



OIL SPILL RECOVERY INSTITUTE  
CORDOVA, ALASKA

# OSRI research activities

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[OSRI.us](http://OSRI.us)

# Mission

OSRI's mission is to support research, education, and demonstration projects that improve understanding and response to oil spills in the Arctic and sub-Arctic marine environments.



# OSRI Basics

- OSRI is managed by the PWS Science Center
- Funded by interest on \$35M
- Programs directed by diverse Board
- Scientific and Technical Committee
- Five-year research plan based on four goals
- Annual work plans



# OSRI Basics

- Current funding ~\$750K
  - \$1,500K reserve
- Non-profit
  - Flexibility
- Can fund internationally
- Most projects \$25-100K





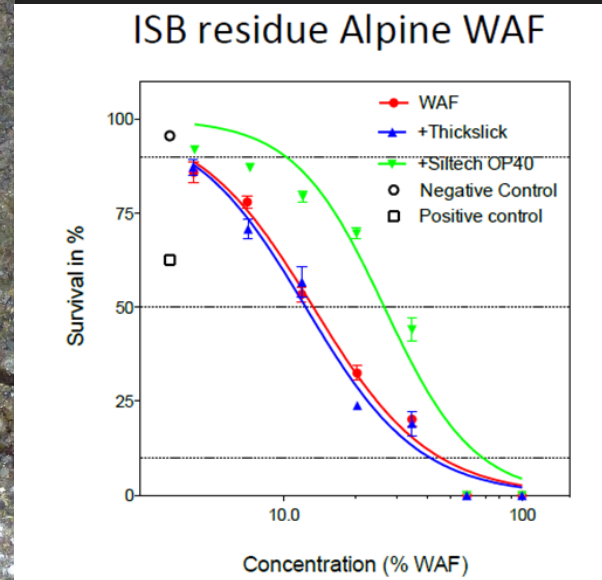
# Five-year Research Plan

- Focus varies
- Based on four goals
  - Understand
  - Respond
  - Inform
  - Partner



