Sustaining a Long-Term Monitoring Program: Three Keys to Success

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NOAA's Ocean Service

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Presentation

- Brief Introduction to the National Ocean Service (NOS) and its priorities
- Three Keys to Success

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NOS Today

Our diversity is our strength,

Our people are our most valuable resource …

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A New Vision for NOS: GLIMO

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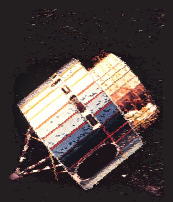
Global
Leader
Integrated
Management
Ocean

Dr. Richard W. Spinrad
Assistant Administrator
NOAA's Ocean Service



- We are a global society
- Oceans are global ecosystems

GLIMO Themes

- Observations (see IOOS presentations Thurs AM)
- Modeling
- Watersheds
- Partnerships
- Technology

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Sustaining a Long-Term Monitoring Program: Three Keys to Success:

- Relevancy
- Robust Methodology/Technology
- Partnerships

For Each,Three Questions:

- What is it?
- How do you get there?
- How do you know when you're there?

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Relevancy – What is it?

- Clearly articulated management uses and customers
- Useful information is delivered “early and often”
- Monitoring information is sufficient by itself or a key component with other information (modeling, research) to make a management decision

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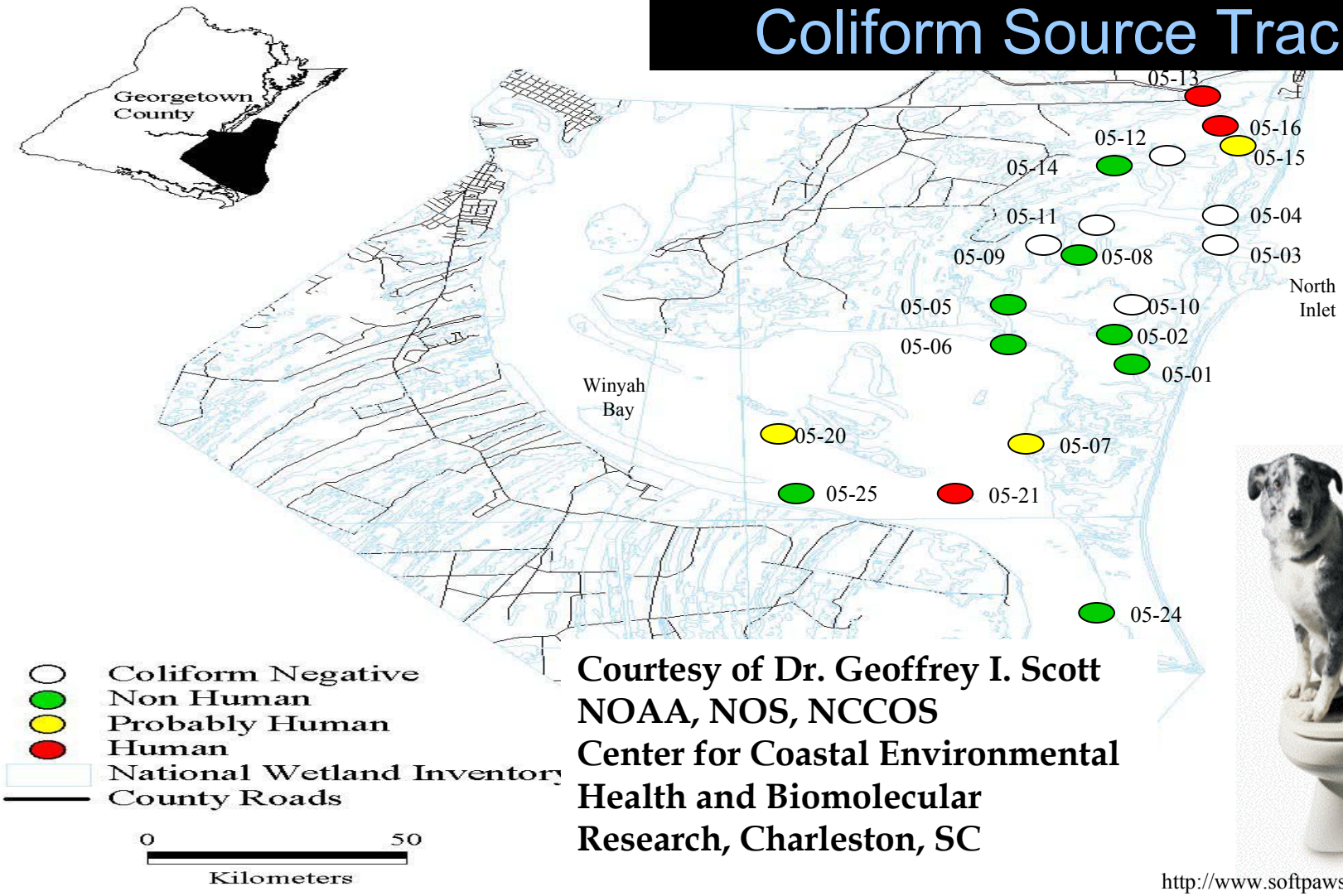
North Inlet MAR for May 2001

