

Coastal Response Research Center and Center for Spills and Environmental Hazards Overview

Nancy E. Kinner

UNH Co-Director, Coastal Response Research Center
Director, Center for Spills and Environmental Hazards

Ben Shorr

NOAA Co-Director, Coastal Response Research Center
Acting Chief, Spatial Data Branch, NOAA ORR



Coastal Response Research Center
May 14, 2018

Welcome and Thank You for Participating



Coastal Response Research Center

2

Introductions



Coastal Response Research Center

3

New NOAA Co-Director

- Ben Shorr
 - Acting Chief Spatial Data Branch
 - Physical scientist with ORR since 2001
 - Started as co-director in December 2017
 - ~8 weeks overlap with Mark Miller before Mark's retirement
 - Involvement with CRRC, especially after Amy Merten became CRRC co-director



Coastal Response Research Center

4

NOAA Co-Director

- Bi-weekly calls with UNH counterpart
- Major role in contracting between UNH and NOAA
- Emphasis on long-term vision of CRRC/ORR
 - Strategic goals
- Outreach between ORR and CRRC



Coastal Response Research Center

5

CRRC CAB Members

- Dave Westerholm, NOAA ORR
- Ricardo Alonzo, USCG MER
- Yvonne Addassi, CAOSPR
- Robyn Comny, USEPA
- Greg DeMarco, ExxonMobil
- Erik Chapman, UNH Sea Grant



Coastal Response Research Center

6

NOAA ORR Participants

- Lisa DiPinto, NOAA ORR
- Scott Lundgren, NOAA ORR
- Kate Wheelock, NOAA ORR



Coastal Response Research Center

7

CRRC Participants

- Kathy Mandsager, Administrative Manager



Coastal Response Research Center

8

Not Attending

- Jan Nisbet, UNH VP Research
- Larry Mayer, UNH Co-Director Joint Hydrographic Center



Coastal Response Research Center

9

Coastal Response Research Center (CRRC)

- NOAA's Office of Response and Restoration (ORR)/UNH Spill Partnership
 - Originally through CICEET in 2002
 - MOA between NOAA & UNH in 2004
 - 5 year grants
- Parallel Center for Non-NOAA Funding
 - Center for Spills and Environmental Hazards (CSE)



Coastal Response Research Center

10

**Coastal Response
Research Center
(NOAA \$)**

**Center for Spills and
Environmental Hazards
(All Other \$)**

- Conduct and Oversee **Basic** and **Applied** Research and Outreach on Spill Response and Restoration
- Transform Research **Results into Practice**
- Serve as **Hub for Oil Spill R&D**
- **Facilitate Interaction** Among Oil Spill Community (all stakeholders)
- **Educate/Train Students** Who will Pursue Careers in Spill Response and Restoration



Coastal Response Research Center

11

Updates Since Last CAB Meeting

- New 5 year grant between NOAA and UNH
 - July 2017 to June 2022
- 6th International Marine Debris Conference
 - March 2018
 - Helped with logistical support
 - Financial liability
- ARD post DWH grant support
 - Two contracts for final NRDA follow-up
 - Three new contracts for continued ORR science



Coastal Response Research Center

12

CRRC Focus Topics

- Dispersants
- DWH long-term data management
- Leveraging academic engagement
- Disaster preparedness
- Arctic spill response
- Submerged oil



Coastal Response Research Center

13

State-of-Science of Dispersant Use in Arctic Waters



Coastal Response Research Center

14

State-of-Science of Dispersants and Dispersed Oil (DDO) in Arctic

- NOAA Project Leads (Doug Helton & Gary Shigenaka)
- Result of Arctic SONS on Response to Arctic Marine Oil Spill
- Part 1: Assemble Database of DDO Literature from June 2008 to December 31, 2015 (CRRC continues to maintain this database)



Coastal Response Research Center

15

State-of-Science of DDO in Arctic

- Part 2: State-of-Science workshop (Jan 2015) and subsequent conference calls
- Meeting with scientific experts on:
 - Efficacy & Effectiveness
 - Physical Transport & Chemical Behavior
 - Degradation & Fate
 - Toxicity & Sublethal Impacts
 - Public Health & Food Security
- Part 3: Public input on Part 2



Coastal Response Research Center

16

State-of-Science of DDO in Arctic

- Part 4: Communicating the state-of-science to the public & others
- Recommendations on how to communicate findings to broader audience/community
 - How to achieve this??
- ARRT meeting Weds May 16
- Meeting with Federal agencies (responders and PIOs) + AK DEC reps in DC
- Meeting with Sea Grant and others in AK



