

US EPA ARCHIVE DOCUMENT



ORD's Environmental Monitoring and Assessment Program (EMAP) Improving Monitoring Science for the Nation and the World

Paul Gilman

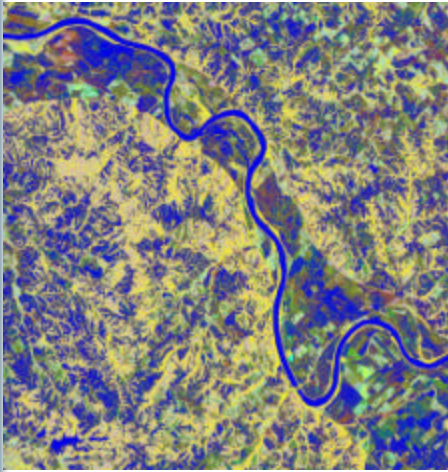
Assistant Administrator

U.S. Environmental Protection Agency

Office of Research and Development

EMAP 2004 Symposium

May 4, 2004



Making decisions with sound science requires..

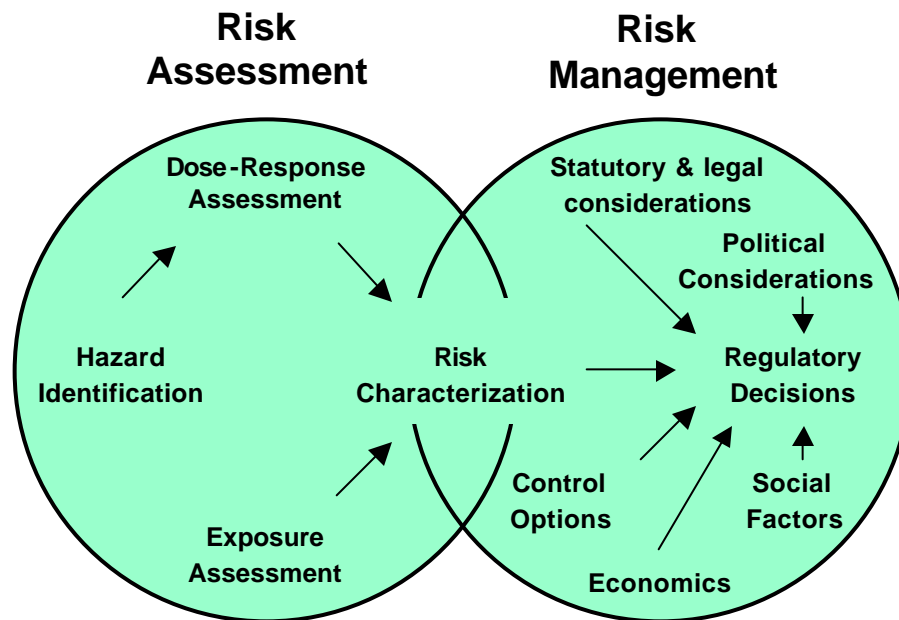
- Relevant, high quality, cutting-edge research in human health, ecology, pollution control and prevention, economics and decision sciences
- Proper characterization of scientific findings
- Appropriate use of science in the decision process

Research and development contribute uniquely to..

- Health and ecological research, as well as research in pollution prevention and new technology
- In-house research and an external grants program
- Problem-driven and core research



Alignment of Labs/Centers with Risk Paradigm



National
Exposure
Research
Laboratory

Research to measure, characterize & assess exposures and to support compliance with environmental regulations and policies

National Health and
Environmental
Effects Research
Laboratory

Research to identify hazards & characterize "Dose-Response"

National
Center for
Environmental
Assessment

Risk characterization & research on risk assessment methods

National Risk
Management
Research
Laboratory

Research & technology transfer to prevent, mitigate & control pollution

National Center
for Environmental
Research and
Quality Assurance

Extramural program - grants, fellowships, & national centers of excellence - to complement ORD's intramural program

