

**U.S. Environmental Protection Agency (EPA) Board of Scientific Counselors (BOSC)**  
**Executive Committee (EC)**  
**Face-to-Face Meeting Minutes**  
**June 27–28, 2019**

**Dates and Times:** June 27, 2019, 9:00 a.m. to 5:00 p.m.; June 28, 2019, 8:30 a.m. to 12:00 p.m. Eastern Time

**Location:** EPA Research Triangle Park Research Facility, 109 TW Alexander Drive, Durham, North Carolina

**Executive Summary**

On June 27–28, 2019, EPA’s BOSC EC convened in Research Triangle Park, North Carolina. The goals of the two-day meeting were to review the BOSC subcommittee draft reports and propose edits to each. In addition, the EC discussed organizational input, focusing on cross-cutting topics, areas of collaboration, and inclusion of partners and stakeholders. The meeting format allowed for presentations, open dialogue, program feedback, subcommittee questions, and EPA responses to questions.

Day 1 consisted of presentations and discussion of the Air and Energy (A-E), Homeland Security (HS), Chemical Safety for Sustainability (CSS), and Sustainable and Healthy Communities (SHC) subcommittee draft reports. Day 2 included presentations and discussion of the Safe and Sustainable Water Resources (SSWR) subcommittee draft reports and the Human Health Risk Assessment (HHRA) subcommittee feedback, and discussion about subcommittee report cross-cutting topics and the future BOSC schedule.

Dr. Jennifer Orme-Zavaleta, Principal Deputy Assistant Administrator for Science, Office of Research and Development (ORD), welcomed the EC and thanked the members for their service. She emphasized the BOSC’s role to ensure EPA’s science is responsive to and supportive of the Agency’s program offices, regions, and states, and expressed her eagerness for a working relationship moving forward. Mr. Tom Tracy served as the Designated Federal Officer from ORD.

**Deliberation on BOSC Subcommittee Draft Reports and Feedback**

***Air and Energy Subcommittee***

Dr. Charlette Geffen, Chair of the A-E subcommittee, presented the A-E subcommittee draft report. She stated the A-E subcommittee supported the program’s integrated approach and selection of emerging areas. She emphasized the A-E program’s vision and recognized the strong alignment with EPA priorities. Dr. Geffen reviewed the general observations, strengths, suggestions, and recommendations for Charge Questions 1a through 1e.

The EC discussed multiple topics, including clarification of terms and phrases used in the draft report. They also inquired if specific topics such as energy impacts and environmental justice would be included in the StRAP. They also discussed previously-used crosscutting roadmaps, effective collaboration with other National Program Directors (NPDs), surveys, how to identify research needs, and research mechanisms.

### ***Homeland Security Subcommittee***

Dr. Paula Olsiewski, Chair of the HS subcommittee, and Mr. Lance Brooks, Vice Chair of the HS subcommittee, presented the HS subcommittee draft report. Dr. Olsiewski discussed HS challenges including Ebola, avian influenza, and African swine fever. She described the HS Research Program's (HSRP) on-the-ground responders to decontaminate and clean up disaster events or disease outbreaks. Dr. Olsiewski indicated that oil spill cleanup is on the current list of HSRP's priorities. She and Mr. Brooks reviewed the general observations, strengths, suggestions, and recommendations for Charge Questions 1a through 1e and Charge Question 2, which was specific to the HS subcommittee.

Multiple EC members raised the crosscutting expertise matrix as a potential crosscutting theme across programs. Several suggested HSRP collaborate with other groups to help with less acute emergencies that might experience the same spills and utilize inter-subcommittee collaborations to synthesize recommendations. The EC discussed how HSRP fits in with the broader government's role of HS, discussing the cooperation of other departments and research to remain prepared for the unknown. Multiple members stated that the report was useful, novel, and that the viewpoints offered were beneficial.

