

Scientific Support for Environmental Emergency Response (SSEER) in Rhode Island



by Richard P. Horwitz

for the 27th Annual
National Environmental Monitoring Conference (NEMC)
Bellevue, WA
August 18, 2011

Rhode Island



Are the State and its Universities on the Same Team?



➤ Ready?

– Consensus: “We aren’t sure.”

➤ Willing?

– “Probably, but it depends.”

➤ Able?

– In fact, normally . . . YES, a lot!

Thou Shalt Collaborate

TITLE 46 Waters and Navigation

CHAPTER 46-23.2 The Comprehensive Watershed and Marine Monitoring Act of 2004

The general assembly finds and declares that there is a need for a marine monitoring system in the state that is capable of:

- (a) measuring the changing conditions in the functionality and health of the waters of the state, including, but not limited to, Narragansett Bay and its watersheds, with one purpose being identifying and predicting potential problems in the marine habitat;*
- (b) providing a central database via the internet to store monitoring data and disseminate the analysis of this data to decision-makers and the public;*
- (c) establishing a mechanism to coordinate and make consistent, monitoring efforts between government agencies, municipalities, nonprofit organizations and universities; and*
- (d) providing the comprehensive data needed to assess a sudden perturbation in the marine environment and to contribute to efforts of disaster prevention, preparedness, response and recovery as defined in chapter 30-15 of the general laws entitled "The Rhode Island 18 Emergency Management Act."*

RI Environmental Monitoring Collaborative (RIEMC)



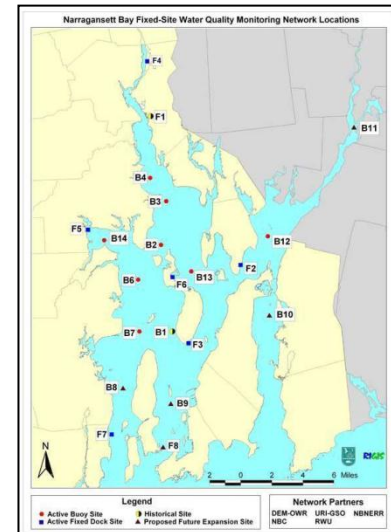
Rhode Island Environmental Monitoring Collaborative

Collaborative Members

[Peter August](#), Coastal Institute at the University of Rhode Island (Chair)
[Jeff Willis](#), [Jim Boyd](#), Coastal Resources Management Council
[Sue Kiernan](#), Department of Environmental Management, Water Quality Section
[Chris Powell](#), Department of Environmental Management, Fisheries Section
[Ernest Julian](#) and [Bonnie Blair](#), Department of Health
[Linda Green](#), URI Watershed Watch
[John King](#), URI Graduate School of Oceanography
[Thomas Uva](#), Narragansett Bay Commission
[Vincent Flood](#), RIGIS
[Charles LaBash](#), URI Environmental Data Center

Institutional Partners

[Margherita Pryor](#), EPA Region 1
[Walt Galloway](#), EPA Atlantic Ecology Division
[Donald Pryor](#), RI Rivers, Bays, and Watersheds Coordinating Team Science Advisory Committee
[Chip Young](#), RI Rivers, Bays, and Watersheds Coordinating Team Public Advisory Committee
[Ken Raposa](#), NOAA Prudence Island Estuarine Research Reserve
[David Gregg](#), RI Natural History Survey
[Barry Costa-Pierce](#), RI Sea Grant Program
[Sarah Stevens](#), National Park Service Inventory and Monitoring Program
[Marci Cole](#), Save the Bay
[Chris Deacutis](#) and [Rich Ribb](#), Narragansett Bay Estuary Program
[Kathleen Wainwright](#), The Nature Conservancy



