

**U.S. EPA Office of Research and Development**  
**Charge to the Board of Scientific Counselors**  
**Subcommittee for the Safe and Sustainable Water Resources Research Program**  
**Virtual Meeting on October 28-29, 2020**

**Introduction**

The mission of the EPA Office of Research and Development (ORD) is to provide the best available science and technology to inform and support public health and environmental decision-making at Federal, state, tribal, and local levels. This leading-edge research addresses critical environmental challenges and anticipates future science needs. Through 2018-19, ORD benefited from input from the Board of Scientific Counselors (BOSC) on the research topics and outputs for six Strategic Research Action Plans (StRAPs):

- Air and Energy (A-E)
- Safe and Sustainable Water Resources (SSWR)
- Sustainable and Healthy Communities (SHC)
- Chemical Safety for Sustainability (CSS)
- Homeland Security Research Program (HSRP)
- Health and Environmental Risk Assessment (HERA)

Taking into consideration BOSC input on the StRAPs, ORD worked closely with its partners in EPA programs and regions, states, and tribes to identify specific products that address their priority needs. This engagement process was conducted through Research Area Coordination Teams (RACTs), drawing membership from across the Agency, and included a pilot program to directly engage state scientists and a formal Tribal Consultation. Following this detailed planning phase, ORD is now transitioning from the “what and when” to the “who and how”, i.e., from planning to implementation. ORD’s request for BOSC input is now focused on the implementation phase. The objective is to have each BOSC subcommittee cover the full portfolio of the relevant research programs within a two-year BOSC review cycle.

**BOSC Review of SSWR Watersheds Topic Research**

The current BOSC review is focused on the SSWR Watersheds Topic, one of the three inter-related topics in the SSWR research portfolio. The Watersheds Topic consists of three Research Areas: RA1 – Assessment, Monitoring, and Management of Aquatic Resources; RA2 – Improved Aquatic Resource Mapping; and RA3 – Human Health and Aquatic Life Criteria. The purpose of this review is to receive the Subcommittee’s feedback on the following charge questions:

**Charge Questions**

Q.1: Progress towards characterizing microplastics in the environment and uncertainties about their potential environmental health effects requires reliable and consistent methods. SSWR is conducting research to develop and standardize collection, extraction, identification and quantification methods for microplastics. Based on the progress and results to date, what suggestion(s) or recommendation(s) does the Subcommittee offer on research into addressing the uncertainties and challenges associated with the Agency’s efforts to develop reliable and consistent microplastics analytical methods?

[Research Area 1, Output 4]

Q.2: Existing geospatial datasets are often limited with respect to mapping rivers, streams, and wetlands with the degree of accuracy and at the resolution needed to support federal, state, tribal, and local water management decisions, including identifying “waters of the United States” subject to Clean Water Act jurisdiction. SSWR is leveraging existing interagency partnerships to improve the accuracy and application of geospatial data for mapping aquatic resources nationally. What suggestion(s) or recommendation(s) does the Subcommittee offer on further identifying emerging technologies, methodologies, and datasets to improve aquatic resource mapping tools and their application for federal, state and local water management decisions? [Research Area 2, Output 1]

Q.3: To help reduce health risks associated with exposure to fecal contaminants in recreational waters, SSWR is conducting research to strengthen the scientific basis of existing, and to advance new, fecal contaminant detection methods, source tracking, predictive tools, and health effects assessments that contribute to human health recreational water quality criteria programs. As the research progresses, what suggestion(s) or recommendation(s) does the Subcommittee offer on continuing to identify and conduct research of greatest importance to advancing human health protection from fecal contaminants in recreational waters? [Research Area 3, Output 1]