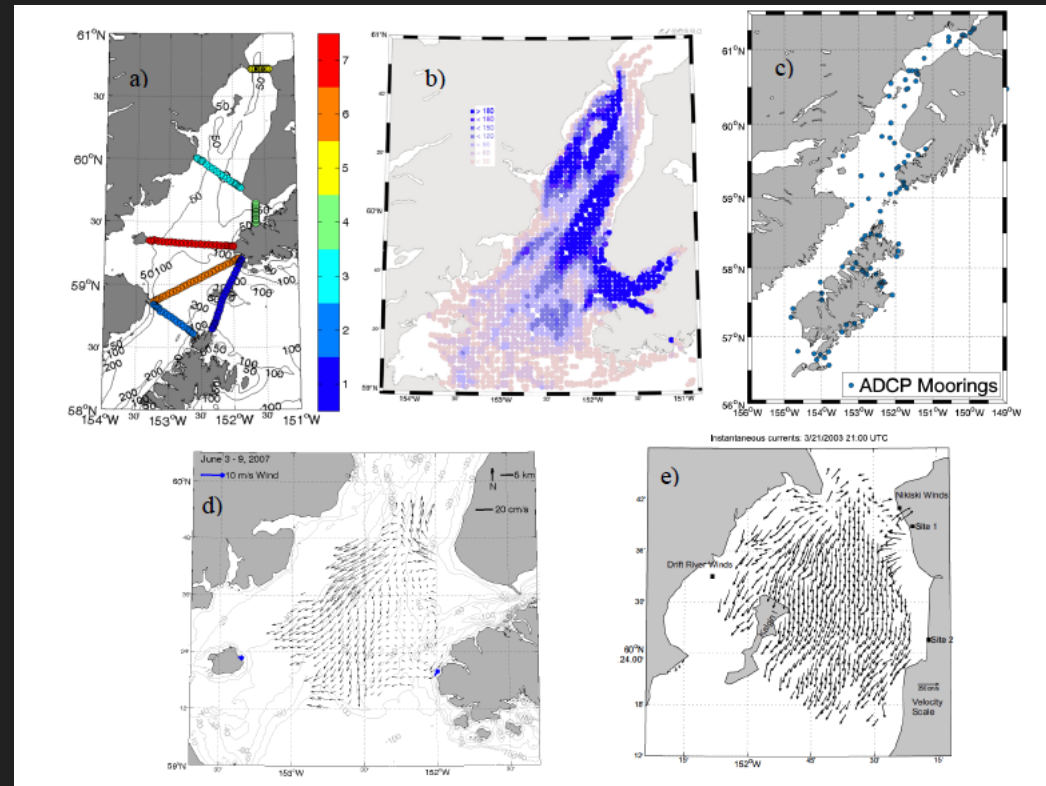
# Understand

- Food Safety
- Degradation and Toxicity
- Ecological Research
- Trajectory Validation



# Understand

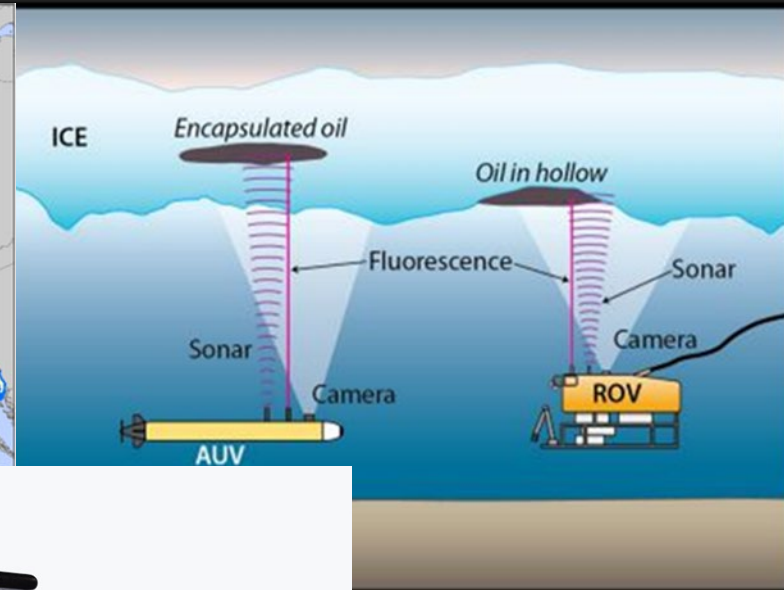
- Arctic Cod
- Food Security
  - Identifying research priorities
- **Cook Inlet Oil Spill Trajectory**
  - AOOS, NOAA, CIRCAC
  - Hindcast using NOAA's model
  - Data Collection
    - HF Radar, Drifters, CTD
  - BOEM – additional analysis, some field
- Oceanography of Rips





# Respond

- Prevention
- Spill Response Information Tools
- Oil Spill Detection and Tracking
- Spill Response Improvements
- Health and Safety





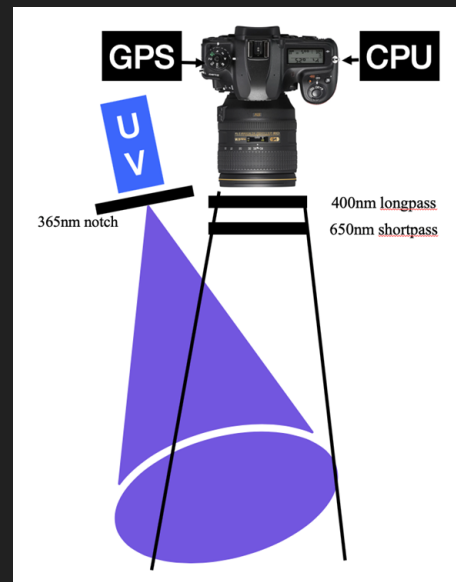
# Respond

- UAV regulations
- PPOR
- Herder/Burner JIP
  - Canadian trials
- MPRI oil thickness
- Oil Detection in Broken Ice
- ESI Shoreline
- Cook Inlet Bird Habitat
- UAS Fluorosensor



