

U.S. Environmental Protection Agency (EPA) Board of Scientific Counselors (BOSC)
Safe and Sustainable Water Resources (SSWR) Subcommittee
Teleconference Meeting Summary

May 21, 2019

Dates and Times: May 21, 2019, 3:00 p.m. to 5:00 p.m. Eastern Time

Location: Teleconference

Executive Summary

On May 21, 2019, the EPA BOSC SSWR subcommittee convened via teleconference to finalize the SSWR subcommittee report. SSWR program staff members were available during the teleconference to address questions and provide input regarding the SSWR Strategic Research Action Plan (StRAP) and specific areas of input from the BOSC. The meeting format consisted of open dialogue and subcommittee questions.

Mr. Tom Tracy, the EPA Designated Federal Officer (DFO) for the subcommittee, opened the call and introduced SSWR subcommittee members. Dr. Joseph Rodricks, Chair of the SSWR subcommittee, welcomed the subcommittee members. He explained that the subcommittee would review the content and format of the draft response to each charge question and section in the report.

Subcommittee Discussion of Safe and Sustainable Water Resources Subcommittee Report

Overarching Responses

Dr. Steve Weisberg explained the subcommittee's overall concerns that he included as part of a few proposed paragraphs not included in the subcommittee report. First, the EPA's Office of Research and Development (ORD) began their presentation at the face-to-face meeting with an emphasis on the importance of communication and outreach, but these components were missing from the SSWR StRAP. Second, several projects emphasized working with local entities and translating journal articles published by ORD staff to local communities, but that translational work was missing from the current StRAP. The subcommittee wants to convey to EPA that they should highlight translational projects when the Agency works with local partners to apply EPA-developed technology and tools. Several subcommittee members agreed with the concepts Dr. Weisberg described. Dr. Rodricks suggested using a title for this section such as "Translational Research."

Charge Question 1a - Does the research outlined for the 2019–2022 timeframe support the relevant Agency priorities as described in the EPA and ORD Strategic Plans?

Dr. Tim Verslycke presented the workgroup's draft response. The workgroup examined various StRAPs and how they compared to the research areas and outputs in the SSWR StRAP. The workgroup specified several goals and objectives in the StRAPs that were not relevant to the SSWR program. One example was modernizing business processes.

Dr. Verslycke described the program's strengths. However, the workgroup found that the StRAP does not clearly describe how to measure success. They suggested adding more detail on

measures of success for research outputs where possible. The StRAP needs restructuring because the current structure was not clear. A suggested revision included an update to Appendix 4. The workgroup urged ORD to ensure that their efforts are not duplicative, as many research areas in the StRAP are addressed by other federal and nonfederal partners. The workgroup commended ORD's effort to strengthen partner and stakeholder engagement but found that the current survey could be significantly improved.

One subcommittee member reminded the group that ORD does not conduct the survey and only receives the data. The current language in the recommendation might imply that ORD conducts the surveys and a slight revision may be needed. The recommendation could be that ORD should work more with their partners to develop surveys. Mr. Scott Ahlstrom and Dr. Rodricks both agreed that ORD should not use the data if the survey is conducted poorly. If ORD uses the data, they are buying into the survey and they should put additional effort into controlling the survey. The subcommittee supports ORD having more influence over how the survey is conducted.

Dr. Kate Lajtha noted that Charge Question 1b focuses on the survey and partner needs. She suggested moving the survey recommendation from Charge Question 1a to Charge Question 1b. She said that some of the suggestions in Charge Question 1a could be upgraded to recommendations. Mr. Tracy, Dr. Rodricks, Dr. Verslycke, and other subcommittee members agreed with Dr. Lajtha.

Dr. Fred Hitzhusen said it would be almost impossible to design five workgroups without overlapping recommendations. He suggested that a recommendation may be stronger if it appears in multiple locations. Mr. Shahid Chaudhry said that the report should not be repetitive.

Dr. Elizabeth Boyer suggested that the current recommendation under Charge Question 1a could be broadened away from the survey to include other ways in which partner and stakeholder engagement is important, such as cooperative federalism and sharing information with federal, state, tribal, and local partners. Dr. Lajtha supported this idea.

Charge Question 1b - Each ORD research program undertook a rigorous engagement process to provide additional detail on specific EPA program and region, state, and tribal needs, the results of which are summarized in the StRAP objectives and explanations of research topics and areas. How well does the proposed research program respond to these partner-identified needs?

Dr. Lajtha said that the survey is a great example of cooperative federalism. The problem is that the survey is limited as it only includes 11 questions and leading questions that might influence the results.

The workgroup was concerned that the StRAP does not address fracking, a major issue raised by tribes. Mr. Chaudhry and other subcommittee members emphasized that ORD should increase transparency and provide clear justification for the projects that do not make the list and for the topics indicated as low priority via the survey but still included in the StRAP. In addition, the workgroup wondered why ORD scientists were not allowed to provide input into the survey.

The workgroup had two recommendations. The first was to improve the survey in a variety of ways. Second, the workgroup recommended that the StRAP include prioritization of research

activities and describe how these priorities could be accomplished in collaboration with other federal agencies. The StRAP should identify the most important items on this list.

Dr. Rodricks reminded the workgroup to clarify language regarding the survey since EPA does not conduct the survey.

Charge Question 1c - Does the StRAP, including the topics, research areas, and proposed outputs, clearly describe the strategic vision of the program? Given the environmental problems and research objectives articulated, please comment on the extent to which the StRAP provides a coherent structure toward making progress on these objectives in the 2019-2022 time frame.

Dr. Rodricks shared that the workgroup thought that the answer to Charge Question 1c was generally well-articulated in the StRAP. Taken collectively, the 31 outputs adequately describe the direction of the program. Although the needs presented in the StRAP are addressed, it is not clear whether those needs reflect the actual stakeholder needs.