Leadership Partners



University -

Coastal Institute

University of Rhode Island

THE
UNIVERSITY
OF RHODE ISLAND



Government -

Dept. of Environmental Management

State of Rhode Island



Bay Campus and the Capitol



Differences in Predisposition



University

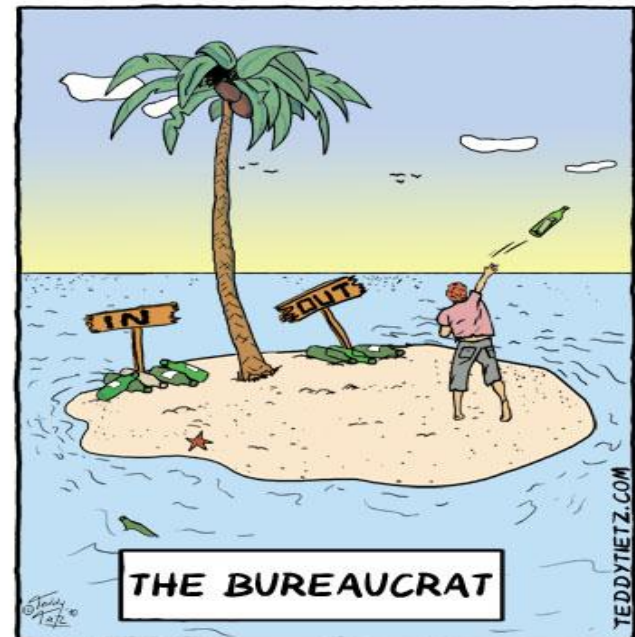
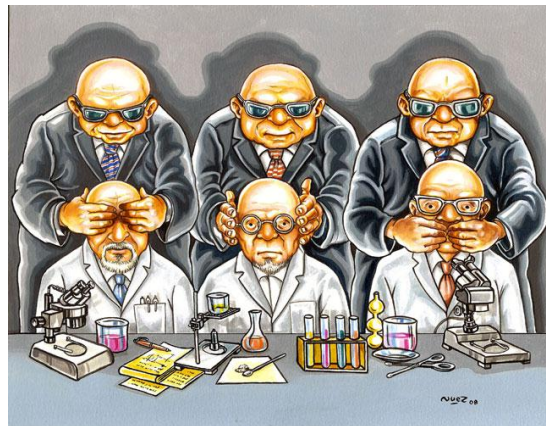
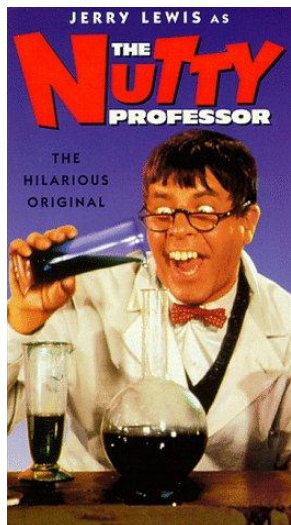
- **Accountability:** professional standards; peers, students, central administration
- **Model end:** path-breaking, refereed publication
- **Model mode:** skeptical, deliberate, uncompromising
- **Better novel than prudent**

Government



- **Accountability:** public laws and regulations; supervisors, officeholders, the electorate
- **Model end:** popular, effective policy
- **Model mode:** calm, pragmatic, compromising
- **Better prudent than novel**

Suspicion



And if it's that way normally . . .

THE CHRONICLE of Higher Education

August 1, 2010

In Oil Spill, University Scientists' Expertise Was Dumped

Missteps in Gulf disaster point to need for a research emergency-response team



Reuters, Sean Gardner

Smoke pours from a controlled burn of spilled oil in the Gulf of Mexico last month.

By Paul Basken

In what could have been one of the few slivers of good fortune in the murk of the Gulf of Mexico oil disaster, a university research vessel was stationed just 10 miles away when the Deepwater Horizon rig collapsed three months ago after a fiery blast.