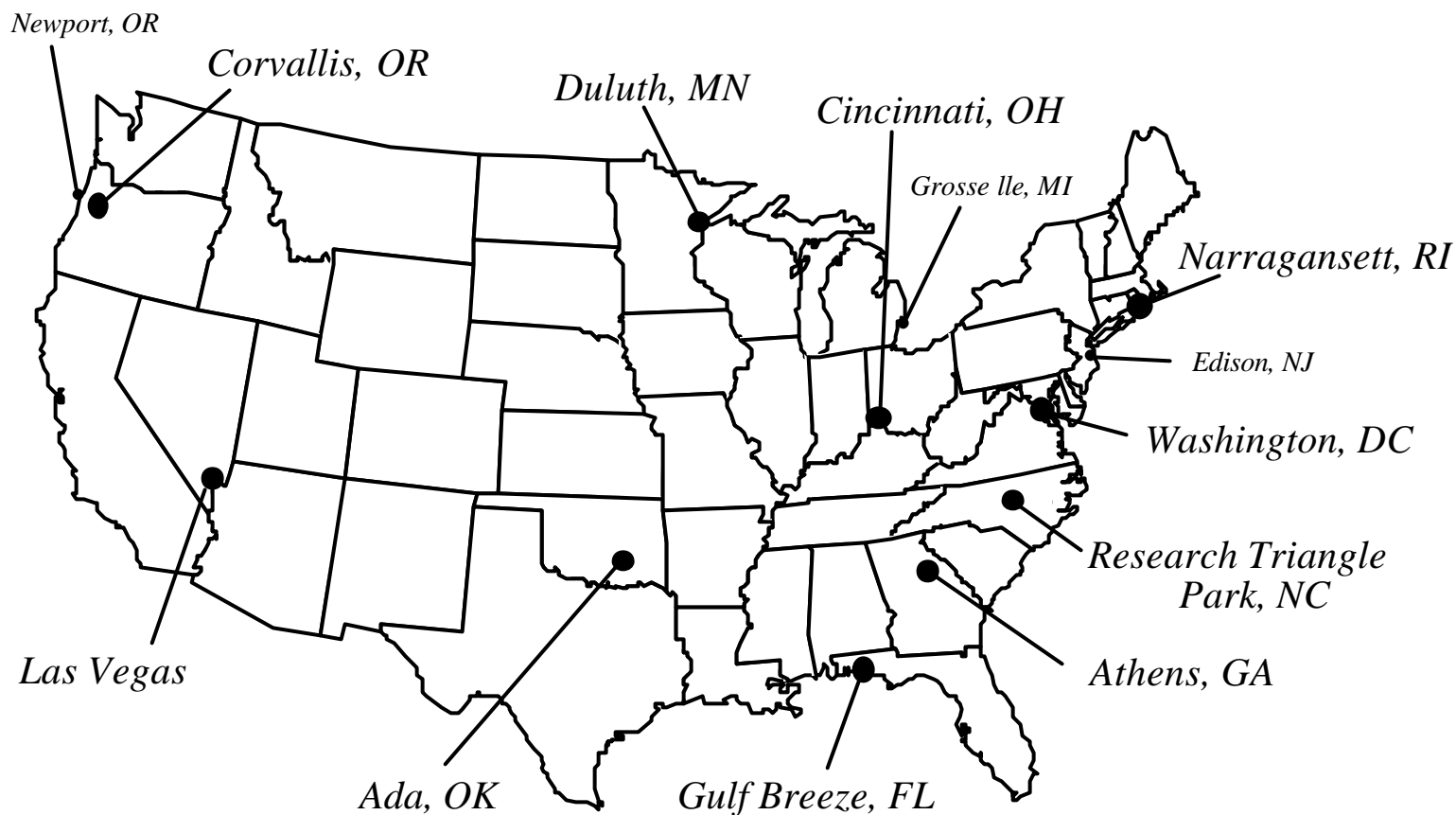


RESEARCH & DEVELOPMENT

Building a scientific foundation for sound environmental decisions

ORD Locations

3 National Laboratories
2 National Centers
2 Offices



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ORD's Customers

EPA Program Offices and Regions

Other Agencies and Policy Partners

Place-Based Customers (states, tribes, local communities)

