

# The Role of the National Coastal Assessment and Findings

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A Growing Partnership



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# The Role of the National Coastal Assessment

## Broad – National Coastal Survey

## Key NCA Contacts in the Northeastern U.S.

| Name                        | State        | Name                            | State   | Name                              | State | Name                                     | State |
|-----------------------------|--------------|---------------------------------|---------|-----------------------------------|-------|--|-------|
| Walker, Henry               | EPA-AED      | Anderson, Ben                   | DE      | Barkin, Seth                      | ME    | Aldous, Kenneth                          | NY    |
| Kiddon, John                | EPA-AED      | Fiksin, Tom                     | DE      | Hagley-Smith, David               | ME    | <del>Carlsch, Ralph</del> <i>retired</i> | NY    |
| Bergr, Sandy                | EPA-AED      | Puerta, Sergio                  | DE      | Charwell, Lucretia                | ME    | Chyralo, Karen (out of NCA 10/02)        | NY    |
| Paul, John                  | EPA-NHEERL   | Riverson, Forreth               | NJ & DE | Courtemanch, Dave                 | ME    | deGaulle, Charles                        | NY    |
| Fasch, Gerald               | EPA-AED      | Knowles, Kathy                  | DE      | Doggett, Len                      | ME    | Foley, Mike                              | NY    |
| Galloway, Walt              | EPA-AED      | McCleary, Barbara               | DE      | Groves, Katherine (departed 9/02) | ME    | Myers, Jeff                              | NY    |
| Cobb, Don                   | EPA-AED      | McQuaide, Dave                  | DE      | Larson, Ron                       | ME    | Nuzzi, Robert                            | NY    |
| Bergr, Valter               | EPA-AED      | Olsen, Gary                     | DE      | LaPierre, George                  | ME    | Rosenthal, Frank                         | NY    |
| Letner, James               | EPA-AED      | Otto, Carolyn                   | DE      | Lewis, Mark                       | ME    | Swanson, Larry                           | NY    |
| Dettmann, Edward            | EPA-AED      | Santoro, Ed                     | NJ & DE | Legden, Kathleen                  | ME    | Viggins, Mark                            | NY    |
| Burum, Harry                | EPA-AED      | Adams, Darvene                  | EPA     | Messing, Brian                    | ME    |  |       |
| Copeland, Jane              | CSC          | Beas, Randy                     | EPA     | Sherrin, Sam                      | ME    |  |       |
| Charpentier, Mike           | CSC          | Craven, George                  | EPA     | Young, Karen                      | ME    | O'Neil, Steve                            | PA    |
| Simoon, Alison              | EPA Region 1 | Gould, Diane                    | EPA     | Baczniski, Robert                 | NH    | Deaculis, Chris                          | RI    |
| Robinson, Keith             | USGS         | Heath, Ellen                    | EPA     | Curran, Paul                      | NH    | Gibson, Mark                             | RI    |
| Moore, Richard              | USGS         | Kuntenback, Jim                 | EPA     | Cheng, John                       | NH    | Lynch, Jim                               | RI    |
|                             |              | Libertz, Catherine              | EPA     | Jones, Steve                      | NH    | O'Shea, Stephen                          | RI    |
|                             |              | Mascaules, John                 | EPA     | Lambson, Deb                      | NH    | Dunst, Candace                           | RI    |
|                             |              | Nolan, Peter                    | EPA     | McLaughlin, Joanne                | NH    | Pomeroy, Skip                            | RI    |
|                             |              | Summers, Kevin                  | EPA     | Nash, Chris                       | NH    | Powell, Chris                            | RI    |
|                             |              | Tedesco, Mark                   | EPA     | Rosch, Paul                       | NH    | Satchwell, Dick                          | RI    |
|                             |              | Thompson, Raj (retired 12/2002) | EPA     | Shay, Dave                        | NH    | Scott, Tim                               | RI    |
|                             |              |                                 |         | Trowbridge, Phil                  | NH    | Tate, Andrew                             | RI    |
|                             |              |                                 |         |                                   |       | Vebl, Paul                               | RI    |
| Banach, Fred <i>retired</i> | CT           | Baker, Jason                    | MA      | Bellon, Tom                       | NJ    |  |       |
| Lyman, Matt                 | CT           | Bucholtz ten Brink, Marilyn     | MA      | Blakeman, Cary                    | NJ    |  |       |
| Hoffman, Greg               | CT           | Gardner, Bernie                 | MA      | Cowell, Bob                       | NJ    |  |       |
| Hovels, Peter               | CT           | Howe, Arnie (retired 11/2002)   | MA      | Clark, Mike                       | NJ    |  |       |
| Johnson, Mark               | CT           | Johnson, Arthur S.              | MA      | Elsie, Bill                       | NJ    |  |       |
| Milus, Julie                | CT           | Kraji, Ken                      | MA      | Hughes, James                     | NJ    |  |       |
| Olsen, Christine            | CT           | Krafforst, Christian            | MA      | Link, Steve                       | NJ    |  |       |
| Perkins, Chris              | CT           | Smith, Jan                      | MA      | McGeorge, Leslie                  | NJ    |  |       |
| Simpson, Dave               | CT           | Snow-Cotter, Susan              | MA      | Martinson, Jim (retired 02/2002)  | NJ    |  |       |
| Stacey, Paul                | CT           | Turner, Jefferson               | MA      | VanAntwerp, Mike                  | NJ    |  |       |
|                             |              | Wallace, Gordon                 | MA      | Johnson, Sandra                   | NOAA  |  |       |

