Habitat Partnership, which connects federal, state, and private entities to restore and protect fish-bearing waters.

(2) Cyd Curtis, EPA HQ: Updates on Integration from the CWA 319 Program

Ms. Curtis of the Nonpoint Source Control Branch began by recounting that new CWA 319 guidelines were finalized in 2013, and the Program began awarding grants under those guidelines last fiscal year. She noted that these guidelines include a strong emphasis on on-the-ground implementation.

Referencing the morning’s discussion, Ms. Curtis highlighted the importance of keeping in mind the recently updated nonpoint source management plans. These

plans, she explained, set the course for CWA 319 eligibility and a long-term strategy of prioritization as it relates to nonpoint sources at the state level. Ms. Curtis added that eighty percent of states have updated plans, and that EPA regions are working closely with the remaining states over the coming year. She suggested that this is a great time for the work of the CWA 303(d) Program and CWA 319 Program to be brought together.

Ms. Curtis explained that the CWA 319 Program has had many conversations about integration and setting priorities, including via ACWA calls and the nonpoint source meeting in Dallas last fall. She added that, from 2008 to 2013, states provided \$175 million for TMDL implementation, another \$50 million for TMDL development, and \$20 million for the development of TMDL implementation plans through the CWA 319 Program.

Building off of the prior session's discussion about NRCS, Ms. Curtis suggested forging relationships with USDA and NRCS, and in particular knowing the state technical committee, since that can be an important venue for information exchange and comparing priorities.

Ms. Curtis concluded her remarks by stressing the importance of measuring success. She explained that the CWA 319 Program intends to develop highlights reports on the Program, with a focus on agriculture, resource extraction, hydrologic modification, and urban stormwater.

(3) Jenny Molloy, EPA HQ; Cindy Lin, EPA R9; Tom Laverty, EPA HQ: Overview of CWA 303(d) Program Integration Efforts with NPDES

Ms. Molloy of the Office of Wastewater Management began the three-part presentation about integration between the CWA 303(d) and NPDES Programs by noting that the NPDES permit is a tried and true workhorse for the implementation of a wasteload allocation (WLA). She acknowledged that it is not a perfect tool, but that it is what is needed.

Ms. Molloy then explained the origin of the TMDL to permits integration workgroup, which began in January 2013. She noted that it emerged from the challenges that EPA regions and states were having in translating WLAs into WQBELS in NPDES permits. She added that the workgroup was comprised of staff from the NPDES Program (Water Permits Division), TMDL Program (Assessment and Watershed Protection Division), and the Office of General Counsel, as well as interested individuals from EPA regions, to find solutions for permit writers that do not generally require TMDL modifications and ensure the future development of "permit-friendly" TMDLs through improved collaborations among programs.

Ms. Molloy said that the workgroup found a general acknowledgement that TMDL and Permit writers need to identify opportunities for coordination early and often; fifteen specific challenges that permit writers experience when trying to interpret

WLAs and develop WQBELS; and a number of other “associated” issues such as data availability, calculation methodologies, process inefficiencies, and confusion over terms. Ms. Molloy listed specific TMDL-to-permits challenges: the TMDL does not include a WLA for a point source; the TMDL recognizes the point source, but includes the WLA as *de minimis*; the TMDL does not realistically distinguish among point sources and sets WLAs equivalent to each other; the permittee is meeting numeric criteria, so there is no development of a WLA for that specific pollutant of concern; the TMDL makes no provision for new and/or increased discharges; the TMDL is vague about the averaging period or maximums; the WLA is usually expressed in terms of mass, but the water quality standard is concentration-based, making assumptions unclear and translation difficult; the TMDL does not fully account for effluent variability; and the TMDL does not specify points of compliance or sets them for the receiving water rather than end-of-pipe.

Ms. Molloy explained the coordination issues between the TMDL and NPDES Program in three different categories. First, she said, is how to translate existing TMDLs into permits, particularly when they have some of the problems listed above. She added that the NPDES Program needs legally defensible, water quality effective solutions for establishing WQBELS and permit provisions, and that in some cases, the TMDLs simply will need to be re-done before permits can be issued. Ms. Molloy labeled the second category as developing permit-friendly TMDLs, effectively how to improve the product going forward. She noted that the key question is what do TMDL developers need to know so that they can write a set of WLAs for permit writers; recommendations need to be developed for this purpose. Ms. Molloy’s third category was permits for pre-TMDL impaired waters, focusing on opportunities for data collection and coordination.

Ms. Molloy concluded her presentation with a list of the workgroup’s efforts to date, including hosting a day-long workshop at the State Permit Writers Conference in 2013, creating the website “Permitting to Meet a TMDL,” a monthly forum with EPA regions, and ad hoc support for EPA regional efforts.

Ms. Lin presented EPA Region 9’s integration efforts regarding the NPDES and CWA 303(d) Programs. She noted that three offices—NPDES, CWA 319, and TMDL and standards—signed a memorandum of understanding on May 18, 2012 to enhance coordination and integration to promote permit-friendly TMDL development. Ms. Lin explained that the MOU arose out of misunderstanding between the offices. She said that all staff met together monthly to go over questions from the three offices, that it was useful for each office to hear the questions of the others, and that the group eventually developed a checklist of key questions that should be asked. For TMDL Program purposes, she added, are specific WLAs, load allocations (LAs), and compliance points clearly identified, and are the target date and milestones (short, medium, long term) for achieving water quality restoration identified? For purposes of NPDES implementation, she said, does the TMDL provide clearly defined and justified WLAs for each point source, as well as justify which point source(s) do not need a WLA? For CWA 319 Program implementation,

she noted, are the highest environmental and health priorities identified for implementation, and what about milestones, partners, and funding?

Ms. Lin said that they found it critical to verify for each TMDL, once developed, that WLAs and LAs could be implemented and that water quality restoration could be tracked. She added that concentrating on these issues changed how they did business and made the offices more cohesive. Ms. Lin also noted that they received a suggestion that permit-writers be asked to review draft TMDLs, and that TMDL developers be asked whether all relevant TMDLs are included in a permit.

Ms. Lin then listed several keys to developing a permit-friendly TMDL: address all point sources in the watershed; disaggregate WLAs as much as possible; clarify where and when WLAs apply; identify whether mass and/or concentration-based WQBELs will be needed; include WLA for future growth; consider unique issues with stormwater WLAs and WQBELs; and determine whether existing permit limits can be used as WLAs for some sources. Ms. Lin also provided several keys to approaching existing TMDLs when developing NPDES permits: check for TMDLs before writing or renewing a permit; address TMDLs that do not include a WLA for the NPDES permit; and translate WLAs into Wastewater NPDES Permit WQBELs.

Ms. Lin concluded her presentation with a list of common roadblocks that they have found: WLAs are not WQBELs; an implementation plan is not a compliance schedule; omitted WLAs for point sources; the use of *de minimis*; and expanding sources and future growth.

Mr. Lavery, Chief of the State and Regional Branch of the Office of Wastewater Management, then contributed his perspective on integration between the CWA 303(d) and NPDES Programs. He suggested that neither program would come close to achieving its respective goals under the CWA without more effective collaboration.

Mr. Lavery noted that the NPDES Program has grown substantially over the last forty years, from fewer than 100,000 point sources across the country to nearly 1,000,000. He explained that the Program was not designed to handle that many point sources, not to mention the increasing complexity of the categories of point sources, including pesticides, logging roads, vessels, and more. Mr. Lavery said that these new challenges, along with ongoing budget cuts, have led the NPDES Program to extensively review what it needs to change. He first noted the need to break down barriers, adding that the NPDES Program has four branches and many divisions that had become silos within the Program, and that they need to work more closely with other programs, such as standards and TMDLs. Second, Mr. Lavery stressed the need to attract and retain good staff. Third, he emphasized the role of partnerships in accomplishing anything under the CWA and mentioned the Program's efforts to involve partners at various levels in its decision-making.

Mr. Lavery then explained the NPDES Program's own issues with prioritizing, particularly with regard to its backlog of permits. He said that this has been a

longstanding challenge for the Program. Also a challenge, he added, is operating under a statute that is nearly unchanged for thirty years and leaves them without the necessary tools in some areas. Mr. Laverty concluded by noting that what they have faced over the last decade is not what they will face over the next decade, and the key will be to continue to adapt to those changes.

Session 3 Plenary Discussion:

A participant began the plenary discussion by noting that, in her state, the permitting group has been focusing on aggregating permits into general permits, and while that might help address the backlog problem, it makes putting a waterbody-specific permit limit into a general permit challenging. Mr. Laverty acknowledged that general permits have been a relief valve for the NPDES Program but that they do pose serious challenges for implementing water quality standards. Ms. Molloy added that it is possible to write a watershed-specific addendum in a general permit.

One state participant inquired about examples and implications of a permit effectively revising a TMDL. Ms. Molloy responded that they do not have examples, and they presently are reviewing the legal implications. Ms. Lin noted that this scenario has arisen a number of times in EPA Region 9, adding that they handle it by first modifying the TMDL and then modifying the permit. Another EPA regional participant explained that a state in his EPA Region has been piloting the use of the permitting process to provide notice that there is a proposed change in the wasteload allocation, potentially leading to modification of the TMDL. He added that the process has worked quite well thus far. Ms. Chemerys noted that EPA Headquarters has been working on a guidance document regarding revising and withdrawing TMDLs.

A state participant referenced the presentations of Ms. Lin and Ms. Molloy, specifically that both of them cited the notation of *de minimis* contributions in WLAs as posing a challenge to permitting, and asked them to elaborate. Ms. Lin explained that some TMDLs identify a point source but assign it no WLA because the agency believes the amount of the pollutant contributed to be insignificant. Ms. Molloy added that this statement raises a lot of questions for permit writers, particularly regarding the intent of the TMDL developer. The state participant asked whether it is possible to require TMDL developers to confirm the assumption that the *de minimis* point sources are not significant, and establish a baseline to affirm that they do not become significant. Ms. Molloy responded that the short answer is “yes,” sometimes requiring monitoring or elaboration on the *de minimis* characterization. Ms. Lin added that they did require more monitoring for the Sandy River TMDL. Another state participant noted that the *de minimis* question is a big one for them. He explained that when it is used in his state, they do not think that the point source is significant, not even measurable, but that they want to do additional sampling to confirm that.

Several participants provided their integration success stories. One state participant explained that a MS4 community in her state pulled together city staff, state DNR staff, a local watershed group, and others from the community for bimonthly meetings over

several years to plan and install green infrastructure in a huge downtown parking lot. She added that, by keeping the focus narrow and the goals small, the collaboration was effective and everyone brought something to the table. Another state participant noted that the CWA 319 and TMDL Programs have been combined in his state, which has allowed them to look at water quality impairments and improvements in a new way and focus more on the results than the numbers.

Two EPA regional participants focused on the interactions among personnel. One of them said that they have tried to knock down the silos by encouraging TMDL staff to walk across the hall and interact with NPDES staff. He added that the TMDL staff have helped draft MS4 permits. The other EPA regional participant highlighted the value of moving staff between programs, noting that she has held a variety of positions and has brought a strong understanding of the NPDES Program to the TMDL Program.

A state participant explained that, when they completed their prioritization last year, they showed the results to some of their assessment staff and received feedback. He added that when they reviewed the priorities this year, the assessment and monitoring groups were fully integrated into the process. As a result, he said, they are all on same page; it is all one approach. He also noted that they are working to bring the CWA 319 Program into the process, specifically so that CWA 303(d) priority waters will rank higher for CWA 319 funding. He stressed that the point is to integrate by function, not by organizational structure, with the benefit of integration efforts surviving staff turnover.

Another state participant explained that CWA 319 staff in her state have helped use the Recovery Potential Screening tool for both CWA 303(d) prioritization and CWA 319 purposes. She also noted that her staff has written water quality factsheets for every town in the state, to explain what stormwater is and how it impacts water quality, as a means of supporting MS4s. Yet another state participant shared an integration effort, this one between water quality assessment planning and funding from the CWA 319 Program. He said that, traditionally, CWA 319 grants sought projects to fund, but they have generated thought and interest ahead of time, and now projects seek money. He explained that they talked with staff of other state agencies and at the local level about going beyond identifying the problem to identifying solutions to the problem. He added that the projects to be funded now include specific references to the details in the assessment, and that they encourage people to talk with program representatives in advance about what needs to be done.

Key Points Raised:

- Integration, coordination, collaboration, and partnerships are not just a side objective; they are essential to effective CWA implementation.
- These efforts are occurring across CWA programs and across federal agencies, at the federal level and at the state level, and they are taking many different forms.
- Integrating by function, rather than by organizational structure, can help integration efforts survive staff turnover.
- Now is an opportune time for the work of the CWA 303(d) Program and CWA 319 Program to be brought together.

- Permit writers have had numerous problems translating TMDLs into permits, but communication between the two programs has made TMDLs more permit-friendly, and there is still significant opportunity for improvement.
- General permits have been a relief valve for the backlog of the NPDES Program, but putting a waterbody-specific permit limit into a general permit is challenging.
- Permit writers would like to see the concept of *de minimis* unpacked in TMDLs.

Session 4: Alternatives

This session consisted of one presentation, followed by plenary discussion. Intended outcomes of the fourth session included:

- Participants will learn about alternative restoration approaches consistent with the Vision.
- Participants will learn the distinction between alternatives under Category 5 and Category 4b.

Adam Schempp of ELI began the session with a brief review of the responses from the registration materials regarding the Alternatives Goal of the Vision. He noted that state, tribal, and territorial staff provided quite varied answers to the question “has your jurisdiction used (or will it likely use) TMDL alternatives to achieve water quality standards.” Nearly half of the respondents conveyed that they already are using alternatives to TMDLs, whether referencing Category 4b or 5R plans or identifying efforts not captured in the existing listing or measures structures. Roughly a third of respondents expressed an interest in using alternatives to TMDLs, but indicated that they have not yet done so. The remaining fifth of respondents suggested that they do not intend to use alternatives to TMDLs. Mr. Schempp also provided the compiled opinions of participants as to the level of progress that had been made to date on each of the milestones for the Alternatives Goal.

Menchu Martinez, EPA HQ: CWA 303(d) Program Vision – Alternatives

Ms. Martinez, EPA headquarters, began her presentation with the basics of what is meant by “alternatives” in the Vision. She explained that they are alternatives to TMDLs, and hence intended for impaired waters. She clarified that protection plans for healthy waters are different. Ms. Martinez detailed the critical aspects of an alternative as (1) a plan of actions; (2) pursued in the near term; and (3) that is, in sum, designed to attain water quality standards. She added that they are meant for circumstances in which other methods of meeting water quality standards may be more effective and faster than a TMDL, but that they do not relieve the statutory obligation to develop a TMDL unless water quality standards are met. As far as process, Ms. Martinez encouraged states and territories to talk with their EPA regions when determining the more effective tool to pursue in the near term to achieve water quality standards.

Ms. Martinez then explained the CWA 303(d) listing implications of alternative approaches. Because the alternative plan is expected to address the impairment more rapidly than a TMDL, she said, the listed water may be assigned lower priority for TMDL development, but TMDL development is not deferred indefinitely. Thus, she added, the statutory requirement to develop a TMDL remains and the water must stay on the CWA 303(d) list, otherwise known as Category 5. The exceptions, she added, are those alternative plans that qualify for Category 4b, in which case the water is not listed or is delisted. Ms. Martinez distinguished alternative plans that move a water to Category 4b from those that cause a water to remain in Category 5 in two key ways: (1) Category 4b requires sufficient demonstration that there are “other pollution control requirements” to meet water quality standards, and (2) EPA reviews and must approve an alternative 4b plan before a water may be moved to Category 4b. She added that no demonstration of “other pollution control requirements” is required for alternative plans for waters that will remain in Category 5, and that EPA’s review of the CWA 303(d) list is not affected by EPA’s review of alternative plans for waters that will remain in Category 5.

Ms. Martinez emphasized how critical buy-in is to the success of alternatives, the importance of stakeholder engagement, and transparency with the public about why an alternative is being used. She explained that, as a result, the main challenge when pursuing an alternative is the description of how the alternative will meet water quality standards and how it will do so more rapidly than a TMDL would.

Ms. Martinez clarified that there is no prescriptive checklist of components for an alternative plan. But, she noted, EPA has drafted a series of elements for states and territories to potentially consider when describing how the alternative is expected to meet water quality standards and how it will do so more rapidly than a TMDL. Ms. Martinez added that each alternative restoration approach is likely to be case-specific, much like TMDLs vary in degree of analysis depending on the complexity of the problem.

