Myths,Hobgloblins and Crusades: EMAP Through the Ages

presented

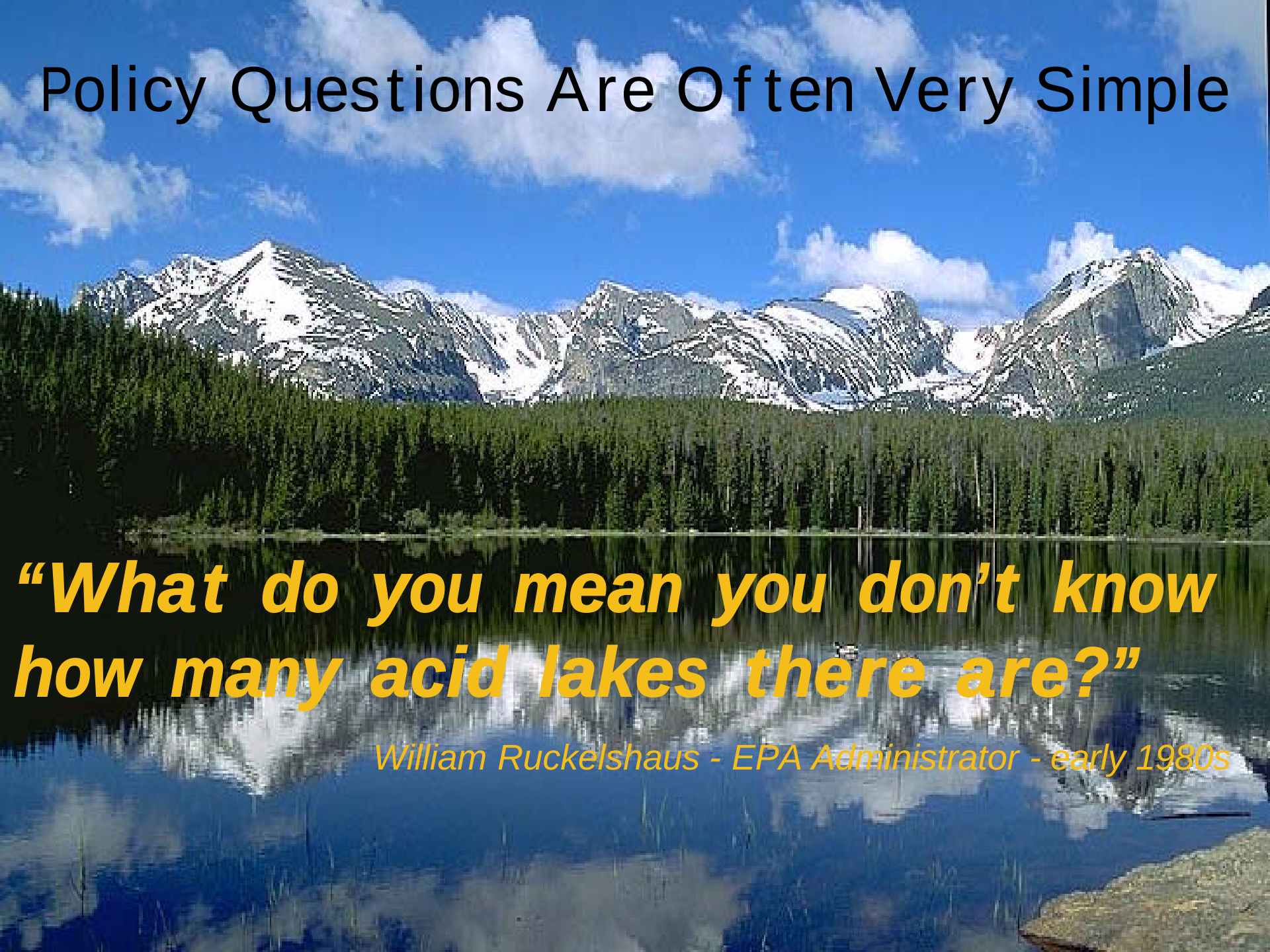
by

Steve Paulsen and Kevin Summers

U.S. Environmental Protection Agency

Pre-EMAP

Policy Questions Are Often Very Simple

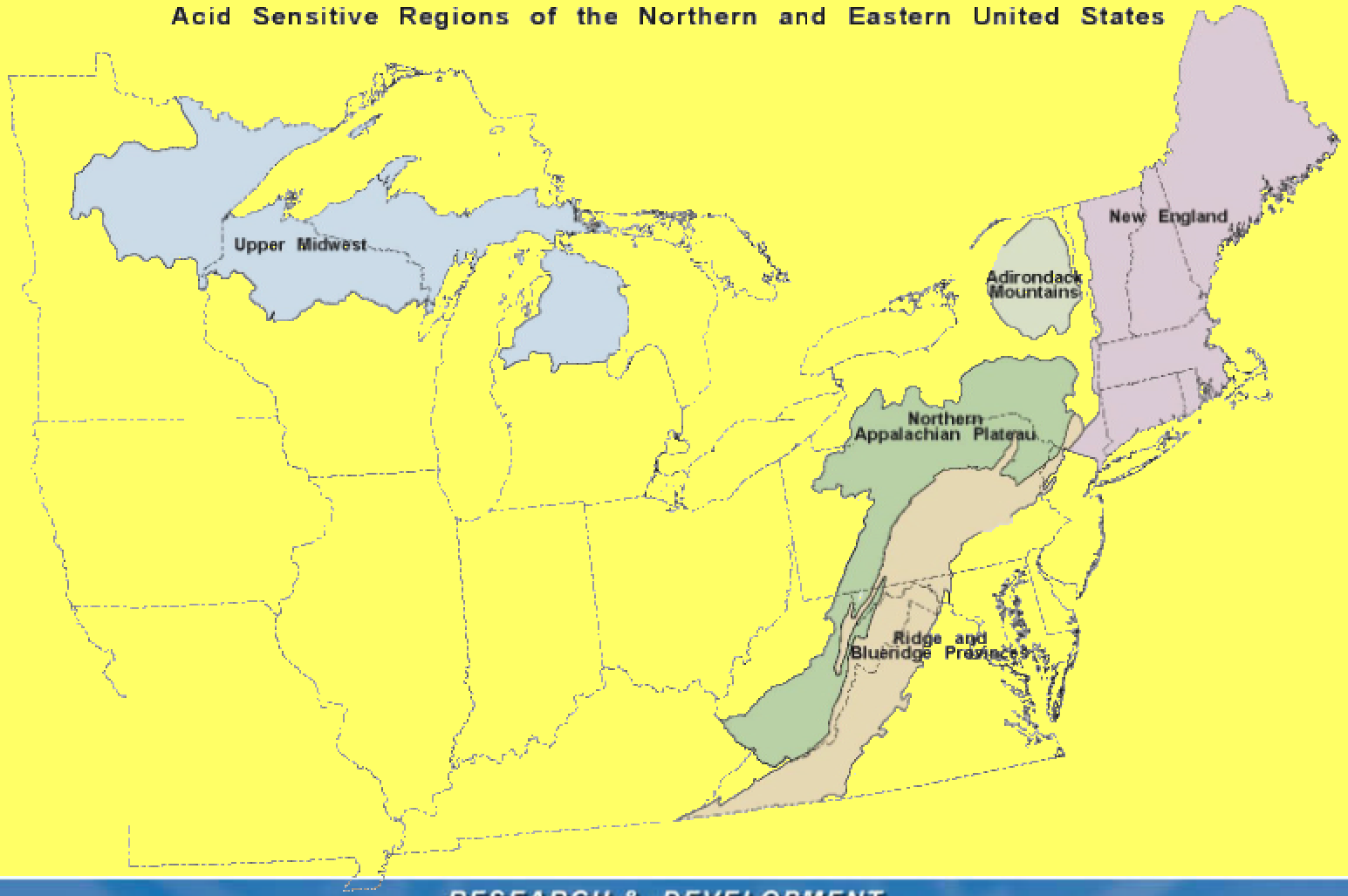


"What do you mean you don't know how many acid lakes there are?"

