

US EPA ARCHIVE DOCUMENT



Myths, Hobgoblins and Crusades: EMAP Through the Ages

presented

by

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U.S. Environmental Protection Agency

Pre-EMAP



Policy Questions Are Often Very Simple

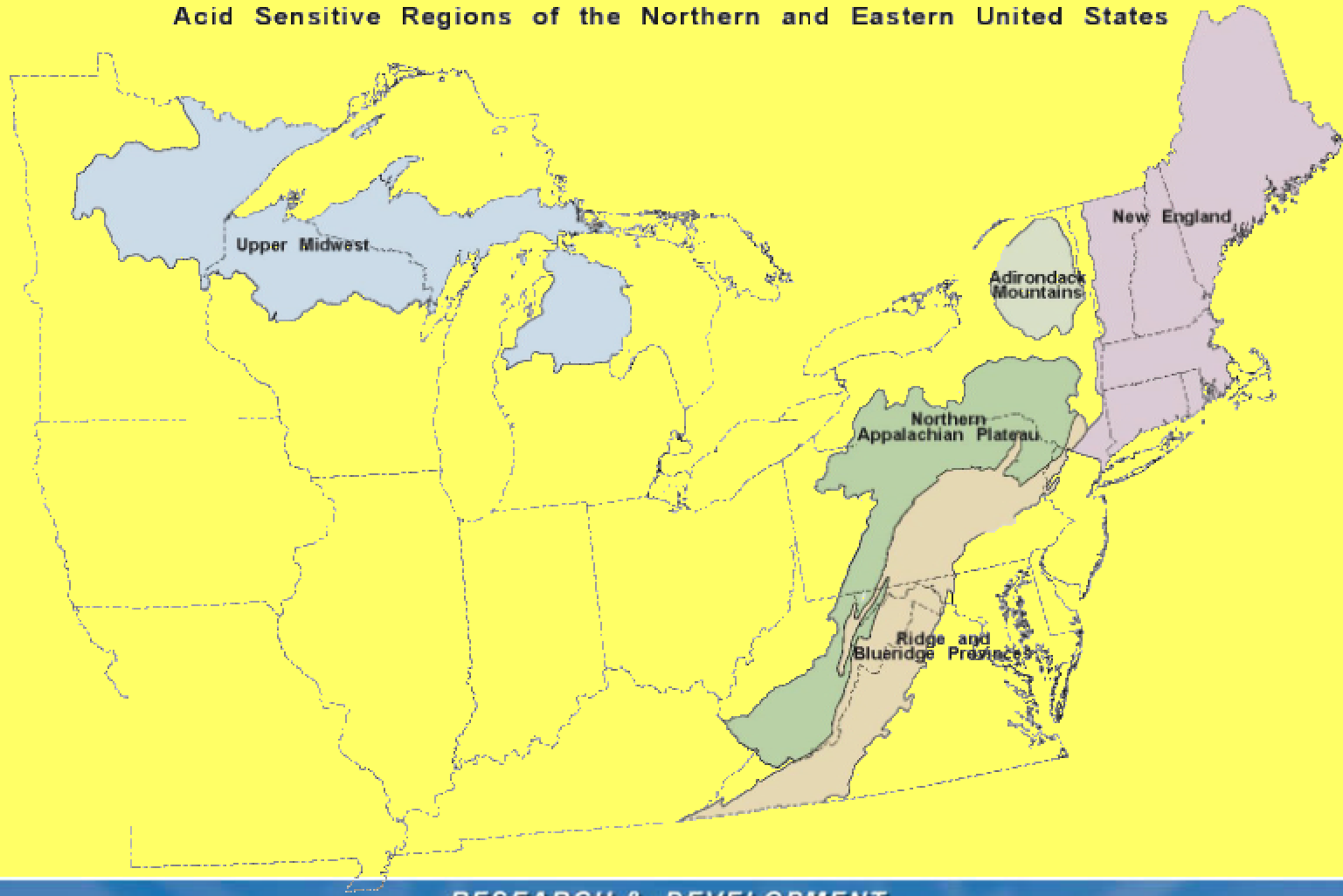
***“What do you mean you don’t know
how many acid lakes there are?”***

William Ruckelshaus - EPA Administrator - early 1980s

NAPAP

National Surface Water Surveys

Acid Sensitive Regions of the Northern and Eastern United States

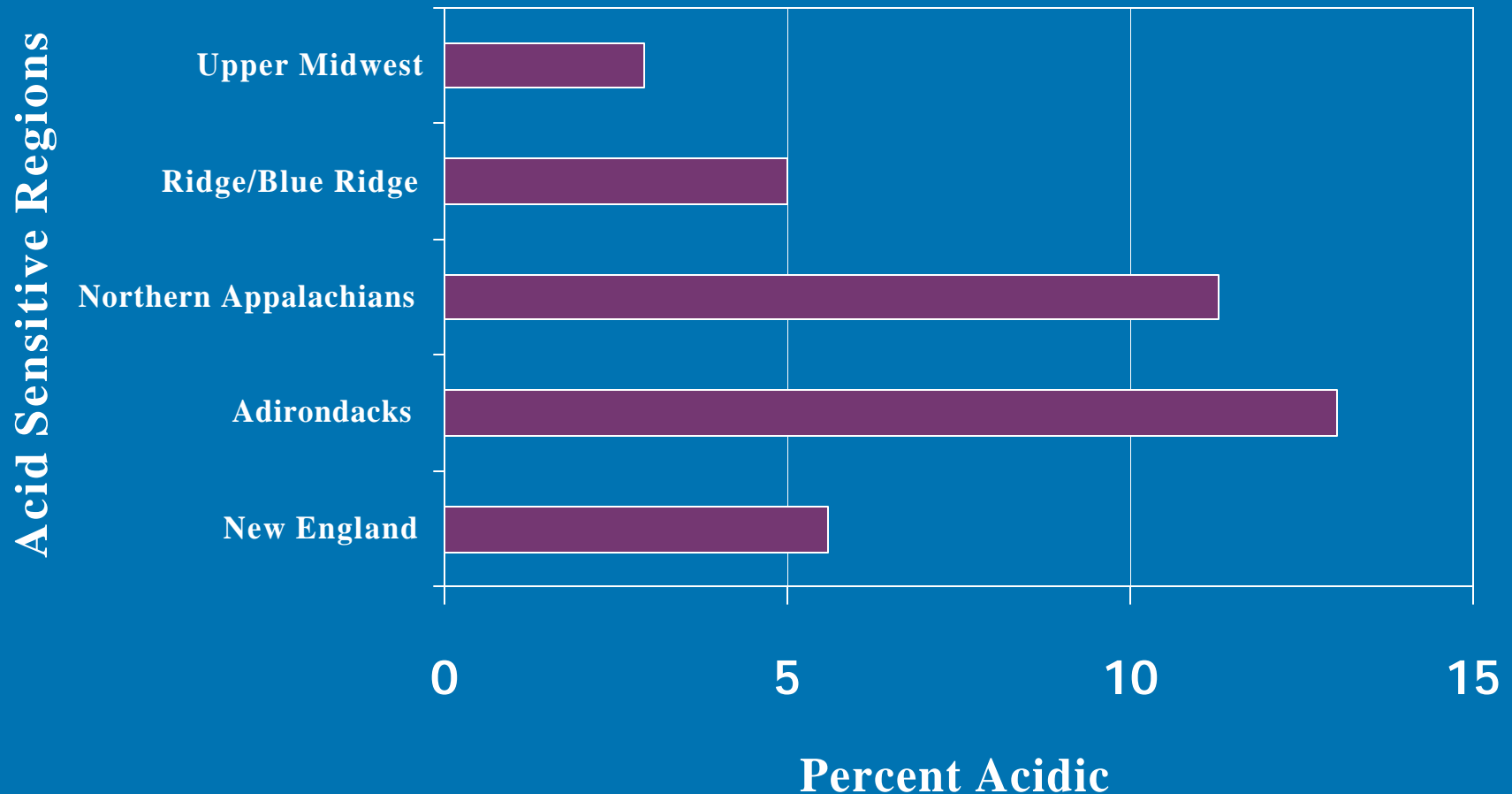


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NAPAP-NSWS Survey Results Answering Ruckelshaus' Question