Ms. Martinez also clarified that EPA reviews alternative plans for measure purposes only, to determine whether they are designed to meet water quality standards, and hence whether they will be reported under the measure. She added that this review is separate from EPA review of the CWA 303(d) list. Ms. Martinez noted that EPA will work with the state or territory to continue to evaluate progress toward meeting water quality standards in each case, or whether to re-prioritize a water for TMDL development.

Ms. Martinez concluded her presentation by introducing Category 5-alt, a subcategory of Category 5. She explained that EPA created this national subcategory for listed waters with established alternative plans to provide transparency with the public, engage stakeholders, and ensure accountability. Ms. Martinez added that states and territories have discretion in the creation of subcategories as organizing tools in the Integrated Report, thus reporting waters under Category 5-alt is not required, merely an option.

Session 4 Plenary Discussion:

A state participant began the discussion by asking whether alternative plans under Category 5-alt and Category 4b will be reported under the new measures. Ms. Martinez answered yes, that under the measures, such plans, along with TMDLs, will be reported under the measure. Another state participant asked whether its Category 5R is equivalent to Category 5-alt, and is so, would his state need to change the title of the subcategory. Ms. Martinez responded that changing the name of the subcategory would not be necessary, and that that any plan for a water in Category 5R could be included in a Category 5-alt if the plan is in place and designed to meet water quality standards. She added that consistency in labeling is one of the benefits of a national subcategory, even if purely optional. That same state participant then asked whether a CWA 319 Program nine-element plan could be included in Category 5-alt, to which Ms. Martinez replied that it could be if the nine elements were sufficiently covered to show how water quality standards would be achieved.

Another state participant asked whether, by 2022, an alternative must have resulted in the meeting of water quality standards, or whether progress is sufficient. Ms. Martinez responded that progress may be sufficient, but to be mindful that the TMDL obligation remains. At some point a determination will need to be made as to whether the alternative approach will meet water quality standards more rapidly than a TMDL, and if not, to reprioritize the water for TMDL development. She added that the timing for such a decision will depend on the circumstances of each case and not be generalizable. Yet another state participant inquired as to the effect that an alternative approach might have on the eight-to-thirteen-year expectation for TMDL development. Ms. Martinez answered that the guidance used the term “generally,” after consideration of various factors. That being said, she added, one cannot tell at what exact point to determine to develop a TMDL; the circumstances, such as progress toward achieving water quality standards and public support, will help provide that answer.

One state participant asked how progress toward the success of alternative plans will be assessed. Ms. Martinez responded that this issue will be for the state or territory and the EPA region to determine. She suggested annual conversations about the waters being addressed through alternative approaches, and certainly to have conversations by 2022. Several EPA regional participants expressed enthusiasm for working with the states and territories on this issue: understanding the case-specific context, defining progress together, periodically reviewing the quality of the water, and collectively determining when to develop a TMDL if water quality standards are not being met.

A state participant asked what the incentive is to use an alternative approach, particularly if a watershed plan is being developed and a TMDL may need to be developed at a later time anyway. Another state participant answered that, in her state, watershed plans are not a big deal because they are short and do not require EPA approval. She explained that it became a financial issue for her—for some impairments, the problem could be addressed faster and with less cost through a straight-to-implementation plan guided by the CWA 319 Program’s nine elements and expenditures to implement the plan. She noted that she

developed guidance for straight-to-implementation plans in her state and that if water quality standards are not met within ten years, a TMDL must be developed (unless the impairment is for temperature because the trees take time to grow). She stated simply: it is cheaper clean water, faster.

Several other state participants provided their own answers for why they find alternative approaches attractive. One noted that the TMDL language can get in the way of implementation in some instances. Another said that, at times, TMDLs can harm existing relationships with the timber industry, and thus derail that stakeholder engagement. A third said that he views alternatives as superior to TMDLs in cases of impairments caused by nonpoint sources of pollution, at least until there are more regulatory authorities over nonpoint sources. A fourth clarified that states and territories do not use alternative approaches to avoid TMDLs; they use them because they believe they can fix the problem just as well without TMDLs. He added that a TMDL should always add value to solving the problem when used, otherwise it is just delaying the meeting of water quality standards.

Several state participants expressed confusion and concern over EPA's suggested elements of an alternative plan. Some noted that they likely would not be able to include all of those elements and that it amounted to a high bar. One state participant requested that EPA give the states and territories the benefit of the doubt, to allow them to try things during this six-year period. Ms. Martinez reiterated that the suggested elements are not a checklist and that the degree and nature to which any of the elements are addressed in the description of how the alternative plan will meet water quality standards more rapidly than a TMDL can and will vary. Another EPA headquarters participant noted that the elements are merely pieces that can help articulate a plan, that there is no expectation that all of them will be included in a plan.

A state participant expressed concern over the potential for the interpretation of these elements to change, particularly with staff turnover, that at some point the expectation may be to include all elements in a plan, at which point alternative plans may be more onerous than TMDLs. She explained that the critical detail is language. Several state participants then offered specific language changes regarding how to present the suggested elements for consideration.

Another state participant predicted that different regions would set different bars for agreeing with an alternative plan, and that a plan accepted in one place may not be accepted in another. He requested consistency across regions. Ms. Martinez replied that such specificity, while important, hinders the circumstantial flexibility that many states are requesting, not to mention giving the elements more of an appearance of being required.

A state participant suggested that people are too fixated on what receives credit. She said that it is important to know the watershed, figure out how to fix it, and implement that plan. If EPA says that it is not good enough for credit, she added, do it anyway. She explained that when she first started doing straight-to-implementation, the EPA region

did not agree with the approach, but she did it all the same, and now this group is talking about the opportunity to receive credit for it. She said that she is impressed that EPA wants to give credit for this work, but she encouraged everyone not to get caught up in the credit aspect of it, noting that it is the work that is key.

One state participant asked for clarification on the recent *Sierra Club* case. An EPA headquarters participant explained that the decision was from the U.S. District Court of the Western District of Washington and concerned the development of the Spokane River PCB TMDL. The EPA headquarters participant noted that this decision is relevant to the issue of alternatives, but that the facts of this case were highly unique. He added that this decision does emphasize that, as seen in the draft Integrated Reporting Guidance, an alternative approach is not replacing a TMDL. Rather, it is temporarily giving the water lower priority for TMDL development while another approach that is expected to achieve water quality standards more rapidly is pursued in the near term. A state participant noted that in his state, they use the term “interim alternatives” for the sake of clarity.

Key Points Raised:

- An “alternative” is a plan and/or set of actions pursued in the near term that in their totality are designed to attain water quality standards.
- Alternatives are meant for circumstances in which restoration methods other than a TMDL may be more effective in less time, achieving cheaper clean water faster.
- TMDLs will remain the most dominant program analytic and informational tool for addressing impaired waters.
- An alternative restoration plan does not eliminate the statutory requirement to develop a TMDL. It may obviate the need to develop a TMDL if the alternative is successful in meeting water quality standards. TMDL development is not to be deferred indefinitely.
- Waters for which alternative restoration plans have been developed remain in Category 5, unless they meet the requirements for Category 4b.
- States/territories and EPA regions should maintain a dialogue throughout the process: from deciding whether to use an alternative approach, to developing the plan, to defining and reviewing progress, to determining whether and when to develop a TMDL.
- EPA review of alternative restoration plans for the purposes of the program measure is separate from EPA review of the CWA 303(d) list.
- Do not overvalue what is reported under the program measure; what is important is to know the watershed, figure out how to fix it, and implement that plan.
- Stakeholder engagement and transparency with the public about why an alternative is being used are critical to its success.

Session 5: Updates on the Measures

This session featured one presentation, with opportunities for questions. Intended outcomes of the fifth session included:

- Participants will have a high level of comfort with the measures as a whole, as well as the computational guidance.
- Participants will understand their roles regarding the measures.
- Participants will be prepared to explain to colleagues in their offices what information EPA needs and how to prepare and transmit the information to EPA.
- Participants will understand how to use the information to communicate with the public.

Shera Reems, EPA HQ: Oh the Awesome Work We Will Now Be Able to Show - CWA 303(d) Measures “WQ-27 and WQ-28”

Ms. Reems began the session by explaining the purpose of the measures. She stressed the importance of accountability for federal agencies, and that it is the responsibility of the agency to communicate what is being done and why to Congress and the Office of Management and Budget. She added that these measures provide the basis for dialogue with the public and upper management as to why the work is important. Ms. Reems noted that better communication, through a story and visuals, can lead to greater support in a variety of ways, including financially.

Ms. Reems acknowledged the tension that can exist between this accountability and flexibility in application. She also noted that flexibility has its own practical limits, as some participants have sought a clearer trail to follow. In sum, she said, there are still improvements to be made. Ms. Reems explained that one of her objectives for the day was to help participants feel more comfortable with the measures’ text-heavy documents, in particular to understand that the system is designed to accommodate changes in priorities, and to be ready to start a dialogue with their respective EPA regions. She added that the new CWA 303(d) Program measures are no longer in a pilot phase; they are moving ahead.

Ms. Reems identified one of the communication challenges of the past being the difficulty of locating a TMDL on a map. An added complexity for a national reflection of the Program, she noted, is that different states use different mapping resolutions. As a result, Ms. Reems explained, the CWA 303(d) Program needed a new measurement method.

Ms. Reems noted that the NHDPlus catchment approach uses the state or territory’s original source data. She said that the process involves EPA relating flow lines to catchments, demonstrating how flow lines connect to the TMDL, and then using the original data to report back to the public. Ms. Reems explained that the NHDPlusV2 is the combination of the National Hydrography Dataset, the Watershed Boundary Dataset, and the National Elevation Dataset. She added that NHDPlusV2 catchments

effectively represent local drainage areas within a HUC-12 watershed. She said that EPA has identified catchments for the entire U.S., except for Alaska, and that they are working closely with Alaska to identify a solution.

Ms. Reems then addressed two common concerns. First, she demonstrated on a map how catchment boundaries relate to higher resolution hydrography by using an example where NHD had been updated from 1:100K to 1:24K. Second, she demonstrated how watershed-based priorities can translate to catchments for lakes impaired by upstream waters by dissolving the upstream catchments that feed the lake into a single drainage area to consider.

An EPA regional participant asked for the average number of catchments per HUC-12, to which Ms. Reems responded that there are approximately 2.6 million catchments and roughly 87,000 HUC-12s in the country. But, she added, an average is a little misleading because the answer for each HUC-12 can vary tremendously. Ms. Reems noted that the average size of a catchment is 1.5 square miles.

A state participant expressed concern over focusing only on catchments that intersect the stream segment at issue, as opposed to considering all catchments in the watershed. Ms. Reems said that this question is being discussed and that there is not a clear answer yet. She explained that, from an integrated reporting standpoint, plans are tied back to assessment units, so the answer depends on how the assessment units are defined. She suggested that states, tribes, and territories talk with EPA about how this may work for them and ensure that the correct areas are being captured.

Along similar lines, an EPA regional participant asked whether the universe for an impaired water is the immediate watershed or the entire contributing upstream watershed. Another EPA regional participant suggested that the answer highly depends on the state or territory's approach to each impairment. A state participant added that the cause of an impairment can be beyond the HUC-12 in which the impairment occurs. Ms. Reems acknowledged that it often is hard to know what areas are contributing to the problem at the outset. Another state participant sought clarification on this point: what should be the priority area for a lake impairment when it is unclear whether and which source streams are contributing to the problem, and what happens later if the assumption is incorrect? Ms. Reems answered that the priority area can be just the lake, but the state can include more area if it chooses to do so. She said that this decision will be case-by-case and is worthy of a conversation with the EPA region. Ms. Reems added that the area covered by a TMDL may not include all of the sources and may not cover all of the relevant restoration and protection efforts; they are all different questions and different ways of communicating where the plans are being addressed. She added that EPA simply is trying to reflect what the states and territories are doing as accurately as possible.

A state participant noted that she does not anticipate having the measures and catchments drive her work, that she will continue developing TMDLs at the HUC-8 level. Ms. Reems built on this comment, expressing concern that participants are

focusing too much on EPA headquarters' use of catchments to talk about the measures. The task of the states, tribes, and territories, she added, is to write plans and make things happen on the ground.

Another state participant suggested that the most important aspect of this structure is how information will be communicated to the public. He said that there is an important difference between what is tracked and what is communicated to the public; for example, addressing the entire watershed of a large river all at once is nearly impossible, and therefore the effort should not be conveyed in that way.

Yet another state participant inquired as to when the period of asking questions about the catchments would occur. Ms. Reems replied that she would like to have that conversation now, adding that she hopes to receive many emails after this training workshop.

Ms. Reems then resumed her presentation, explaining the WQ-27 measure. She clarified that "WQ-27" is an EPA term denoting the measure that tracks "plans in place" to address the long-term priorities of states and territories. She also said that the priorities used will be those defined by the states and territories, whether in the form of assessment units, watersheds, ecoregions, or basins; by pollutants; or by designated uses. Ms. Reems added that "plans" include TMDLs, alternative restoration plans, and protection plans. She noted that a state or territory need not use all of these tools and that the measure merely reflects its objectives and efforts. Regarding flexibility, she mentioned that EPA intends to have an "open season" once a year for changes to priorities.

Ms. Reems said that the goal is to have "plans in place" for all priority waters by 2022. She suggested that participants not worry now about the expectation, but rather focus on identifying their priorities and developing plans for those waters. Ms. Reems noted that EPA is seeking the help of states, tribes, and territories to tell the CWA 303(d) Program's story by the end of the year, and for that it is important to have priorities on paper.

Ms. Reems provided case studies, for demonstration purposes only, of the application of the WQ-27 measure in Kansas and Montana. She said that Montana prioritizes by assessment unit based on the cause of impairment. She added that the demonstration uses the state's 2014 integrated reporting cycle geospatial information. Ms. Reems displayed several maps of the state, zooming in on a few prioritized assessment units. She then related the assessment units to catchments. Through this method, she noted, the state's universe, otherwise known as the total prioritized area, is 1,380,887 acres, and none of those priorities presently have all plans in place.

Ms. Reems then turned to the example of Kansas, which prioritizes HUC-12s with nutrient impairments. She explained that EPA interpreted the information provided by the state as assessment units with phosphorus or nitrate impairments. As in the case of Montana, she said, the demonstration used Kansas' 2014 integrated reporting cycle

geospatial information. Again, Ms. Reems displayed several maps of the state, zooming in on a few prioritized assessment units and relating the assessment units to catchments. From this information, she noted, they determined the state's universe. Unlike Montana, Kansas already has established plans for several of its priority waters. Ms. Reems said that they identified the catchments related to those plans and then determined the baseline area from the sum of the area of priorities fully addressed by plans in place.

Ms. Reems also covered the details of the WQ-28 measure. She explained that the measure tracks not only "plans in place," but also progress towards "plans in place," both within and outside of priorities. As with WQ-27, she added, "plans" include TMDLs, alternative restoration plans, and protection plans. Unlike WQ-27, she noted, WQ-28 uses a weighted approach to measurement, since it accounts for so many things at once, and the baseline is considered rolling. Ms. Reems explained that the WQ-28 measure does not have a target or commitments associated with it. She added that reporting on progress occurs at the end of each fiscal year, and the universe and baseline are updated with each new Integrated Report.

Ms. Reems again referenced Kansas and Montana for demonstration purposes. She noted that the universe for the WQ-28 measure always is the area within the state that is identified as impaired on the state's Integrated Report, including waters in Categories 5, 4a, and 4b, as well as other waters for which the states have determined protection plans will be developed. Again, for Kansas and Montana, she added, the 2014 integrated reporting cycle geospatial information was used. For both states, Ms. Reems again displayed several maps, zooming in on a few assessment units and relating the assessment units to catchments. For the baseline, she noted that no state or territory will be at zero, as they will have TMDLs developed and possibly other plans in progress or in place. Ms. Reems indicated that the Montana WQ-28 baseline was 13.69% of the state's WQ-28 universe, and the Kansas WQ-28 baseline was 25.11% of the state's WQ-28 universe. She noted that EPA will work with each state and territory to accurately reflect the areas for which plans are in place and in progress.

A state participant noted his approval of the process but suggested adding caveats or warnings to discourage inter-state comparisons and the drawing of incorrect conclusions. Ms. Reems said that the potential for comparisons is an issue with which they have been struggling, and that unfortunately caveats do not always get carried with the message. She asked that participants provide her suggestions for and assistance during the public outreach portion of this effort.