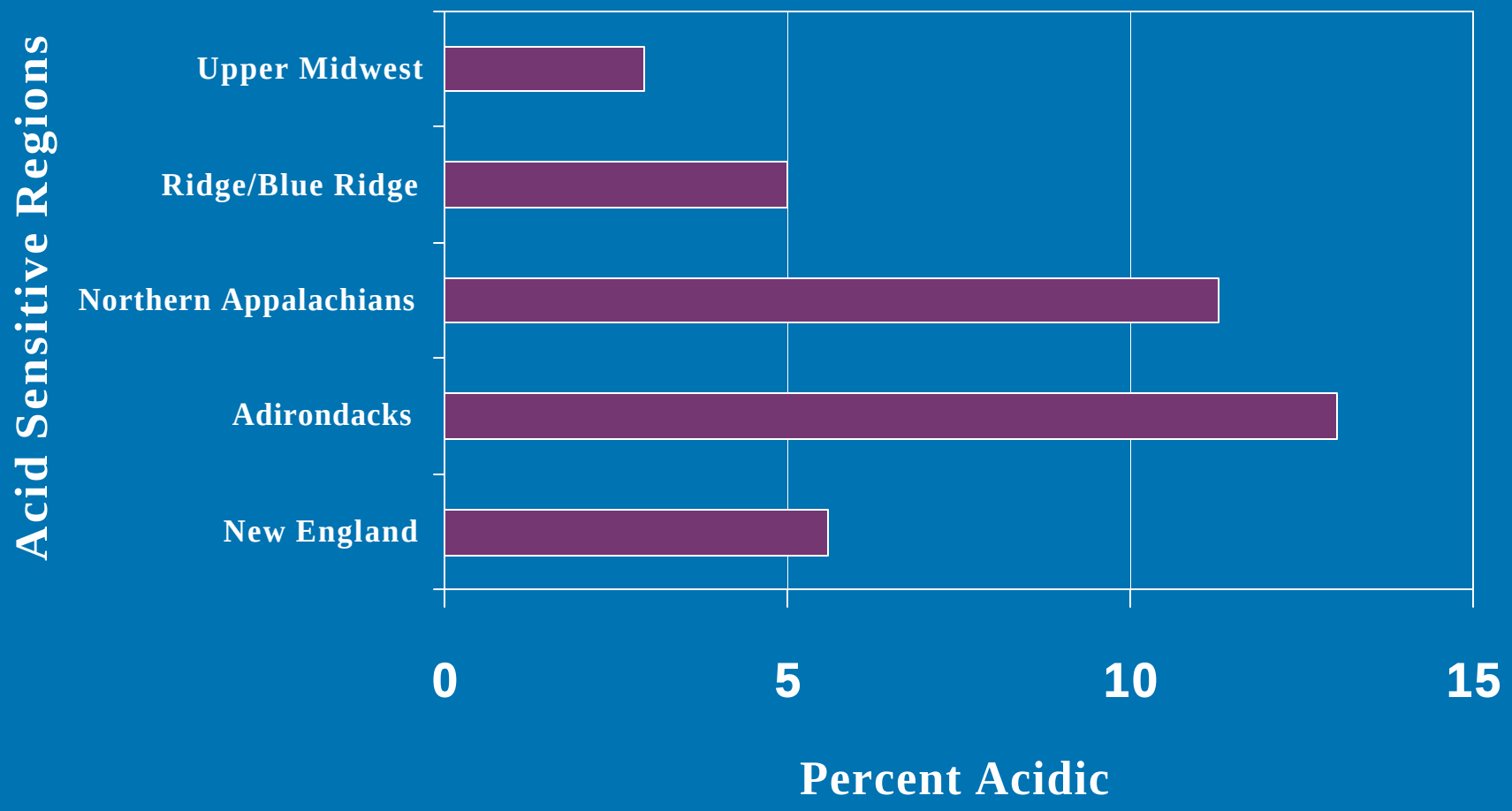
William Ruckelshaus - EPA Administrator - early 1980s

NAPAP

National Surface Water Surveys



NAPAP-NSWS Survey Results Answering Ruckelshaus' Question



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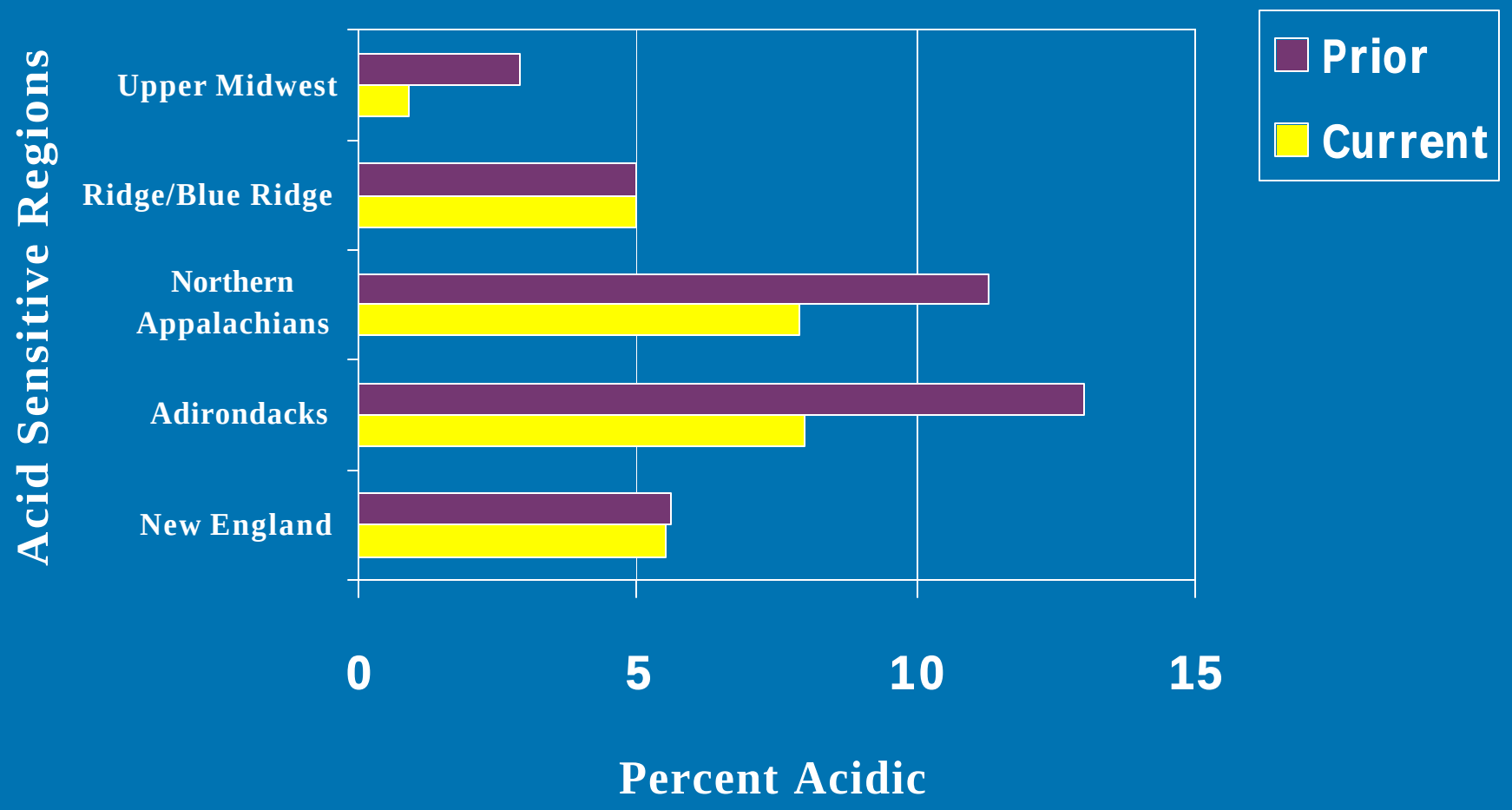


Lesson #1 - Not all "Experts" are expert in all things

"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

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

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!

Organization and the Golden Days

Ecosystem Types and Turfs

Myth #2

Visionary organizations require great and charismatic leaders

Leadership (10 in 10)

