

RRT5 Science and Technology Subcommittee Report Spring 2023 – updated with 4/3/23 call notes

Chairs:
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2023 Spring RR5 S&T Subcommittee Agenda

Introductions/New SSC recognition

USCG Research & Development Update (Scott)

Great Lakes Center of Excellence (Kit Pace)

MPRI related research (Faith)

Great Lakes other, related updates R&D (NOAA)

Bioremediation (All)

Climate Change Tools Update from fall? (none needed)

IOSPP projects (John)

Fate/Transport (Faith/John)

Questions/feedback

Coast Guard Research and Development Updates

- Emerging Pollution Response Technology (mechanical recovery and containment) – Working toward brief(s) on evaluations, including sorbent testing in fy23
- Behavior of diluted bitumen in fresh water (warm/cold) – guidance document on response in late fy23
- Nearshore and inland evaluation of the estimated recovery system potential (ERSP) calculator
 - Prototype and user guide (May 24)
- Advancing UAS and AUV capabilities to characterize water column and surface oil in ice environments
 - UAS experiments at GLCOE this past winter
 - UAS/AUV systems field exercise integration report planned for summer '23



U.S. Coast Guard Great Lakes Oil Spill Center of Expertise



Purpose: Operationalize innovative ideas that improve freshwater and arctic oil spill responses.

The GLCOE is a non-regulatory, non-operational body with a legislative mandate to conduct research in the domain of oil spill response.

Great Lakes Center of Excellence

- Update from Kit Pace
- In the process of formalizing process for doing and proposing new research in 2024, 2025
- Studies on UAS detection of surface oil/ice conducted this past winter
- Continuing other studies through USCG into 2023
- See separate powerpoint slide on overview of activities.

Canada's Multi-Partner Research Initiative (MPRI)

- MPRI Phase 2 (Natural Resources Canada) <https://natural-resources.canada.ca/energy/energy-offices-and-labs/canmetenergy/canmetenergy-devon/multi-partner-research-initiative/24679>; starts 2023-2026
- Lake Superior State University's Center of Freshwater Research and Education Network "Our Waters of the North (OWN)" led by Ashley Moerke with multiple participating agencies and universities from Canada and the U.S. with special call out to indigenous communities.
 - Biological interactions in the coastal wetland environments
 - Oil-particle interactions
 - Sensor testing
- Network building helps link with other inland and Great Lakes studies

Great Lakes Other R&D of potential interest

- USACE coastal resiliency starting – concentrating on Lake Ontario and Lake Superior
- Lake level Viewer will be updated - +/- 6 ft average will change to low water datum and +10 ft and -3 ft at 0.5 ft increments
 - NOAA Digital Coast <https://coast.noaa.gov/digitalcoast/>
 - NOAA Lake Level Viewer [Lake Level Viewer \(noaa.gov\)](https://lakelevelviewer.noaa.gov/)
- NOAA updating topobathy – especially national parks, harbors; data hosted on data access viewer. Benthic mapping also taking place around multiple national parks. Contact Nicolle Rutherford ORR

Bioremediation

- New S&T topic
- What are states doing inland – interest in using bioremediation agents and growing industry
- More research is needed on methods
- Possible link with the vendor protocol (on RRT5 web site)
- Where are resources for response techniques?

Inland Oil Spill Preparedness Program (IOSPP) New FY2023 Projects

- Cell Phone App Calibration, Field Demonstration, and Technology Transition Plan (Lead: Jeff Steevens, USGS Columbia Environmental Research Center)
- Volatile Gas Remote Detection (Lead: Claire Bunch, USGS Arizona Water Science Center)
- contact John Nelson or Faith Fitzpatrick for more info or introductions

Inland Oil Spill Preparedness Program (IOSPP) FY2024

- Pre-proposals are due April 19, 2023; Full proposals July 19, 2023
- If you have an idea for a tool, technique, etc. linked to spill response and may benefit from IOSPP funding, contact John Nelson (john_nelson@ios.doi.gov)

Fate & Transport Updates

- **Inland Riverine Oil Spill Collaboration Area (IROS)** changed from web to Microsoft teams in spring 2022 –table of fate/transport riverine applications/tools/apps -- Faith needs to refresh and get a teams meeting set up – Interaction with planning subcommittee for RRT5 tools and models.
- **FluOil model** methods publication released:
<https://www.frontiersin.org/articles/10.3389/frwa.2021.771764/full>
 - FluOil training being planned for lower St. Croix River with UMBRA (Mark Ellis contact) for September 2023
- EPA held in person **ICWater** training (Jon Gulch contact)
- RRT6 Planning subcommittee has workgroup forming – contact Kim Churchill if interested.

Questions/add 'l feedback

For more info contact the chairs or contributors to the slides:
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