Grosso Master Thesis, Summer 2001
Norman J. Arnold School of Public Health
University of South Carolina

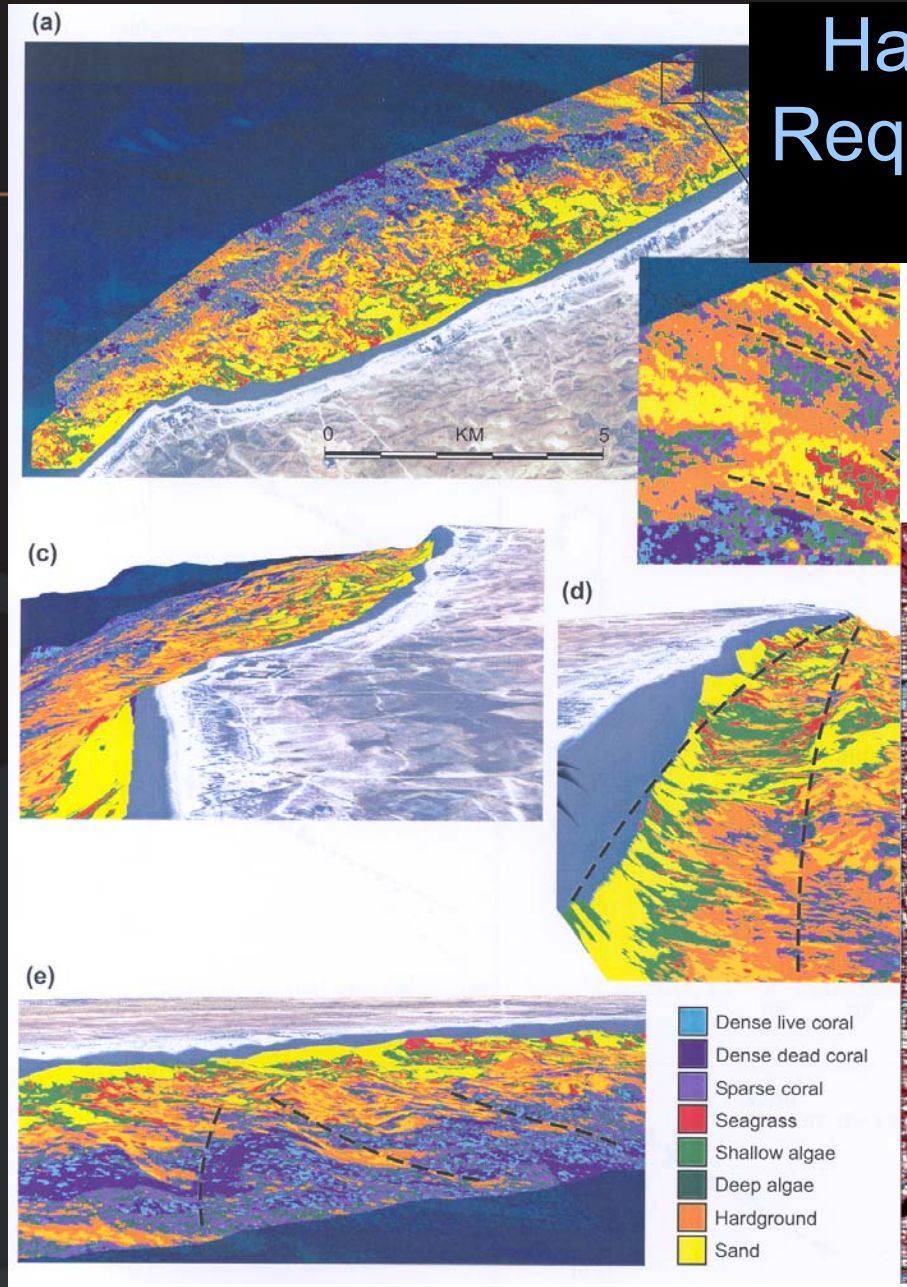
Using Diagnostics to Increase Management Relevance – Biomolecular Methods for Coliform Source Tracking