Rick Linthurst

Jay Messer

Gil Veith

Ed Martinko

Tom Murphy

Rick Kutz

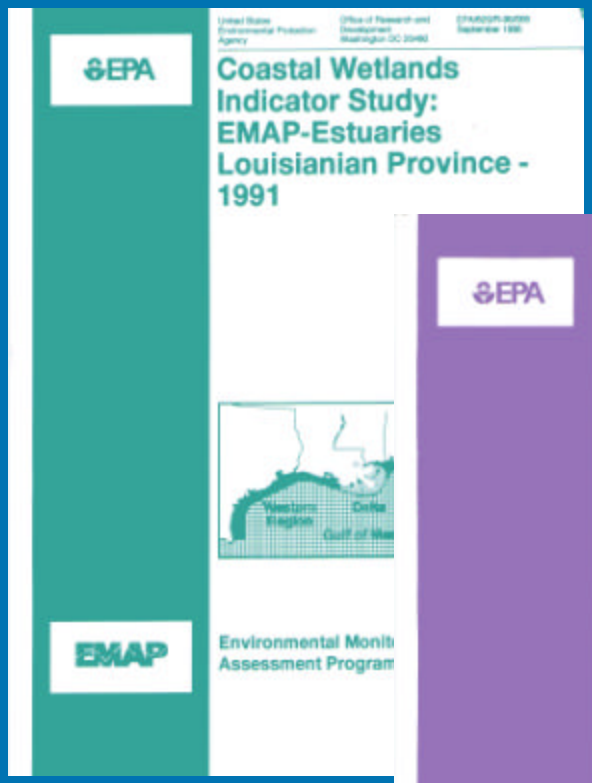
Sidney Draggan

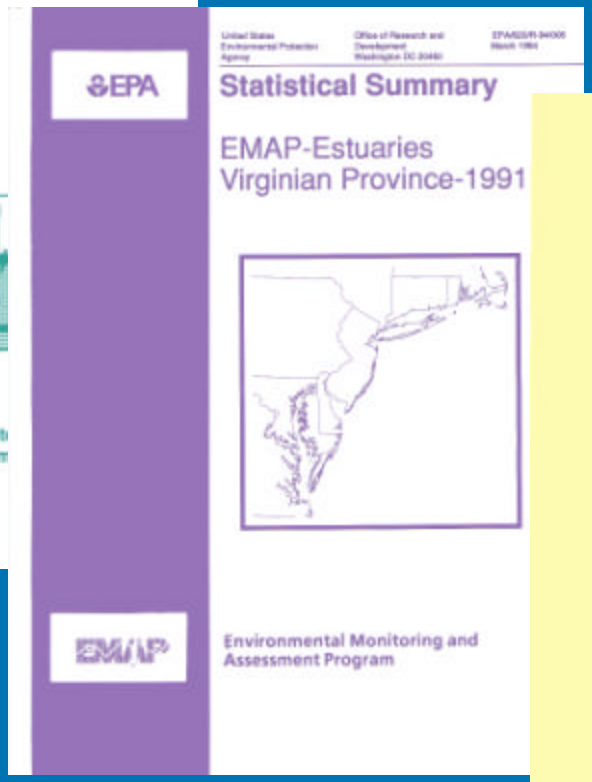
Matt Bills

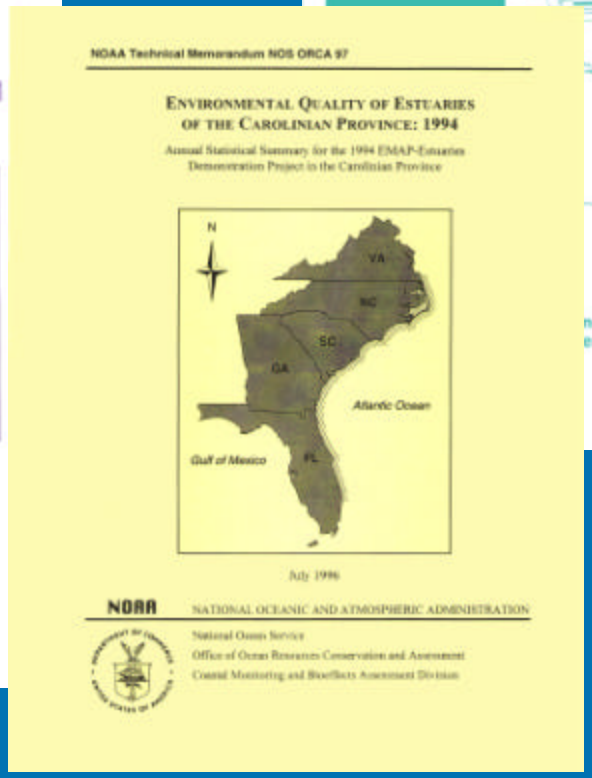
Mike McDonald

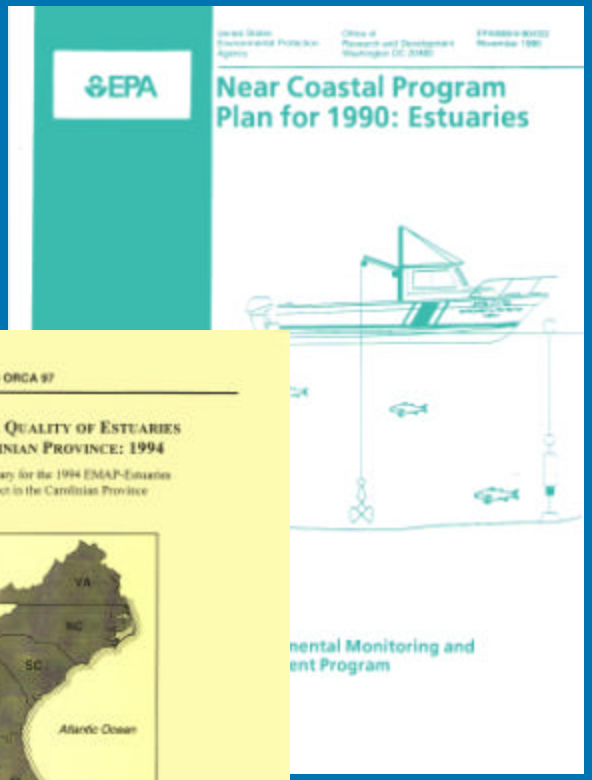
Steve Paulsen

Pilot Studies



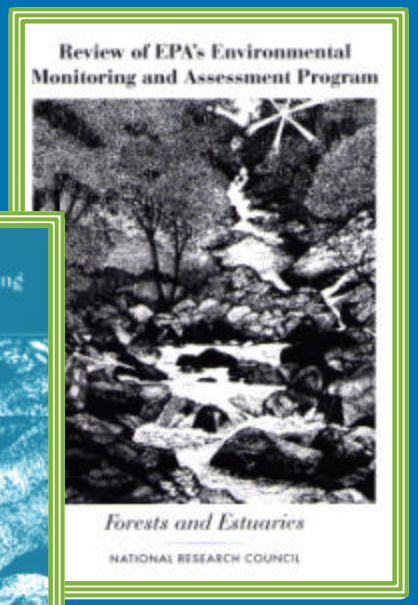


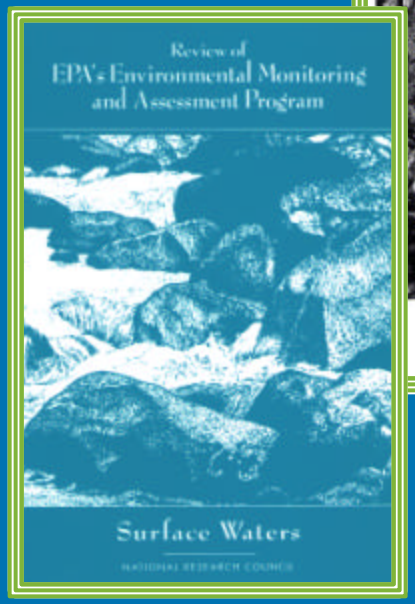




Peer Review

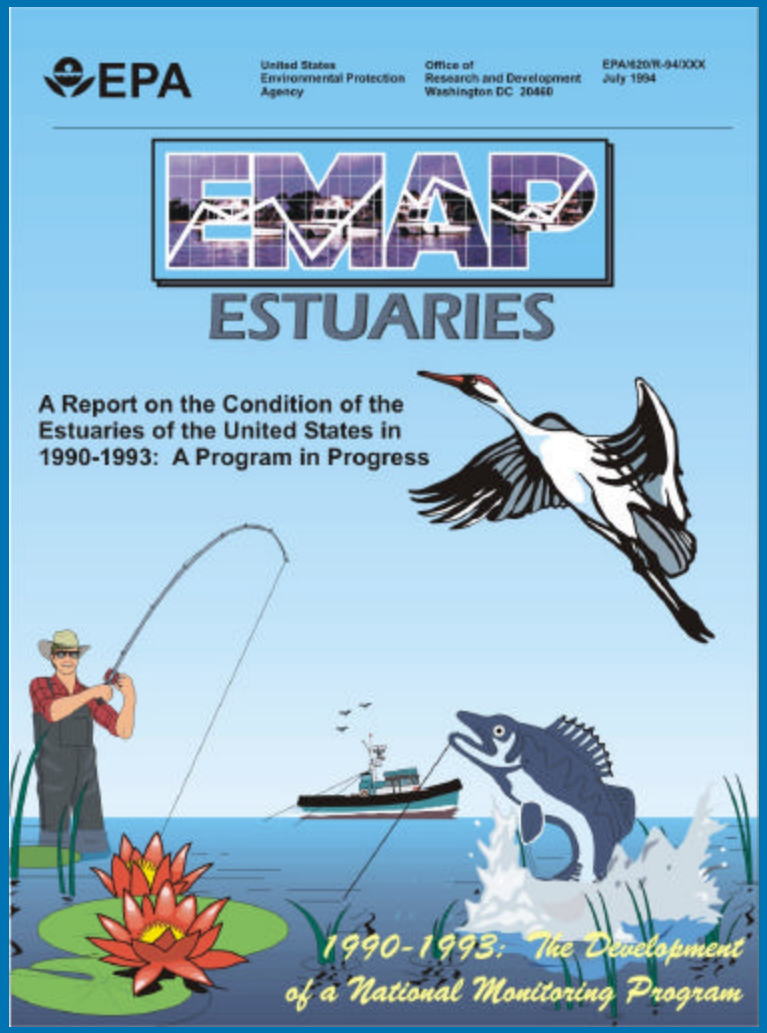
- Most reviewed program in ORD
- Example – Coastal (NRC)
  - 28 Recommendations
  - 26 Positive
  - 2 Negative