Dr. Rodricks described the workgroup's suggestions. First, some of the outputs are repetitive. It was unclear if some outputs were of greater priority or if all 31 outputs were of equal importance. Second, the StRAP should articulate measures of success, although Dr. Rodricks noted that the articulation might now overlap with the new recommendation in Charge Question 1a. The workgroup suggested including additional thought into topics and organization. They raised that watersheds, nutrients, and harmful algal blooms (HABs) are categorically different. Third, the workgroup noted that some outputs were general while others were specific, which resulted in an uneven level of detail in each output description.

The workgroup recommended that ORD improve research translation and communication, especially around issues related to human health and environmental risk. The StRAP should include more discussion of accurate and effective research communication to the public.

Dr. Hitzhusen shared that he struggled with how to approach and address the watersheds topic and wondered if there was a way to reword the topic title or have the topic serve as a catch-all for everything not related to infrastructure or HABs. Dr. Rodricks responded that he would give the issue some thought.

Dr. Weisberg noticed that the recommendation for Charge Question 1c is worded in a way that is more explanatory than directive. Drs. Rodricks and Lucinda Johnson agreed and added that the recommendation seems feeble and the current language explains the thought process. Dr. Johnson wondered if putting the "EPA should" language at the top of the paragraph, followed by the explanation, would help the Agency understand their response.

Charge Question 1d - Recognizing ORD's focus on addressing identified partner research needs, in the presence of reduced scientific staff and resources, are there any other critical emerging environmental needs or fields of expertise and/or new research methods where this program should consider investing resources?

The workgroup for Charge Question 1d proposed two recommendations regarding identification of critical emerging environmental needs. The first was to develop a process for identifying emerging issues. The workgroup found there to be a distinct process for identifying customer and

stakeholder needs but no process for horizon-scanning to identify emerging issues. The second was to invest in solutions to address the ramifications of climate change and develop next-generation environmental monitoring tools and technologies.

Mr. Chaudhry said that Recommendation 1d.2 did not seem in line with Charge Question 1d. He thought that EPA already adequately addresses the ramifications of climate change. The charge question asks for ideas on other research that EPA should address. Dr. Johnson responded that the workgroup understood that there is work happening around climate change but noted that it was not covered in the StRAP. The workgroup listed them to ensure they were considered.

Dr. Weisberg supported the first recommendation. He clarified that the second recommendation was that the research plan is inadequate in these two research areas. Dr. Rodricks agreed and said that the workgroup should reorganize the text in their section.

Charge Question 1e - What are some specific ideas for innovation (including prizes/challenges) and market-based approaches that the program could use to advance solutions to existing and emerging environmental problems?

Mr. John Lowenthal shared that the workgroup discussed shifting the paradigm of how programs are structured by putting more energy into incentives than into threats of penalties. Dr. Rodricks and Dr. Weisberg stated that the subcommittee cannot suggest that the EPA “reduce enforcement penalties” or make enforcement recommendations to ORD. ORD is not involved in enforcement. Dr. Weisberg suggested expanding the incentives section and deemphasizing enforcement. He suggested considering what ORD can achieve. Dr. Rodricks proposed integrating some of the text supporting the use of incentives to improve compliance into a recommendation.

Dr. Weisberg was unsure if that should be raised to a recommendation since other issues are more critical. Dr. Steve Carr agreed that more specific incentives could be included; one of the best incentive programs is refunds on aluminum cans. Similar programs could be applied with support from EPA. Dr. Hitzhusen said that the workgroup struggled to address the “market incentives” concept because they are difficult to apply and might not be practical for federal agencies.

The subcommittee sought to clarify Charge Question 1e. Mr. Tracy explained that the intention of the charge question is to determine how the SSWR program could further ORD’s research with challenges, incentives, markets, etc. A subcommittee member stated that the question was very different than the example of aluminum can incentive programs because ORD is not involved in regulation. Dr. Hitzhusen encouraged collaboration with economic professionals such as environmental and natural resource economists from the American Applied Economics Association.

Mr. Lowenthal and Dr. Rodricks agreed that the workgroup would revise their response. Mr. Tracy recommended the workgroup focus on ORD’s scope and avoid areas where ORD does not have a direct impact.

Formatting Issues

Dr. Rodricks and Dr. Lajtha suggested using the response to Charge Question 1a as a guide for formatting other charge questions. They suggested the approach of presenting a paragraph

narrative statement as an introduction to how the workgroup conducted their analysis, with strengths, suggestions, and recommendations presented in bullets.

Conclusions

The edits from the teleconference will be compiled into the draft BOSC SSWR StRAP review reports. The BOSC EC will convene in June 2019 to review and consider the subcommittees' recommendations and finalize the overall BOSC report, which will include reviews of each of ORD's research programs.

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Meeting Charge Questions

The draft charge can be accessed at https://www.epa.gov/sites/production/files/2018-12/documents/strap_charge_to_bosc.pdf.

BOSC Safe and Sustainable Water Resources Subcommittee Members:

Joseph Rodricks, *Chair*
Robert Blanz, *Vice Chair*
Scott Ahlstrom
Jerad Bales
Elizabeth Boyer
Steve Carr
Shahid Chaudhry
David Cole
Joel Ducoste
Elizabeth Fassman-Beck
Fred Hitzhusen
Lucinda Johnson
Kate Lajtha
Michelle Lorah
John Lowenthal
Tim Verslycke
Stephen Weisberg
John White

EPA Designated Federal Officer (DFO): Tom Tracy, *Office of Research and Development*

Contractor Support (ICF):

Alessandria Schumacher