Academic Research Community

Environmental Technology Providers

National and International Collaborative Efforts

National Coastal Assessment

National Coastal Condition Report II

Western EMAP

R-EMAP

Great Rivers

Gulf of Mexico hypoxia

Ocean.US

EOS



National Coastal Assessment 2003 Western Partners

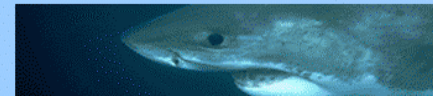


**Southern California Coastal
Water Research Project**

Channel Islands
National Marine Sanctuary



GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY



An ocean wilderness beyond the Golden Gate



Olympic Coast National Marine Sanctuary



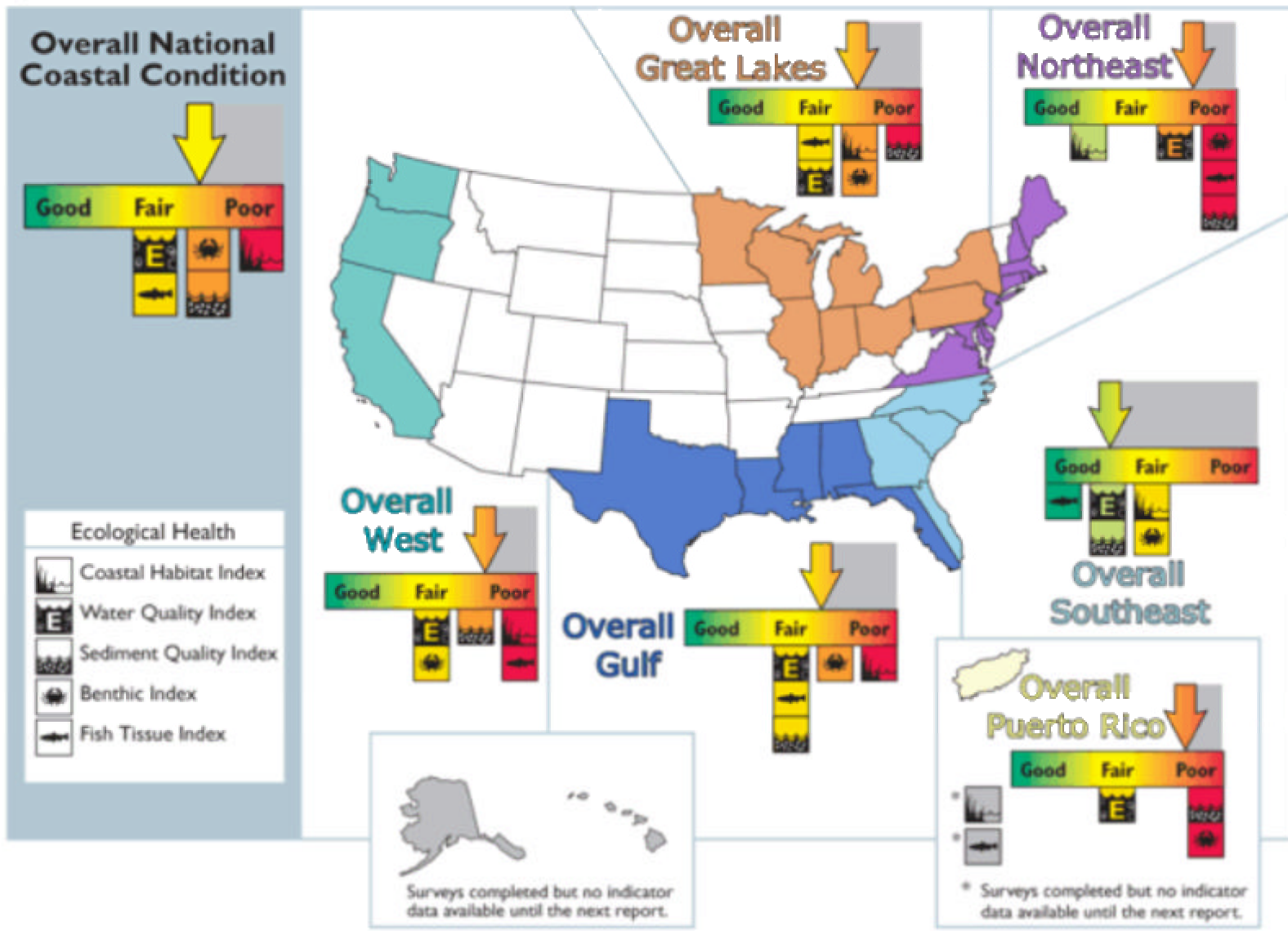
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**Alaska Department of
Environmental Conservation**

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NCCR2



Other EPA Efforts

Ocean.US

National Oceanographic
Partnership Program's Interagency
Ocean Observation Office

Earth Observation System (EOS)

EMAP's data archives and ease of
accessability is contributing towards a
global collaborative network for
environmental problem-solving

EOS

Earth Observation System (EOS)

Recent EOS Summit; 46 member nations and 24 participating international organizations affirmed the need for timely, quality, long-term, global information as a basis for sound decision making.