Original First National Coastal Report

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

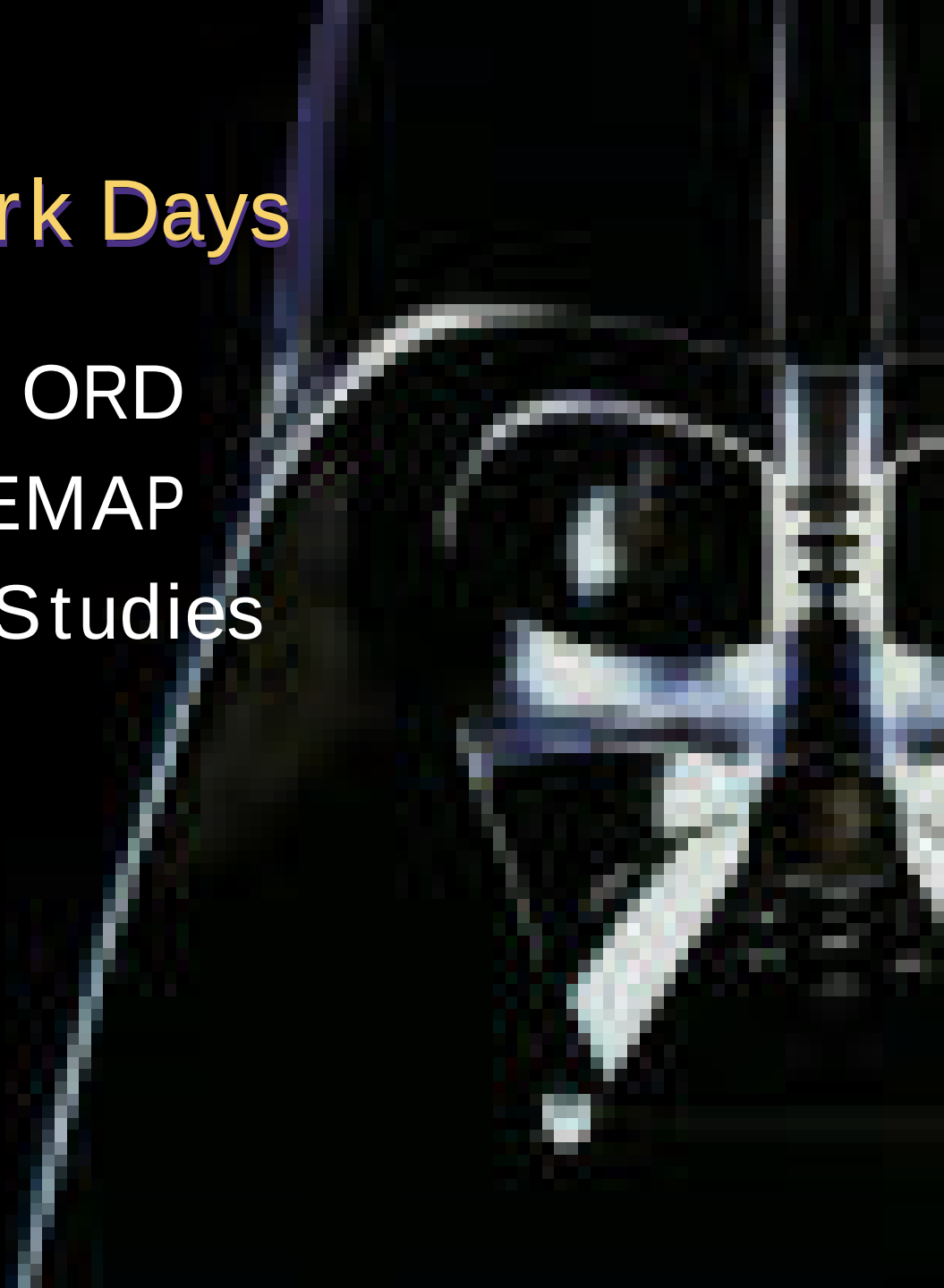


Myth #3

Visionary organizations are great places to work for everyone

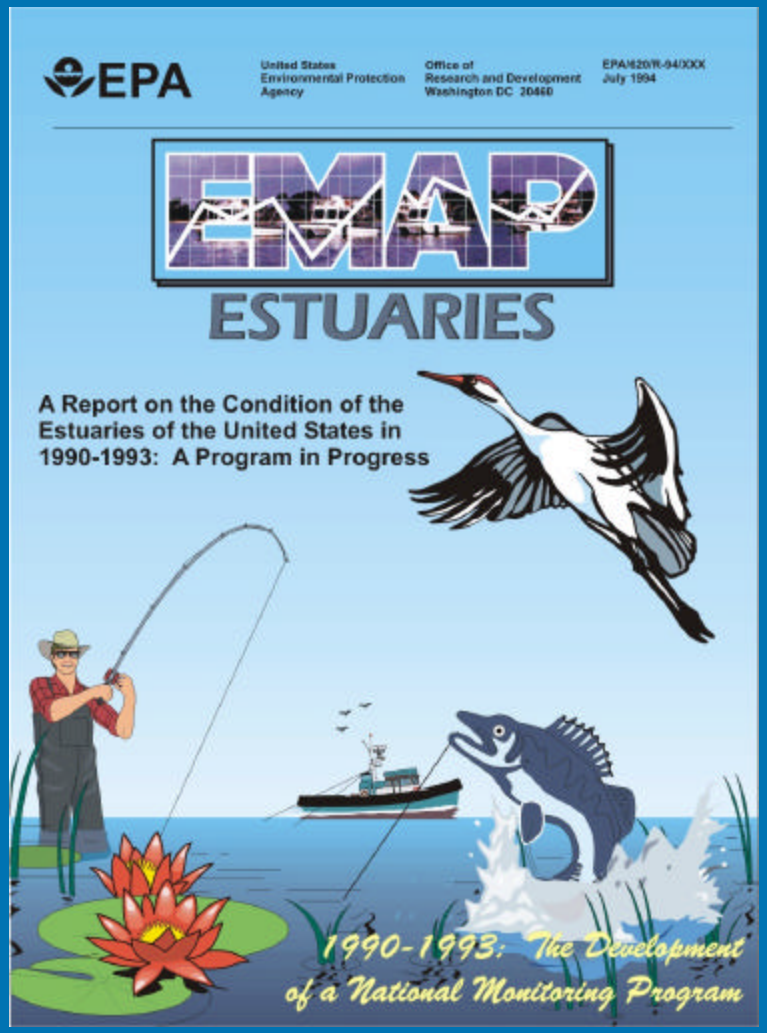
Dark Days

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

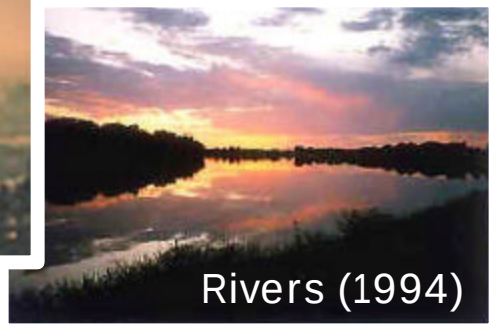


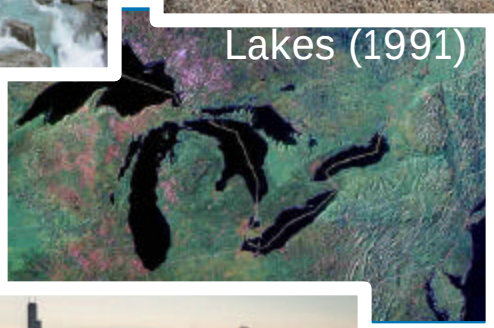
Original First National Coastal Report

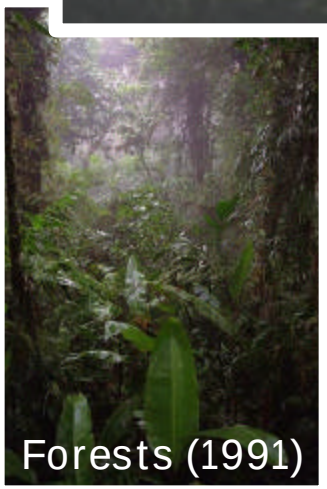
- Stopped as part of reorganization
- Published electronically by OW
- Shelving of Coastal

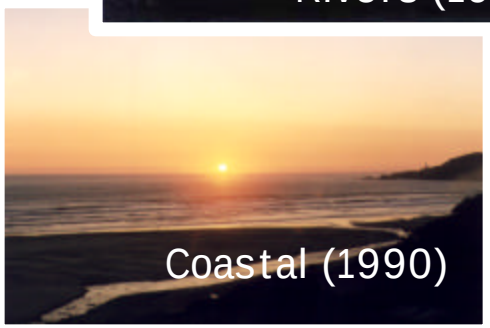


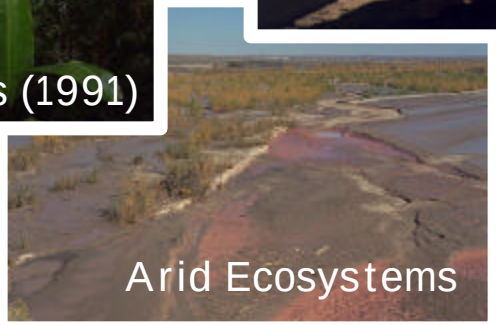
Early EMAP Resources Groups Targeted Regions Where Federal or State Partners Were Ready











