



Office of Research and Development

SAFE AND SUSTAINABLE WATER RESOURCES RESEARCH PROGRAM



SSWR Overview and Charge Questions

*BOSC SSWR Subcommittee Meeting on Nutrients and HABs
December 1-2, 2021*



Overarching Research Topics

Clean Water Act

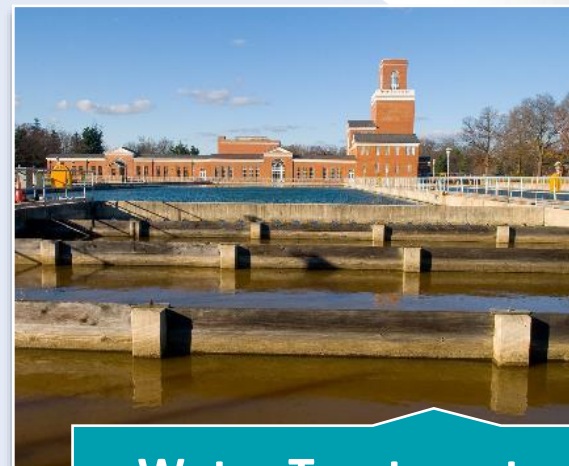
Safe Drinking Water Act



Watersheds



**Nutrients and
Harmful Algal Blooms**



**Water Treatment
and Infrastructure**

SAFE AND SUSTAINABLE WATER RESOURCES RESEARCH PROGRAM



ORD's Nutrients and HABs Research



**Research Area 4:
Assessment and
Management of HABs**



**Research Area 5:
Science to Support
Nutrient-Related
Water Quality Goals**



**Research Area 6:
Nutrient Reduction
Strategies and
Assessment**



Charge Question I

Nutrient pollution is the most widespread water quality problem facing the United States, with far-ranging consequences for environmental condition, economic prosperity, and human health and well-being. Current SSWR in Research Area 5 focuses on nutrient-related impacts in watersheds and waterbodies to support determining protective endpoints for aquatic life in different water body types.

What suggestion(s)/ recommendation(s) does the Subcommittee have on ORD's implementation of this research area and on

- a) any new or emerging sensitive aquatic life endpoints, and
- b) methods, sensors, and/or nutrient indicators for assessing aquatic life endpoints, particularly under changing climate conditions?





Charge Question 2

While EPA, states, and tribes have made great efforts toward reducing nutrient pollution nationwide, it is still a challenge to identify best practices for implementing interventions and tracking their effectiveness to meet nutrient reduction goals in a comprehensive manner.

To address this issue, SSWR Research Area 6 focuses on:

1. applying tools, technologies, and best practices for nutrient management
2. monitoring and tracking the effectiveness of nutrient reduction strategies
3. working closely with stakeholders to apply management practices and monitoring within their nutrient reduction programs.

What suggestion(s)/ recommendation(s) does the Subcommittee have on ORD's implementation of this research area, particularly related to evaluating the effectiveness of nonpoint source nutrient reductions at local to large regional scales?





Charge Question 3

Harmful algal blooms are complex ecological processes that are affected by a variety of factors, including nutrient availability, water temperature, weather patterns, solar irradiation, limnology, and competing microorganisms. Much is still unknown regarding the human and environmental health effects of toxins produced during blooms.

What suggestion(s)/ recommendation(s) does the Subcommittee have on ORD's implementation of the HABs portfolios, particularly in

- a) determining the toxicity of HABs, and
- b) developing the capacity to forecast HAB events to prevent or mitigate exposure?