### ***Chemical Safety for Sustainability Subcommittee***

Dr. James Stevens, Vice Chair of the CSS/HHRA subcommittee, noted that they typically review two StRAPs at the same time. However, the HHRA StRAP was not complete by the meeting in April 2019. The CSS/HHRA subcommittee looked for areas of synergy and overlap between the CSS and HHRA programs. He explained that the CSS program works towards cutting-edge science but also responds to customers' immediate needs by following TSCA regulations. The CSS program is organized into three major research topics (chemical evaluation; complex systems science; and solutions-driven translation and knowledge delivery) supported by eight research areas.

Dr. Stevens reviewed the general observations, strengths, suggestions, and recommendations for Charge Questions 1a through 1e. In summary, the program has a variety of measures in place that support the creation and adoption of innovative tools and methods that are central to the Agency's mission, but the measures could be enhanced. The research outlined and the proposed outputs in the CSS StRAP clearly define the desired research vision of the CSS program. With the continual partner and stakeholder inputs, collaborations, and top-level science in the CSS program, they are on track to advance the management of chemical risks to protect human health and the environment.

The EC discussed approaches, problems, and solutions to mixtures, issues surrounding new approach methodologies (NAMs), and accelerating discovery. They also described the differences and interaction of the CSS and HHRA program regarding the TSCA active inventory list. Various members asked for clarification on the definition of the terms "genomics" and "non-chemical stressors;" inclusion of plastics, and LCA and safer alternatives. The EC highlighted potential crosscutting issues, including mixtures, per- and polyfluoroalkyl substances (PFAS), and life cycle analysis (LCA).

### ***Sustainable and Healthy Communities Subcommittee***

Dr. Courtney Flint, Chair of the SHC subcommittee, and Mr. Matthew Naud, Vice Chair of the SHC subcommittee, presented the SHC subcommittee draft report. Dr. Flint stated the SHC subcommittee reviewed the SHC StRAP, which was broken into three topic areas including contaminated sites; waste and sustainable materials management; and healthy and resilient communities. She and Mr. Naud reviewed the general observations, strengths, suggestions and recommendations of Charge Questions 1a through 1e and Charge Questions 2 and 3, which were specific to the SHC subcommittee .

The EC discussed the process by which recommendations were made, and whether they were actionable or should be moved to suggestions, re-grouped, or removed. They discussed the subcommittee's input and how to prioritize and streamline StRAP content to not dilute the important recommendations with those that should be suggestions, should be removed, or are not the SHC program's responsibility.

### ***Safe and Sustainable Water Resources Subcommittee***

Dr. Joseph Rodricks, Chair of the SSWR subcommittee, and Dr. Robert Blanz, Vice Chair of the SSWR subcommittee, presented the SSWR subcommittee draft report. Dr. Rodricks provided an overview of the three interrelated research topics, including watersheds; nutrients and harmful algal blooms (HABs); and water treatment and infrastructure. He explained that each topic carries near- and long-term goals designed to yield practical tools and solutions to maintain the chemical, physical, and biological integrity of the nation's waters and protect the quality of drinking water throughout the United States. Dr. Rodricks reviewed the general observations, strengths, suggestions, and recommendations for Charge Questions 1a through 1e. Dr. Rodricks stated the overall feedback for the SSWR Research Program was positive.

The specific recommendations were discussed, as well as specific formatting and phrasing around the term "wastewater," the use of genomics, removal and mitigation of HABs, and projects to aid research in those areas. The EC also discussed the partner engagement process as a crosscutting theme across the programs.

### ***Human Health Risk Assessment Subcommittee***

Dr. Stevens explained that the CSS/HHRA subcommittee provided feedback on the directions of the HHRA program before they developed the StRAP, as the draft StRAP was not ready for review at the April 2019 CSS/HHRA subcommittee meeting. He provided a background of the HHRA program.

Dr. Stevens reviewed the subcommittee's feedback for Charge Questions 1 through 4 and noted that the HHRA program is a primary CSS customer. Various additions, edits, and clarifications to the StRAP were discussed, including cumulative risk assessments, uncertainty methods, and ecological assessment research. Dr. Tina Bahadori, National Program Director, HHRA Research Program highlighted that the HHRA program will soon become Health and Environmental Risk Assessment (HERA).