Scientists on board the 116-foot *R/V Pelican*, operated by the Louisiana Universities Marine Consortium, immediately began taking sediment and water samples ahead of what

RI Test: North Cape Oil Spill (1996)



Recognition: We Can Do Better



University

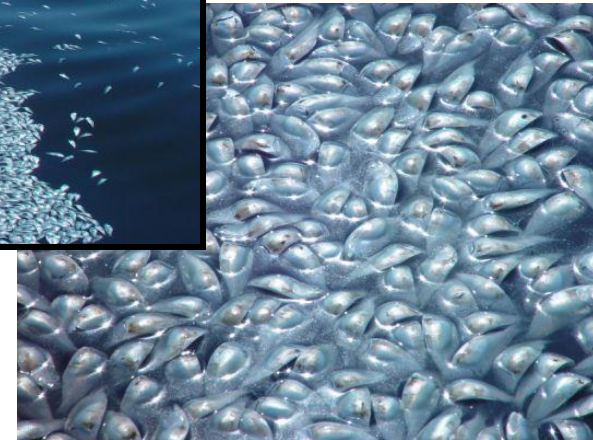


Government



- **Get better science on the public's side.**
- **More quickly and effectively deploy, especially to gather ephemeral evidence of environmental injury for NRDA.**
- **Better handle chain-of-custody requirements.**
- **Assemble and release more consistent and reliable news about the spill and response efforts.**

Whence the Political Will (2003)



SSEER On-Line



COASTAL
INSTITUTE

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[fellows](#)



[partners](#)



[projects](#)



[questions](#)



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[HOME](#)



**Scientific Support for
Environmental Emergency Response
(SSEER, formerly BART)**

[DEM's BART Home Page \(transitioning to SSEER\)](#)

[DEM / URI Scientific Support MOU](#)

[SSEER F & A Agreement](#)

[DEM / URI Scientific Support FAQ \(transitioning to SSEER\)](#)

[DEM / URI Scientific Support Work Order](#) (Work Order form to [fill out](#) in RTF format)

[URI / DEM Scientific Support Roster](#)

More information? Contact [Judith Swift](#) (jswift<at>uri.edu)

**In this period of transition from the BART to the SSEER MOU,
please contact [Judith Swift](#) if you need clarification.**

<http://www.ci.uri.edu/Projects/SSEER/>

SSEER Work Order – Page 1

DEM / URI Work Order for Scientific Support
MPA # R74A050017
Rhode Island DEM & University of Rhode Island

Instructions: Complete this form and email it to jswift@uri.edu AND debim@gso.uri.edu

Scope of Work. *Provide a brief statement of the work to be conducted.*

Deliverable(s). *Provide a clear statement of the data, information, maps, samples, services, etc. to be obtained and delivered to the DEM Emergency Response Coordinator.*

Deliverable(s) and Due Date:

Principal Investigator (PI):

Name:

Address:

Contact phone and e-mail:

Title:

SSEER Work Order – Page 2

Total Cost (Personnel Cost plus Transportation and Supplies Cost): \$ _____

Personnel:

Name	Academic Rank and Rate ¹	Total Hours	Cost
Total personnel cost:			

Transportation and Supplies:

	Description	Unit rate	Cost
Vessels ¹			
Travel ²			
Equipment			
Supplies			
Total Direct Costs			
Indirect Costs (25%) ³			
Total cost:			

Approvals:

Principal Investigator

Date

RI DEM Emergency Response Coordinator

Date

URI Coastal Institute

Date

SEER Work Order – Rates

Helpful Information

Personnel costs are computed according to the following rate schedule. Hourly rates include salary, benefits, and indirect costs. All expenses in this MOA shall include the standard 25% modified indirect cost rate applied in DEM and URI grants and contracts. Equipment expenses do not incur overhead charges.

Rank/Position	Hourly Cost
Full Professor	\$120
Associate Professor	\$85
Assistant Professor	\$75
Technician, Research Associate	\$60
Technician, Research Assistant	\$40
Graduate Student	\$22
Undergraduate Student	\$13

Approved equipment and expendable materials will be reimbursed at cost.