Ms. Reems concluded her presentation by focusing on the timeline for reporting on the measures. For the WQ-27 measure, she asked that states and territories submit the data for their "draft" long-term priorities by the end of July, but the sooner the better. She said that EPA then will calculate the universe and baseline and work with the states and territories to QA the results, trying to conclude that process by September. Ms. Reems asked states and territories to work through scenarios for developing

“draft commitments” by September and to submit “draft final” FY2016 commitments by late September or early October. She explained that EPA regions then would enter approved TMDLs into the National TMDL Tracking System between October 1 and September 30, 2016. Through the spring of 2016, Ms. Reems added, EPA will work with states and territories to design, build, and test the data entry tool for alternative restoration plans and protection plans. On April 1, 2016, she noted, states and territories are scheduled to submit their 2016 Integrated Reports. Also in April 2016, she commented, states and territories are to inform EPA if adjustments should be made to their WQ-27 universe, baseline, and “draft final” commitments. In such a case, Ms. Reems added, the state or territory will work with EPA to modify the WQ-27 information and then submit adjustments in May 2016. Finally, she said, in October 2016, EPA will calculate end-of-year results based on the plans in place that were entered into ATTAINS by September 30, 2016, and EPA will coordinate with states and territories to confirm that the calculations and end-of-year results are correct.

Ms. Reems also detailed the timeline for the WQ-28 measure. She explained that EPA will calculate each state and territory’s universe and baseline using the most recent Integrated Report data available in the ATTAINS database. She added that states and territories will need to inform EPA of any waters for which it will develop protection plans. Ms. Reems said that EPA hopes to work early and often with states and territories to QA those universe and baseline results. She noted that since WQ-28 does not include commitments, there is more time to determine the universe and baseline, up to July 2016. Like WQ-27, however, EPA regions will enter approved TMDLs into the National TMDL Tracking System between October 1 and September 30, 2016, and EPA will work with states and territories to design, build, and test the data entry tool for alternative restoration plans and protection plans through the spring of 2016.

A state participant asked whether the April adjustment period for priorities will be flexible. Ms. Reems answer that it is not, but that the next “open season” would occur six months later, at the beginning of FY2017. An EPA regional participant then asked how the process will play out for states not intending to use alternative restoration or protection plans. Ms. Reems explained that the process would not be much different for them; they would not be committing to the development of alternative restoration or protection plans, only to developing TMDLs to address their priorities. She added that no one will be penalized for not pursuing alternatives; the dominant tool of the CWA 303(d) Program still is the TMDL.

Key Points Raised:

- WQ-27 is the measure that reports “plans in place” to address the long-term priorities of states and territories.
- WQ-28 is the measure that reports “plans in place” and progress towards “plans in place” within and outside of priorities.
- There is a tension between accountability and flexibility, and there is a clear need for both.

- The measures provide the accountability necessary for federal agencies, as well as a basis for dialogue with the public and management as to why the work is important.
- The CWA 303(d) Program needed a new visual measurement method because different states use different mapping resolutions.
- The use of NHDPlus catchments provides EPA with a common “unit of measure” across states, tribes, and territories and allows EPA to automate the calculation of the measures.
- EPA will undertake most of the tasks associated with reporting progress under the measures, attempting to make the process as easy as possible for the states and territories.
- EPA will have an “open season” to change priorities; it is anticipated that this would occur each fiscal year, but this has yet to be worked out with EPA regions and states.

Session 6: ATTAINS Redesign

This session featured one presentation, with opportunities for questions. Intended outcomes of the sixth session included:

- Participants will learn what changes are being made to the ATTAINS database.
- Participants will learn the significance of the ATTAINS redesign, particularly in light of its relationship to the new measures.
- Participants will learn how to better use the ATTAINS database to engage their management and the public in their work.

Shera Reems, EPA HQ: Bringing It All Together: ATTAINS Redesign and CWA 303(d) Measures “WQ-27 and WQ-28”

Ms. Reems started her presentation by providing an overview of the data model. She explained that all plans, whether TMDLs, alternative restoration plans, or protection plans, are tied back to assessment units. Those assessment units, she continued, are then cross-walked with catchments, and EPA works with the states and territories to ensure that the geographic areas covered by the plans are accurately reflected, as they will be used for purposes of display.

With regard to process, Ms. Reems said, the first step is the setting of priorities. She noted that the prioritization process likely includes a document with the waters listed in tabular fashion and a map with those waters geospatially identified. She added that this information is then used to identify the applicable catchments, and then all three documents are placed into the ATTAINS database.

Ms. Reems described the second step as the defining of assessment units. She explained that EPA will use the state or territory’s most recent Integrated Report data available in ATTAINS to identify which waters are meeting water quality standards and which are not, and then run the information through the catchment-relationship

process. She noted that the spreadsheet of assessment unit data, the map of assessment units, and the catchment map then are placed into the ATTAINS database.

The third step, Ms. Reems said, is putting the plans in place. Once a plan is developed, she explained, EPA will use it and any geographic information regarding the application of the plan to identify the relationship to catchments. She added that the plan, the catchment map, and geospatial data from the plan (if available) then are placed into the ATTAINS database.

Ms. Reems noted that the final step of the process is the automated calculation of the measure. For purposes of the WQ-27 measure, she said, the relationship of priorities to catchments (in acres) serves as the denominator, and the relationship of plans to catchments (in acres) serves as the numerator.

Ms. Reems identified a current challenge to this process being the lack of a mechanism for entering alternative restoration plans and protection plans into the ATTAINS database, an undertaking that will be part of the ATTAINS Redesign effort. She noted that TMDLs will continue to be entered via the National TMDL Tracking System, often by EPA regions, although some states have expressed interest in entering the TMDLs themselves. Ms. Reems also highlighted the different data elements needed for different types of plans: TMDLs require data on the pollutant, assessment unit, causes addressed, WLA and LA, and NPDES permits; alternative restoration plans require data on the assessment unit and causes addressed; and protection plans require data only on the assessment unit. Ms. Reems added that, since the WQ-28 measure includes actions in progress, states and territories may enter this information, as long as it includes data on the assessment unit and causes addressed.

An EPA regional participant asked why data regarding the pollutant is not sought for alternative restoration plans. Ms. Reems replied that not all waters on CWA 303(d) lists are impaired by a pollutant. She added that it would be nice to have the alternative be linked back to a pollutant, but at least it must be linked back to a cause.

A state participant asked for examples of the geospatial data being referenced. Ms. Reems responded that Integrated Reports contain a significant amount of the geospatial information that they will need, adding that for plans, GIS data is very useful. Another EPA headquarters participant noted that GIS data is included in many TMDLs, and where it is not, EPA has set aside resources for that purpose.

A state participant asked how EPA will handle instances where the assessment unit and catchment do not align perfectly. Ms. Reems acknowledged that most assessment units will cross multiple catchments, but that they have incorporated that factor into the tool. Another EPA headquarters participant explained that EPA has set thresholds to guide when to include and not include catchments, and that the process has worked quite well.

Ms. Reems resumed her presentation with an update on proposed changes to other EPA measures. When talking about implementation, she explained, the measures at issue are SP-10 and SP-11. She noted that these measures will remain as they are for the next few years because any changes would need to be part of the next strategic plan for 2018. But, she added, EPA soon will be engaging states and territories about potential changes, particularly how to use catchments to report on an area through these measures as well.

In conclusion, Ms. Reems noted that EPA does not have all of the pieces in place or all of the answers, but the tools for automating the calculations for the WQ-27 and WQ-28 measures are almost ready. Ms. Reems reiterated that the data entry tool for TMDLs already is in place, as the existing National TMDL Tracking System, but the data entry tool for alternative restoration and protection plans is yet to be designed. She noted that discussions regarding tools for EPA regions and states and territories to interact with information being used to calculate the measures will begin this summer, and discussions regarding the web interface for the public to “see” the measures will begin in FY2016.

Ms. Reems charged the participants with outlining priorities by July so that EPA can start preparing visuals. She added that EPA then will work with states and territories to calculate the WQ-27 universe and baseline and, through September, discuss and finalize commitments. Ms. Reems also noted that EPA will form a team, including staff from EPA headquarters, EPA regions, and states and territories, to design the new system.

A state participant asked what the consequences to the process may be of her state not having yet completed its 2014 Integrated Report. Ms. Reems said that many states are in a similar position, and that the effects on the measures process will not be significant as priorities do not have to be tied to the Integrated Report. Still, she added, it is important to get Integrated Reports in on time. The state participant characterized the challenge as a workload issue, that her state would not further delay its Integrated Report in order to prepare this other information, and the staff at the agency is just too small to do both. Ms. Reems replied that the amount of work needed will depend on the data available and how the state or territory is setting priorities. She added that the first step is a call with EPA.

Key Points Raised:

- To calculate the WQ-27 and WQ-28 measures, EPA will need to have in the ATTAINS database a list of priorities, the most recent Integrated Report, geospatial information, and all plans.
- EPA presently lacks a mechanism for entering alternative restoration plans and protection plans into the ATTAINS database, but discussions with states and territories regarding this issue will begin this summer.
- TMDLs will continue to be entered into the ATTAINS database via the National TMDL Tracking System.

- Much of the process for updating the ATTAINS database and calculating the WQ-27 and WQ-28 measures will be done by EPA; the amount of work for states and territories will depend on how they set their priorities and data availability.
- The SP-10 and SP-11 measures will remain as they are for the next few years, but EPA soon will be engaging states and territories about potential changes to them.

Session 7: Breakouts by Region

This two-part breakout session consisted of small group discussions. Intended outcomes of the seventh session included:

- Participants will learn the steps in the automated process of deriving the universe and baseline from priorities.
- Participants will better understand the priorities, challenges, and views of others in their respective regions.

This session had two distinct purposes: (1) to provide participants a tailored tutorial and Q&A period regarding reporting under the new measures, and (2) to provide participants an opportunity to discuss with those in their EPA Region the opportunities and challenges that they foresee in implementing CWA 303(d) Program responsibilities consistent with the Vision. As a result, half of the regional groups (consisting of state as well as tribal or territorial participants from the EPA region, in addition to EPA regional and headquarters staff) met independently for the first hour to cover the latter objective. At the same time, the other half of the regional groups were paired together for a tutorial by an EPA headquarters representative about the new measures. For the second hour, the groups switched.

Sessions 8: Report Back and Discussion

This session featured two plenary discussions. The intended outcome of the eighth session was:

- Participants will receive answers to their most pressing questions and discuss key outstanding issues.

Ms. Reems began the session by sharing the next steps that she envisions for the measures. First, she said that they plan to work with ACWA to hold webinars, likely one on measures and a separate one on NHDPlus, to provide all interested state, tribal, and territorial staff with the information presented today. She added that the presentations from the morning would be available on ELI's website as well. Second, Ms. Reems explained that they intend to use the feedback that they have received from this workshop to improve the tools and process. She added that the indexing tool will accept polygons. Over the longer term, Ms. Reems noted, they will get a group together to design an interface for the mapping component. She stressed that their objective is to accurately reflect all of the great work that is being done by states, tribes, and territories. Third, Ms. Reems said that they will continue to improve the articulation of terminology, and she

requested continued input from the participants as to which terms need more clarification and in what ways.

Ms. Reems said that many participants expressed concern about meeting long-term priorities. She reiterated that the purposes of those priorities are to focus resources, to tell the story of what needs to be done, and to provide a means of communicating accomplishments to the public and Congress. Ms. Reems acknowledged that priorities may change and explained that the process has been designed to accommodate any change.

Mr. Havard and Ms. Martinez then addressed and discussed the outstanding questions arising from the breakout sessions. Many of the questions were quite specific, seeking clarification on points made earlier in the training workshop and inquiring as to how to apply the approaches to certain scenarios. The conversation covered alternatives and Category 5-alt, prioritization, TMDLs, and more.

In response to a question, Mr. Havard noted that EPA headquarters will try to remove any suggestion that aspects of Vision implementation are prescriptive. Responding to a different question, Ms. Martinez detailed another of EPA headquarters' next steps: coordinating with CWA 319 Program staff to avoid unnecessary double review of CWA 319 plans that are intended to be counted in the measure as an alternative.

Answering a question about the timeline for submitting priorities, Mr. Havard asked that participants do what they can to provide draft priorities by July. He reiterated that those priorities are flexible, so what is submitted this year is not set in stone. One question sought examples of prioritization from other states, tribes, and territories, prompting many participants to recount their experiences.

A couple of questions arose regarding boundaries. Mr. Havard said that, for inter-state efforts, the work done in a state will count for that state, but what will be reported under the measure is limited to what occurs within the state boundaries. Responding to a question about waterbodies shared by states and tribes, he stressed that communication between the two governments is critical, adding that there has been significant work on a new development of Treatment in the Same Manner as a State rule for CWA 303(d). When asked how tribes fit in under the Vision, Mr. Havard said that the Vision presently does not expect specific action by tribes, but that they are welcome and encouraged to participate in all aspects of it.

Session 9: Engagement

This session featured a plenary discussion. Intended outcomes of the ninth session included:

- Participants will learn what progress has been made by other states, tribes, and territories, as well as EPA, in implementing CWA 303(d) Program responsibilities consistent with the Engagement Goal.

- Participants will learn what engagement processes have been successful and unsuccessful across the country.

Adam Schempp of ELI began the session with a brief review of the responses from the registration materials regarding the Engagement Goal of the Vision. He noted that state, tribal, and territorial staff answered the question “how far along is your state in engaging stakeholders and the public, relative to where you think it could or should be” with everything from an extensive list of engagement activities to statements that they have yet to start engaging people in the Vision. Over half of the respondents suggested that they have some programs or methods for engaging stakeholders and/or the public, and a few more respondents referenced extensive outreach efforts. Roughly thirty percent of respondents indicated that their program’s engagement with stakeholders and the public has been quite limited compared to where it could be and that they are just getting started with regard to the Vision. Mr. Schempp also provided the compiled opinions of participants as to the level of progress that had been made to date on each of the milestones for the Engagement Goal.

Session 9 Plenary Discussion:

Many state participants offered examples of successful methods of engaging stakeholders and the public. One state participant emphasized the importance of involving the public early in the process, in this case the prioritization process. He said that kickoff meetings to explain the formula for prioritizing and identifying the initial waterbodies prioritized have proven to be quite useful. He added that watershed groups and other organizations can be very helpful in generating attendance at meetings. Another state participant echoed these sentiments, noting that the Vision is a great opportunity to educate stakeholders and the public and get them involved. He also stressed the value of finding easy points of agreement at the outset, explaining that the consensus can keep people together through the more challenging issues.

One participant explained that the majority of impairments occur in the rural parts of his state and that a critical component of their outreach has been actually being present in those watersheds, that the relationships matter, as does being visible. Another state participant reiterated the value of closely working with the public—in her case, collaborating with watershed groups and even helping them find grant opportunities to implement projects.

The discussion also covered the importance of connecting water quality issues to uses of the water, such as recreation and drinking water supplies. One participant noted that what people care about is outcomes. Another participant emphasized the role not just of water uses, but potential threats to them, explaining that citizen concerns about oil development in his state has increased public participation in water quality processes.

A state participant said that she has had great success communicating with the public via online resources. She provided examples, including updates on shellfish bed closings and an animation connecting those occurrences with storm events, which helped to resolve a

debate over the causes of the shellfish bed closings by demonstrating that septic systems were not the key problem. She stressed the importance of regularly providing new information on the website, to keep giving people more to come back for, ideally providing real-time information and updates on implementation progress. Another state participant noted the visual aids that she uses to show the effects of large storm events on downstream water quality. Yet another state participant said that she could benefit significantly from side-by-side videos of fish in water with turbidity and fish in water without it.

Several state participants noted the success that they have had with outreach efforts. One participant explained that a city in her state has developed educational videos, including one on nutrient pollution using rubber ducks – at first a narrow view of a few rubber ducks in the river, and then zooming out to show thousands of rubber ducks going to the ocean. Another participant said that his state has been creating various products, including a fake pharmaceutical add for “restless tilling syndrome.” Yet another state participant mentioned the positive reactions to the “Keep the Rio Grand-e” commercials and “scoop the poop” bumper stickers as part of the *E.coli* campaigns in her state.

Participants also discussed the use of analogies to convey concepts. One state participant said that he likens water quality protection and restoration to healthcare; he wears a white coat, talks about checkups, and suggests that TMDLs are like heart surgery. He added that there are a range of problems and solutions, and, as with healthcare, the most aggressive solution may not be the most appropriate one at the start. Another state participant noted that a university professor with whom she works likens TMDLs to a prescription of donuts: one donut is fine, but too many gets you sick.