Courtesy of Dr. Geoffrey I. Scott
NOAA, NOS, NCCOS
Center for Coastal Environmental Health and Biomolecular Research, Charleston, SC

http://www.softpawsk9.org/html/files.htm

Habitat Assessments Often Require Spatially-Explicit Data to be Relevant



NCRI
NATIONAL CORAL REEF INSTITUTE

Nova Southeastern University with State, Local and Academic Partners
Funding: NOS/Center for Sponsored Coastal Ocean Research

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Relevancy – How Do You Get There?

- Use “management questions” to dissect management issues and frame clear and relevant objectives
- Limit objectives – for monitoring they usually bin into three:
  - status/characterization
  - change/trend
  - processes/modeling
- Work closely with management agencies – don’t assume

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Relevancy – How Can You Tell When You're There?

- Management agencies ask for your data and information
- Management agencies willing to shoulder all or a portion of the monitoring program cost
- Management agencies use information as part of the basis for making a management decision
- System condition improves as a result of the above

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Robust Methodology/Technology – What is it?

- Methodologies and technologies that are accurate & precise, low maintenance, cost-effective, and close to state-of-art
- The full "chain" from field collection/sensors, lab analysis, data management, data analysis, data interpretation, information delivery, and QA/QC
- Providing consistent data through time

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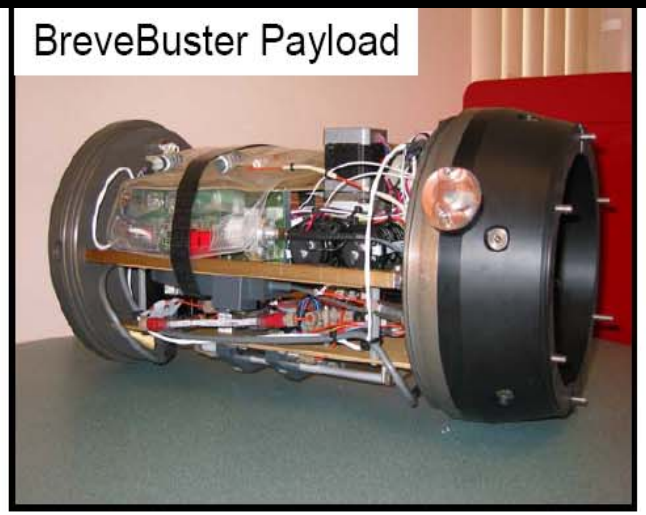
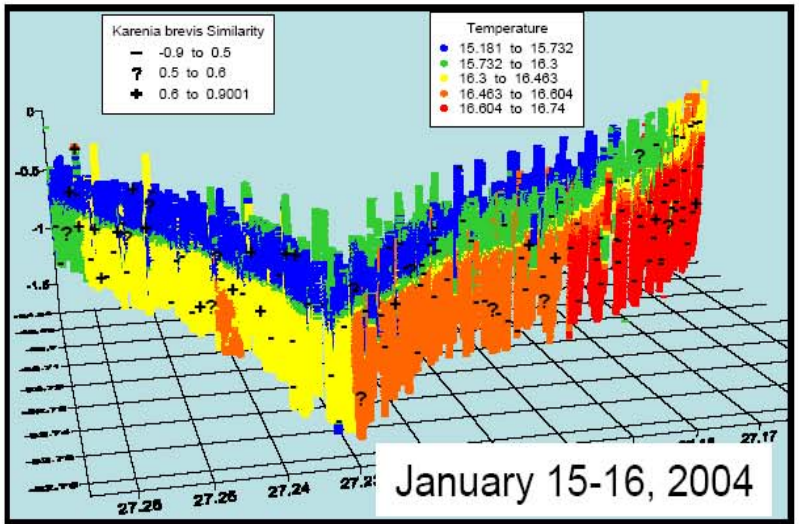
Instrumentation for Continuously Recording Water Quality:

D.O., Sal., Temp., pH, Chlor., Turbidity

MD DNR Chesapeake Bay Monitoring Program

"BreveBuster"- Equipped AUVs Detecting Red Tides in the Gulf of Mexico





Dr. Gary Kirkpatrick, Mote Marine Laboratories

Funding: NOS/Center for Sponsored Coastal Ocean Research/ ECOHAB Program

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Robust Methodology/Technology– How Do You Get There?