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

Lesson #4 - Low Hanging Fruit

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

Regionalize
Demonstrate How It All Comes Together

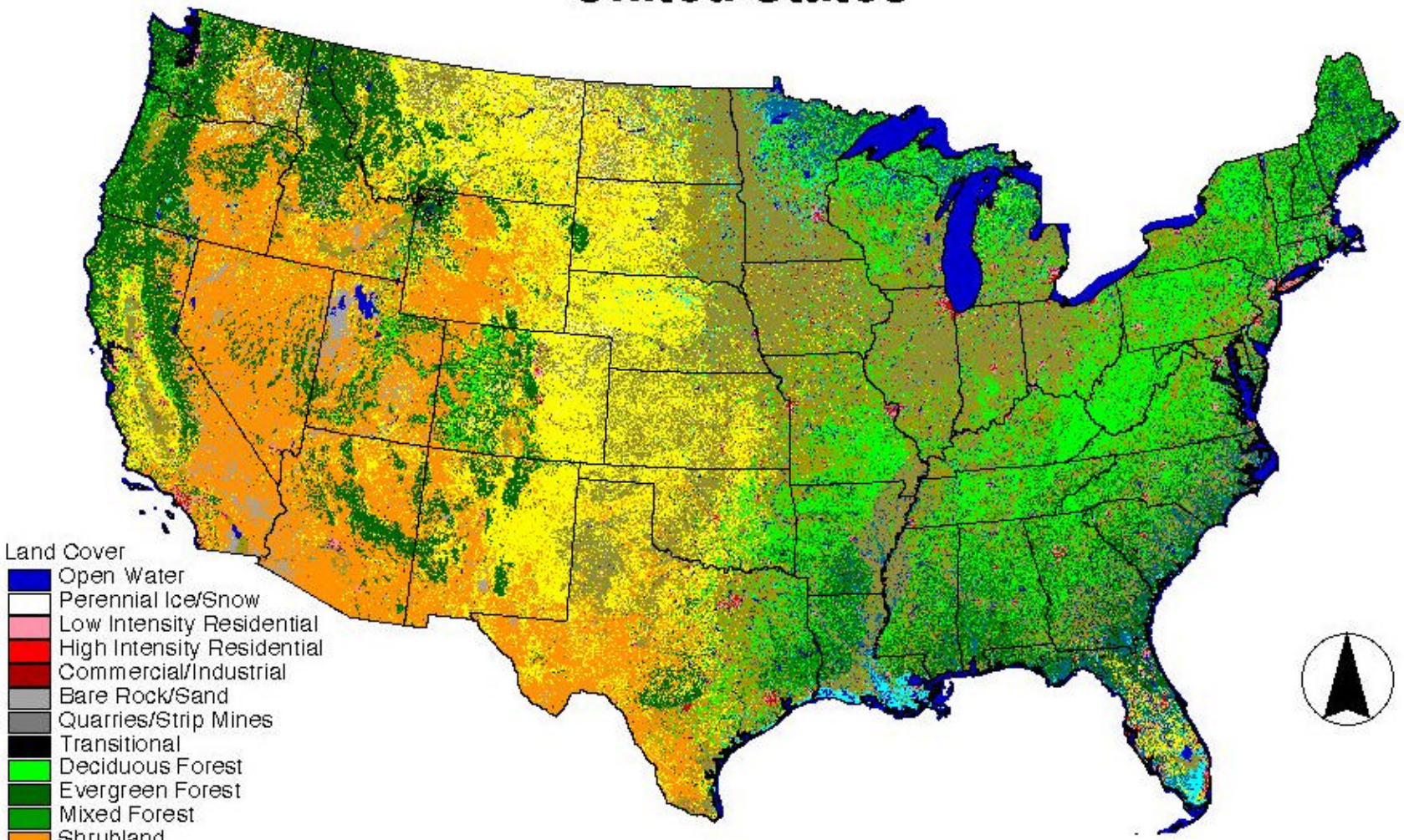
"MAIA"
Mid-Atlantic Integrated Assessment

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

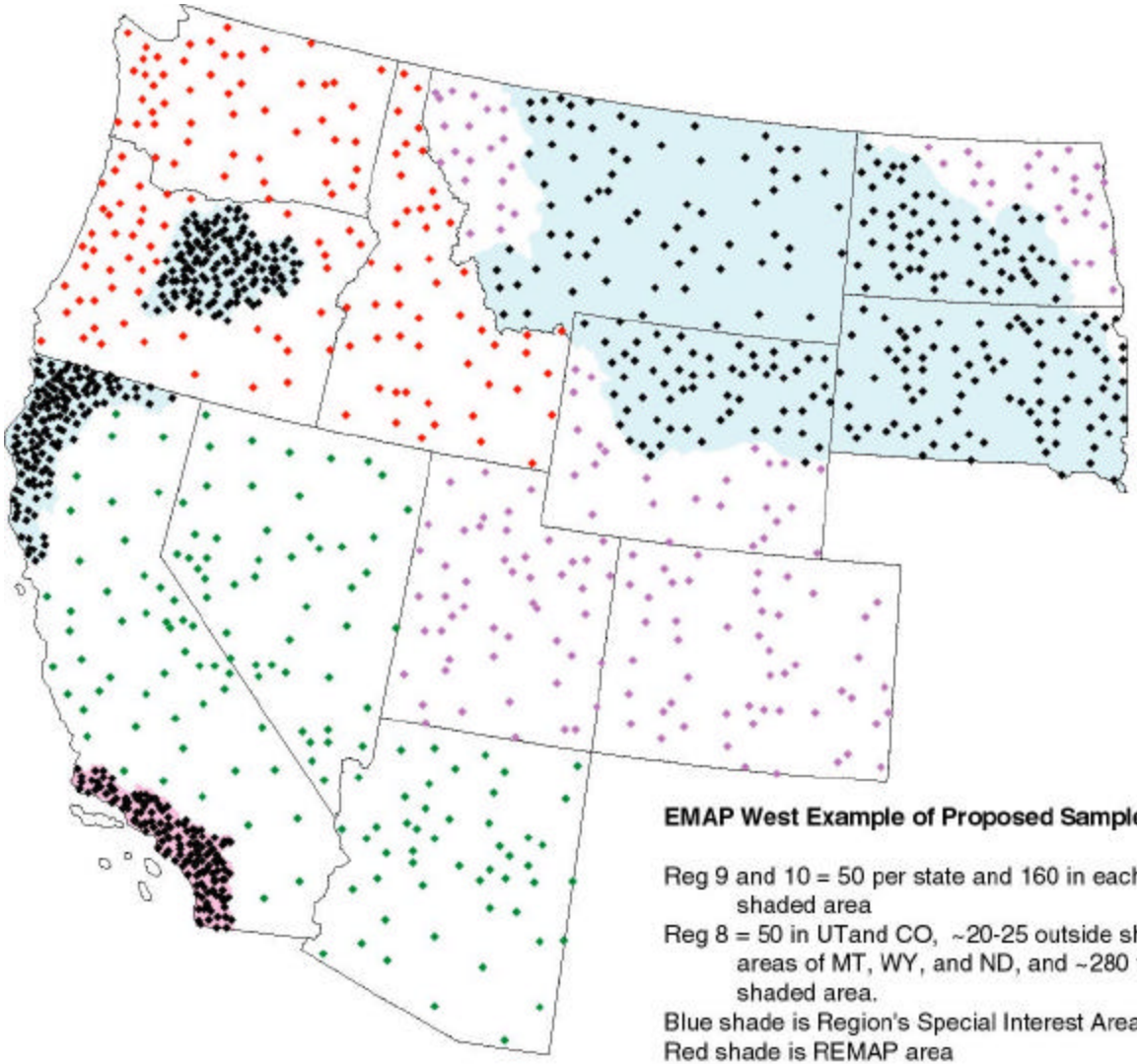


Land Cover
- Open Water
- Perennial Ice/Snow
- Low Intensity Residential
- High Intensity Residential
- Commercial/Industrial
- Bare Rock/Sand
- Quarries/Strip Mines
- Transitional
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrubland
- Orchards/Vineyards
- Grasslands/Herbaceous
- Pasture/Hay
- Row Crops
- Small Grains
- Fallow
- Urban Grasses
- Woody Wetlands
- Herbaceous Wetlands

300 0 300 600 900

Kilometers

EMAP-West



EMAP West Example of Proposed Sample scheme.

Reg 9 and 10 = 50 per state and 160 in each shaded area
Reg 8 = 50 in UTand CO, ~20-25 outside shaded areas of MT, WY, and ND, and ~280 within shaded area.
Blue shade is Region's Special Interest Areas
Red shade is REMAP area

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

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

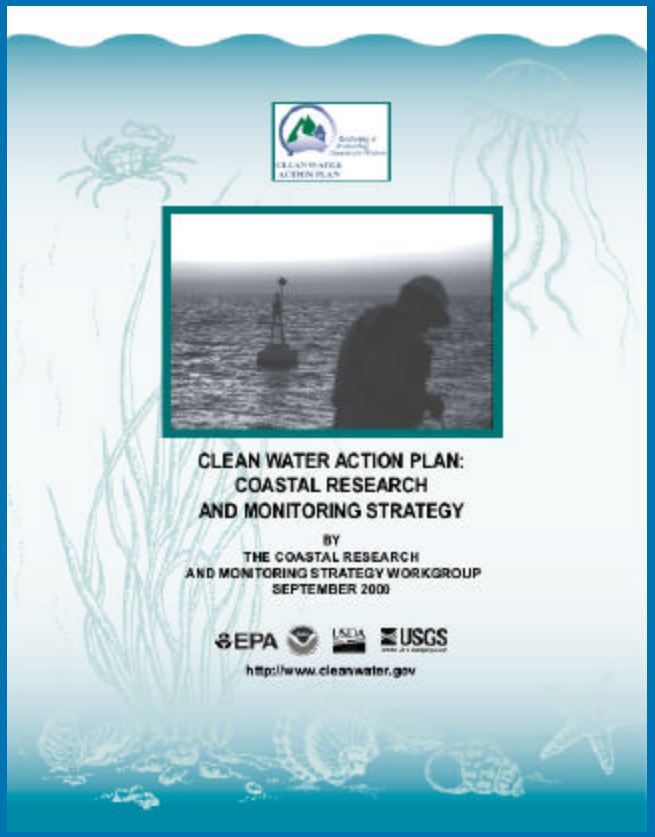
Myth #4

Organizations become visionary primarily through "vision statements".