- Promote the development of a comprehensive, coordinated, and sustained Earth observation system[s]
- Assist developing countries in improving and sustaining their contributions to observing systems
- Exchange data in full and open manner, consistent with international instruments and policies





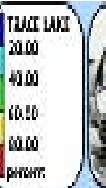

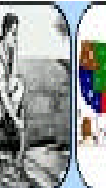








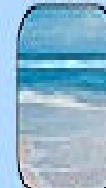
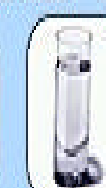

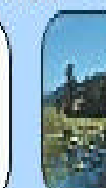


EPA EOS "Button" Chart

	Measurement and Monitoring	Models	Decision Support Tools	Programs
Air		Databases 		
Water				
Land / Waste				
Community Ecosystem Health				
Compliance/Stewardship	Mapping 			
Legend Tools/data identified Tools/data in progress Models available now Models in progress Programs				
EIMS	Science Portal	Technology		

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EOS - Measurement and Monitoring

Water	 ERAMS					 SDWIS				
	 EMAP					 ICR				
	 EPANET					 CWNS				
	 DFLOW					 WATERS				
	 TMDL					 NCOD				
	 305B					 River Corridor				
	 Local Drinking Water Info					 SI-Water Quality				
	 Oceans, Coasts, Estuaries					 Beaches				
	 Drinking Water Contaminant Source Index					 STORET				
	 National Nutrient Guidance									
	 Ecoregional Nutrient Criteria									
Partner						 National Hydrography Dataset				



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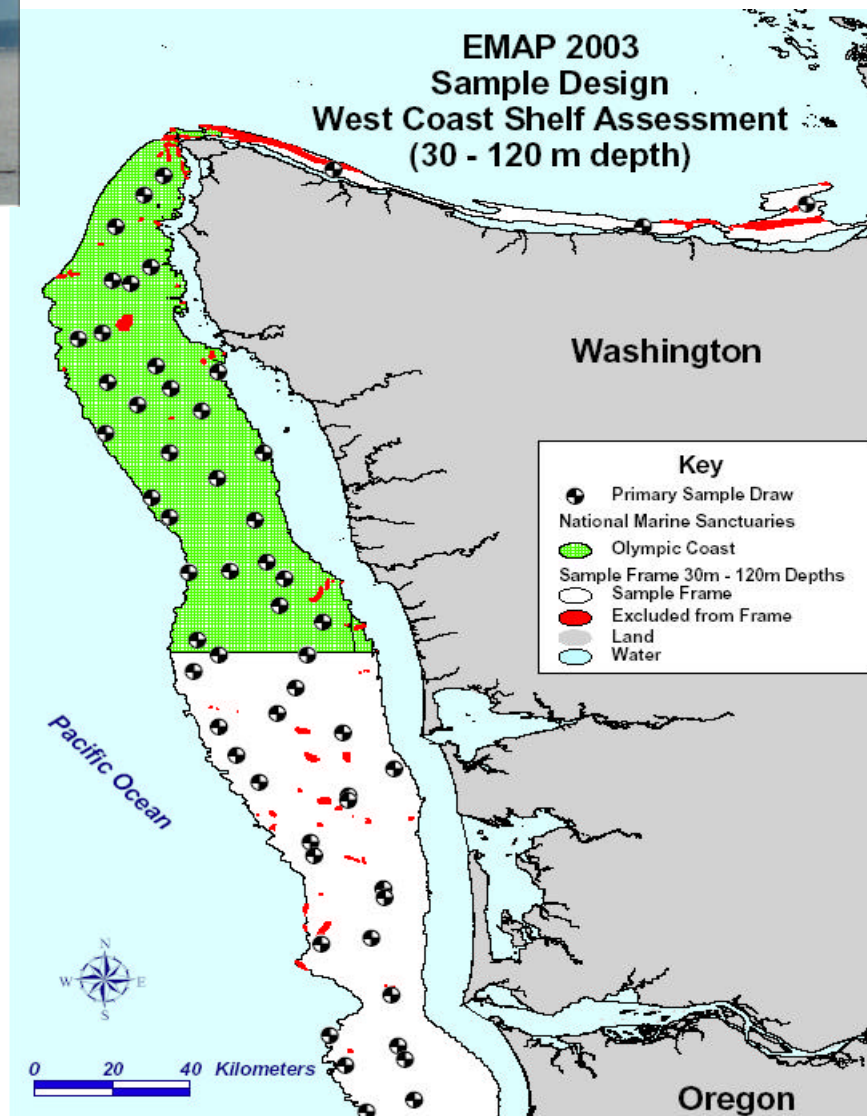
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R.V. McArthur II