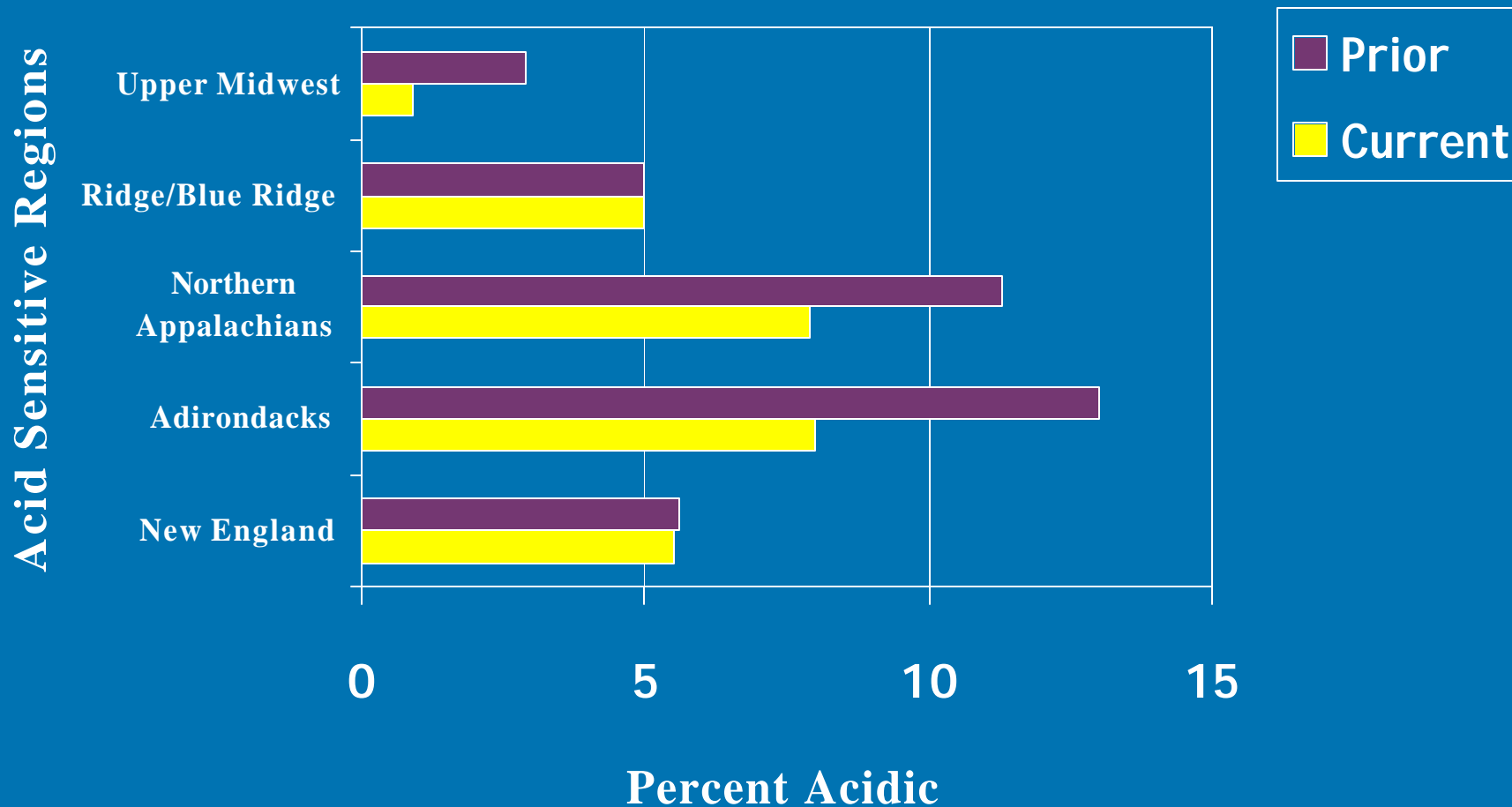


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NAPAP-NSWS Survey Results

Answering Ruckelshaus' Question



Lesson #1 -

Not all “Experts” are expert in all things

“That’s a stupid question and one that you can’t possibly answer.”

Chair of NRC Indicator Panel




EMAP - Beginnings



Initiation

- Meeting in 1987 – Versar (LOE Contractor) and Linthurst
 - Completing Acid Rain Lakes Program
 - Idea for Monitoring Ecosystems of US
 - No Program
 - No Money
 - Little Interest
 - No Sanction

Myth #1



It takes a
great idea to
start a great
organization





Thursday Pizza Nights

Thursday Night Pizza (conceptualization)

- Nearly 1 year in duration
- Thursday nights 6pm-10pm
- Continuing members: Linthurst, Holland, Summers
- Would add people depending on topic
- End result: Outline of a program (nameless)
- Next step: create followers



"EcoSynthesis"

The Very Early Stages of EMAP

"There are plenty of data out there to know what is going on in the environment and what our major problems are. Do the hard work and synthesize it!"

Conventional Wisdom



Lesson # 2

Conventional wisdom is just that, conventional, and seldom leads to important breakthroughs.

- The data were not there to provide unbiased estimates.
 - ✓ lack of appropriate indicators (e.g. forests) and
 - ✓ lack of an appropriate design (e.g. inland aquatics).
- We discover we will have to collect the data ourselves!



Early Partnerships



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Partnerships

OEPER and OMMSQ (remember those organizations???) continue the often painful process of working together

ORD starts the very challenging process of partnering with other federal agencies, States and Tribal Nations.

Cost estimates for fully implemented program escalate to \$100M – Yikes!



Lesson #3



CONFIDENCE!!!

If the idea is a good one, move forward in confidence (not arrogance), in spite of the critics & apparent challenges!



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Organization and the Golden Days

Ecosystem Types and Turfs



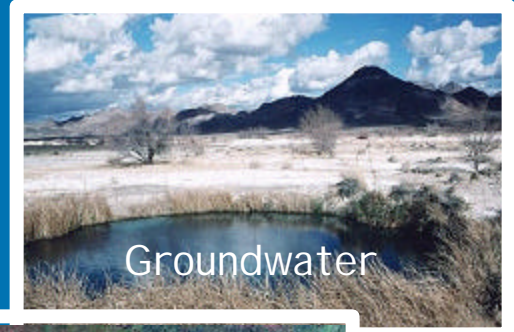
Air



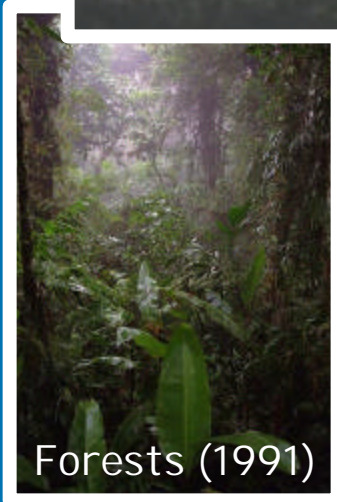
Rivers (1994)



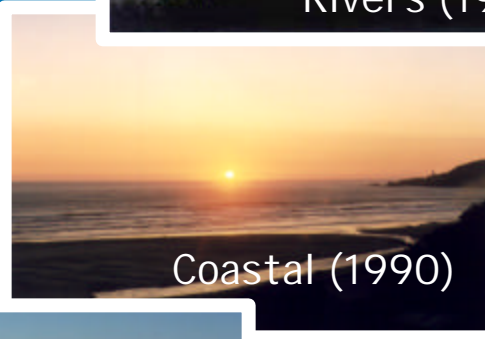
Streams (1993)



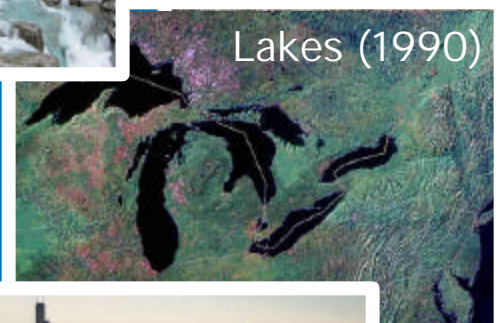
Groundwater



Forests (1991)



Coastal (1990)



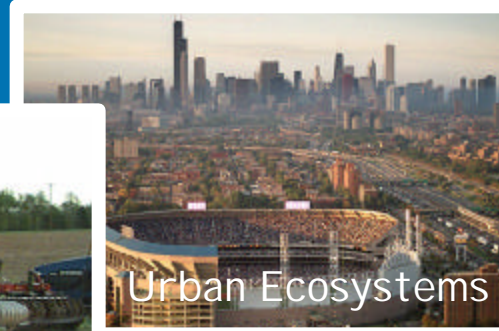
Lakes (1990)



Arid Ecosystems



Agro-ecosystems



Urban Ecosystems

Myth #2



Visionary
organizations
require great and
charismatic leaders



Leadership (10 in 10)