Myth #5

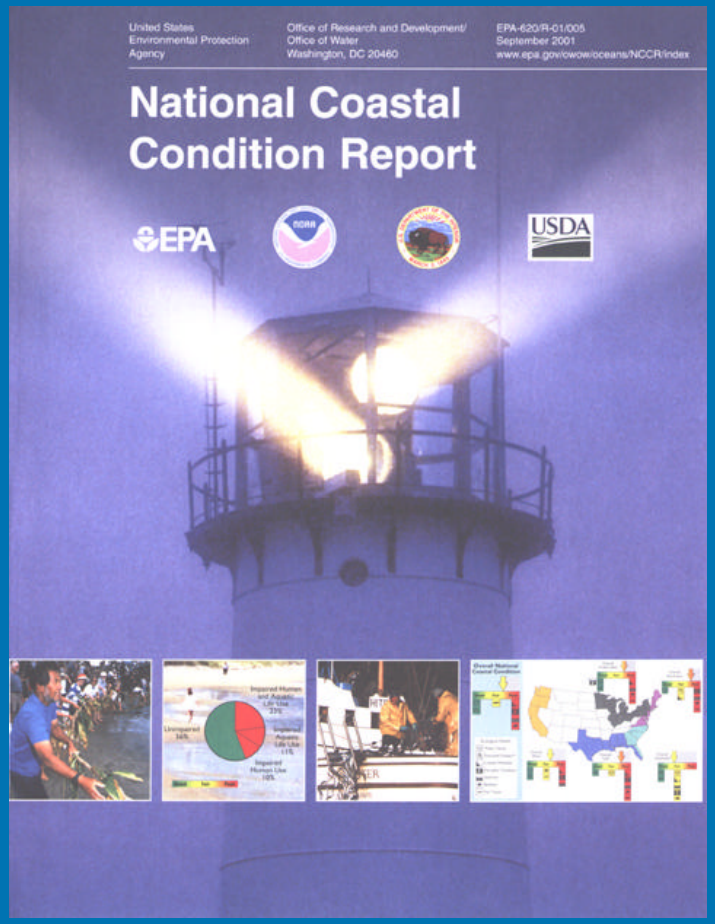
The Clean Water Action Plan (1999)