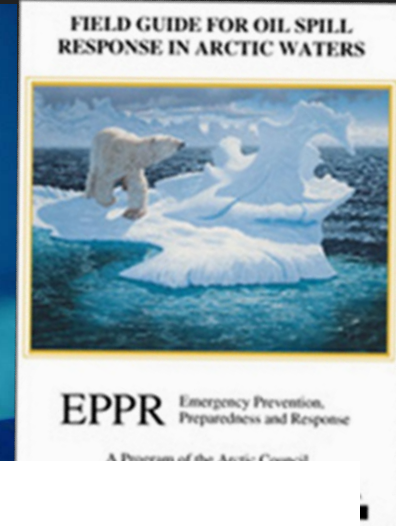
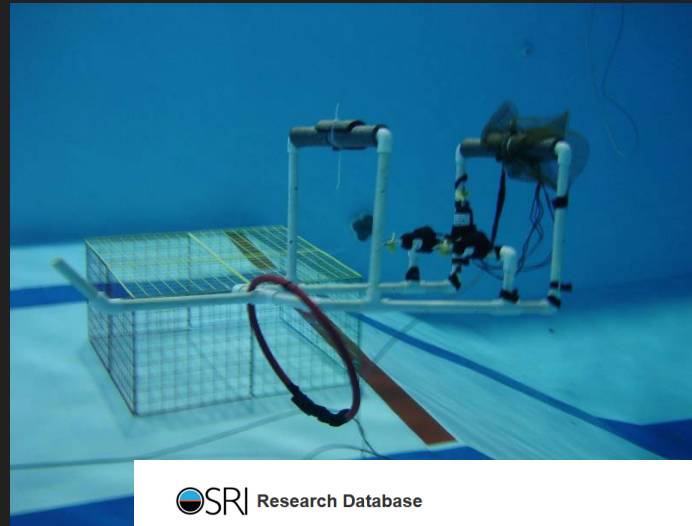
# Respond


- UAV regulations
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- Oil Detection in Broken Ice
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- Cook Inlet Bird Habitat
- **UAS Fluorosensor**



# Inform

- Education
- Outreach
- Workshops and Conferences



 **OSRI Research Database**

[Home](#) [Citations](#) [Add Citation](#) [Bulk Import](#) [Editor's Guide](#)

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A comprehensive bibliography of high-latitude oil spill research

Search for citations. See author listings. Export to major citation formats.

[See All Citations](#)

**Begin Your Search**

Title or Abstract

Keyword

Author

Type of Publication  
- Any -

Between Year

And



# Inform

- Headwaters to Ocean
- GRF
- Internship
- Outreach efforts

- Remote Learning

○ <https://osri.us/modules/oil-in-the-marine-environment/>

- Bibliography

- Workshops

## SCIENCE OF OIL SPILLS

### Oil in the Marine Environment

#### Course Navigation

[Module Home](#)

✓ Expand All

○ The Fate of Spilled Oil

12 Lessons 1 Quiz

- Video: The Fate of Spilled Oil
- Reading: Oil in the Water
- Exercise: Mixing Oil and Water
- Video: The Effects of Wind and Current
- Video: The Effects of Weathering
- Video: The Effects of Long Term Weathering
- Reading: Fate of Marine Oil Spills
- Video: Introduction to Oil Spills
- Lab: Fate and Behavior
- Case Study: Three Tankers
- Video: Next Steps
- Section Review



While oil residue on roadways and oil dumped into storm drains are the **number one source of oil pollution in the ocean**, and require a more long-term and widespread abatement program, catastrophic events like the Exxon Valdez tanker accident or the Deepwater Horizons well blowout create single-incident spills that can be addressed through a variety of emergency response methods. The choice of which response approach is most likely to be effective in a given incident requires that response teams understand the forces and factors that act upon oil after a catastrophic event in the marine environment.