One state participant said that they have been conducting a public survey to measure public attitudes toward water versus other issues, so as to establish a baseline from which to compare the effects of public engagement. Another participant explained that water was rated as the top environmental concern of people in her state, a fact that her program uses often when communicating with the legislature.

Key Points Raised:

- Involving the public early can improve the quality and duration of engagement.
- Finding easy points of agreement at the outset can keep people together through the more challenging issues.
- Being present on the ground and building relationships with the public can be critical to successful engagement.
- A regularly updated website with visual aids, videos, updates on implementation progress, and real-time information can be an effective outreach tool.
- The public connects to water best through how they use it, so water quality problems should be explained through the impacts that they have on uses of water where possible.
- Analogies can be a good way to communicate complex water quality issues and even the roles of the CWA 303(d) Program.

Session 10: Communication

This session featured in-room breakout discussions and a report-back period. The intended outcome of the tenth session was:

- Participants will learn new ways of conveying CWA 303(d) Program concepts and issues to the public, stakeholders, and other programs and agencies.

This session began by dividing the participants into eight randomly assigned breakout groups. Each group was assigned a leader and given a discrete aspect of the CWA 303(d) Program that is difficult to convey briefly and comprehensively. In their twenty minutes as a group, the participants were asked to identify methods of overcoming that communication challenge. A speaker from each group then summarized the results of the discussion and invited input from other participants.

Group 1 was asked how the problem of bacteria and *E.coli* can best be conveyed to the public. Members of the group suggested focusing on what matters to the public, such as whether it is safe to swim, rather than on the bacteria levels. One participant described the website that his state has constructed to inform people about whether it is safe to swim at a specific beach, noting that it also provides a letter grade (A to F) tied to human health risk. In addition, members of the group recommended correlating risks to kids or dogs, not just for *E.coli* but for other pathogens and viruses as well. The group highlighted the importance of using multiple forms of communication, not just a website, but apps, Facebook, and other social media platforms. They said that these methods of communication can help with collecting data as well as disseminating information. A participant from another group mentioned that her state has developed an app that informs people whether it is safe to recreate on the Ohio River.

Group 2 was asked how the concept of nutrient impairment can best be communicated to the public. The members of the group acknowledged the challenge of conveying this concept as the fact that nutrients are a necessary component of a functional riparian ecosystem, but when there is too much, there is a problem. The group had several suggestions for explanatory techniques: “nutrient over-enrichment,” “too much of a good thing is a bad thing,” a reference back to the donut analogy, and “how green is too green?” The group also suggested linking chlorophyll-a to aesthetics and fishing use. One state participant noted that he has found success analogizing the issue to a diet, how it is important to watch how much is in the system and be aware of the health impacts of excess.

Group 3 was asked how the concept of TMDLs can best be communicated to the public. The members of the group stressed the importance of knowing the audience, the local history, and the types of environmental issues that the community recently faced. They added that it is useful to understand the local perception of the sources and the problem, to address primary concerns and dispel false assumptions quickly. The group also emphasized the need to understand whether the issues are policy-based, technical, emotional, etc. A state participant suggested requesting help, explaining that people are very willing to lend a hand and give a kind word if help is sought. Another state

participant highlighted the value of internal communication, recounting an instance in which TMDL developers did not know that a new wastewater treatment plant recently had been funded. In conclusion, the members of the group noted that the use of the analogy “pollution budget” or “pollution diet” often is better received by the public than the term TMDL.

Group 4 was asked how to communicate the concepts of water quality and impairment. Two main ideas arose in the group: (1) make it personal, know the audience and explain why the issue is of importance to them – in many cases focusing on uses of the water; and (2) tell a story from standards, to monitoring, to impairment, relating it to people and their experiences. The group added that it is critical to keep communication simple and direct, focusing on information over data, using visual aids such as charts, report cards, and before-and-after pictures.

A brief conversation regarding approaches to public meetings developed after the report from Group 4. One state participant noted that he commonly received better engagement at open house events, as opposed to more formal meetings. Another state participant said that they make sure to invite all active interest groups, to make events like a watershed fair and give people a more complete sense of all the activities occurring. Yet another state participant explained that his program has found success with affinity group meetings, invitation-only events for all groups with a particular interest. He explained that people tend to talk more openly when their opponents are not in the room. He added that these meetings are in addition to, and not a replacement for, open stakeholder meetings.

Group 5 was asked how to convey the concept of biological impairments to the public. The members of the group noted the challenge of finding charismatic fauna at lower levels of the food chain. They identified a generational divide, that children often are drawn to bugs but adults appreciate fish more and often dislike the presence of some bugs. They stressed the value of promoting purity and integrity, for example through the ads for “Pure Michigan” and the notion that rivers should have fish in them, so that people can relate to it at all levels. The group also recommended using factsheets to communicate basic concepts, such as what a watershed is, as well as key scientific information. In addition, they stressed being cautious around political minefields.

Group 6 was asked how the concept of “alternatives to TMDLs” can best be conveyed to the public without providing the false assumption that they are being done in lieu of developing TMDLs. The group suggested avoiding the issue of TMDLs when speaking to the public about alternatives, instead focusing on streamlining the approach to meeting water quality goals. For example, the group recommended using the acronym “LEAP,” Let’s Establish Action Plans, and phrases like “LEAP for your lake.”

Group 7 was asked how best to convey the idea of CWA 303(d) prioritization to other programs. The members of the group suggested referencing prioritization as targeting the use of time and money resources, but they clarified that it does not mean that the targets are more important than the priorities of other programs. The group concluded that the

real objective is creating an opportunity to establish common goals, even if in the form of a Venn diagram, and that the word “priority” is a communication stumbling block. The group suggested the analogy of passengers boarding a plane, by zones – everyone will get on, even if there may not be overhead storage space.

Group 8 was asked how best to convey priorities to the public without suggesting that other waters are not important. The members of the group suggested that the term “priority” not be used, and at the very least, that the terms “low” and “lower” not be used because they frame the discussion in a negative light. The group suggested talking about a framework for selecting the right water quality tool. They also highlighted the value of identifying ongoing activities and funding opportunities outside of TMDL development, ideally through the use of maps. In addition, the group recommended public engagement in the process, from providing information about how priority waters are selected, to ensuring a means of stakeholder and public participation in the selection process, to meetings explaining why state resources are being used in one place and not another. The group stressed the importance of using internal language that keeps others involved in the process and helps drive the conversation with everyone.

Key Points Raised:

- Know your audience and connect the issue to what matters to them.
- Keep communication simple and direct, focusing on information over data.
- Use multiple communication platforms, from a website to social media, not only to disseminate information but also to collect data.
- When explaining nutrient pollution and the concept of TMDLs, diet and health are useful analogies, conveying the notion that some is okay, and in cases it is necessary, but intake must be managed to prevent excess and its health implications.
- When communicating the concepts of water quality and impairment, use visual aids such as charts, report cards, and before-and-after pictures.
- The acronym “LEAP,” Let’s Establish Action Plans, could be a useful replacement for the term “alternatives.”
- The word “priority” can be a communication stumbling block, internally because other programs have their own priorities, and externally because it can suggest that other waters are not important.

Training Workshop Wrap-Up

This final session consisted of three sets of closing remarks.

(1) Jim Havard, EPA HQ: Summary and Next Steps

Mr. Havard began by recapping themes from the training workshop and identifying follow-up actions going forward. Regarding prioritization, he highlighted the importance of flexibility and accountability, specifically the value yet challenge of setting long-term priorities. Mr. Havard emphasized that prioritization, and the Vision

generally, is an opportunity to tell a story of what is more important in term of water quality goals; to convey intentions as well as challenges and successes; and to improve connection with stakeholders and the public. In terms of follow-up actions regarding the Prioritization Goal, Mr. Havard noted that EPA will review relevant draft documents to better reflect flexibility in setting goals; continue to develop and refine technical tools; and otherwise support states, tribes, and territories in their prioritization efforts.

Focusing on the Assessment Goal, Mr. Havard acknowledged the multiple “masters” and expectations facing the Monitoring Program, but also the multiple opportunities for improved coordination between it and the CWA 303(d) Program. He noted that the development of effectiveness monitoring will be case-specific, depending on many factors, and a significant challenge to that task in some cases is the accessibility of information about agricultural best management practices. Mr. Havard said that EPA has before it the tasks of continuing to coordinate Monitoring and CWA 303(d) Program activities and assisting in the procurement and sharing of examples of state-level data-sharing agreements with NRCS. He added that state, tribal, and territorial CWA 303(d) programs should be mindful of the Vision milestones on developing plans for baseline, planning, and effectiveness monitoring.

Mr. Havard then covered themes from the session on integration, including that integration is essential to effective CWA implementation, that integration by function might be a better approach than by organizational structure in certain circumstances, and the fact that many challenges exist to integration but there are numerous success stories. He identified as next steps for EPA: the continued coordination with the NPDES Program on overcoming integration barriers; and working with the CWA 319 Program and Regions on the development of a process for reviewing nine-element plans as alternatives under the measures.

Regarding the session on alternatives, Mr. Havard identified a series of themes, notably that alternative approaches can be cheaper and faster ways to get to water quality standards than TMDLs; TMDLs still will remain the most dominant program analytic and informational tool for addressing impaired waters; developing an alternative restoration plan does not eliminate the duty to develop a TMDL; many aspects of alternative approaches are case-specific, making coordination with the EPA region all the more important; and “sometimes you have to have faith in what you want to do and just do it.” As for next steps, he noted that EPA will review the relevant draft documents in light of the discussions that were had.

Mr. Havard also outlined the themes from the measures sessions. He recounted that states and territories will not need to change the way that they do business; rather, EPA will calculate WQ-27 with the information the state or territory provides regarding priorities. He also noted that the new measures and the redesigned ATTAINS database will provide visual aids that should improve communication to stakeholders and the public. Regarding next steps, Mr. Havard said that EPA will coordinate with ACWA to set up additional calls to present the material from this

training workshop to a wider audience of state, tribal, and territorial staff. He added that EPA will continue to coordinate and communicate with states, tribes, and territories on the redesign of the ATTAINS database.

Mr. Havard then encouraged greater communication among jurisdictions. He referenced Iowa's approach to prioritization: a simple sorting mechanism with four boxes – (1) impairments with relatively high social impact and a relatively low complexity and/or cost for development; (2) impairments with relatively high social impact and a relatively high complexity and/or cost for development; (3) impairments with relatively low social impact and a relatively low complexity and/or cost for development; and (4) impairments with relatively low social impact and a relatively high complexity and/or cost for development. He noted that there are many other examples and is encouraged by the progress many states have made in setting priorities and implementing the Vision.

To conclude his remarks, Mr. Havard showed a few pictures demonstrating why water quality means so much to him, for recreation, for scenery, and for family. He then thanked the members of the Workshop Planning Group; ELI; and the state, tribal, territorial, and EPA headquarters and regional staff and wished everyone safe travels.

(2) Traci Iott, Connecticut; Jeff Berckes, Iowa: Concluding Comments

Ms. Iott began by noting how charged up she always is after this training workshop from the great ideas and the open communication. She added that this year is particularly exciting, with the group having worked deep into practical implementation. Ms. Iott said that the next workshop will be even more exciting because priorities will be out and everyone will be talking about their experiences – the Vision truly will be moving forward. She congratulated everyone, saying that we are leaving the starting gate, and the race has begun.

Mr. Berckes explained that one of his favorite aspects of these training workshops is the opportunity to talk with people who can relate to his day-to-day experiences, the good and the bad.

(3) Tom Stiles, Kansas: Send-Off Remarks

Mr. Stiles began by thanking everyone in attendance for a great week of work. He noted that measures dominated the week's discussion, but measures are "in our hands," a function of impaired waters; priority areas; and the approaches that states, tribes, and territories want to take to address them. Mr. Stiles explained that, by comparing the maps from 2016 and 2022, everyone will be able to tell a story, one of success, challenges, and more, and this is unique. He encouraged participants not to worry about the measures, saying that the story is what is important: "this is us; we are 303(d)."

Mr. Stiles emphasized the flexibility that EPA is providing, particularly with regard to alternatives. He added that sometimes you just need to learn to take yes for an answer. He asked the states, tribes, and territories to work out the details with their respective EPA regions and come away with a sense of “this is where we are going.”

Mr. Stiles challenged the participants to “go into this with boldness” and focus on bringing value, adding “keep believing, keep pushing, carpe opus.”

APPENDIX 1: TRAINING WORKSHOP AGENDA



ENVIRONMENTAL LAW INSTITUTE®

AN INDEPENDENT, NON-PARTISAN ENVIRONMENTAL EDUCATION AND POLICY RESEARCH CENTER.

2015 NATIONAL TRAINING WORKSHOP ON CWA 303(d) LISTING & TMDLS

MAKING THE VISION A REALITY

National Conservation Training Center
Shepherdstown, West Virginia
April 7-9, 2015

TRAINING WORKSHOP AGENDA

**This project made possible through a cooperative agreement with the
United States Environmental Protection Agency**

PURPOSE OF THE TRAINING WORKSHOP

To provide an opportunity for state, tribal, and territorial participants from Clean Water Act Section 303(d) Listing and TMDL Programs—along with their federal counterparts—to learn about and discuss approaches for implementing CWA 303(d) Program responsibilities consistent with the [Vision](#), methods of identifying progress under the new program measures, and what assistance is needed to accomplish these ends.

WORKSHOP OBJECTIVES

- Learn about **progress made** by states, tribes, territories, and EPA for each milestone of the Vision Goals.
- Share information that **supports the CWA 303(d) prioritization efforts** of states, tribes, and territories.
- Advance **mutual understanding** among states, tribes, territories, and EPA about the expectations for reporting under the new measures and the role and nature of alternatives to TMDLs.
- Learn about **state, tribal, and territorial needs** for implementing CWA 303(d) Program responsibilities consistent with the Vision and for reporting under the new measures.
- Learn about the **redesign of data systems** to report and track water quality data.
- Learn and discuss how the data and outreach needs of the CWA 303(d) Program may be **aided through integration and coordination** with other CWA programs, other agencies, and the public.
- Learn and discuss **terms and phrases** that can be used to describe the CWA 303(d) Program and the Vision when communicating with stakeholders and the public.
- Enhance the **network of listing and TMDL professionals** by expanding and improving communication among the states, tribes, and territories and with EPA regions and headquarters.

OUTPUTS

No. 1: A final report summarizing presentations and discussions from the training workshop. The report will include a summary of individual input from workshop participants and may serve as a reference for program personnel implementing their responsibilities consistent with the Vision.

No. 2: A menu of terms and phrases that can be used to describe the CWA 303(d) Program and the Vision when communicating with stakeholders and the public.

AGENDA

Monday, April 6

Arrival, Check-In, and Registration

- | | |
|-------------------|--|
| 3:00 pm – 8:00 pm | NCTC Check-In and Training Workshop Registration
Main Lobby
Murie Lodge, Lounge Area |
| 6:00 pm – 7:30 pm | Dinner
Commons Dining Room |
| 8:00 pm – 9:00 pm | Informal Welcome
Murie Lodge, Lounge Area |

Tuesday, April 7

Training Workshop Day 1

6:30 am – 8:15 am Breakfast
Commons Dining Room

8:30 am – 9:30 am **Welcome, Introductions, and Training Workshop
Overview**
Auditorium

Greeting and Introductions

Bruce Myers, ELI

Opening Remarks

Tom Stiles, KS

Jim Havard, EPA HQ

Training Workshop Overview

Adam Schempp, ELI

Teeing Up the Communication Discussion

Jeff Berckes, IA

9:30 am – 10:00 am **Session #1(a)**
Prioritization
Auditorium

Registration Responses Regarding the Prioritization Goal

Adam Schempp, ELI

CWA 303(d) Program Vision – Prioritization Goal

Jim Havard, EPA HQ

Session #1(a) Outcomes:

- *Participants will learn what progress has been made by other states, tribes, and territories, as well as EPA and ACWA, in implementing CWA 303(d) Program responsibilities consistent with the Prioritization Goal.*
- *Participants will receive clarification on details regarding the Integrated Reporting memo.*

10:00 am – 10:20 am Morning Break

10:30 am – 11:30 am **Session #1(b)**
Prioritization (cont'd)
Auditorium

Facilitated Discussion

Session #1(b) Outcomes:

- *Participants will learn about examples of processes and factors used to establish priorities consistent with the Vision, and early experiences with them.*
- *Participants will learn about successful methods for engaging the public when developing and disseminating priorities.*

Discussion Questions:

1. What priorities and means of prioritizing have states, tribes, and territories found to have worked and not worked?
2. What do states, tribes, and territories need in order to have priorities to report for the FY16 measure?
3. What have been successful methods for engaging the public when developing and/or disseminating priorities?