Rick Linthurst

Jay Messer

Gil Veith

Ed Martinko

Tom Murphy

Sidney Draggan

Rick Kutz

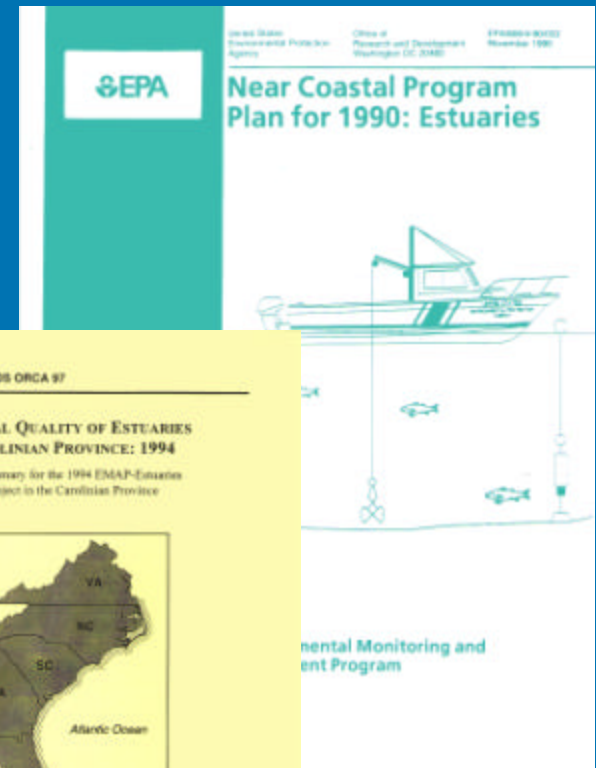
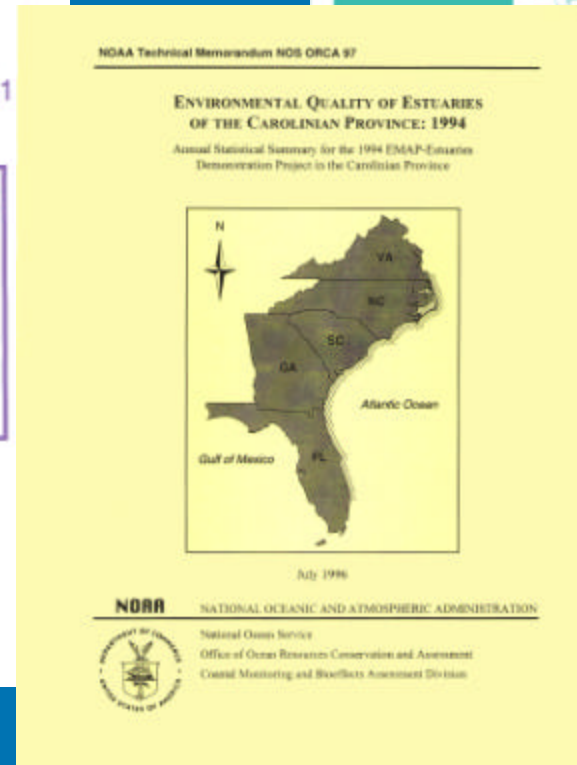
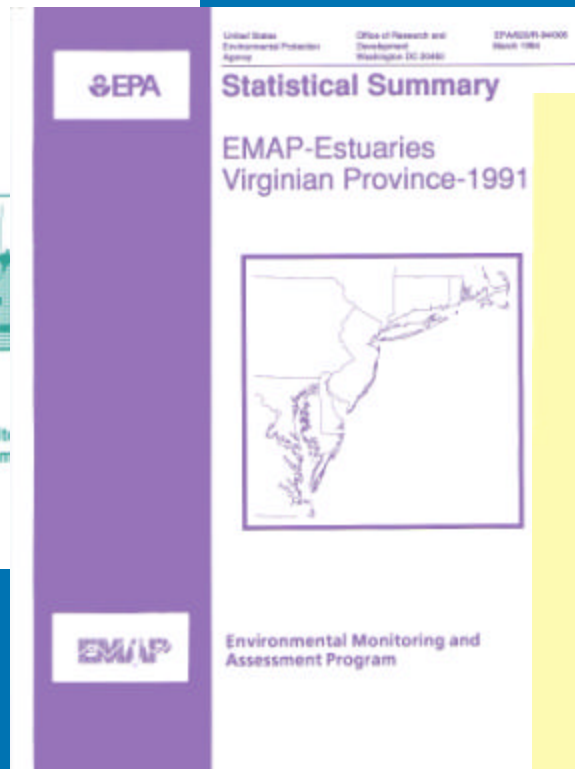
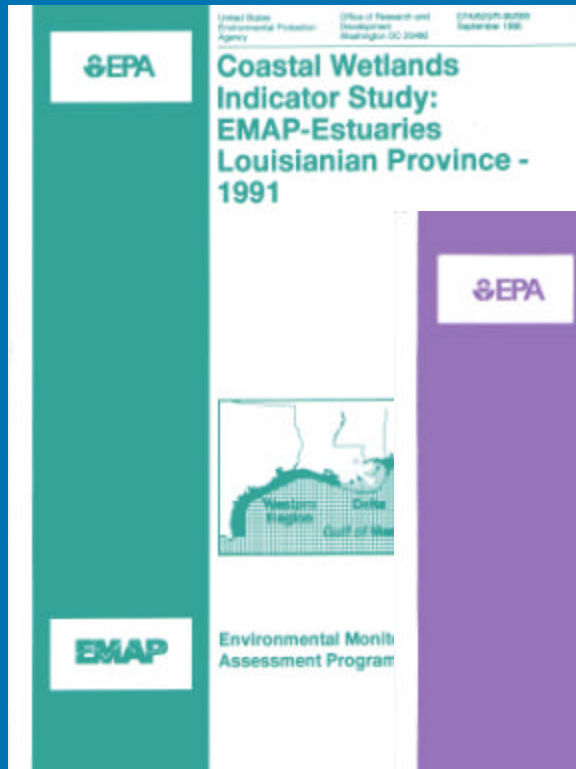
Matt Bills

Mike McDonald

Steve Paulsen

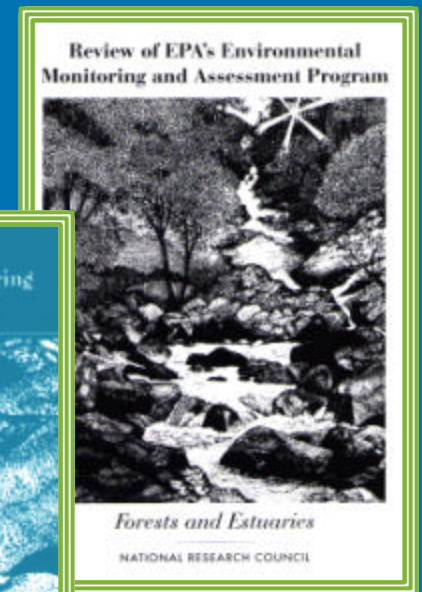
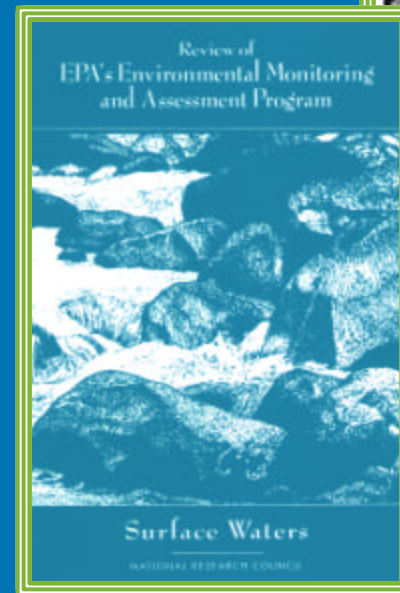


Pilot Studies



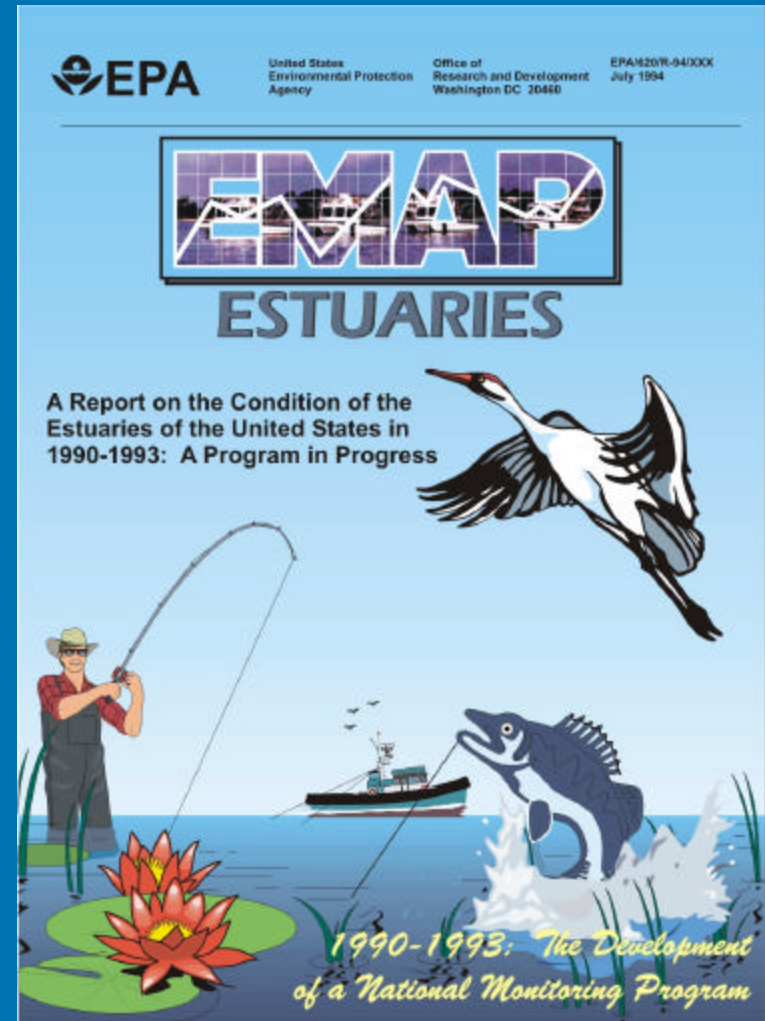
Peer Review

- Most reviewed program in ORD
- Example – Coastal (NRC)
 - 28 Recommendations
 - 26 Positive
 - 2 Negative