# Inform

- Headwaters to Ocean GRF

- Internship

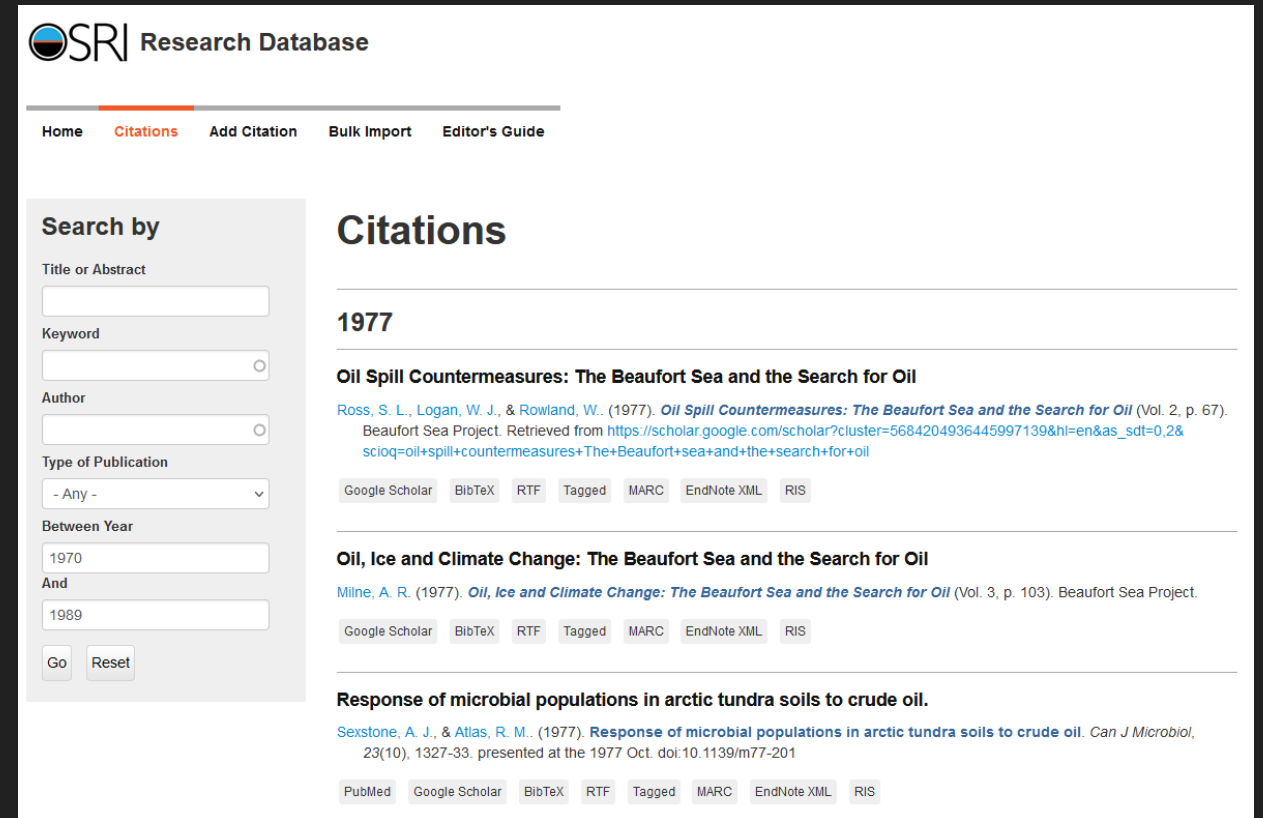
- Outreach efforts

  - Remote Learning

  - Bibliography

  - <https://osri.a2hosted.com/>

- Workshops



The screenshot shows the OSRI Research Database website. The header includes the OSRI logo and the text "Research Database". Below the header is a navigation bar with links: Home, Citations (highlighted), Add Citation, Bulk Import, and Editor's Guide. The main content area is titled "Citations" and features a "Search by" sidebar on the left. The sidebar contains search criteria: Title or Abstract, Keyword, Author, Type of Publication (set to "- Any -"), and Between Year (1970 to 1989). The main content area lists three citations from 1977. The first citation is "Oil Spill Countermeasures: The Beaufort Sea and the Search for Oil" by Ross, S. L., Logan, W. J., & Rowland, W. (1977). The second citation is "Oil, Ice and Climate Change: The Beaufort Sea and the Search for Oil" by Milne, A. R. (1977). The third citation is "Response of microbial populations in arctic tundra soils to crude oil" by Sexstone, A. J., & Atlas, R. M. (1977). Each citation is followed by a list of download options: Google Scholar, BibTeX, RTF, Tagged, MARC, EndNote XML, and RIS.