11:30 am – 12:30 pm

Session #2
Assessment
Auditorium

The Results of the ACWA Survey

Traci Iott, CT

Review of Assessment Goal and Its Milestones

Eric Monschein, EPA HQ

**Working with Your Monitoring Program to Support the
Assessment Goal and Its Milestones**

Susan Holdsworth, EPA HQ

Facilitated Discussion

Session #2 Outcomes:

- *Participants will learn what progress has been made by other states, tribes, and territories, as well as EPA, in implementing CWA 303(d) Program responsibilities consistent with the Assessment Goal.*
- *Participants will learn opportunities for improved coordination between monitoring and CWA 303(d) programs, at the EPA- and state-levels.*
- *Participants will learn potential designs for baseline and effectiveness monitoring plans.*

Discussion Questions:

1. How can the CWA Monitoring and CWA 303(d) Listing and TMDL Programs work better together to support the Assessment Goal and its milestones in priority areas?
2. Defining monitoring objectives is the first step in developing plans to collect data. How would you define your monitoring objectives – what questions do you need answered with monitoring data?
3. What are the potential sources of that data? What does, can, and might the Monitoring Program provide the CWA 303(d) Program, and what innovative opportunities are there to partner with others?

12:30 pm – 1:15 pm

Lunch
Commons Dining Room

1:30 pm – 3:00 pm

Session #3
Integration and Coordination
Auditorium

Registration Responses Regarding the Integration Goal

Adam Schempp, ELI

Brief Review of the Integration Goal

Ruth Chemerys, EPA HQ

Updates on Integration from the CWA 319 Program

Cyd Curtis, EPA HQ

Overview of CWA 303(d) Program Integration Efforts with NPDES

Jenny Molloy, EPA HQ

Cindy Lin, EPA R9

Tom Laverty, EPA HQ

Facilitated Discussion

Session #3 Outcomes:

- *Participants will learn what progress has been made by other states, tribes, and territories, as well as EPA and ACWA, in implementing CWA 303(d) Program responsibilities consistent with the Integration Goal.*
- *Participants will learn about opportunities to link CWA 303(d) priorities with those of other programs, with a focus on CWA programs.*
- *Participants will learn about engagement efforts of other programs and the potential for integrated engagement.*

Discussion Questions:

1. Integration success stories: in what ways has inter-program and inter-agency cooperation improved, and what have been the outcomes of that integration, particularly for prioritization?
2. What do we hope to achieve this year?
3. What opportunities are there for integrated engagement, and what are obstacles to it (stemming from institutional structure, resource availability, terminology, etc.)?

3:00 pm – 3:20 pm

Afternoon Break

3:30 pm – 5:30 pm

Session #4
Alternatives
Auditorium

Registration Responses Regarding the Alternatives Goal

Adam Schempp, ELI

CWA 303(d) Program Vision – Alternatives

Menchu Martinez, EPA HQ

Facilitated Discussion

Session #4 Outcomes:

- *Participants will learn about alternative restoration approaches consistent with the Vision.*
- *Participants will learn the distinction between alternatives under Category 5 and Category 4b.*

Discussion Question:

What factors could help when determining whether alternative restoration approaches would address an impairment more rapidly than a TMDL?

6:00 pm – 7:00 pm

Dinner
Commons Dining Room

8:00 pm – 10:00 pm

Bonfire

Wednesday, April 8

Training Workshop Day 2

6:30 am – 8:15 am Breakfast
Commons Dining Room

8:30 am – 10:00 am **Session #5**
Updates on the Measures
Auditorium

**Oh the Awesome Work We Will Now Be Able to Show -
CWA 303(d) Measures “WQ-27 and WQ-28”**

Shera Reems, EPA HQ

Facilitated Discussion

Session #5 Outcomes:

- *Participants will have a high level of comfort with the measures as a whole, as well as the computational guidance.*
- *Participants will understand their roles regarding the measures.*
- *Participants will be prepared to explain to colleagues in their offices what information EPA needs and how to prepare and transmit the information to EPA.*
- *Participants will understand how to use the information to communicate with the public.*

Discussion Question:

What support (i.e., technical support, programmatic support, meetings to help clarify questions) do states, tribes, and territories need in order to report under the new measures?

10:00 am – 10:20 am Morning Break

10:30 am – 11:30 am **Session #6**
ATTAINS Redesign
Auditorium

**Bringing It All Together: ATTAINS Redesign and CWA
303(d) Measures “WQ-27 and WQ-28”**

Shera Reems, EPA HQ

Session #6 Outcomes:

- *Participants will learn what changes are being made to the ATTAINS database.*
- *Participants will learn the significance of the ATTAINS redesign, particularly in light of its relationship to the new measures.*
- *Participants will learn how to better use the ATTAINS database to engage their management and the public in their work.*

11:30 am – 12:15 pm

Lunch
Commons Dining Room

12:30 pm – 1:45 pm

Session #7(a)
Breakouts by Region
Breakout Rooms, Various Locations

This session will consist of ten breakout groups, one for each region, each with state, tribal, and territorial participants from that region as well as EPA regional and headquarters staff.

- The groups from regions 3 and 5 will together meet with an EPA headquarters representative for a tailored tutorial and Q&A period regarding reporting under the new measures. The groups from regions 1, 6, and 7 will together do the same with another EPA headquarters representative.
- The groups from regions 2, 4, 8, 9, and 10 each will convene in separate breakout rooms to: (1) discuss the obstacles and opportunities that they foresee in accomplishing what has been discussed to that point of the workshop; and (2) identify up to three top questions or issues that they would like presented during the report back and discussion.

1:45 pm – 3:00 pm

Session #7(b)
Breakouts by Region (cont'd)
Breakout Rooms, Various Locations

- The groups from regions 2 and 4 will together meet with an EPA headquarters representative for a tailored tutorial and Q&A period regarding reporting under the new measures. The groups from regions 8, 9, and 10 will together do the same with another EPA headquarters representative.
- The groups from regions 1, 3, 5, 6, and 7 each will convene in separate breakout rooms to: (1) discuss the obstacles and

opportunities that they foresee in accomplishing what has been discussed to that point of the workshop; and (2) identify up to three top questions or issues that they would like presented during the report back and discussion.

Session #7 Outcomes:

- *Participants will learn the steps in the automated process of deriving the universe and baseline from priorities.*
- *Participants will better understand the priorities, challenges, and views of others in their respective regions.*

3:00 pm – 3:20 pm

Afternoon Break

3:30 pm – 5:00 pm

Session #8
Report Back and Discussion
Auditorium

Clarification of Issues Raised in the Measures Tutorials

Shera Reems, EPA HQ

Report Back and Discussion of Issues from the Breakouts

Adam Schempp, ELI
Menchu Martinez, EPA HQ

Facilitated Discussion

Session #8 Outcome:

- *Participants will receive answers to their most pressing questions and discuss key outstanding issues.*

5:00 pm – 6:00 pm

Open

NOTE: During this time, the developers of EPA's WATERSCAPE tool, Recovery Potential Screening tool, automated measures process, and protection prioritization component related to the Healthy Watersheds Program will be available in the Murie Lodge lounge area to discuss and further demonstrate these resources.

6:00 pm – 7:00 pm

Dinner
Commons Dining Room

7:30 pm – 8:30 pm

Informal Evening Session
Murie Lodge, Lounge Area

Thursday, April 9

Training Workshop Day 3

6:30 am – 8:15 am Breakfast
Commons Dining Room

8:30 am – 9:30 am **Session #9**
Engagement
Auditorium

Registration Responses Regarding the Engagement Goal
Adam Schempp, ELI

Facilitated Discussion

Session #9 Outcomes:

- *Participants will learn what progress has been made by other states, tribes, and territories, as well as EPA, in implementing CWA 303(d) Program responsibilities consistent with the Engagement Goal.*
- *Participants will learn what engagement processes have been successful and unsuccessful across the country.*

Discussion Questions:

1. What is or are the end goal(s) of engagement?
2. What has and has not worked to engage stakeholders and the public in CWA 303(d) Program processes?
3. What do states, tribes, and territories need to successfully engage stakeholders and the public?

9:30 am – 9:50 am Morning Break

10:00 am – 11:15 am **Session #10**
Communication
Auditorium

Communication Building Blocks – Kickoff to Team Exercise

Jeff Berckes, IA

Facilitated Discussion (after preliminary small group problem-solving regarding communication issues identified during the workshop)

Session #10 Outcome:

- *Participants will learn new ways of conveying CWA 303(d) Program concepts and issues to the public, stakeholders, and other programs and agencies.*

11:15 am – 12:00 pm

Training Workshop Wrap-Up
Auditorium

Summary and Next Steps

Jim Havard, EPA HQ

Concluding Comments

Traci Iott, CT

Jeff Berckes, IA

Send-Off Remarks

Tom Stiles, KS

12:00 pm – 12:45 pm

Lunch
Commons Dining Room

NCTC Check-Out & Departure

1:00 pm

Departure of Shuttle Bus for Dulles Airport
Murie Lodge, Parking Lot

APPENDIX 2: PARTICIPANT LIST

2015 NATIONAL TRAINING WORKSHOP ON CWA 303(d) LISTING & TMDLS MAKING THE VISION A REALITY

National Conservation Training Center
Shepherdstown, West Virginia
April 7-9, 2015

State, Tribal, and Territorial Participants

James Mooney

Environmental Engineering Specialist, Senior
Alabama Department of Environmental
Management
1400 Coliseum Boulevard
Montgomery, AL 36110
334-394-4352
jjmooney@adem.state.al.us

John Pate

Environmental Engineering Specialist, Senior
Alabama Department of Environmental
Management
1400 Coliseum Boulevard
Montgomery, AL 36110
334-270-5662
jtp@adem.state.al.us

Cindy Gilder

Environmental Program Manager
Alaska Department of Environmental
Conservation
555 Cordova Street
Anchorage, AK 99501
907-269-3066
cindy.gilder@alaska.gov

Krista Osterberg

Watershed Protection Unit Manager
Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007
602-771-4635
ko1@azdeq.gov

Jason Sutter

Surface Water Hydrologist
Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007
602-771-4468
sutter.jason@azdeq.gov

Selena Medrano

Aquatic Ecologist
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118
501-682-0662
medrano@adeq.state.ar.us

Cyndi Porter
Aquatic Ecologist
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118
501-682-0012
porter@adeq.state.ar.us

Rik Rasmussen
TMDL Section Manager
State Water Resources Control Board
Division of Water Quality
1001 I Street – 15th Floor
Sacramento, CA 95814
916-341-5549
rik.rasmussen@att.net

Holly Brown
TMDL Specialist
State of Colorado, Colorado Department of
Public Health and Environment, Water Quality
Control Division
WQCD-WS-B2
4300 Cherry Creek Dr. S.
Denver, CO 80246
303-691-4023
holly.brown@state.co.us

Robin Harris
Water Quality Coordinator
Confederated Tribes of the
Umatilla Indian Reservation
46411 Timine Way,
Pendleton, OR 97801
541-429-7273
robinharris@ctuir.org

Traci Iott
Supervising Environmental Analyst
Connecticut Department of Energy and
Environmental Protection
79 Elm Street
Hartford, CT 06106
860-424-3082
traci.iott@ct.gov

David Wolanski
Environmental Scientist
Delaware Department of Natural Resources and
Environmental Control
820 Silver Lake Blvd., Suite 220
Dover, DE 19904
302-739-9939
david.wolanski@state.de.us

Mary Searing
Chief, Planning and Permitting Branch,
Water Quality Division
District of Columbia Department of the
Environment
1200 First Street NE
Washington, DC 20002
202-535-2990
mary.searing@dc.gov

Elizabeth Alvi
Program Administrator
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 3565
Tallahassee, FL 32399
850-245-8559
elizabeth.alvi@dep.state.fl.us

Greg DeAngelo
Administrator
Water Quality Evaluation and TMDL Program
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 3555
Tallahassee, FL 32399
850-245-7609
gregory.deangelo@dep.state.fl.us

Kevin O'Donnell
Environmental Administrator
Watershed Assessment Section
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 3560
Tallahassee, FL 32399
850-245-8469
kevin.odonnell@dep.state.fl.us

Elizabeth Booth

Watershed Planning and Monitoring Program
Manager

Georgia Environmental Protection Division
2 Martin Luther King Jr., SE, Suite 1152
Atlanta, GA 30334

404-463-4929

elizabeth.booth@dnr.state.ga.us

Allison Nunnally

Environmental Health Specialist
Hawaii State Department of Health
Clean Water Branch

919 Ala Moana Blvd., Room 301

Honolulu, HI 96814

808-586-4309

allison.nunnally@doh.hawaii.gov

Randee Tubal

TMDL Coordinator
State of Hawaii Department of Health
Clean Water Branch

919 Ala Moana Blvd., Room 301

Honolulu, HI 96814

808-586-4309

randee.tubal@doh.hawaii.gov

Gary R. Colegrove, Jr.

Senior Environmental Planner II
Hoopa Valley Tribe, Tribal EPA
12 Cannery Road, P.O. Box 1130
Hoopa, CA 95546

530-625-5515

snunty@netzero.net; ljackson5515@gmail.com

Tonya Lindsey

Environmental Planner
Hoopa Valley Tribe, Tribal EPA
12 Cannery Road

Hoopa, CA 95546

530-625-5515

hvtepa@gmail.com

Marti Bridges

TMDL Program Manager
Idaho Department of Environmental Quality

1410 North Hilton

Boise, ID 83706

208-373-0382

marti.bridges@deq.idaho.gov

Abel Haile

Manager, Planning (TMDL) Unit
Watershed Management Section
Illinois Environmental Protection Agency

1021 North Grand Avenue East

P.O. Box 19276

Springfield, IL 62794

217-782-3362

abel.haile@Illinois.gov

Martha Clark Mettler

Deputy Assistant Commissioner, Office of Water
Quality

Indiana Department of Environmental
Management

100 N. Senate Avenue

MC 65-40 IGCN 1255

Indianapolis, IN 46204

317-232-8402

mclark@idem.in.gov

Bonny Elifritz

Chief, Watershed Planning and Restoration
Section, Office of Water Quality

Indiana Department of Environmental
Management

100 N. Senate Avenue

Indianapolis, IN 4620

317-308-3082

belifrit@idem.IN.gov

Jeff Berckes

TMDL Program Coordinator
Iowa Department of Natural Resources
502 E. 9th Street

Des Moines, IA 50319

515-725-8391

jeff.berckes@dnr.iowa.gov

Trevor Flynn
Chief, Planning and Standards Unit
Kansas Department of Health and Environment
1000 South Jackson St, Suite 420
Topeka, KS 66612
785-766-5358
tflynn@kdheks.gov

Tom Stiles
Chief, Watershed Planning, Monitoring and
Assessment
Kansas Department of Health and Environment
1000 South Jackson St, Suite 420
Topeka, KS 66612
785-608-8983
tstiles@kdheks.gov

Lisa Hicks
Environmental Scientist
Kentucky Division of Water
200 Fair Oaks Lane, 4th Floor
Frankfort, KY 40601
502-564-3410
lisa.hicks@ky.gov

Alicia Jacobs
TMDL Section Supervisor
Kentucky Division of Water
200 Fair Oaks Lane, 4th Floor
Frankfort, KY 40601
502-564-3410, ext. 4853
alicia.jacobs@ky.gov

Viswatej Attili
Environmental Program Manager
Kickapoo Environmental Office
1107 Goldfinch Road
Horton, KS 66439
785-486-2601 ext. 7
viswatej.attili@ktik-nsn.gov

Chuck Berger
Engineer 6
Louisiana Department of Environmental Quality
602 North Fifth Street
Baton Rouge, LA 70802
225-219-3366
wcbckm@yahoo.com

Amanda Vincent
Environmental Scientist Manager
Louisiana Department of Environmental Quality
602 North Fifth Street
Baton Rouge, LA 70802
225-219-3188
amanda.vincent@la.gov

Dinorah Dalmasy
Manager, TMDL Technical Development
Program
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230
410-537-3699
dinorah.dalmasy@maryland.gov