Original First National Coastal Report

- Overall condition from Virginian and Louisianian Provinces
- Ready to go to press
- Preliminary Agreement between NOAA and EPA



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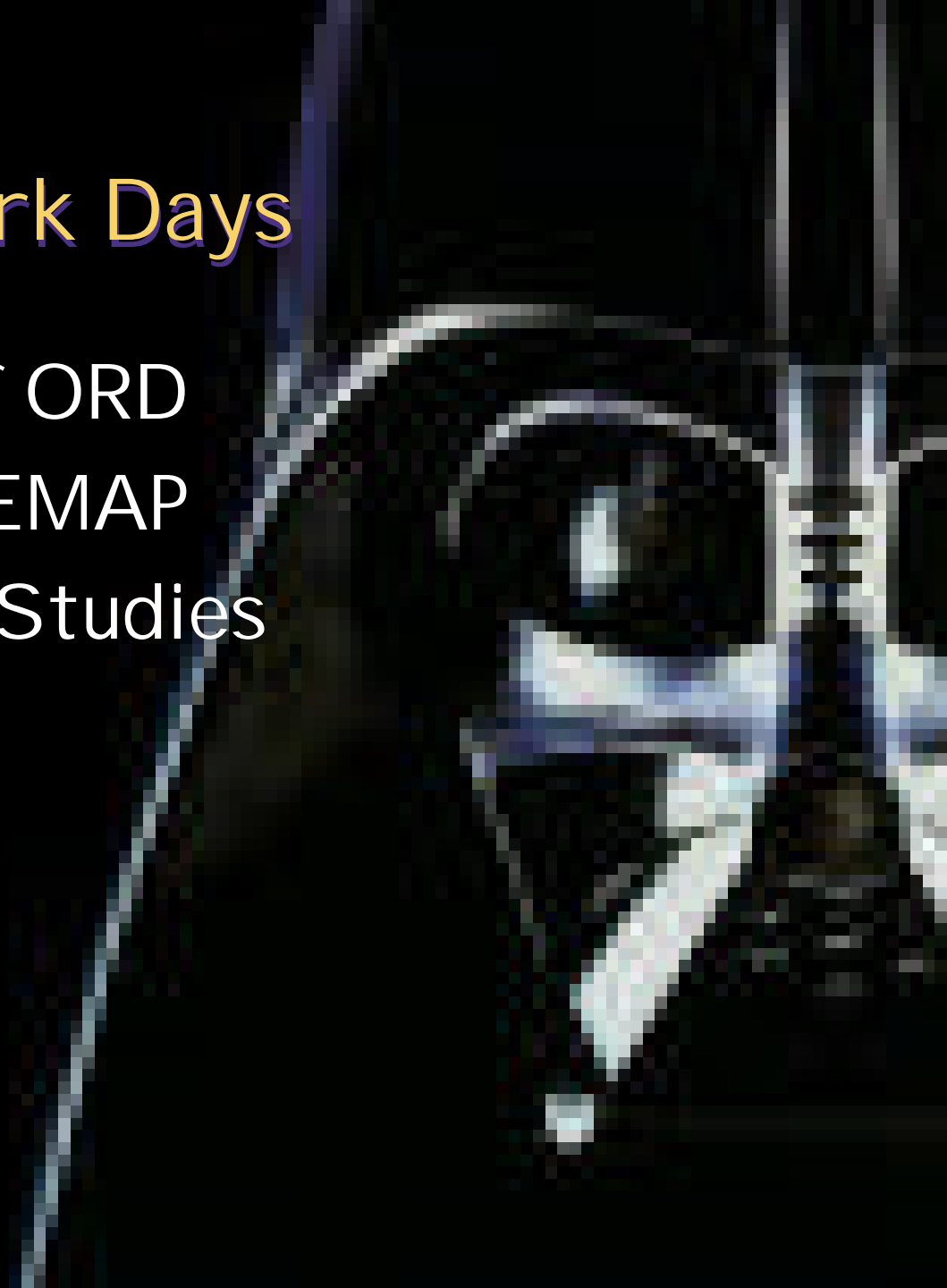
Myth #3

Visionary
organizations
are great
places to
work for everyone



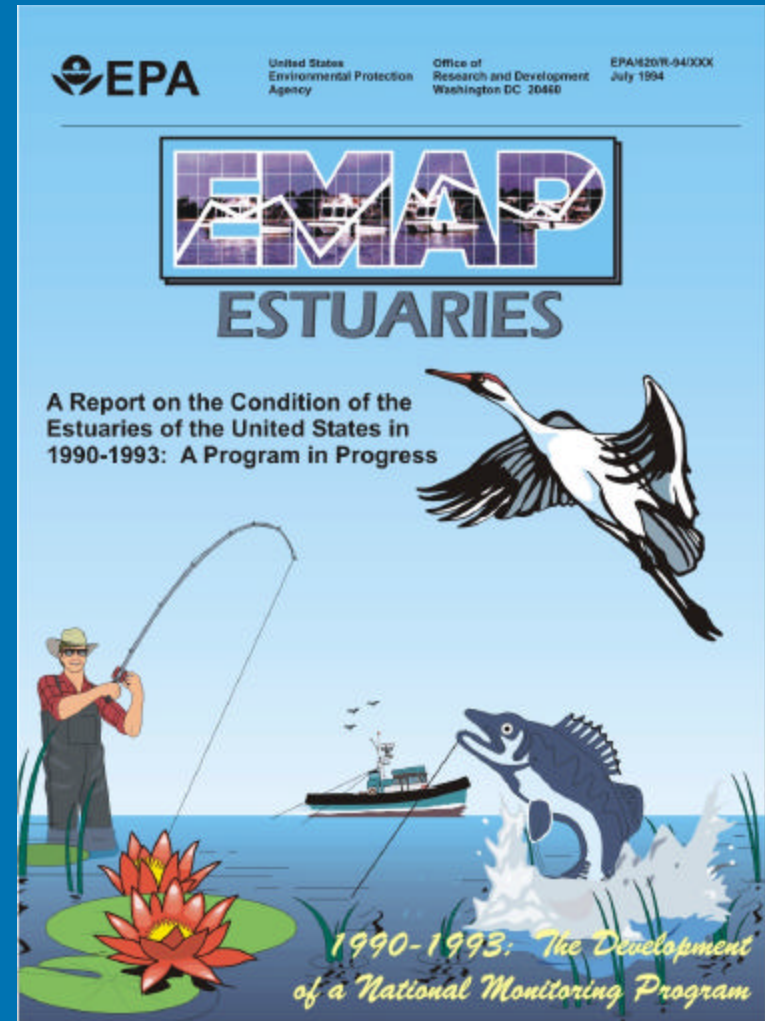
Dark Days

- Reorganization of ORD
- Re-evaluation of EMAP
- Stopping of Pilot Studies
- Reassignment



Original First National Coastal Report

- Stopped as part of reorganization
- Published electronically by OW
- Shelving of Coastal



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Early EMAP Resources Groups Targeted Regions Where Federal or State Partners Were Ready