OSRI Research Database

Home Citations Add Citation Bulk Import Editor's Guide

**Search by**

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Go Reset

## Citations

### 1977

**Oil Spill Countermeasures: The Beaufort Sea and the Search for Oil**

Ross, S. L., Logan, W. J., & Rowland, W. (1977). *Oil Spill Countermeasures: The Beaufort Sea and the Search for Oil* (Vol. 2, p. 67). Beaufort Sea Project. Retrieved from [https://scholar.google.com/scholar?cluster=5684204936445997139&hl=en&as\\_sdt=0,2&scioq=oil+spill+countermeasures+The+Beaufort+sea+and+the+search+for+oil](https://scholar.google.com/scholar?cluster=5684204936445997139&hl=en&as_sdt=0,2&scioq=oil+spill+countermeasures+The+Beaufort+sea+and+the+search+for+oil)

Google Scholar BibTeX RTF Tagged MARC EndNote XML RIS

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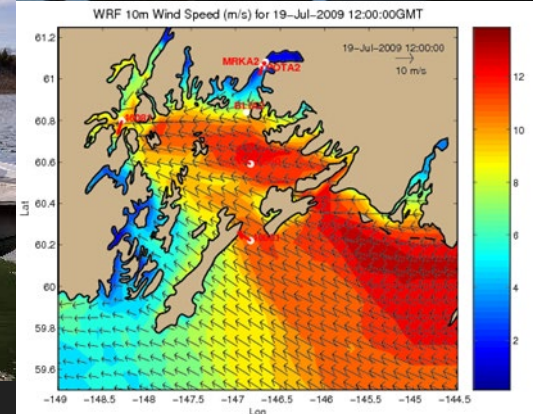
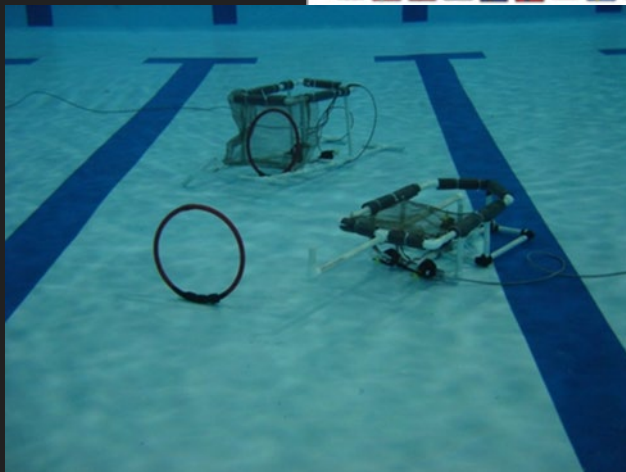
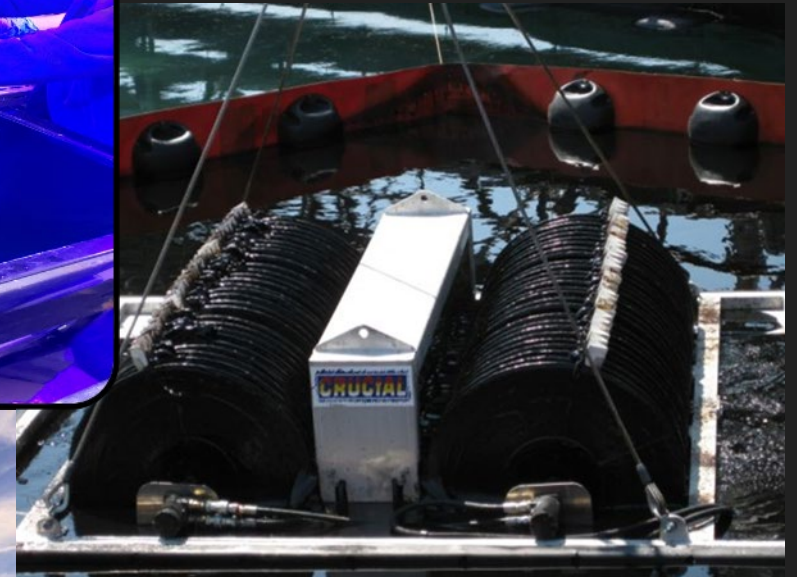
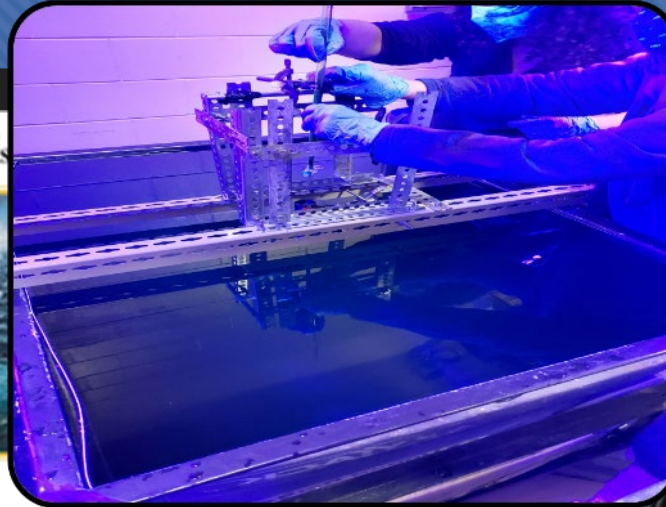
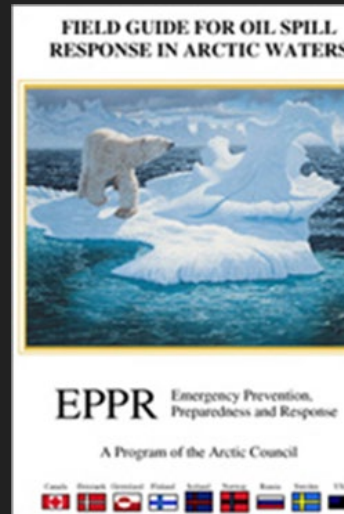
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PubMed Google Scholar BibTeX RTF Tagged MARC EndNote XML RIS