- Use what works from others
- Be cautious about the “latest and greatest” technology
- Insure enough resources to cover all elements in the “chain”; better to do a few things right
- Evaluate comparability with historical data
- Provide assistance for monitoring methods development

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Robust Methodology/Technology – How Can You Tell When You're There?

- You are obtaining high quality data and information "at the end of the pipeline" in a timely manner
- You are still sane

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Partnerships – What is it?

- Sharing monitoring responsibilities in large-scale ecosystem programs
- Sharing funding responsibilities
- Cooperating in analysis, interpretation and delivery of information to management arena

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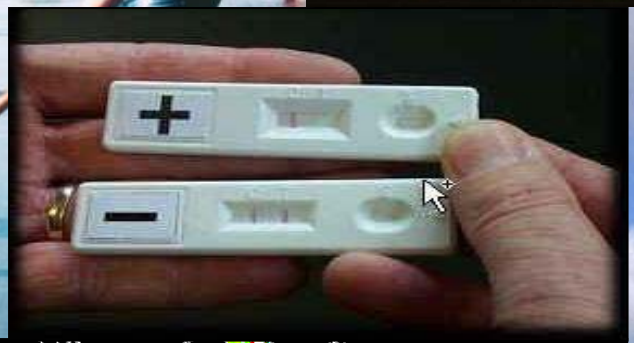
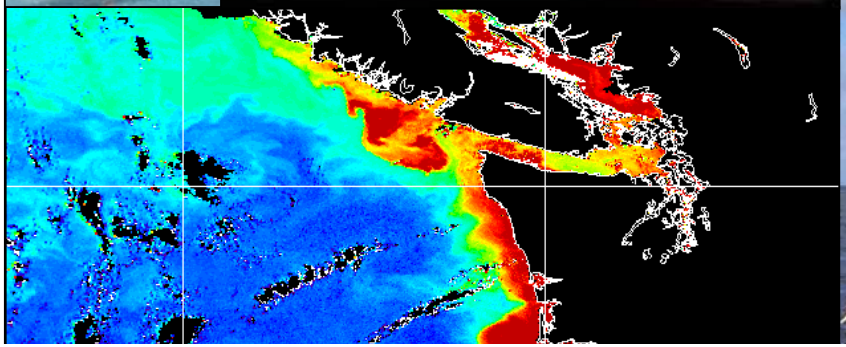
Olympic Region Harmful Algal Blooms

ORHAB PARTNERSHIP





Clam opener canceled due to high toxin count

OLYMPIA — The first razor clam dig of the fall season has been postponed due to elevated levels of marine toxins on Washington's

Beaches affected by the health closure include Long Beach, Twin Harbors, Copalis, Mocrocks and Kalaloch.

Partners: State of Washington, Local Tribes, NOAA/PMEL, NOAA/CCFHR, Univ. Washing

Funding: NOS/Center for Sponsored Coastal Ocean Research/
MERHAB and ECOHAB Program

Photos: Dan Ayers

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Partnerships – How Do You Get There?

- Key individuals in cooperating agencies sell concept to upper mgmt.
- Cooperators communicate frequently on all aspects of programs
- Produce results of use to all partners
- Establish a program-wide QA/QC and data management program

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Partnerships – How Can You Tell When You're There?

- Components of monitoring program fit together in data analysis, interpretation and information delivery
- You're using the partnership to defend your budget when times are tough
- Your sanity is severely tested by all of the coordination meetings you're attending

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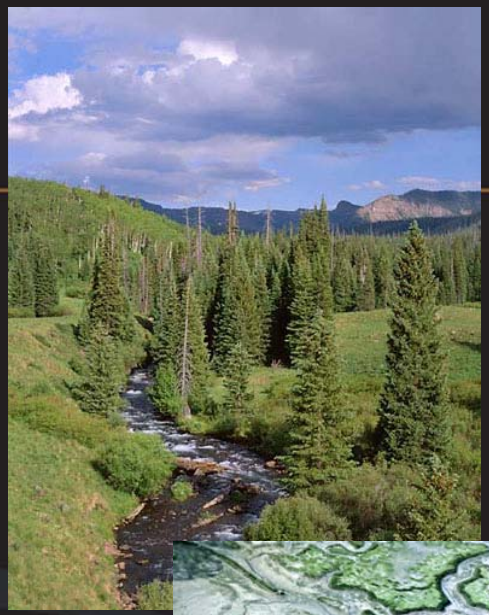
Summary …



Relevancy

Robust Methodology/Technology

Partnerships

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