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



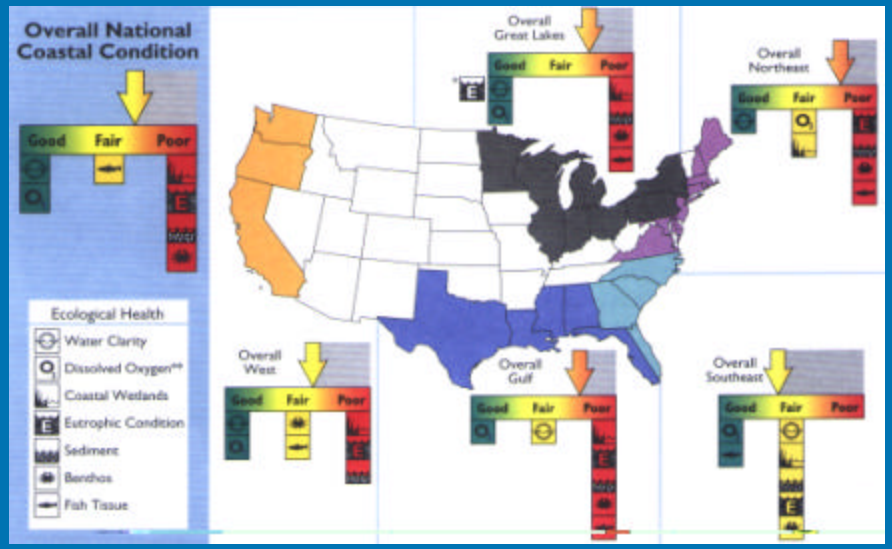
National Coastal Condition Report I

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

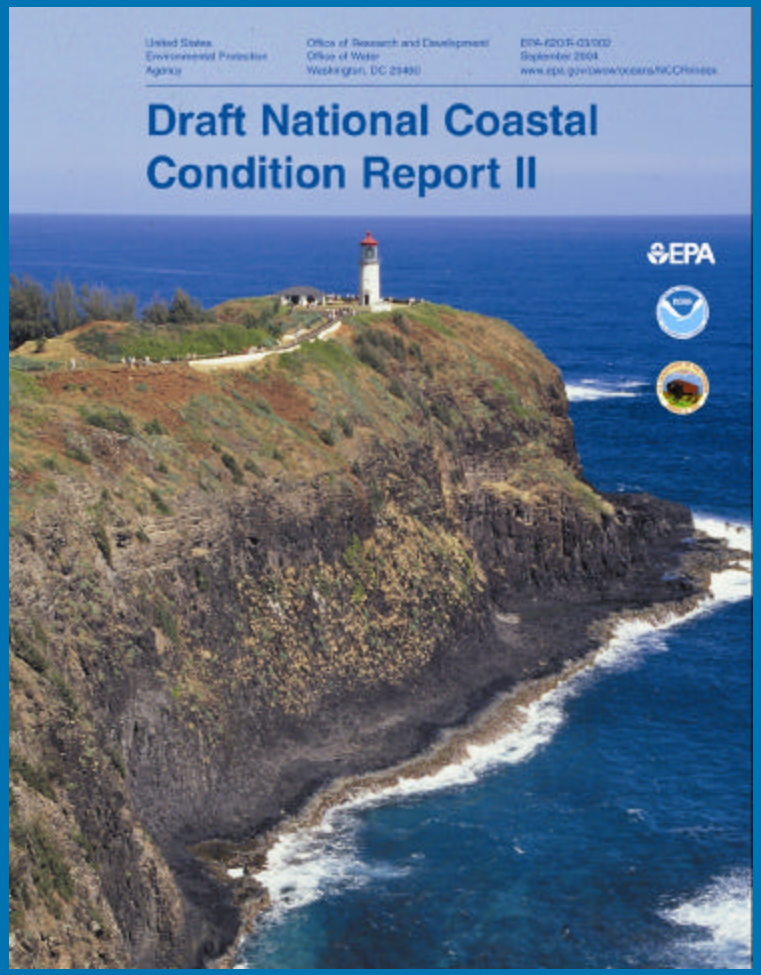


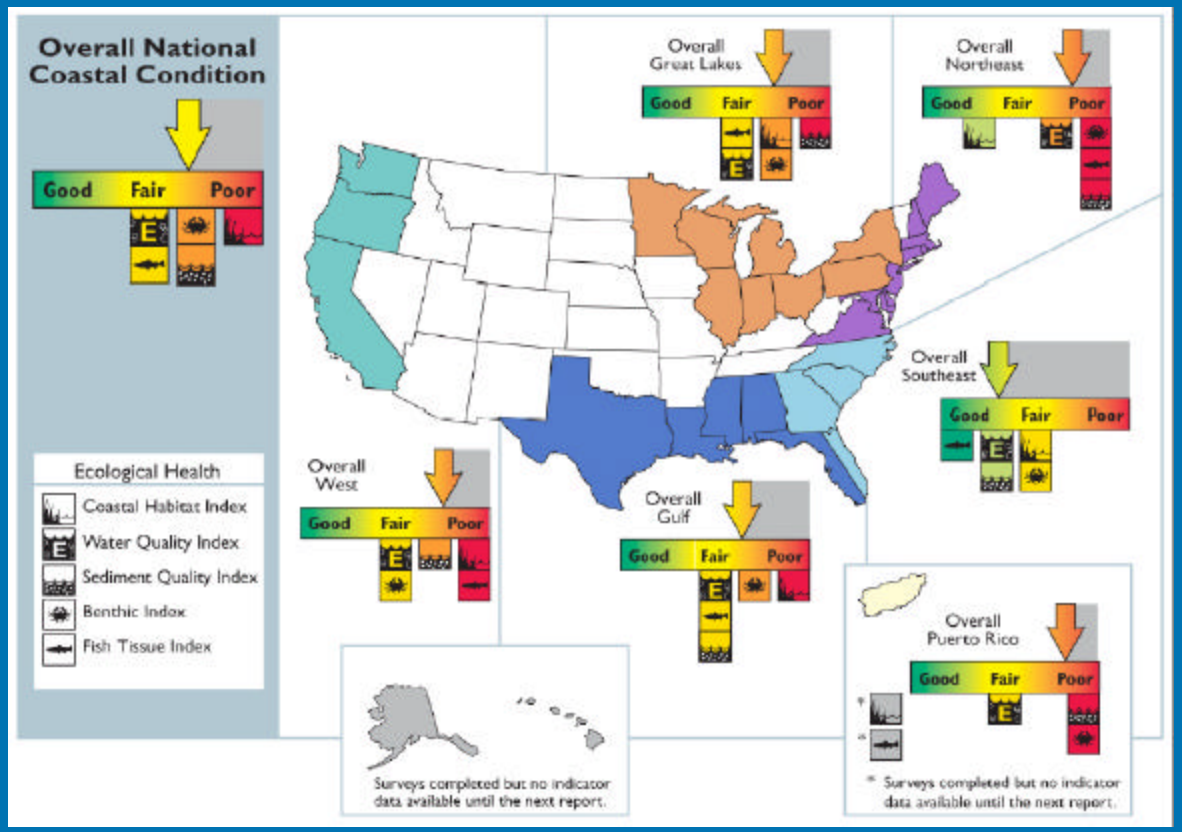
National Coastal Assessment

- 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



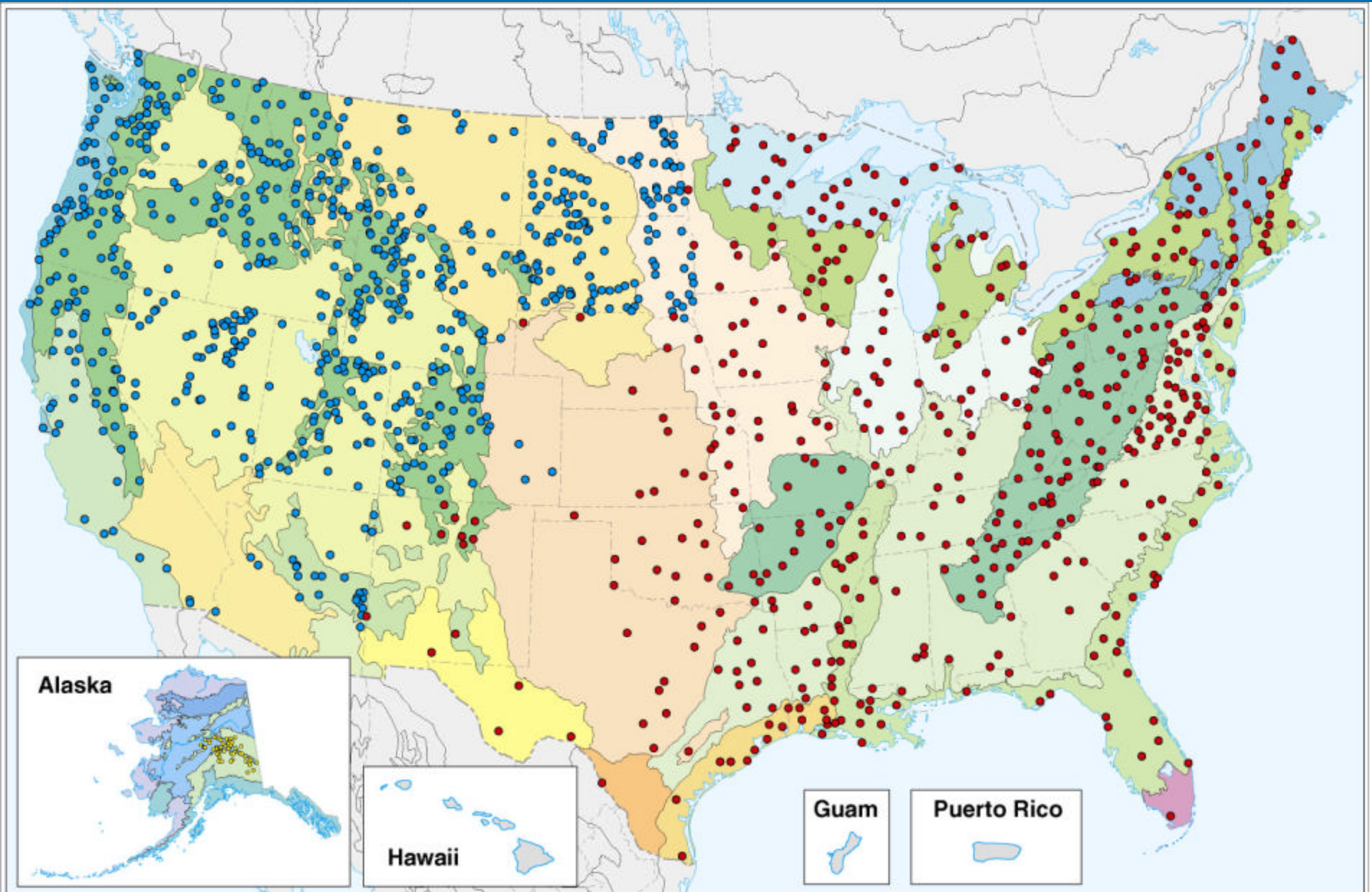

Overall National Coastal Condition
Good
Fair
Poor
Ecological Health
Coastal Habitat Index
Water Quality Index
Sediment Quality Index
Benthic Index
Fish Tissue Index
Overall Great Lakes
Good
Fair
Poor
Overall Northeast
Good
Fair
Poor
Overall Southeast
Good
Fair
Poor
Overall West
Good
Fair
Poor
Overall Gulf
Good
Fair
Poor
Overall Puerto Rico
Good
Fair
Poor
Surveys completed but no indicator data available until the next report.
* Surveys completed but no indicator data available until the next report.

-The Future-
&
Challenges

Transition

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

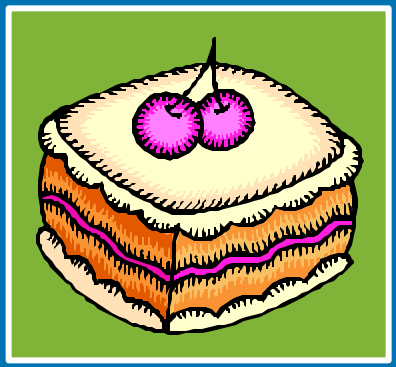
Wadeable Streams Assessment (WSA)



Wadeable Streams Assessment
The Beginning of a Fellowship?

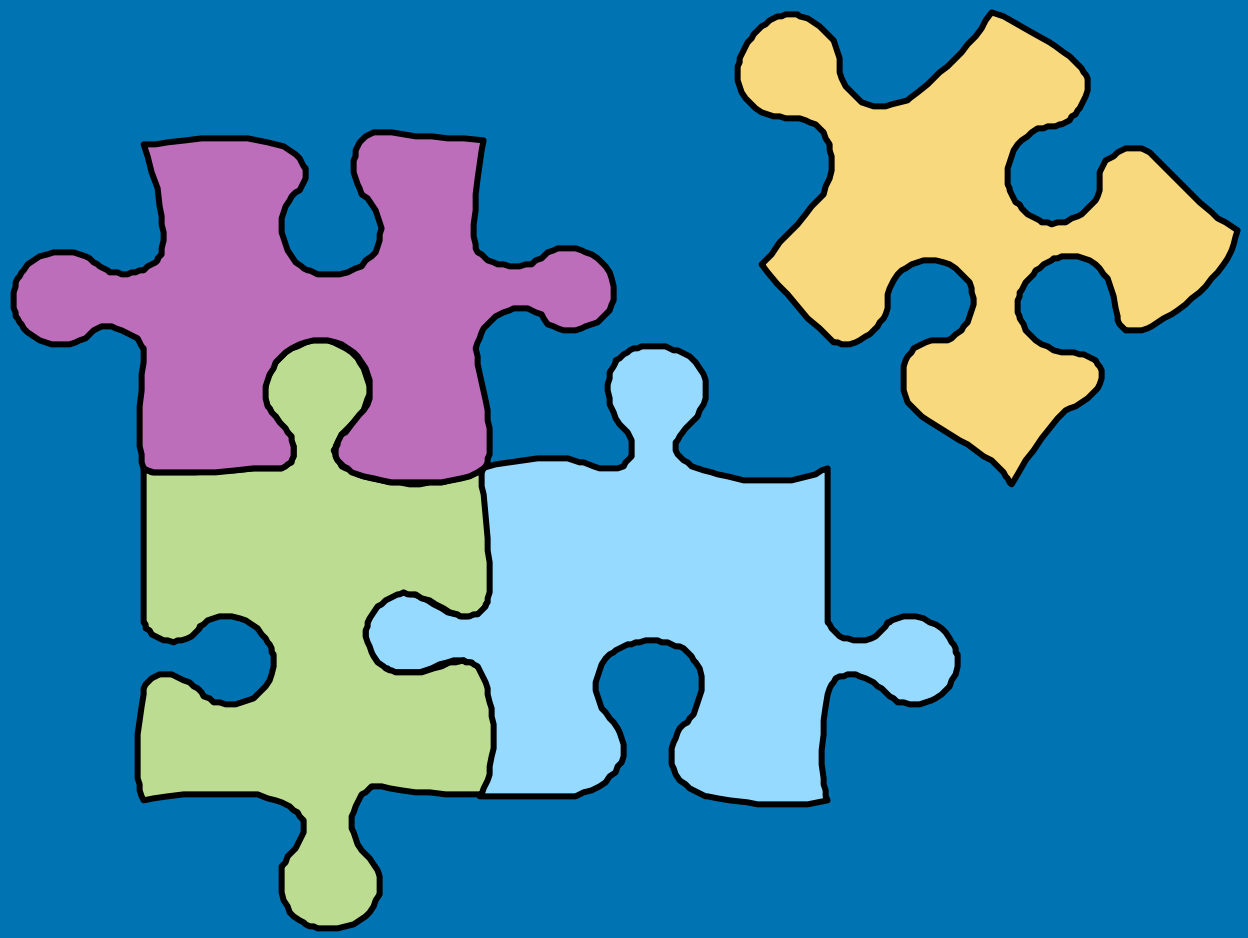
- OW, Regions Managed
- ORD Supported
- States & Contract Field Effort
- Blends ORD EMAP-West and new eastern survey with compatible designs and consistent indicators
- Assessment in Dec. '05