### ***Crosscutting Topics, Summary of Next Steps, and Future BOSC Schedule***

On day 2 of the meeting, the EC discussed crosscutting topics raised throughout the discussions and edited the list as necessary. The EC then examined the structure of subcommittee reports, report terminology consistency, and the future expectation of the subcommittees and the opportunity for additional meetings through each program's implementation stage.

### **Conclusion**

Dr. Paul Gilman, Chair of the EC, stated that each BOSC subcommittee is responsible for implementing modifications or improvements to their draft report based on EC discussions. He suggested the EC report focus on crosscutting issues, or common themes, between the subcommittee reports.

The EC discussed the layout of the final report. Mr. Tracy stated the completed report was due early August 2019 and would include the revised subcommittee reports. Dr. Gilman planned to keep the report format similar to previous years' EC reports, but still needed input from the EC on the crosscutting issue nominations.

Dr. Tracy set a deadline of early August 2019 to deliver the final BOSC EC report.

## Meeting Participants

### **BOSC Chemical Safety for Sustainability/Human Health Risk Assessment Subcommittee Members:**

Katrina Waters, *Chair*  
James Stevens, *Vice Chair\**  
Gina Solomon, *Temporary Vice Chair*  
Anthony Bahinski  
Richard Becker  
Juan Colberg  
Richard Di Giulio  
Chris Gennings  
Dale Johnson  
Daland Juberg  
Juleen Lam  
Timothy Malloy  
Jennifer McPartland  
Jane Rose  
Ponisseril Somasundaran  
Donna Vorhees  
Clifford Weisel  
Mark Wiesner

*\*did not attend*

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

### **EPA Presenters:**

Tina Bahadori, *National Program Director, Human Health Risk Assessment Research Program*  
Betsy Behl, *Director, Health and Ecological Criteria Division, Office of Water*  
John Cowden, *Biologist, National Center for Computational Toxicology*  
Alexandra Dapolito Dunn, *Assistant Administrator, Office of Chemical Safety and Pollution Prevention*  
David Dunlap, *Deputy Assistant Administrator for Research and Development, Office of Research and Development*  
Jeff Frithsen, *National Program Director, Chemical Safety for Sustainability Research Program*  
Hayley Hughes, *Director, Office of Science Coordination and Policy*  
John Kenneke, *Assistant Laboratory Director, Chemical Safety for Sustainability Research Program*  
Anna Lowit, *Senior Science Advisor, Office of Pesticide Programs*  
Jeffery Morris, *Director, Office of Chemical Safety and Pollution Prevention*  
Kathleen Raffaele, *Senior Science Advisor, Office of Land and Emergency Management*  
Bruce Rodan, *Associate Director for Science, Office of Research and Development*  
Joe Tietge, *Deputy National Program Director, Chemical Safety for Sustainability Research Program*

Antony Williams, *Chemist, National Center for Computational Toxicology*

**Other EPA Attendees:**

Xabier Arzuaga	Dale Hoff	Tom Puruker
David Bussard	Keith Houck	Elizabeth Radke-Farabaugh
Anna Champlin	Samantha Jones	Sandy Raimondo
Brian Chorley	Richard Judson	Bruce Rodan
Allen Davis	Barbara Klieforth	Kim Rogers
Ingrid Druwe	Tom Knudsen	Paul Schlosser
David Dunlap	Andrew Kraft	Anita Simha
Steven Dutton	Carlie LaLone	Todd Stedeford
Amanda Fitzmorris	Jason Lambert	Michele Taylor
Megan Fleming	Meredith Lassiter	John Vandenberg
Jill Franzosa	Emma Lavoie	Katrina Varner
Lauren Gessner	Lucina Lizarraga	Dan Villeneuve
Jeff Gift	Mike Loughran	John Wambaugh
Andy Gillespie	Madison McGovern	Andre Weaver
Annette Guiseppi-Elie	Alexa Moore	Erin Yost
Maureen Gwinn	Jennifer Nichols	Doug Young
Belinda Hawkins	Beth Owens	

**Other Participants:**

Paul Gilman, *Chair, BOSC Executive Committee*

**Contractor Support (ICF):**

Canden Byrd  
Sophie Hearn  
Kate Helmick