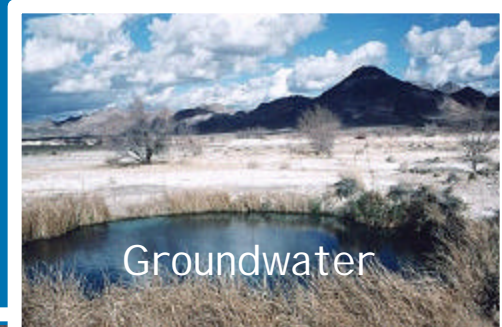
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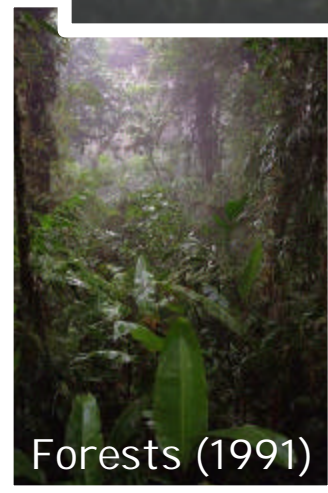
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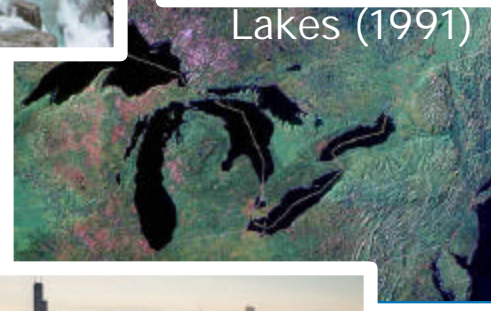
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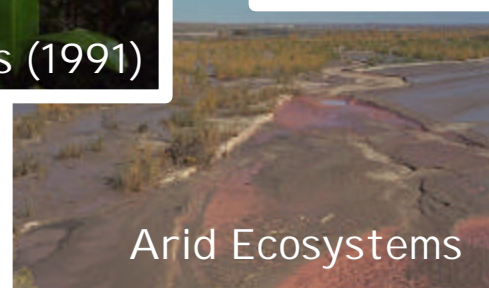
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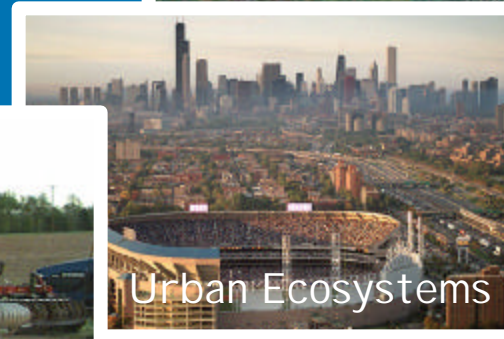
Lakes (1991)



Arid Ecosystems



Agro-ecosystems



Urban Ecosystems



Lesson #4 - Low Hanging Fruit

Whatever you do, get the low-hanging fruit FIRST!



After solving all the tough problems, Dixon discovers low hanging fruit!



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Regionalize

Demonstrate How It All Comes Together



“MAIA” Mid-Atlantic Integrated Assessment

Hosted by EPA Region III

ORD Contributed:

Estuarine,
Stream/River and
Landscape

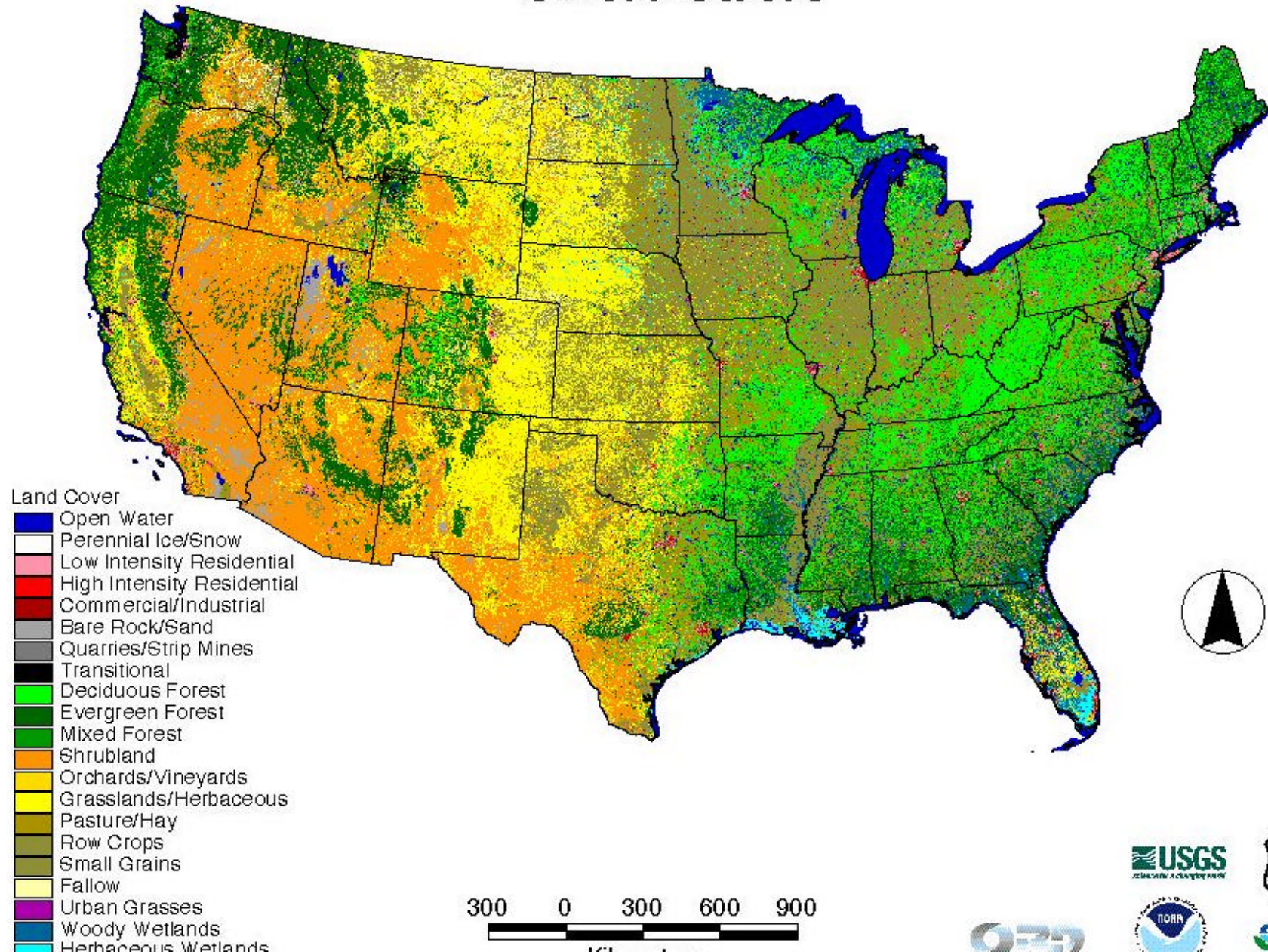
US Dept. Agriculture

Forest

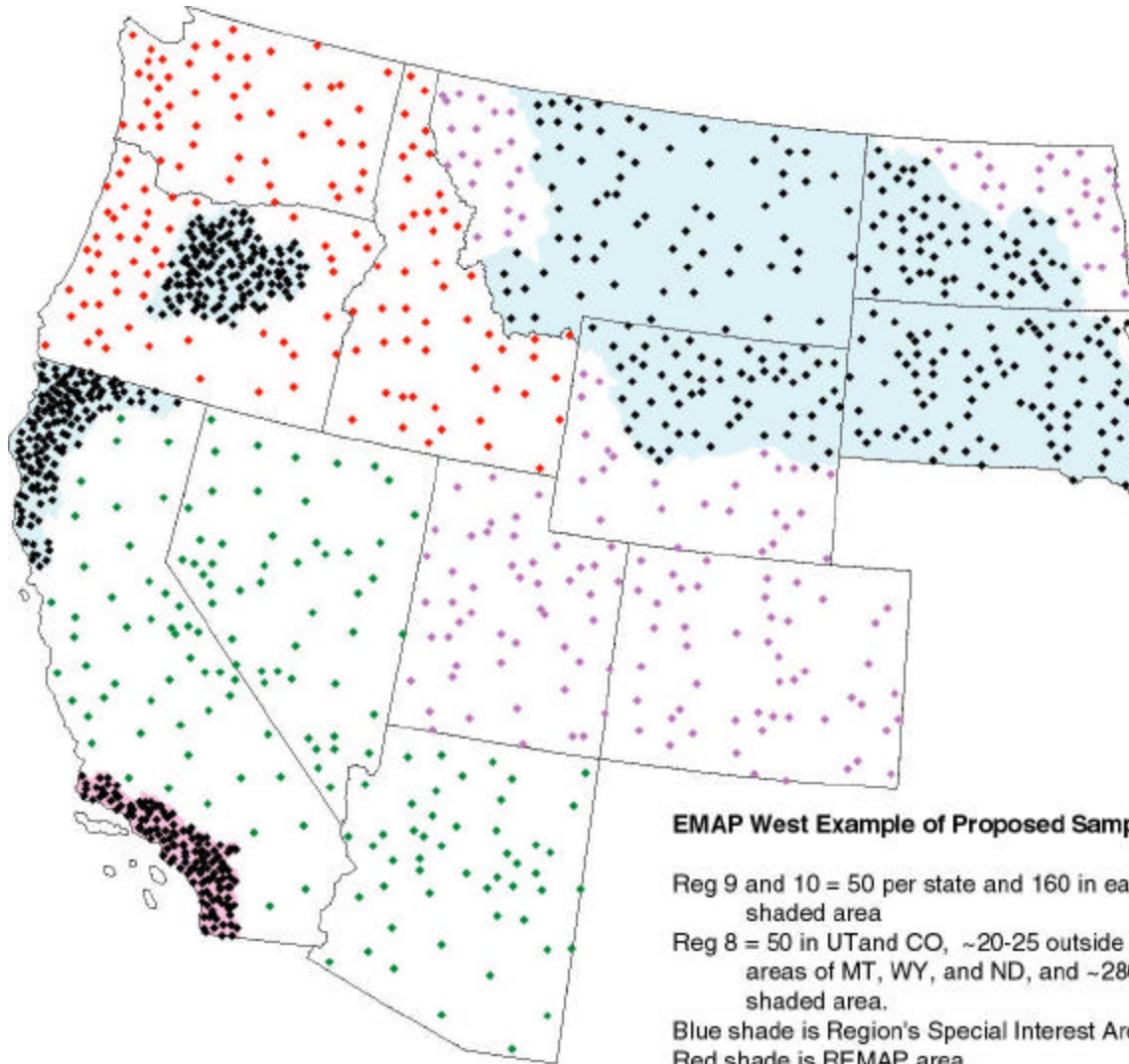
NASS/ARS

Acted as Catalyst for CENR
Monitoring Framework Pilot

MRLC Land Cover of the Conterminous United States



EMAP=West



- Streams and Rivers in 12 Western States
- Estuaries in Western States including Alaska and Hawaii!

A scenic landscape photograph featuring a river flowing through a lush green valley. The river is surrounded by tall grass and small shrubs. In the background, a dense forest of evergreen trees lines the valley. Beyond the forest, a range of rugged, rocky mountains rises against a bright blue sky filled with large, white, fluffy clouds. The overall scene is peaceful and natural.

Lesson # 5

It's amazing what you can accomplish
if you don't care who gets credit!

A Phoenix Rising (National Coastal Assessment)



Challenges (1996-1999)

- How do you continue EMAP-Coastal with no money?
- Can EMAP-Coastal be expanded into a national program?
- Can NOAA be re-engaged?
- Can OW be engaged?

Highly successful organizations make their best moves by brilliant and complex strategic planning



Myth #4

Organizations
become visionary
primarily through
“vision
statements”.

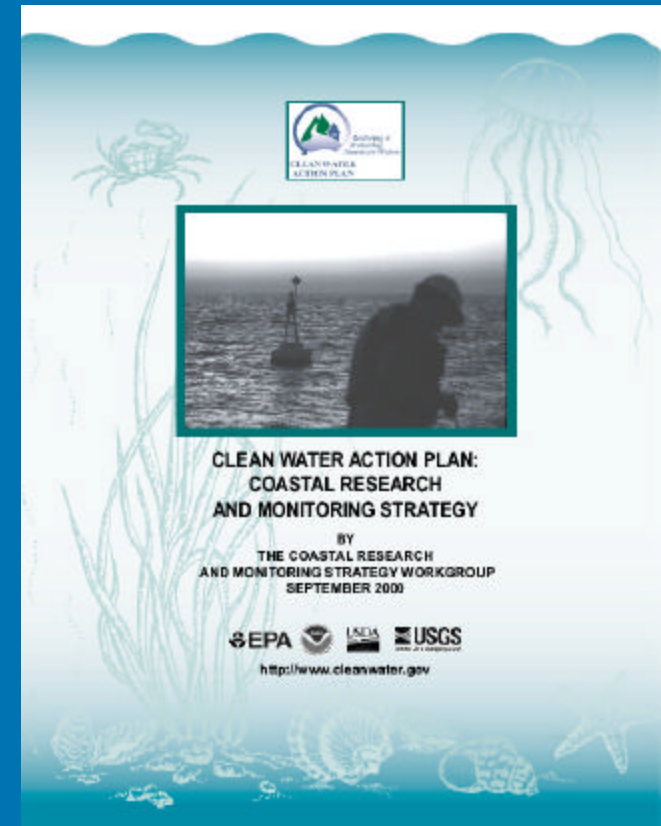


Myth #5



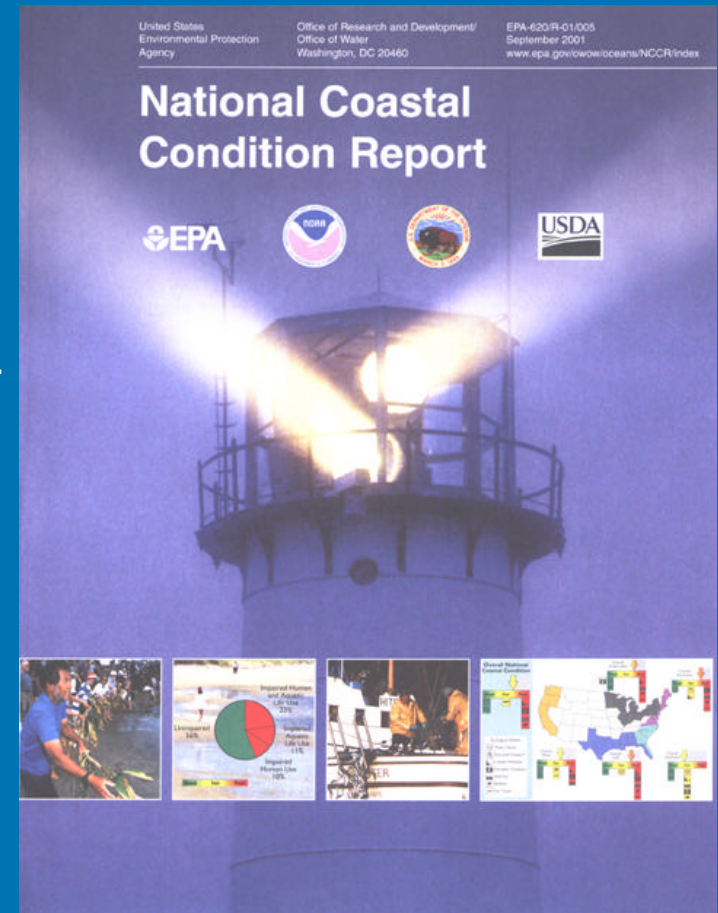
The Clean Water Action Plan (1999)

- OW/NOAA/USGS requirement to assess the condition of aquatic resources
- Stalelated – 1999 Conference Call
- Invention of the National Coastal Condition Report



National Coastal Condition Report I

- Based on 1990-1996 data
- Virginian, Carolinian, Louisianian, selected west coast sites