Coastal Response Research Center

17

DWH Long-Term Data Management



Coastal Response Research Center

18

DWH Long-Term Data Management

- DWH response, assessment and restoration generation of huge amounts of data
- Must be publically available/searchable
- Coordination of 30+ groups
- Initial workshop June 2017
- Currently facilitating working groups
 - Data Standards
 - Interoperability
 - Data searchability and discovery
- Next workshop Dec 2018



Coastal Response Research Center

19

SCAT for Tomorrow Workshop

- Shoreline Clean-up and Assessment Technique (SCAT)
- January 2017 workshop with industry
- Developed common data standard to enhance information sharing
- Data sharing agreements
- SCAT use in exercises/drills
- Continuing monthly meetings with ORR steering committee



Coastal Response Research Center

20

Leveraging Academic Engagement

- Collaboration with Scott Lundgren
- Objectives:
 - Develop best practices for advancing NOAA OR&R interaction with the academic community during response
 - Build relationships and foster understanding of the roles and responsibilities
 - Develop mechanisms that facilitate access for academic research during oil spills
 - Develop implementation recommendations and metrics for evaluating success
- Workshop in January 2019



Coastal Response Research Center

21

Disaster Preparedness Program

- Collaboration with Kate Wheelock
- Building from GOM NOAA Regional Preparedness Training (NRPT) workshops
 - Partnership with GOM DRC
- Two upcoming workshops with possible locations:
 - US Caribbean
 - Norfolk, VA
- Possible longer term initiative



Coastal Response Research Center

22

Other CRRC Activities



Coastal Response Research Center

23

Dispersants (DWG) and Submerged Oil Working Groups

- Started after R&D Needs Workshops on these topics in 2005 and 2006, respectively
- Meet annually at Clean Gulf and in conjunction with IOSC
- Updates on R&D on-going from national and international stakeholders



Coastal Response Research Center

24

One Health Initiative

- Collaboration with Lisa DiPinto
- Intersection of DWH toxicology of marine mammals, fish, birds and human health
- Funding from GOMRI and NIEHS for workshop in October 2018



Coastal Response Research Center

25

Arctic Spill Response Modeling

- Proposal to ADAC for funding for two workshops and three working groups
- NOAA ORR leadership on oil spill response modeling
 - Many models and approaches
 - Need to discussions among the many players before a major spill happens



Coastal Response Research Center

26

Food Safety During Spill Response

- Possible effort in New England where NOAA has a strong interagency (federal/state/local) coordination
- Workshop to discuss how seafood safety would be “handled”
- Coordination with Betsy Nicholson
 - NOAA North Regional Director, Office for Coastal Management
- Dovetail with AK Food Safety initiative on roles/regulations funded by OSRI



Coastal Response Research Center

27

Center for Spills and Environmental Hazards (CSE) Activities



Center for Spills in the Environment

Russia: Oil Spill Efforts (CSE)

- U.S. Embassy funded workshop in Moscow in March 2017
 - Lessons learned from DWH spill
- March 2018: UNH-hosted Arctic ERMA discussions with Russian responders
- NEK to Russian Marine Rescue Service/USCG D17 meeting in Sakhalin in Nov 2018



Center for Spills in the Environment

29

Oil Flume Research

- Sunken oil remobilization experiments with Alberta bitumen, Fuel Oil No. 6, Dilbit
 - Lengthening and erosions as function of salinity, water velocity and temperature, bottom type
- Snare research on adsorption/desorption and when used as a submerged oil detection and monitoring tool
 - Optimization of underwater towing



Center for Spills in the Environment

30

Marine Snow in Arctic Research

- Collaboration with Sue Saupe CIRCAC and NOAA Kasitsna Bay Lab
- MS role in DWH
- Potential role of MS during oil spill in Arctic waters
 - High sediment loads
 - Seasonal blooms of plankton
- ORR's Catherine Berg and Sarah Allan on PAC



Center for Spills in the Environment

31

Other Topics

- Board membership
- Conferences
 - Clean Gulf
 - GOMOSES
- Next board meeting: Spring 2019 (?)



Coastal Response Research Center

32



www.crrc.unh.edu
www.cse.unh.edu

nancy.kinner@unh.edu
ben.shorr@noaa.gov



Coastal Response Research Center

33