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

Welcome to Rhode Island
The Ocean State

[Image of a sign saying Welcome to Rhode Island]

[Image of a map of Rhode Island]

[Image of a bridge over water]

[Image of a sailboat on water]

[Image of a person holding clams]

North Atlantic Ocean
Narragansett Bay
Block Island Sound
Block Island

PROVIDENCE
Cranston
Warwick
Bristol
Newport

East Providence
West Warwick
Pawtucket
Woonsocket

Connecticut
Massachusetts
Wood

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!
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)

Collaborative Members

Peter August, Coastal Institute at the University of Rhode Island (Chair)
Jeff Willis, Jim Boyd, Coastal Resources Management Council
Sue Kieman, 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

**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

The facts are coming! The facts are coming!

JERRY LEWIS as THE NUTTY PROFESSOR

THE HILARIOUS ORIGINAL

THE BUREAUCRAT
And if it’s that way normally . . .
RI Test: North Cape Oil Spill (1996)
• 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

http://www.ci.uri.edu/Projects/SSEER/
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:*
Total Cost (Personnel Cost plus Transportation and Supplies Cost): $__________

Personnel:

<table>
<thead>
<tr>
<th>Name</th>
<th>Academic Rank and Rate</th>
<th>Total Hours</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Total personnel cost: $_________

Transportation and Supplies:

<table>
<thead>
<tr>
<th>Vessels</th>
<th>Description</th>
<th>Unit rate</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Direct Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect Costs (25%)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Total cost: $_________

Approvals:

Principal Investigator ___________________________ Date __________

RI DEM Emergency Response Coordinator ___________________________ Date __________

URI Coastal Institute ___________________________ Date __________
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.

<table>
<thead>
<tr>
<th>Rank/Position</th>
<th>Hourly Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Professor</td>
<td>$120</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>$85</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>$75</td>
</tr>
<tr>
<td>Technician, Research Associate</td>
<td>$60</td>
</tr>
<tr>
<td>Technician, Research Assistant</td>
<td>$40</td>
</tr>
<tr>
<td>Graduate Student</td>
<td>$22</td>
</tr>
<tr>
<td>Undergraduate Student</td>
<td>$13</td>
</tr>
</tbody>
</table>

Approved equipment and expendable materials will be reimbursed at cost.

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

<table>
<thead>
<tr>
<th>Vessel</th>
<th>Daily(^4) Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>R/V Captain Bert</td>
<td>$650</td>
</tr>
<tr>
<td>R/V Hope Hudner</td>
<td>$650</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Contact Information</th>
<th>Specialties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Damon, Christopher</strong></td>
<td>Environmental Data Center Lab, Coastal Institute, Room 25 One Greenhouse Road, URI Kingston, RI 02881</td>
<td>(401) 874-2930 (401) 874-4561 cdamon&lt;at&gt;edc.uri.edu</td>
<td>GIS Geospatial web apps</td>
</tr>
<tr>
<td>Deacutis, Christopher</td>
<td>URI Bay Campus South Ferry Rd. Narragansett, RI</td>
<td>(401) 874-6217 (401) 874-6899 deacutis&lt;at&gt;gso.uri.edu</td>
<td>Anthropogenic impacts in estuaries and eelgrass restoration (oil spills, excess nutrients, etc.)</td>
</tr>
<tr>
<td>Duhaime, Roland</td>
<td>Environmental Data Center Lab, Coastal Institute, Room 25 One Greenhouse Road, URI Kingston, RI 02881</td>
<td>(401) 874-5406 (401) 874-5054 maps&lt;at&gt;uri.edu roland&lt;at&gt;edc.uri.edu</td>
<td>GIS/Resources at Risk; Internet resource development.</td>
</tr>
<tr>
<td>Fanning, Bill</td>
<td>Marine Technical Services Graduate School of Oceanography Bay Campus, URI South Ferry Road Narragansett, RI 02882-1197</td>
<td>(401) 874-6590 (401) 874-6578 wfanning&lt;at&gt;gso.uri.edu</td>
<td>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.</td>
</tr>
</tbody>
</table>

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**Oil Spill Science Protocols:**

- Mapping, Modeling, Chemistry, Biology, Shoreline
- Vertebrates (plan, personnel, equipment)
- Incident Severity Scales

Has taken and passed the on-line course “Introduction to the Incident Command System”.
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