2003
the co
shelf
within
depth
station
Mexico



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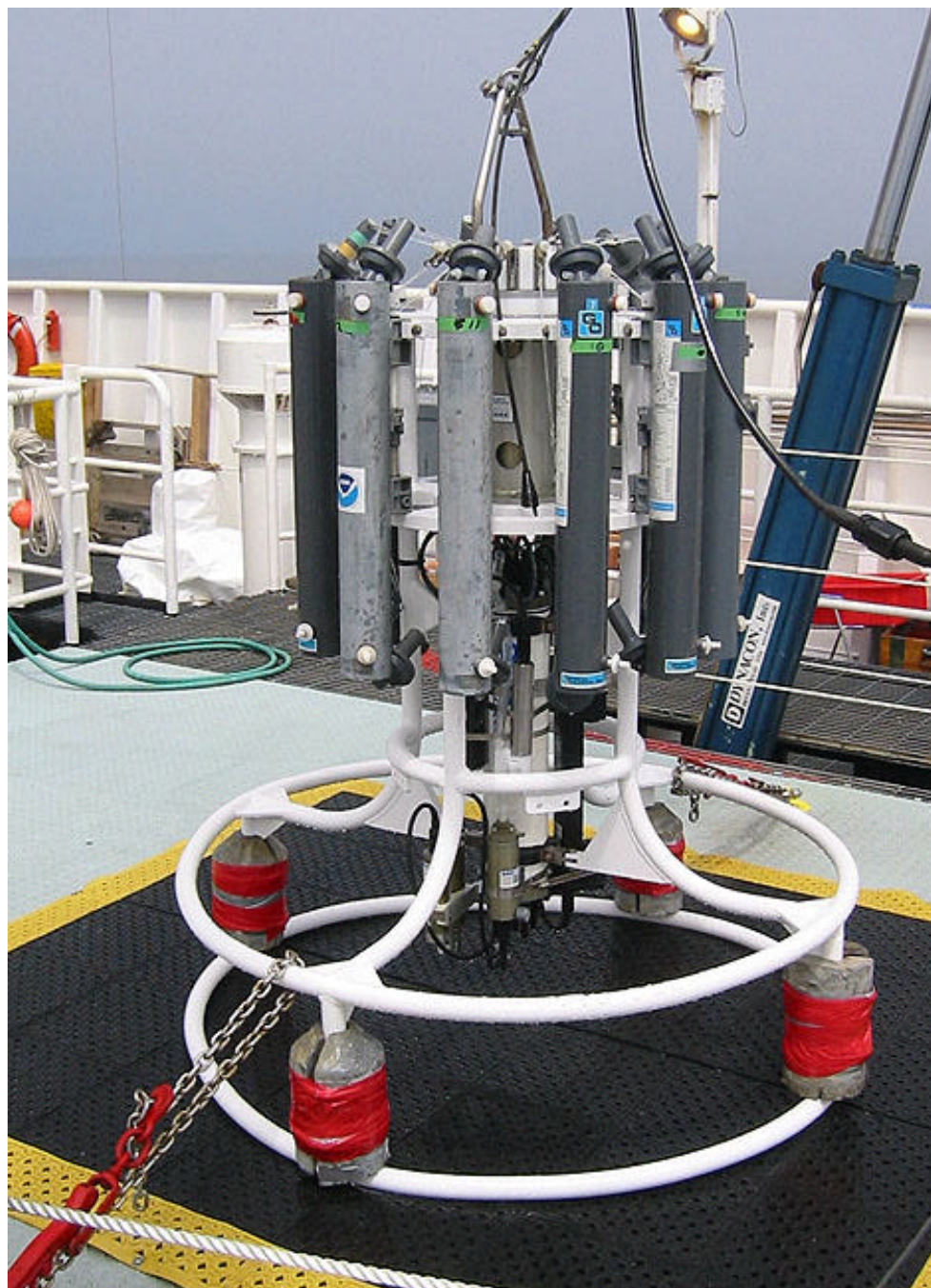
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EMAP GOALS

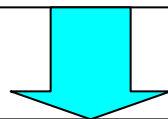
Develop the scientific basis for
consistent measurement of the health
of the Nation's aquatic ecosystems