Kimberly Groff
Director, Watershed Planning Program
Massachusetts Department of Environmental
Protection
8 New Bond Street
Worcester, MA 01606
508-767-2876
kimberly.groff@state.ma.us

Tamara Lipsey
Senior Aquatic Biologist
Water Resources Division
Michigan Department of Environmental Quality
525 W. Allegan, P.O. Box 30458
Lansing, MI 48909
517-284-5545
lipseyt@michigan.gov

Teresa McDill
Manager, Metro Watershed Section
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, MN 55155
651-757-2303
teresa.mcdill@state.mn.us

Shawn Clark
Environmental Engineer
Mississippi Department of Environmental
Quality
P.O. Box 10385
Jackson, MS 39225
601-961-5629
sclark@deq.state.ms.us

Trish Rielly
Monitoring and Assessment Unit Chief
Missouri Department of Natural Resources
1101 Riverside Drive
Jefferson City, MO 65101
573-526-5297
trish.rielly@dnr.mo.gov

Bill Whipps
TMDL Unit Chief
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102
573-526-1503
bill.whipps@dnr.mo.gov

Michael Pipp
Program Manager
Montana Department of Environmental Quality
1520 E. 6th Ave, P.O. Box 200901
Helena, MT 59620
406-444-7424
mpipp@mt.gov

Dean Yashan
Environmental Program Manager
Montana Department of Environmental Quality
1520 E. 6th Ave., P.O. Box 200901
Helena, MT 59620
406-444-5317
dyashan@mt.gov

Laura Johnson
Integrated Report and TMDL Coordinator
Nebraska Department of Environmental Quality
1200 N Street Suite 400, The Atrium
Lincoln, NE 68509
402-471-4249
laura.r.johnson@nebraska.gov

Randy Pahl
Special Projects Coordinator
Nevada Division of Environmental Protection
901 S. Stewart Street, Suite 4001
Carson City, NV 89701
775-687-9453
rpahl@ndep.nv.gov

Peg Foss
TMDL Coordinator
New Hampshire Department of Environmental
Services
29 Hazen Dr.
Concord, NH 03302
603-271-5448
margaret.foss@des.nh.gov

Kimberly Cenno
Environmental Specialist
Bureau of Environmental Analysis,
Restoration and Standards
New Jersey Department of Environmental
Protection
401 East State Street
P.O. Box 420, Mail Code: 401-04I
Trenton, NJ 08625
609-633-1441
kimberly.cenno@dep.nj.gov

Heidi Henderson
TMDL and Assessment Team Supervisor
New Mexico Environment Department
1190 St. Francis Drive, P.O. Box 5469
Santa Fe, NM 87502
505-827-2901
heidi.henderson@state.nm.us

Jeff Myers
Director, Water Assessment and Management
New York State Department of Environmental
Conservation
625 Broadway, 4th floor – Water
Albany, NY 12233
518-402-8179
jeff.myers@dec.ny.gov

Campbell McNutt

Environmental Program Consultant
Division of Water Resources, Modeling and
Assessment Branch
North Carolina Department of Environment and
Natural Resources
1617 MSC
Raleigh, NC 27699
919-807-6435
cam.mcnutt@ncdenr.gov

Mike Ell

Environmental Scientist
Division of Water Quality
North Dakota Department of Health
918 East Divide Ave, 4th Floor
Bismarck, ND 58501
701-328-5214
mell@nd.gov

Cathy Alexander

Environmental Manager
Division of Surface Water
Ohio Environmental Protection Agency
50 West Town Street, Suite 700
Columbus, Ohio 43215
614-644-2021
cathy.alexander@epa.ohio.gov

Joe A. Long

Environmental Programs Specialist
Oklahoma Department of Environmental Quality
707 N. Robinson
Oklahoma City, OK 73102
405-702-8198
joe.long@deq.ok.gov

Patrick Rosch

Engineering Manager
Oklahoma Department of Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73101
504-702-8182
patrick.rosch@deq.ok.gov

Gene Foster

Manager, Watershed Management Section
Oregon Department of Environmental Quality
811 SW 6th Avenue
Portland, OR 97204
503-229-5325
foster.eugene.p@deq.state.or.us

Bill Brown

Chief, TMDL Development Section
Pennsylvania Department of Environmental
Protection
400 Market Street
Harrisburg, PA 17105
717-783-2951
willbrown@pa.gov

Molly Pulket

Water Program Specialist
Pennsylvania Department of Environmental
Protection
400 Market Street
Harrisburg, PA 17105
717-783-2949
mpulket@pa.gov

Gary Walters

Environmental Group Manager
Pennsylvania Department of Environmental
Protection
400 Market Street
Harrisburg, PA 17105
717-783-7964
gawalters@pa.gov

Angel Melendez-Aguilar

Chief, Plans and Special Projects Division
Puerto Rico Environmental Quality Board
P.O. Box 11488
San Juan, PR 00910
787-767-8181 ext. 3543
angelmelendez@jca.gobierno.pr

Wade Cantrell

303(d), Modeling and TMDL Section Manager
South Carolina Department of Health and
Environmental Control
2600 Bull Street
Columbia, SC 29205
803-898-3548
cantrewm@dhec.sc.gov

Dennis Borders

Environmental Protection Specialist
Division of Water Resources
Tennessee Department of Environment and
Conservation
William R. Snodgrass TN Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243
615-532-0706
dennis.borders@tn.gov

David Duhl

TMDL/Watershed Unit Manager
Division of Water Resources
Tennessee Department of Environment and
Conservation
William R. Snodgrass TN Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243
615-532-0438
david.duhl@tn.gov

Anita E. Nibbs

Environmental Program Manager
Department of Planning and Natural Resources
Division of Environmental Protection
45 Mars Hill
Frederiksted, VI 00841
340-773-1082 ext. 2308
anita.nibbs@dpr.vi.gov

Carl Adams

Environmental Program Manager
State of Utah, Division of Water Quality
P.O. Box 144870
Salt Lake City, UT 84114
801-536-4330
carladams@utah.gov

Tim Clear

303(d)/TMDL Coordinator
Watershed Management Division
Monitoring, Assessment and Planning Program
Vermont Department of Environmental
Conservation
1 National Life Drive, Main 2
Montpelier, VT 05620
802-490-6135
tim.clear@state.vt.us

Will Isenberg

TMDL and Water Quality Assessment
Coordinator
Virginia Department of Environmental Quality
629 East Main Street
Richmond, VA 23219
804-698-4228
william.isenberg@deq.virginia.gov

Bryant Thomas

Regional Water Permits and Planning Manager
Virginia Department of Environmental Quality,
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
703-583-3800
bryant.thomas@deq.virginia.gov

Helen Bresler

Watershed Planning Unit Supervisor
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504
360-407-6180
helen.bresler@ecy.wa.gov

John Wirts

Assistant Director, Watershed Assessment
Branch
West Virginia Department of Environmental
Protection
601 57th Street SE
Charleston, WV 25304
304-926-0499 ext. 1060
john.c.wirts@wv.gov

Aaron Larson

Impaired Waters Program Coordinator
Wisconsin Department of Natural Resources
101 South Webster Street
Madison, WI 53707
608-264-6129
aaronm.larson@wi.gov

Kevin Hyatt

Wyoming TMDL Program Principal
Water Quality Division
State of Wyoming, Department of
Environmental Quality
122 W. 25th Street
Herschler Bldg. 4W
Cheyenne, WY 82002
307-777-8582
kevin.hyatt@wyo.gov

EPA Headquarters

Dwight Atkinson

Watershed Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1226
atkinson.dwight@epa.gov

Benita Best-Wong

Director, Office of Wetlands, Oceans and
Watersheds (OWOW)
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 4501T
Washington, DC 20460
202-566-1159
best-wong.benita@epa.gov

Ruth Chemerys

Watershed Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1216
chemerys.ruth@epa.gov

Jim Curtin

Office of General Counsel
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 2355A
Washington, DC 20460
202-564-5482
curtin.james@epa.gov

Cyd Curtis

Nonpoint Source Control Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-0340
curtis.cynthia@epa.gov

Tommy Dewald

Monitoring Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1178
dewald.tommy@epa.gov

Sarah Furtak

Watershed Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1167
furtak.sarah@epa.gov

Jason Gildea

Watershed Branch, OWOW (on detail from EPA
Region 8)
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-0568
gildea.jason@epa.gov

Jim Havard

Acting Chief, Watershed Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-564-5544
havard.james@epa.gov

Susan Holdsworth

Chief, Monitoring Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1187
holdsworth.susan@epa.gov

Virginia Kibler

Office of Wastewater Management (OWM)
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4203M
Washington, DC 20460
202-564-0596
kibler.virginia@epa.gov

Tom Laverty

Chief, State and Regional Branch, OWM
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4203M
Washington, DC 20460
202-566-1869
laverty.thomas@epa.gov

Chris Lewicki

Watershed Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1293
lewicki.chris@epa.gov

Menchu Martinez

Watershed Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1218
martinez.menchu-c@epa.gov

Jenny Molloy

Office of Wastewater Management
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4203M
Washington, DC 20460
202-564-1939
molloy.jennifer@epa.gov

Eric Monschein

Associate Chief, Watershed Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1547
monschein.eric@epa.gov

Heidi Nalven

Office of General Counsel
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 2355A
Washington, DC 20460
202-564-3189
nalven.heidi@epa.gov

Carol Peterson

Watershed Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1304
peterson.carol@epa.gov

Shera Reems

Watershed Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1264
reems.shera@epa.gov

Wendy Reid

Monitoring Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1705
reid.wendy@epa.gov

Lee Schroer

Office of General Counsel
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 2355A
Washington, DC 20460
202-564-5476
schroer.lee@epa.gov

Steve Sweeney

Office of General Counsel
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 2355A
Washington, DC 20460
202-564-5491
sweeney.stephen@epa.gov

Deric Teasley

Office of Water
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4101M
Washington, DC 20460
202-564-3356
teasley.deric@epa.gov

Tom Wall

Director, Assessment and Watershed Protection
Division, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-564-4179
wall.tom@epa.gov

Dwane Young

Monitoring Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-1214
young.dwane@epa.gov

EPA Regions

EPA Region 1

Ralph Abele

Chief, Water Quality Branch
USEPA REGION 1
5 Post Office Square
Mail Code: OEP
Boston, MA 02109
617-918-1629
abele.ralph@epa.gov

Mary Garren

Water Quality Branch
USEPA REGION 1
5 Post Office Square
Mail Code: OEP
Boston, MA 02109
617-918-1322
garren.mary@epa.gov

Steven Winnett

Water Quality Branch
USEPA REGION 1
5 Post Office Square
Mail Code: OEP
Boston, MA 02109
617-918-1687
winnett.steven@epa.gov

EPA Region 2

Kate Anderson

Chief, Clean Water Regulatory Branch
USEPA REGION 2
290 Broadway
Mail Code: 24TH FL
New York, NY 10007
212-637-3754
anderson.kate@epa.gov

Richard Balla

Chief, Watershed Management Branch
USEPA REGION 2
290 Broadway
Mail Code: 24TH FL
New York, NY 10007
212-637-3788
balla.richard@epa.gov

EPA Region 3

Evelyn MacKnight

Associate Director, Water Protection Division
USEPA REGION 3
1650 Arch Street
Mail Code: 3WP30
Philadelphia, PA 19103
215-814-5717
macknight.evelyn@epa.gov

EPA Region 4

Frank Baker

Water Quality Planning Branch
USEPA REGION 4
61 Forsyth Street, S.W.
Mail Code: 9T25
Atlanta, GA 30303
404-562-9757
baker.frank@epa.gov

Gracy Danois

Chief, Assessment, Listing and TMDL Section
Water Quality Planning Branch
USEPA REGION 4
61 Forsyth Street, S.W.
Mail Code: 9T25
Atlanta, GA 30303
404-562-9119
danois.gracy@epa.gov

Marion Hopkins

Assessment, Listing and TMDL Section
USEPA REGION 4
61 Forsyth Street, S.W.
Mail Code: 9T25
Atlanta, GA 30303
404-562-9481
hopkins.marion@epa.gov

Alya Singh-White

Assessment, Listing and TMDL Section
USEPA REGION 4
61 Forsyth Street, S.W.
Mail Code: 9T25
Atlanta, GA 30303
404-562-9339
singh-white.alya@epa.gov

EPA Region 5

Donna Keclik

Watersheds Section
USEPA REGION 5
77 West Jackson Boulevard
Mail Code: WW-16J
Chicago, IL 60604
312-886-6766
keclik.donna@epa.gov

Dave Werbach

Watersheds Section
USEPA REGION 5
77 West Jackson Boulevard
Mail Code: WW-16J
Chicago, IL 60604
312-886-4242
werbach.david@epa.gov

EPA Region 6

Stacey Dwyer

Associate Director, Permits and TMDL Branch
USEPA REGION 6
1445 Ross Avenue
Suite 1200
Mail Code: 6WQ
Dallas, TX 75202
214-665-6729
dwyer.stacey@epa.gov

Miranda Hodgkiss

Chief, TMDLs Section
USEPA REGION 6
1445 Ross Avenue
Suite 1200
Mail Code: 6WQ
Dallas, TX 75202
214-665-7538
hodgkiss.miranda@epa.gov

Richard Wooster

Acting Associate Director, Planning and
Analysis Branch
USEPA REGION 6
1445 Ross Avenue
Suite 1200
Mail Code: 6WQ
Dallas, TX 75202
214-665-6473
wooster.richard@epa.gov

EPA Region 7

Tabatha Adkins

Water Quality Management Branch
USEPA REGION 7
11201 Renner Boulevard
Mail Code: WWPDWQMB
Lenexa, KS 66219
913-551-7128
adkins.tabatha@epa.gov

John Delashmit

Chief, Water Quality Management Branch
USEPA REGION 7
11201 Renner Boulevard
Mail Code: WWPDWQMB
Lenexa, KS 66219
913-551-7821
delashmit.john@epa.gov

EPA Region 8

Vern Berry

Water Quality Unit
USEPA REGION 8
1595 Wynkoop Street
Mail Code: 8EPR-EP
Denver, CO 80202
303-312-6234
berry.vern@epa.gov

Sandra Spence

Chief, Water Quality Unit
USEPA REGION 8
1595 Wynkoop Street
Mail Code: 8EPR-EP
Denver, CO 80202
303-312-6947
spence.sandra@epa.gov

EPA Region 9

Dave Guiliano

Water Quality Assessment Office
USEPA REGION 9
75 Hawthorne Street
Mail Code: WTR-2
San Francisco, CA 94105
415-947-4133
guiliano.david@epa.gov

Cindy Lin

Standards and TMDL Office
USEPA Southern California Field Office
600 Wilshire Blvd.
Mail Code: WTR-2
Los Angeles, CA 90017
213-244-1803
lin.cindy@epa.gov

EPA Region 10

Dave Croxton

Manager, Watershed Unit
USEPA REGION 10
1200 Sixth Avenue
Mail Code: OWW-134
Seattle, WA 98101
206-553-6694
croxton.david@epa.gov

Other Participants

Julia Anastasio

Executive Director and General Counsel
Association of Clean Water Administrators
1634 I Street NW, Suite 750
Washington, DC 20006
202.756.0600
janastasio@acwa-us.org

Susan Kirsch

Senior Environmental Program Manager
Association of Clean Water Administrators
1634 I Street NW, Suite 750
Washington, DC 20006
202-756-0603
skirsch@acwa-us.org

Emily Bird

Environmental Analyst
New England Interstate Water Pollution
Control Commission (NEIWPCC)
650 Suffolk Street Suite 410
Lowell, MA 01854
978-349-2521
ebird@neiwppcc.org

Julianne McLaughlin

ORISE Postdoctoral Participant
Office of Science and Technology
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4305T
Washington, DC 20460
202-566-2542
mclaughlin.julianne@epa.gov

Laura Shumway

ORISE Participant
Monitoring Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-2514
shumway.laura@epa.gov

Roy Weitzell

ORISE Participant
Nonpoint Source Control Branch, OWOW
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4503T
Washington, DC 20460
202-566-0647
weitzell.roy@epa.gov

Lisa Goldman

Environmental Law Institute
1730 M Street, NW, Suite 700
Washington, DC 20036
202-939-3863
goldman@eli.org

Elana Harrison

Environmental Law Institute
1730 M Street, NW, Suite 700
Washington, DC 20036
202-939-3827
harrison@eli.org

Katie Meehan

Environmental Law Institute
1730 M Street, NW, Suite 700
Washington, DC 20036
202-939-3831
meehan@eli.org

Bruce Myers

Environmental Law Institute
1730 M Street, NW, Suite 700
Washington, DC 20036
202-939-3809
myers@eli.org

Adam Schempp

Environmental Law Institute
1730 M Street, NW, Suite 700
Washington, DC 20036
202-939-3864
schempp@eli.org

APPENDIX 3: MENU OF TERMS AND CONCEPTS

Potential ways to more effectively communicate aspects of the CWA 303(d) Program and its Vision

The phrases, analogies, and other methods of explaining the complexities of the CWA 303(d) Program provided below arose from the experiences and ideas of participants of the *2015 National Training Workshop on CWA 303(d) Listing & TMDLs*.