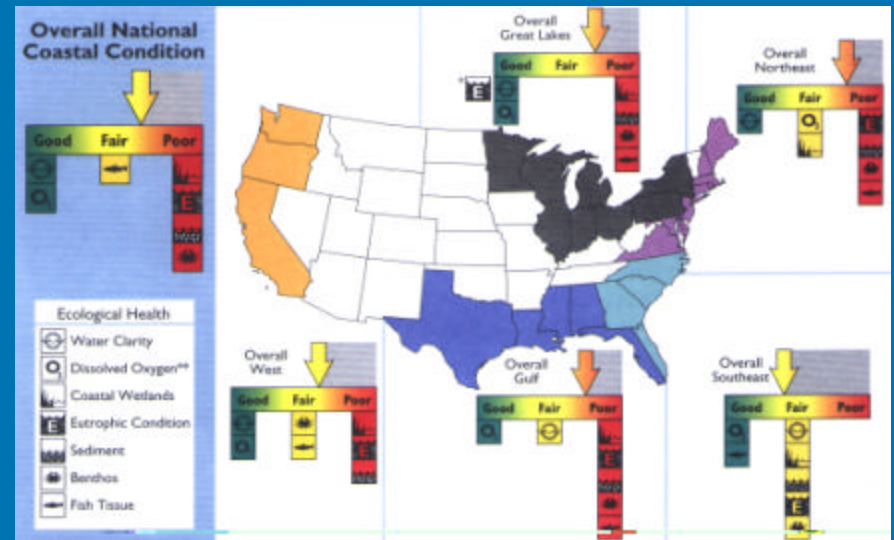


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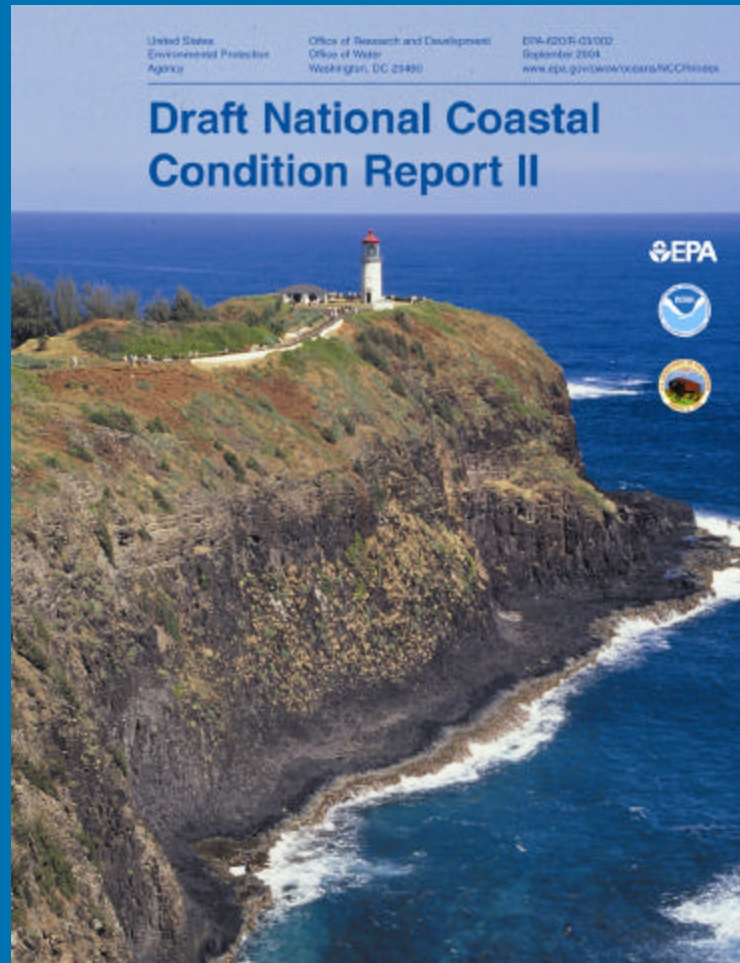
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National Coastal Assessment

- 1999 – EMAP Western Pilot Coastal
- 2000 – All coastal states in conterminous US and Puerto Rico
- 2001 – Includes Alaska and Hawaii (one time)
- 2002 – Includes Western Inter-tidal
- 2003 – Includes Western Offshore with NOAA
- 2004 – Includes SE Offshore with NOAA



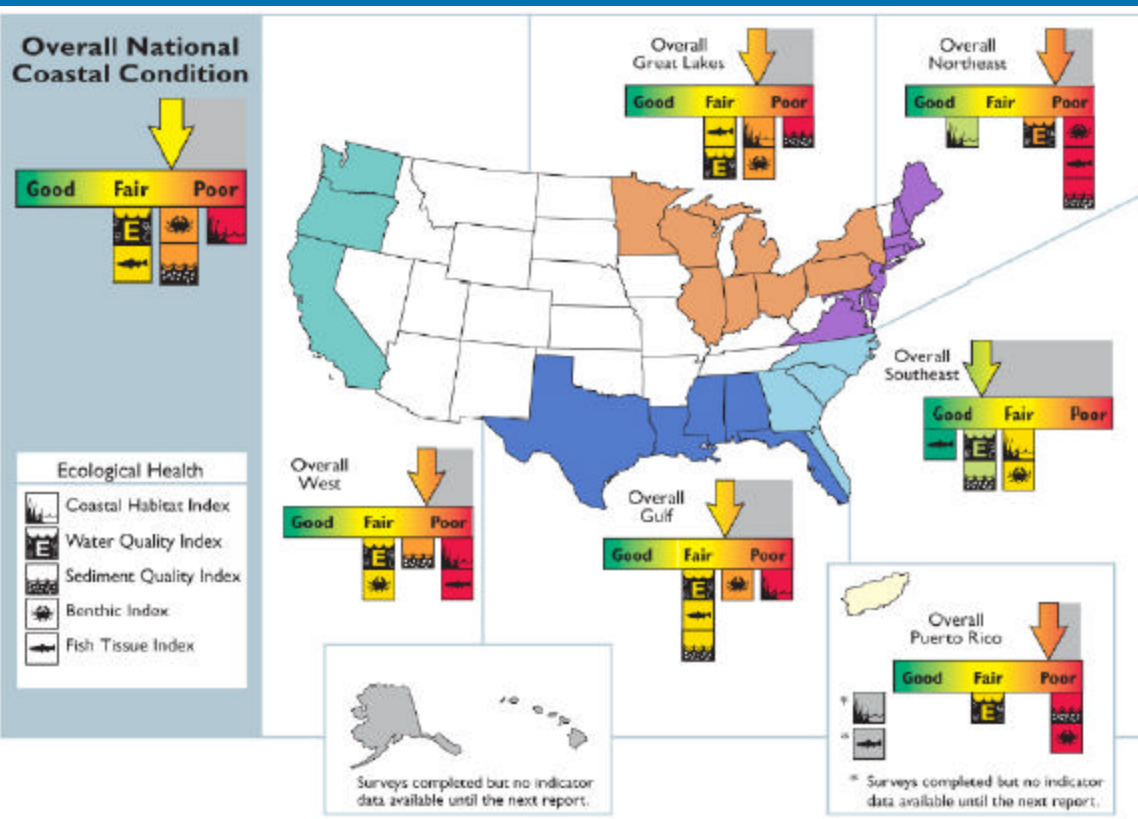
National Coastal Assessment II



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A large, jagged iceberg floats in the dark blue ocean. The sky is a mix of orange, yellow, and blue, suggesting a sunset or sunrise. The iceberg has a prominent peak on the left and a larger, more complex structure on the right. The water is dark and choppy.

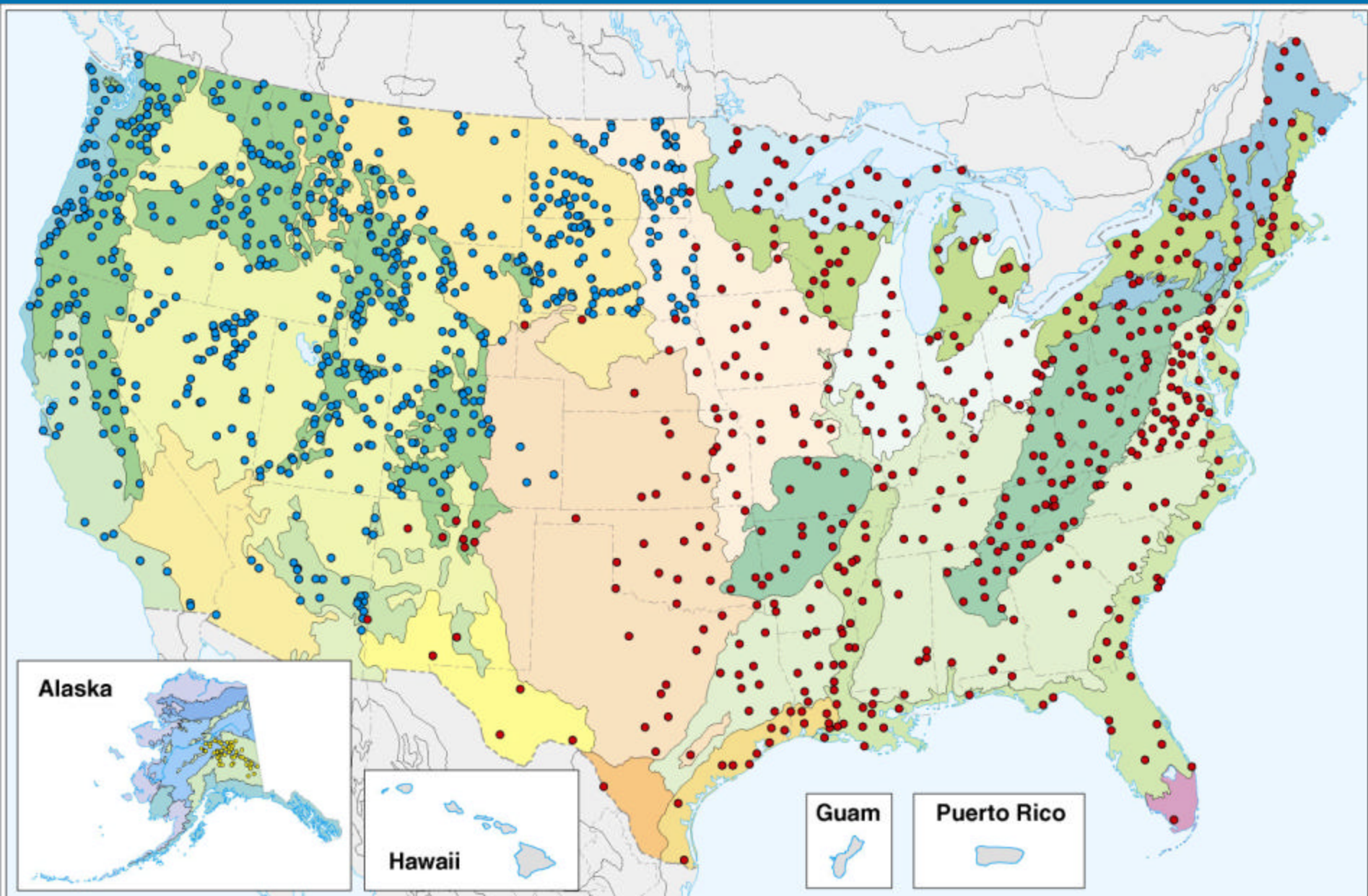
-The Future- & Challenges

Transition

- Moving from research to operation
- Players (OW, Regions, ORD, States)
- Options



Wadeable Streams Assessment (WSA)



Wadeable Streams Assessment The Beginning of a Fellowship?