Assist in building state capacity for
monitoring for 305(b) and 303(d)

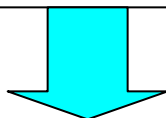
Provide design/analysis support so states
can implement more cost-effective
monitoring

EMAP Approach for a Report Card

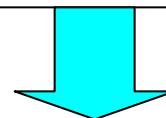
Develop a cost-effective, scientifically-defensible, representative, and unbiased estimate of ecological condition



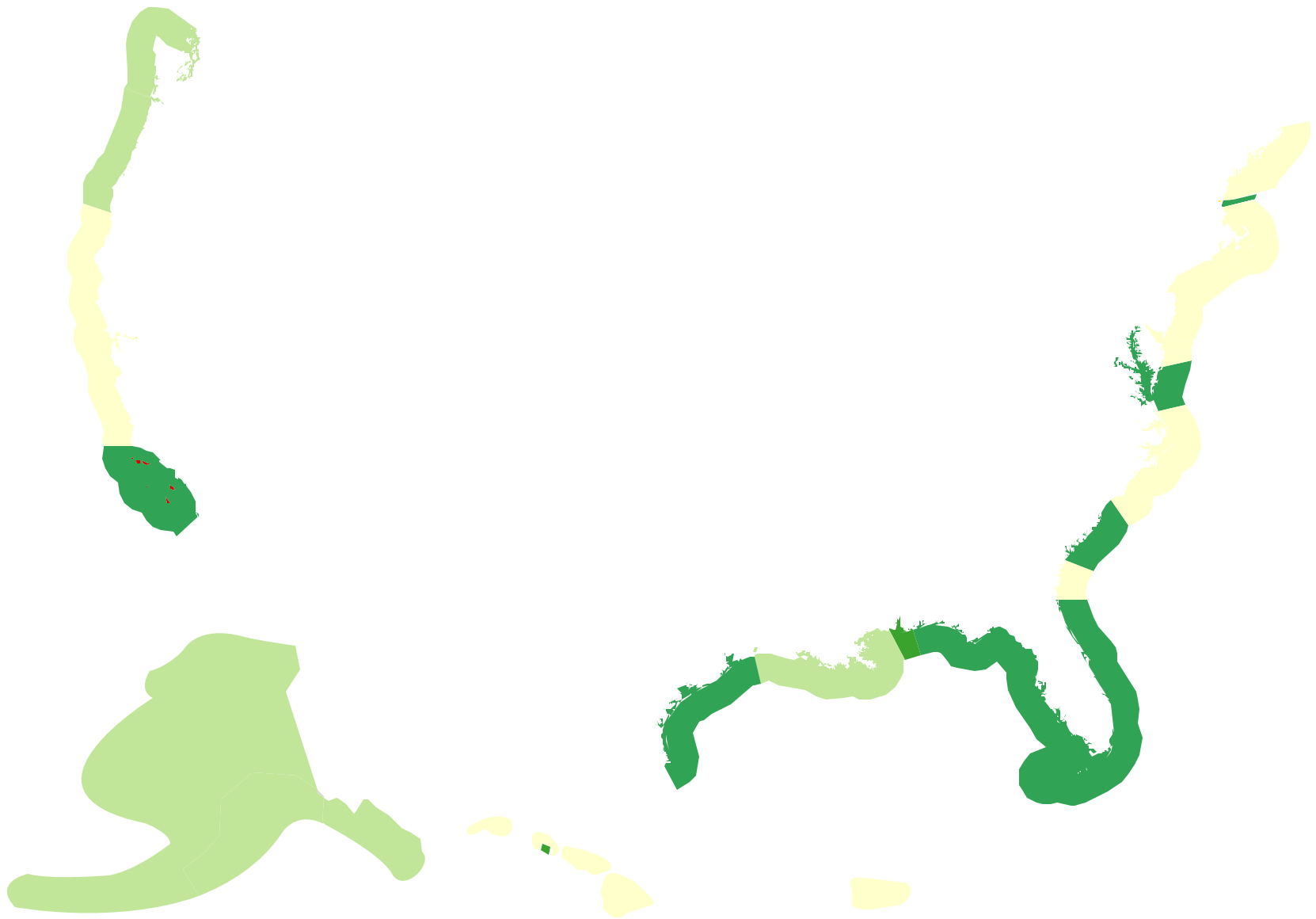
States adopt and implement a consistent approach for assessing ecosystem health



States' data aggregated for national report card



Change and trend data



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March 2004