Water Quality Impairment and Restoration Generally:

- Relate it to human health and future generations
- Relate it to key uses (e.g., recreation)
- Explain how the flora and fauna (rather than pollution concentrations) have changed
- Use a report card approach
- Use before and after pictures to convey problems and successes

The Water Quality Program Generally:

- Liken it to healthcare: checkups, a range of problems and solutions, and the most aggressive solution may not be the most appropriate one at the start

TMDL:

- Explain it as a “pollution budget” or even a “pollution diet”
- Use the metaphor of a donkey with an overloaded cart (how much of the load must be removed for the donkey to be able to do its job?)
- Liken it to “Total Maximum *Donut* Load” (fine in limited quantities, but too many make you sick)

Prioritization:

- Explain it as the targeting of CWA 303(d) Program time and money
- Explain it to staff in other programs as (the opportunity for) establishing common goals (like a Venn diagram)
- Use the analogy of boarding a plane... don't worry, you (your waterbody) will get on
- Clearly explain the methods for selecting priorities

Alternatives:

- Refer to them as “interim alternatives”
- Use the acronym “LEAP” (Let's Establish Action Plans) instead (e.g., Leap for the lake)

E.coli/Bacteria/Pathogens:

- Use a digital map/tool to indicate impacts at specific locations (e.g., if it is safe to swim)
- Correlate pollutant levels to risks to children and pets

Nutrients:

- Refer to the problem as “nutrient over-enrichment”
- Reference how too much of a good thing is bad
- Correlate chlorophyll-a levels to aesthetics

Biological impairments:

- Promote the integrity of the system (e.g., rivers should have fish in them)

APPENDIX 4: SUMMARY OF WORKSHOP PARTICIPANT EVALUATIONS

Forty-eight workshop participants completed an anonymous Participant Evaluation Form (provided in the resource binder materials). The combined numerical results from the evaluations indicate an overall event rating of “Very Good-to-Excellent,” across all categories. In addition to the numerical responses, we received many written comments, which are reproduced here in substantial part.

Participant Evaluation Form: Compilation

Scale: 5 = Excellent, 4 = Very Good, 3 = Satisfactory, 2 = Fair, 1 = Poor

A. The Workshop—Overall

Information Presented

5 (19) 4 (25) 3 (4) 2 (0) 1 (0) AVG: 4.31

Workshop Materials

5 (14) 4 (23) 3 (11) 2 (0) 1 (0) AVG: 4.06

Workshop Organization

5 (33) 4 (14) 3 (1) 2 (0) 1 (0) AVG: 4.67

Group Interaction

5 (24) 4 (23) 3 (1) 2 (0) 1 (0) AVG: 4.48

Session Facilitation

5 (36) 4 (10) 3 (2) 2 (0) 1 (0) AVG: 4.71

Conference Facility (NCTC)

5 (40) 4 (7) 3 (0) 2 (1) 1 (0) AVG: 4.79

Comments:

- Adam once again did an incredible job facilitating.
- Great job organizing this and keeping things moving smoothly!
- Great facility, great food, and a great group of people.
- Outstanding job.
- Providing all the presentations ahead of time would have been helpful. I know, more trees!
- Suggest a shift in state leadership. The same people with the same ideas are always talking without regard to the issues the other states are facing.

- It would have been nice to have copies of all the presentations during the meeting in order to take notes on.
- There were some materials that were not included that I would have liked to have in my pocket, especially the monitoring materials.
- I really have little negative to say. You all really put together a fantastic conference. This is my first time and I feel so privileged to have been involved in this. I'm definitely walking away well informed.
- Overall a very good conference. Great discussions + interactions among the states + EPA regions.
- Overall, I enjoyed the conference and appreciate all the work that went into its planning and delivery. I do think some changes are needed to keep the conference sustainable and well-attended.
- Need some longer breaks during the day to hit the trails or get up and move around. Is there any way to include an activity such as a hike between breaks?
- Truly worth the trip + time. Thanks for the invite! I needed this workshop more than I knew. Thanks to Adam and Elana for helping me to make it. I made it and I am eternally grateful.
- The facility is excellent and creates a great environment to continuously interact with each other.
- Really good package of materials. A few of the slides were hard to read on the big screen – especially WQ27+28 demos. ELI does an excellent job keeping on schedule.
- ELI is great. So friendly, helpful, great facilitation. NCTC is wonderful!
- It would be beneficial to have the regions provide discussion topics as a group in the auditorium. I know the intent is to not single out any state, tribe, territory in particular, but giving a basic overview/comparison among the regions would be informative.
- Flawless workshop. Thank you to all ELI staff for such a great job! Thanks EPA for all the help in understanding this vision!
- Got lots of good ideas once again to follow up on + see if it works for our state.
- It would be helpful for the PowerPoints to be included in the binders. Also if the presenters could reference the section (A, B...) so that we can more easily follow along.
- Always love coming here to touch base with everyone and check in. Thanks ELI and planning group.
- This kind of interaction would be of great value to the regional level more frequently, quarterly.
- Language in the vision is obtuse. "Prioritization" means simply taking a water body from 303(d) list to TMDLs (WQ-27 measure). It took me the entire workshop to figure that out. I don't think I was the only one...
- All the presenters did a great job. Overall the sessions were overly repetitive. Some repetition is necessary, but it seemed to outweigh where we could make advances.
- Tremendous esprit de corps. Stoked by this event. Format and execution built to crescendo. Mealtime exchanges were priceless.
- Per usual ELI has done a superlative job in facilitating discussion and organizing the workshop. Thanks!
- Overall this is an incredibly useful workshop. It was very well organized and the presenters were very well informed and passionate about the material.

- Would be nice to have all of presentations ahead of time. ELI did a good job facilitating group discussion and making an effort that everyone who wanted to speak had a chance. The auditorium isn't the best set-up for the large group discussion.
- Few presentations available in packet. Microphone delivery was slow and disorganized.
- This is a fantastic conference. The opportunity to network face to face and the atmosphere where we can speak [freely] is so valuable. This venue is fantastic: the setting, lodging, food, and conference hosts are top notch!

B. Goals and Outcomes

How effective was the workshop in satisfying the stated goals and intended session outcomes?

5 (20) 4 (22) 3 (3) 2 (1) 1 (0) AVG: 4.33

How successfully did the workshop meet your own expectations?

5 (21) 4 (22) 3 (1) 2 (2) 1 (0) AVG: 4.35

Comments:

- My questions were not answered and the responses to many questions were “talk to the region.” Not an answer. HQ is to provide some sort of rational consistency, while we’re all different, we have similarities.
- The vision goals are clear, although to meet the expectations may be difficult to predict at this time.
- There was a lot of discussion/confusion on some issues – mostly I felt there was clarification on these issues but at some point it felt like ping pong.
- Sometimes conversations stemmed from the goals but it was necessary and I’m happy it was allowed.
- Got confused on goals.
- Jeff’s opening slides are great – Traci’s comment said it best on the cross ideas. A few more in-depth presentations (similar to prior years) on state specific examples – for example: what were my priorities before, what are they now.
- [Gave low score for meeting expectations] only because there are still questions to be answered. Not surprising. But important to keep dialogue going between now and next April.
- The detailed discussions of the measures were helpful but I feel too long. Many of the questions asked made me wonder whether folks had read the draft guidance. The one-on-one sessions with Shera/Dwane were very helpful though.
- The value of this workshop is immeasurable. It not only provides information and understanding about the LTV, but it allows the sharing of ideas and avenues for networking for dealing with 303(d) challenges.
- Sound system seemed muffled, hard to hear some of the speakers.
- This group should be more sophisticated at this point. Many seemed to be caught up in minutiae or just being resistant.

- Strong feeling that we're further along on these than we were on Monday.
- As a newcomer to the program, I found the workshop useful.
- My expectations and goals were met. I would like a morning or afternoon dedicated to hands-on with the contractor tools: RPST, Waterscapes, Healthy Watersheds.

C. Specific Sessions

Session #1: Prioritization

- Felt like [there was] a lot of rehashing of things we all already know and have discussed before as a group.
- The discussion was very informative; however, no guidance was given as to how to prioritize with outdated resources. This use of outdated lists is an extra waste of resources + taxpayer money.
- We have made progress to meet the prioritization. The session was helpful in defining the timeline and expectations.
- Feel this is getting closer, some states still struggling hearing others complain they would like to hear from states that haven't shared where they are.
- The priority list needs to be flexible! Identifying the framework used to prioritize is one thing – identifying/prioritizing those waters that fall under that framework is another. A hard and fast date may be difficult to provide. We need flexibility!
- PowerPoint slides (HQ's) were a bit too busy – should not be a full script. It's also not great to essentially read what is on the slides. States and EPA were talking at each other rather than really listening.
- Maybe have pre-session for “venting” before actual session starts. Give session on “what are your concerns” first – they can be noted and addressed throughout the workshop, that way won't start off by getting sidetracked and can get to session discussion questions.
- Definitely clarified what is expected. I know way more now than I did before.
- First day was great in general. I was very engaged the entire day and the day went by quickly. I learned a lot.
- I saw the waterscape tool, but they need to verify something. I would like to see PR included in the RPS tool.
- Great discussion and ideas. Different states have various reasons for the way they prioritize which was good to hear.
- I was expecting a bit more time with regional personnel on prioritization. Due to the timing of this goal, more time would have been nice. Next workshop, evaluate the current goal timeframe and ensure participants have time to get help they may need.
- Too repetitive.
- This is still too nebulous of a concept. EPA has been unclear on how many important waters need to be tackled during a given period of the system vision.
- [We] are getting mixed messages from HQ on expectations for setting long term priorities vs. having flexibility to change priorities. After this session it was still unclear what HQ would consider acceptable.

- Too much discussion on measures, jumping ahead. Discussion questions were not addressed. Can the “how states prioritize” doc be updated or encourage states to post prioritization frameworks online or to ELI?
- Good session.
- Good group discussion. Flexibility vs accountability remains problematic. 2002 baseline was hokey and concerned w/ the replacement year/concept. The vision really is a beta-test and should be viewed as such. Then tweak outcomes/concepts as we move forward. The bean count remains a problem because we don’t “tell our stories” about how complex TMDL development is. Implementation is even more complex.

Session #2: Assessment

- Working with the Monitoring Program was a good idea to support data needs for the vision to meet its goals.
- Did we meet anyone from the monitoring groups? Are we looking at ways to support shared monitoring?
- It would be nice to have the handouts for the assessment presentations. Is it the responsibility of the TMDL Program to conduct or prepare the effectiveness of the Monitoring Plan? Seems like this is part of implementation + could be covered by integration with other programs (re 319 Program).
- This and a few other sessions would have been easier to take notes on if the presentations were available.
- Would have been nice to have the panelists’ PowerPoint slides in our binders.
- Will help me better plan my monitoring priorities + resource allocations.
- This was interesting in that my state does not have a separate budget for TMDL assessments/monitoring. I have to work with the monitoring program and essentially fight for a site where I would like data.
- As goal is written, it seemed like states to have plans in place by 2018 based on assessment info gathered. But not clear to me how WQ-27 and WQ-28 if by FY and we have plans in place by 2018, it may be 2016-2017 and not much activity will be apparent in 27.
- This was one of the weaker sessions and could maybe be improved with more state-specific examples of how the assessments will be improved by the vision.
- Good session, but there is still more work needed in understanding how assessments will be allowed to change to help meet the vision goals.
- Too repetitive.
- We can build on this more in the future.
- This is certainly the weak link in the 303(d) program chain. On the state level, assessment programs are easiest for legislators to cut during the budget process, so cooperation and integration is essential to getting the most out of the program. Great discussion.
- Unclear on timeline 2018 or 2020?
- Good session.
- Assessment and monitoring should have reversed order. You monitor first, assess next. Should have been related to WQ27 and 28 somehow.

Session #3: Integration and Coordination

- Whether or not we coordinate with other agencies in itself will not lead to cleaner water.
- TMDL to Permits Integration and Challenges was excellent presentation.
- Think this topic is important but we need to discuss it more.
- Working w/ 319 Program to identify priority watershed for 319 funding.
- This was an interesting discussion but lacked enough development. Could be an interesting topic to take up in smaller break-out groups.
- Learned from cohorts. See lots of ways to integrate the TMDL + priority conversation within my agency and with our community.
- Throughout, this discussion was very relevant and would have gone on for more time, but I understood these are almost full day topics regarding 319 and NPDES coordination.
- Good discussion on permits to TMDL.
- Need assistance with integration with 319 Program.
- This session was very helpful, and I feel this is the key to successful program evolution.
- State examples of integration and coordination would have enhanced this presentation.
- Too much focus on permit integration.
- Too repetitive.
- In a time of tight budgets, integration is essential to meeting program goals. This discussion did a great job.
- What is EPA/others' experience w/ NPDES? Coordination for states without NPDES primary.
- Interesting to hear what other states are doing but I didn't really need this.
- Good session especially NPDES portion; 319 discussion weak.

Session #4: Alternatives

- This part is still open for discussion, as the alternatives will be different for each and every watershed.
- This session dominated the final day – slightly controversial – need to show examples in future and highlight success to alleviate fears.
- Interesting discussion. Can't you go straight to implementation through a WLA if you know the source is a point source?
- I thought Menchu did a pretty good job both in terms of presentation and how she handled Q and A's.
- Moderator (ELI) could have reigned in the “too much” discussion on suggested elements of alternative approach. That almost got ridiculous on how much it was said to be a suggestion + people kept bringing it up as issue. Just say will discuss online and move on.
- Great ideas.
- Lively. Still a disconnect between regions, HQ, and states perspective of what will work best.
- It's exhausting [to implement HQ ideas with] no guidance. This cycle of “you just go about it, and we'll tell you if we like it” is a waste of time and resources, because when we bring something in, it's never “right.”
- We expect that our region will discuss with us case by case. Alternative to postpone the development of TMDL.

- Re: the “acceptability” of alternatives. Would like to hear more from the different regions. The breakouts are good – great! But there should be more inter-regional consensus.
- Menchu did an excellent job. Difficult questions, but we’re making progress.
- If the use of alternatives becomes laborious, the appeal of using them will be lost. Allow flexibility in deciding what are the required components. EPA needs to stay out of the alternative plan approval. Focus on getting the backlog of TMDL approval finished.
- Good discussion.
- This discussion could have been a day unto itself. Attitudes are all over the board as to the utility of category 5ALT and alternative restoration plans in general.
- As with prioritization, states and regions need clarity about expectations. We need clear steps of how the process will work.
- Still unclear how to track alternatives for purpose of measures.
- This piece is hard without seeing examples that have actually been approved. A good block of time was dedicated to the discussion/feedback which was great. It is important to allow for feedback questions and discussion, otherwise it is frustrating, so thank you.
- 5ALT seems like a waste of time unless you’re using it as a way for a bean count in WQ27 and WQ28. 5ALT may raise concerns with environmental groups about whether EPA will be doing a TMDL.

Session #5: Updates on the Measures

- Very helpful clarification. Still don’t fully understand but getting there.
- My region is being very forceful and pressuring us to do this and headquarters is very laid back about it. HQ seems removed from the work involved and the obstacles we face and the pressure we’re receiving from the Region.
- Well presented. WQ-27, WQ-28
- Did a fantastic job of surgically discussing the measure...broke it down into pieces/ showed examples/ was honest with the states about everything – you could physically see everyone relax and feel more like they could get this to work for them.
- Is my understanding correct that EPA HQ will be developing the catchments for all the states? The maps should not be published since they will confuse the public and may not agree with what the states’ maps may show.
- I thought these were more clear today/this week than with my own reading – I am still not sure that I understand but I guess I will eventually.
- Bravo to the long day dedicated by Shera, Dwane, and their colleagues.
- Lots of information to process – sometimes confusing. Perhaps follow up on measure details – webinar?
- This was a helpful session, delivered by Shera in a very effective way.
- Pass out materials in advance! Afterwards is too late. I take notes on slide handouts.
- Still anxious but clear vision.
- Lots of good information. Hands on utilization of the tool will be relevant to next year’s follow up.
- It would have been helpful if the presentation was more in English. For example, the water is polluted when the red colored land areas...
- Very informative.