# Partner

- Funding
- Expertise



# How can we support your needs?

○ OSRI.us

○ wspegau@pwssc.org

The screenshot displays the OSRI website. The top navigation bar includes links for HOME, ABOUT, PROJECTS, RESOURCES, NEWS, CONTACT, and INTERNAL. The main banner features a large image of an oil rig in the ocean with mountains in the background. The text 'OSRI on Your Side' is prominently displayed, followed by a description: 'OSRI is a support organization that bolsters talented thinkers to improve marine oil spill response.' A button labeled 'LEARN MORE ABOUT US' is positioned below the text. Below the banner, the 'Past Awards' section is visible, featuring a search bar and a list of awards. The search bar has fields for 'BY KEYWORD', 'BY FISCAL YEAR', and 'BY GOAL', along with a 'SEARCH' button and a 'CLEAR' link. The list of awards includes:

- PY 2021 | Food Safety/Security
- PY 2021 | Oil Thickness Exercise Proposal
- PY 2021 | Measuring Thickness of Oil Slicks
- PY 2021 | Oil-on-Water Measurements
- PY 2021 | Sea ice modeling
- PY 2020 | Herder/Burner Systems
- PY 2020 | Unmanned Aerial System Capacity
- PY 2020 | Bacterial Growth on Oil Transport
- PY 2020 | Subtidal Habitat Mapping in Cook Inlet
- PY 2020 | CAMPRI Oil Thickness Exercise
- PY 2020 | Headwaters to Ocean Education Program (H2O)
- PY 2019 | Arctic Cod 2

Below the list, there are links for 'Projects' and 'How to Apply'. The OSRI logo is visible in the bottom right corner of the screenshot.