- OW, Regions Managed
- ORD Supported
- States & Contract Field Effort
- Blends ORD EMAP-West and new eastern survey with compatible designs and consistent indicators
- Assessment in Dec. '05



Myth #6: You can't have your cake and eat it too.

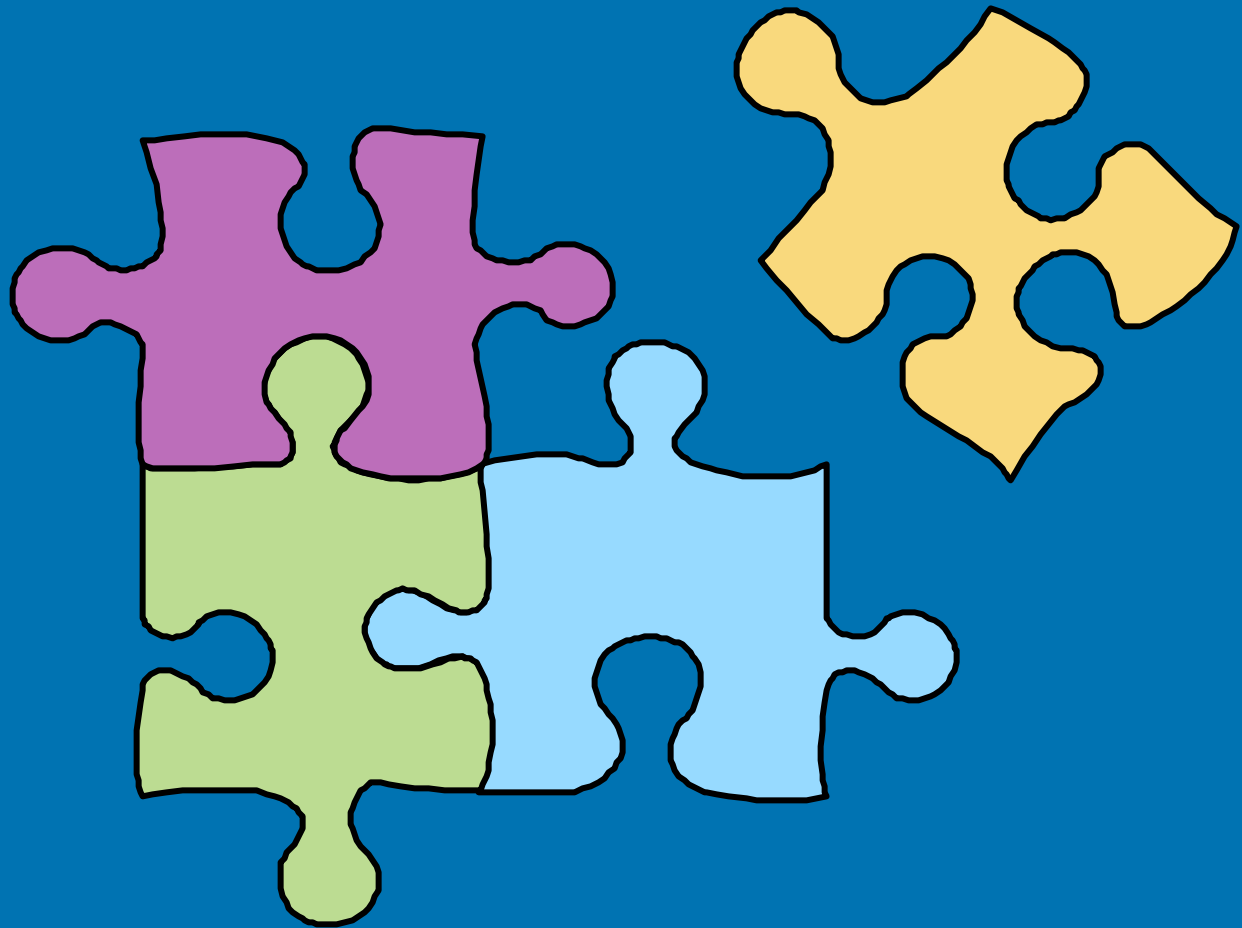


The Agency is Ready to Get the Assessments It Needs.
We Need to Work Out the Details of How to Manage It!





Missing Pieces



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Spatial

Temporal

**Intensive
Sampling**

Surveys

**Remote Sensing
& Censusing**



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TMDL

Spatial

Broad-Scale Remediation

**Water Shed → Regional
Remediation**

**Site
Remediation**

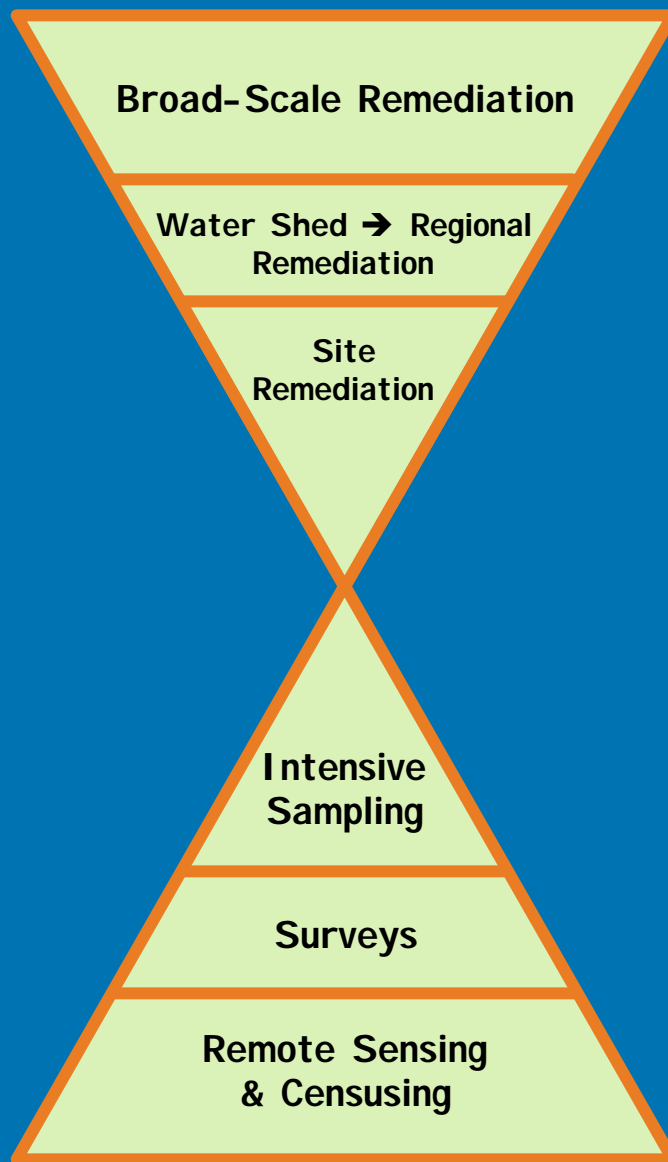
**Intensive
Sampling**

Surveys

**Remote Sensing
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Policy

Temporal



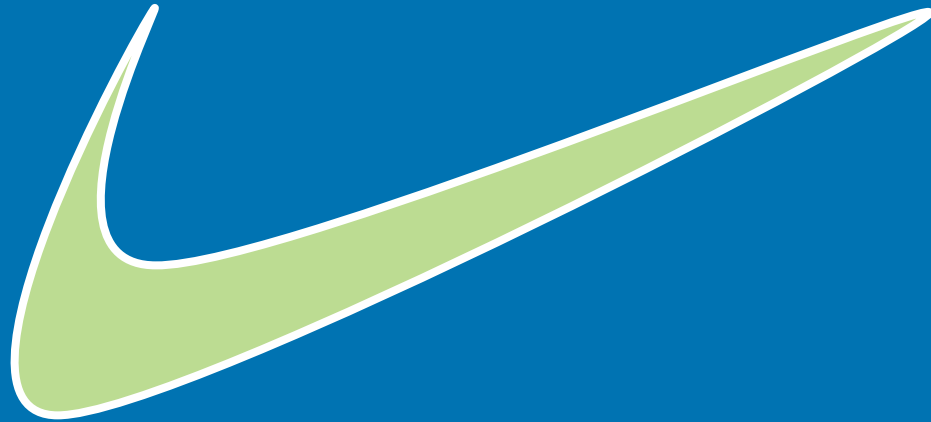
Myth #7

**Successful
organizations play
it safe**



Attributes of EMAP

- Thoughtful risk
- No penalties
- Just do it!



All in all...



...It's Been a Lot Like...



Herding Cats!



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It's Been Fun!
Thanks & Good-Bye