- If they already work with assessment unites for PR and VI.
- The breakout/tutorial was very useful.
- Very exciting to see this becoming reality. Tools will be helpful. Great work, Shera and team!
- The flexibility associated with adjusting priorities seems to have been clarified.
- At this point, it feels like the EPA is asking states to have “faith” in the process. It would have been nice to have the tool ready to use at the state level long before the deadline. Feeling rushed.
- Very informative! Will be important for broader state audience to see some presentation.
- Still lots of questions and concerns about how this will translate.
- Repetitive.
- Most important session in last 2 years. Won the day at meeting.
- Getting to see the tools that HQ plans to use for calculating the measures was helpful to conceptualize. More varied examples of how catchments are calculated w/ streams vs. lakes vs. watersheds of varying sizes.
- A brief overview of the measures would have been useful. Very useful.
- Good info and overview, very helpful. This helped clarify some things, however the “proof is in the pudding.” Until we see what will be counted, it is hard to get a full handle, especially on the alternative piece.
- Great session by Shera. Needs a “handbook” or step by step directions. Follow up Webinar for states good idea. Timelines are a hurdle to meet.

Session #6: ATTAINS Redesign

- A demo would have been good.
- It was interesting to see how things come together. Having slides in our binder would have been extremely helpful. Know sometimes this is beyond your control.
- Will follow up with GIS folks on the redesign
- Still a nebulous theory ... lots there that is not completed and new for the process.
- Who do we give the priority water bodies to get it entered into ATTAINS? Is EPA HQ entering the priority waters into the draft priorities data entry tool?
- Seems like it would be more beneficial to have tools available for setting priorities along with commitments so it is frustrating that the availability is going to be so long term. I think that “GREEN” for plans is misleading for the public – in terms of grouping areas with a plan whether they are impaired or delisted.
- Would like to learn more regarding any potential reporting requirement changes + how states will be provided flexibility to report info to EPA because several states may need to make enhancements to their reporting systems with any new requirements.
- I know this is still under development, but still want to know more – perhaps training and/or webinar to show how to use ATTAINS.
- Helpful. Looking forward to using the redesign more on a day to day basis.
- Ok, we’ll see what it looks like when finished.
- Looking forward to changes.
- This session was not memorable for me. Perhaps too much when combined with session 5.
- Great ppt! Very helpful to visualize everything.

- More info on ATTAINS would be helpful – maybe training on regional scale? Webinars?
- See session #5 comments.
- Great concise presentation of a technical project.
- I am confused more now than ever.
- A building issue/topic for future discussion.
- Would have liked an update/recap from the January 2015 LEAN event. What is redesign timeline?
- Informative.
- Well ... doesn't seem like we ever got on this topic at all ... time gobbled up by measures and how we input info. I have serious concerns about ability of INDUS et al to effectively translate NTTS/ATTAINS and historic data/info. IT doesn't work well now and seems fraught with problems and inefficiency for future.

Session #7: Breakouts by Region

- Regional breakouts are extremely beneficial. We would have benefited greatly by having more regional time.
- Was really good to discuss with the Region Coordinator and see what other states are doing on the vision.
- This was a great session and accomplishes a lot – really unifies the regions and states. HQ needs to take more care in “reporting” what they thought they heard.
- Maybe a good idea to mix regions in at least one breakout session.
- Will need to work with EPA Region to set correct timing of the priorities.
- It was very insightful but caused more confusion + conflicting information.
- This was a great session (7A – individual region). 7B session tailored tutorial + Q&A period was ok – the tutorial was hard to follow and see – perhaps this would be best shared via a webinar at a later date.
- 7A – having demo session in auditorium did not work. Could not hear soft spoken questions [or some of the presenter's comments]. 7B – Breakout was ok, but not great. In some ways, it was merely another platform for states to reiterate the same messages we've been hearing for many months.
- Not nearly enough time allotted for the regions to answer state questions. The session was slanted toward the regions asking questions of the states.
- Great chance to get together – would have liked more time to discuss + suggest ELI facilitator be in a breakout group of region to help facilitate what states are saying to EPA HQ.
- Great opportunity to meet with Region Reps face to face.
- Very helpful but this seemed to confirm [some disconnects regarding] 5ALT.
- Very valuable session – especially to talk about common regional issues.
- Needed a facilitator. 3 people in our group dominated the entire session. I was very disappointed and frustrated. This was for the individual region one. The joint region one with Dwane talking about measures was VERY helpful.
- Very useful. Smaller discussion in the context of the conference (knowing what everyone else is doing) is great.
- Always extremely helpful.

- Necessary meeting for regions and states. My impression is EPA HQ allowing flexibility to put decisions up to states, but regions trying to then put some sort of requirement on this. Worry that will end up with regions having different levels of added requirement.
- Really appreciate this portion of workshop. It helped to have EPA managers (last year) inform us of vision b/c it helps to push vision forward at state level. I wish they were able to come again this year.
- Good discussion, needed more time.
- Always good.
- Wanted to have the opportunity to meet with the states without HQ presence. For some regions, this is the only time where we can have a face-to-face meeting with our state counterparts.
- Best, effective time.
- Tremendous success. In lockstep.
- I think more time was needed on the regional breakout, perhaps the entire afternoon. The session following with EPA HQ GIS guru was a little on the technical side that was probably more appropriate for specific technical staff rather than program managers.
- This was the most helpful and productive session of the whole workshop. It would have been much better with more time to hash out ideas – our time felt very rushed.
- 7A – Breakout with regions. Very bumpy demo. Technical staff did not clearly explain model or measures. We need microphones. 7B – need longer with regions.
- This was very productive. Please keep this region breakout time in the agenda.
- Our states all have a good idea of how or what they'll prioritize. I learned about how completely irrelevant this meeting and the vision is to the tribes. Tribal interest/outreach by EPA universally seems low. Tribes don't have TAS for TMDLs yet they got data and provide it to EPA and EPA doesn't publish it or update the tribal 303(d) list...etc. TAS isn't necessarily good since tribes will be left holding the bag with few financial or other resources.

Session #8: Report Back and Discussion

- Too much time was spent on Alternatives. If they didn't want to do them, don't.
- Still remains issues on Alternatives, especially with the timeline and qualifying for WQ-27 measure.
- Awful – while it might be a good idea, not fully going through the report devalues what was accomplished – facilitator-wise this could have been done better – not allowing us to get outside one topic.
- Very insightful – clearly shows how interpretation of measure counting differs. There is value in keeping it vague but opens it up for inconsistencies between regions.
- This session did not meet expectations; and it was a dishonor to the time states/regions spent in breakouts.
- Created some confusion – follow up discussion was helpful on last day. More time probably needed to get through these.
- This was not useful to me. Too late in day. Beating issues to death. I would have rather talked more about examples of what different states are doing for developing their vision.
- Obviously not enough time. Perhaps some of these issues could be focus of follow up email/conference...etc.

- Can you share the list of questions we discussed?
- I think this session suffered from being at the end of the day. It's important to regroup and report on the breakouts, but if possible to do this fresh the next morning that would make it more effective.
- Unanswered questions.
- Always good. Nice mix of interactive – can be tough to do.
- It will be great if HQ provided written response (as a summary) to all.
- Oddly, this session resulted in confusion.
- Lagged, group lost energy, message got muddled.
- This session was not very productive. I did like that the questions were grouped by categories, but we did not have enough time to go through each question one-by-one. We ended up rehashing conversations already had. Time would have been better spent covering questions which had not been asked yet.
- Not enough time for all questions.
- Recap was ok, I was pretty tired by then.
- Sort of good. Still getting mixed messages from HQ vs. what other HQ or regional EPA policy positions have been the past several ELI meetings.

Session #9: Engagement

- Yes, a collection of links to materials would be great.
- The discussion was helpful and if visual materials become available engagement will have much better success.
- Good examples of public engagement.
- Nice to hear what states are doing to meet this goal. How do states document this goal (receive credit)? Is it part of a measure?
- Meh...
- EPA regions or HQ didn't give examples of how they help with engagement – they should at least be collecting the examples + putting out summary of some good examples for others to learn about.
- Great ideas shared!
- Pretty straightforward. Good side discussions from this session.
- Really good ideas shared. Glad ELI may produce a web resource site. Good to be able to do by pollutant.
- Good.
- This could be opportunity for “active” session. Show videos, “role playing” with the public. I know...more work, have to get volunteers to help. Just a thought.
- Good sharing of experiences.
- Good.
- Sound ideas to get people informed and rallied.
- Good experience-sharing discussion.
- Look forward to a compilation of outreach tools. How have other states been sharing the vision?
- We want to engage people but resources to do so are one on one inadequate.

Session #10: Communication

- Was expecting more of a presentation of ideas + what we think about it, not group activities.
- Excellent brainstorming on several WQ issues.
- Good session, good discussion, good suggestions.
- Enjoyed the breakout group.
- Good exercise.
- Why not let people decide which topic/group they want to join? Also, another instance where the same state reps essentially controlled the process and discussion.
- Loved exercise + lots of good ideas.
- Good format, good ideas, but group discussion was brief and dominated by a few states.
- I wish I could be as creative as Jeff. Would have liked better TMDL suggestions.
- Great – more of this type of activity is great. Get to meet more people. Talk more one to one (even if group of 10).
- Fun!
- This was a great breakout! I felt that we came up with a strategy for explaining alternatives to the public.
- Worked very well! Group has great ideas. Good work Adam and Jeff!
- Fun break out session. It was a welcomed format change from just sitting and listening to presentations.
- Great ideas presented.
- This was fun and came away with some new ideas.
- Discussion seemed to turn to an engagement discussion.
- Good to share ideas from around the country but a little too remedial and repetitive.
- Really good idea. Worked better than I thought it could.
- I enjoyed the format of breaking into smaller groups to brainstorm.
- Not sure this session quite hit the mark. The takeaways weren't quite as tangible as I'd hoped.
- This was a good session, but would have benefited from a wrap-up, similar to the other sessions.
- Good job by Menchu, Jeff, all.

Training Workshop Wrap-Up

- Some discussion of sharing ideas on engagement and general information (visuals, documents, etc.). There was also some mention about the possibility of a listserv – I think this would be useful as a forum of communication and exchange of ideas and material.
- I think this wrap up is less effective and powerful than it could be. For example, can we find ways to get broader participation from the entire group? Maybe post some flipcharts and have people write final thoughts during the week. The limerick was hilarious.
- Loved poems + pics. Encouraged me to come back. Truly re-energized my outlook on TMDLs + priorities.
- Dry – but not sure anything can be done about it.
- Very good note-taking by the team. Captured all the key items successfully.
- Good summary – please send out sooner than later Jim's summary. ELI folder w/ examples for communication. Can't wait.

- Love the poems! So motivational!
- Great comments.
- Would really like a copy of that...
- The benefits of this outweigh the cost many fold.
- Great closing by Adam, Jeff and Traci. They are all passionate and articulate.
- One page of “Action items” would have been useful. Love the limericks and haikus.
- I found it very productive overall, great format.

Other Comments or Suggestions

- State flags on nametags are interesting (stimulate some conversation) but are not particularly useful. Please put 2 letter state ID on nametags as well to aid in identifying people from specific states – would have been very useful to me! The conference was great – thanks!
- [The ELI staff running the hand mikes was] really lacking this year, wasting a lot of our time getting microphones to people. Not only were they not even paying attention to who was raising their hand, they seemed genuinely uninterested in doing the work required to make this run smoothly.
- Clarification needs to be given on what the maps for WQ-27 + WQ-28 represent. Is it for the impaired water body or the area covered by the “plan”?
- Great workshop. Love the opportunity to learn and communicate with other states. Would like to learn more about states monitoring and assessment procedures. Thanks for your hard work for organizing another great meeting.
- It is not clear how the “name your favorite park” intro gives value proportionate to the time it requires. I think Helen Bresler should play [a greater] role; she is articulate, concise and “fresh.” Overall, I think ELI and HQ do a very professional job with the conference. However, I also think it is time to shake things up a bit. This particular event tended to seem like the KS, NY, IN, CT, IA show. Sure these state reps have opinions they are comfortable sharing, but their constant domination of the conversation makes it highly unlikely that the group will hear from other more reserved states. Too many of the presentations were not included in the binder.
- Adam and ELI were excellent! Thank you – you did great! Have primer pre-workshop meeting for those who may be new to all this work to explain what is WQ-27, WQ-28, what is Vision...etc. Would like as presentation – not just printed to read in advance, though this would be good to have too. Didn’t see many comments from EPA HQ or regions on how they are synthesizing all the efforts for each part of the Vision. For how many EPA people were in attendance, would have liked to hear more from them on how they are helping states to carry this out – not just making policies + bean counting, but by compiling examples of what states are doing or helping brainstorm on each part of the Vision. Got more confused last day when [EPA HQ] was discussing comments that didn’t get discussed yet under prioritization. Confusion came from what workshop objectives were listed + his answers that WQ27 + 28 were workshop focus – not SP10 + 11. What are SP10 + 11, first of all? Workshop purpose and objectives did not state that. I saw that WQ27+28 would be focus. Maybe “new program measures” means WQ27+28? If this workshop is focused on these, what workshops are on the other aspects of TMDLs (SP10+11)? Have elastic string name badge. Had allergic reaction to metal necklace and had to hold badge. Have all attendees send in a photo (in line w/ Jim’s

suggestion to add photos) or progress in their jurisdiction, -- either of before/after project; stakeholder outreach...etc. ID jurisdiction on photo – can run photos during breaks as a powerpoint for others to look at/get inspired by. Haven't been in on calls – didn't know about them so please add all participants to email list about calls.

- Thanks again. Great workshop!
- Very good workshop. Totally worth our time. Looking forward to getting on ELI listserv and seeing examples placed on website.
- I recommend that you consider involving the EPA Caribbean field office in these matters (assessment, TMDL, etc) to facilitate communication. Sometimes it's very difficult to communicate or discuss these kinds of issues by phone or email. Meeting face-to-face will be good.
- I love this conference. You guys do a great job of creating “balance” between formal and informal sessions; state vs EPA opinions (though could hear more from EPA regions). Great job, great facilities.
- All sessions were helpful + clarification was provided on IDing and implementing measures. Future: need more guidance and training on data entry tool. Specifically for how to show incremental process developing a plan, implementing it, etc. To get credit for WQ27+28.
- As we move forward under the New Vision and acceptance of alternatives to TMDLs as effective and acceptable restoration/protection tools, highly suggest updating title of workshop to be along lines of “...on CWA 303(d) Listing, Restoration and Protection Implementation” (so not just focus on TMDL aspect). Thank you.
- EPA staff are great.
- Great job as always by the ELI. Starts with all the logistics and “herding cats.”
- Another great workshop. Thanks to EPA and especially to all the ELI staff. Let's keep it going.
- Your registration form: When I (a state) read “the states have...” it sounds like I'm supposed to know what all the states are doing. Hence, your high number of “I don't know.” Try “your state has...” Overall excellent. And VERY helpful for people to meet face to face. Thank you!
- The software demos were very helpful. Kudos to all that worked to make that happen. ELI did a great job facilitating the sessions.
- Bring on a new person to the PAC each year – they bring fresh perspective and energy.
- As with any multi-day workshop there were high points and low points. Personally the high points were where I felt like I had control over the projects and the low points were on issues that are outside my direct control and over my head technically.
- I found the smaller group session the most helpful. It was a good way to hear voices of those who would otherwise not speak up in a larger group. More of these in the future would be great.
- These meetings used to be state-centric and now the EPA presence is overwhelming.
- Being inside for 3 days was hard but given what we accomplished it was worth it.
- This is always the most useful 4 days to my TMDL program. The network with peers has really helped me improve program delivery and accomplish good things. Thank you ELI for an outstanding job.

APPENDIX 5: WORKSHOP WEB PORTAL— ELI'S *CWA 303(d) PROGRAM RESOURCE CENTER*

ELI maintains a resource website intended to assist states, tribes, and territories in their implementation of the CWA 303(d) Program. Training workshop materials for 2015, as well as many other resources that are relevant to the mission and work of state and territorial CWA 303(d) programs and tribal water quality programs are now available at the Institute's *CWA 303(d) Program Resource Center*, at <http://www.eli.org/freshwater-ocean/state-tmdl-program-resource-center>.