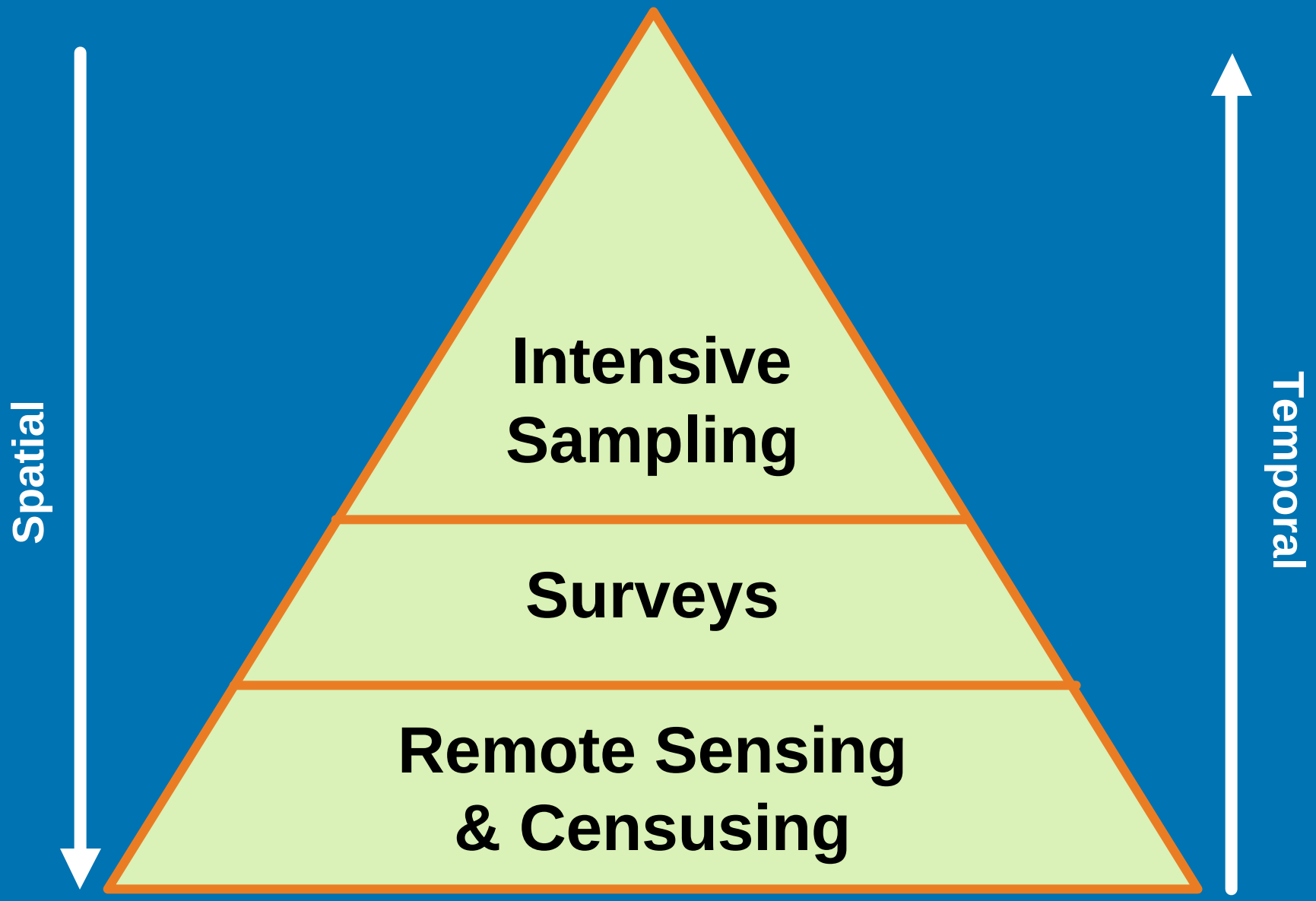
Myth #6: You can't have your cake and eat it too.

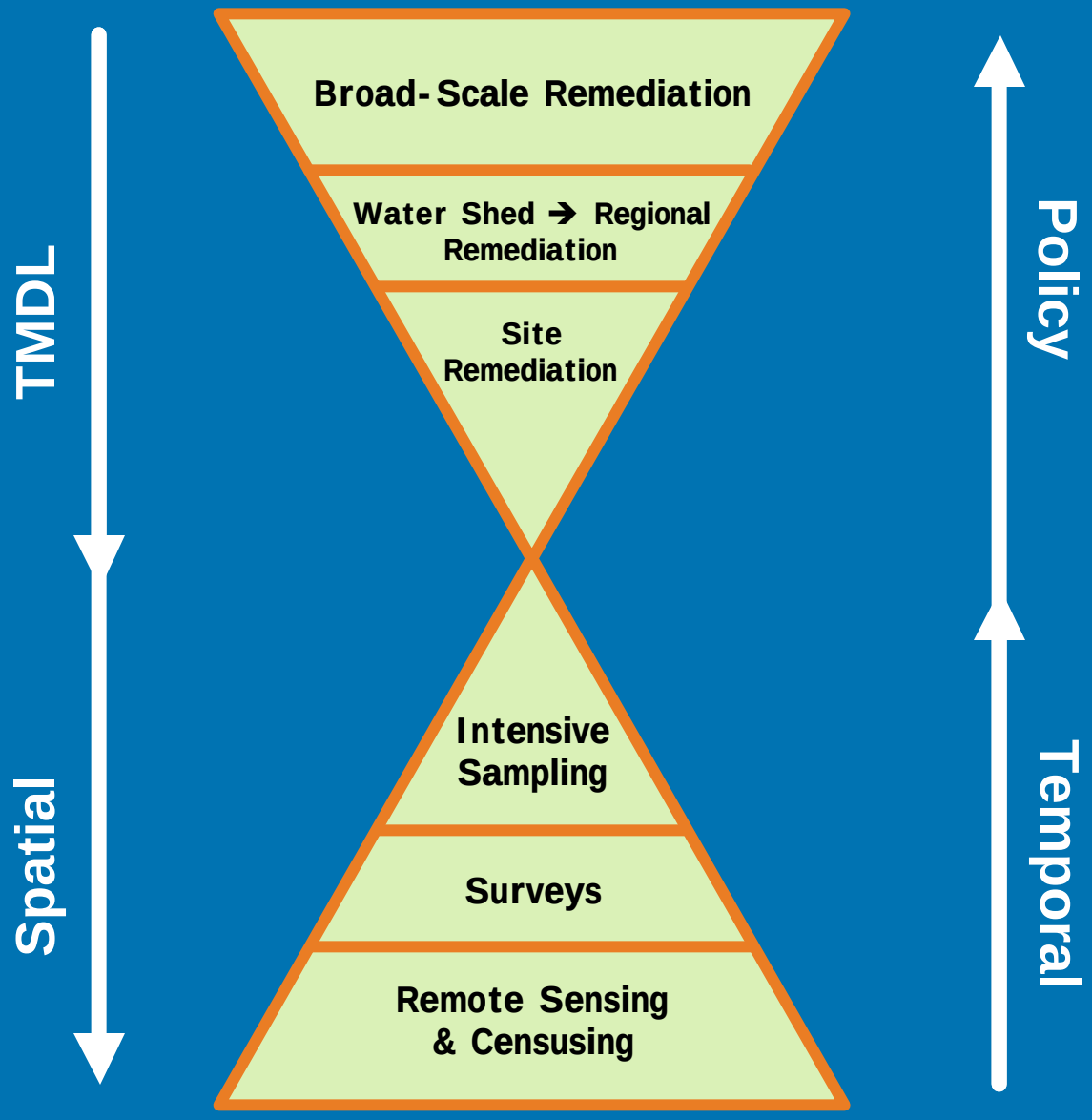


The Agency is Ready to Get the Assessments It Needs.
We Need to Work Out the Details of How to Manage It!

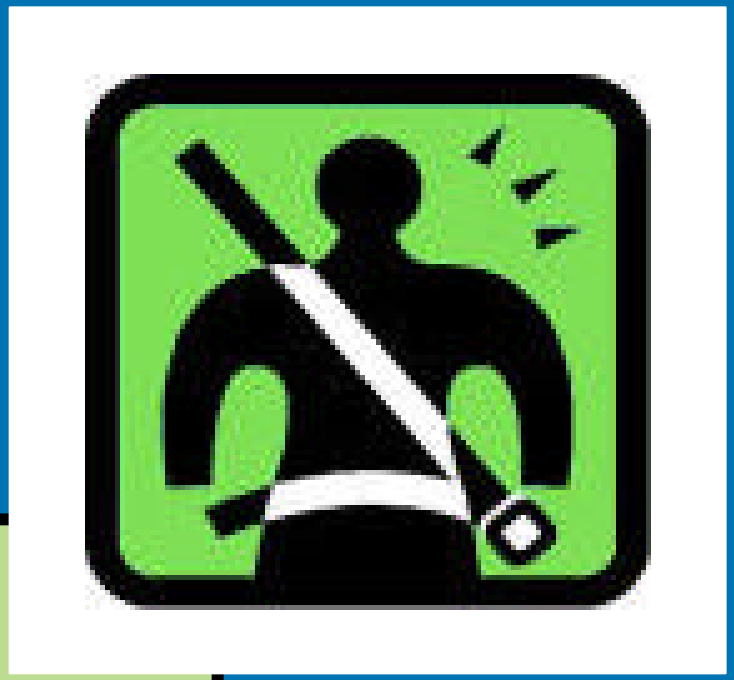
Missing Pieces




Spatial
Intensive Sampling
Surveys
Remote Sensing & Censusing
Temporal


TMDL
Spatial
Broad-Scale Remediation
Water Shed → Regional Remediation
Site Remediation
Intensive Sampling
Surveys
Remote Sensing & Censusing
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!

I t’s Been Fun!
Thanks & Good-Bye