URI vessel rates include ship expenses, fuel, insurance, and captain's salary.

Vessel	Daily ⁴ Cost
R/V Captain Bert	\$650
R/V Hope Hudner	\$650

SSEER Conditions

Frequently Asked Questions

Can I be a consultant for another group involved in an environmental incident and RI DEM at the same time?

No, unless you ask and receive approval from the State in advance. DEM's answer is likely to depend on who the other group is. For example, in an oil spill you cannot provide expert counsel both to the State of Rhode Island and to the party who is allegedly responsible for the spill ("the RP"). However, it is possible, and perhaps desirable, that you provide scientific information to other natural resource Trustees (state, federal, or tribal agencies). We are trying to avoid situations where the RP "hires away" the State's best and brightest experts.

If I am on the roster and then agree to work on a DEM project, under the terms of the DEM/CI agreement, are there restrictions on what I can do with my findings?

Normally, yes. "Deliverables" --the data and analysis that you develop under contract with the State -- would belong to the State (normally, RI DEM). Given the volatility of environmental issues, the legal and ethical ramifications of publishing data, rights to privacy, and need for coordination during emergency response, the distribution of findings must be subject to unified, consistent policy and authority. DEM may decide to share your deliverables with other parties or the press, but you cannot, unless you request and receive advance approval.

SEER Roster and Procedures

Damon, Christopher GISP Research Associate	Environmental Data Center Lab Coastal Institute, Room 25 One Greenhouse Road, URI Kingston, RI 02881	(401) 874-2930	(401) 874-4561	cdamon<at>edc.uri.edu	GIS Geospatial web apps
Deacutis, Christopher Chief Scientist, NBEP Adj. Prof., URI Biol. Dept	URI Bay Campus South Ferry Rd. Narragansett, RI	(401) 874-6217	(401) 874-6899	deacutis <at>gso.uri.edu	Anthropogenic impacts in estuaries and eelgrass restoration (oil spills, excess nutrients, etc.)
Duhaime, Roland GISP Research Assoc.	Environmental Data Center Lab Coastal Institute, Room 25 One Greenhouse Road, URI Kingston, RI 02881	(401) 874-5406 (401) 874-5054	(401) 874-4561	maps<at>uri.edu roland<at>edc.uri.edu	GIS/Resources at Risk; Internet resource development.
Fanning, Bill Ship's Oceanographic Technician	Marine Technical Services Graduate School of Oceanography Bay Campus, URI South Ferry Road Narragansett, RI 02882-1197	(401) 874-6590	(401) 874-6578	wfanning<at>gso.uri.edu	Shipboard technical support; Design and manage oceanographic data acquisition computer networks; Create software for the collection, processing, display, and analysis of oceanographic data; Specify, install, maintain and support instrumentation at sea; Has taken and passed the on-line course "Introduction to the Incident Command System".

Oil Spill Science Protocols:

[Mapping](#), [Modeling](#), [Chemistry](#), [Biology](#), [Shoreline](#)

[Vertebrates \(plan, personnel, equipment\)](#)

[Incident Severity Scales](#)



Accomplishments



- **MOU (recently renewed) making SSEER a ready asset, at least for authorization and accounting purposes**
- **Roster of over 60 scientists from 3 universities**
- **Standard procedures for NRDA following an oil spill**
- **Annual exercises plus 4 pilot projects**
- **Expansion of mission from strictly on-the-Bay to watershed as a whole (BART to SSEER)**
- **Confirmation that so many are ready, willing, and able.**

Elements for Improving Scientific Support of Response to Environmental Emergencies



- 1. Support of universities and state government, especially in middle management**
- 2. MOU with procedures for rapid authorization, funding, and deployment of scientific support**
- 3. Roster of scientists who are ready to serve**
- 4. Regular exercises to maintain, update, and improve capacity**