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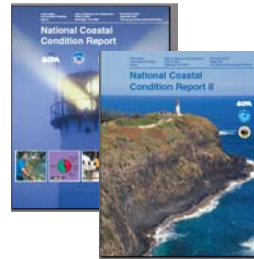
## Talk Outline:

### Role & Implementation of the NCA

- Goals
- Strategy
- Approach



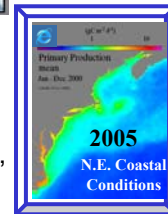
### Broad – National Coastal Surveys



### • Preliminary Findings

### • Next Steps for Analysis & Reporting

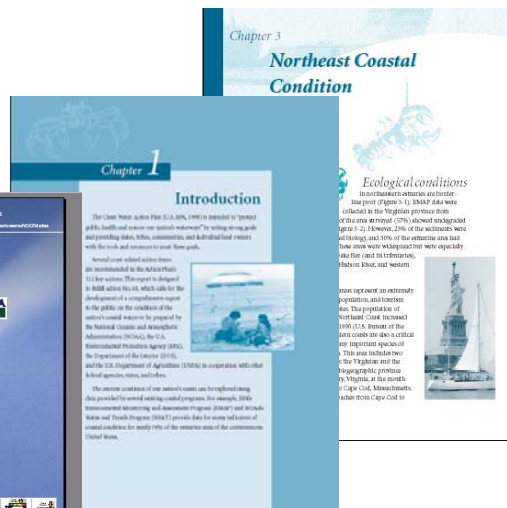
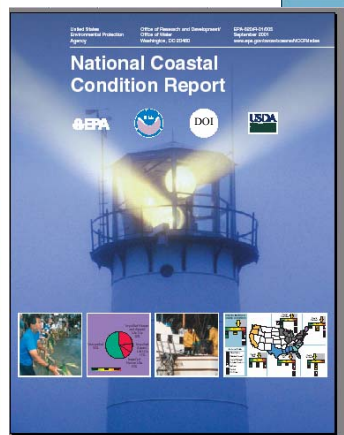
- Electronic Web-Based Reporting, possibly with active links to: 1) NCA data, 2) Analysis Tools, 3) National Estuary Programs, & 4) States



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## National Coastal Condition Report September 2001

<http://epa.gov/owow/oceans/nccr/downloads.html>

## Consistently Measured Indicators Coastal 2000 / NCA Core Indicators:

### Water Quality

- dissolved oxygen
- salinity
- temperature
- pH
- depth
- light attenuation
- secchi depth
- dissolved nutrients
- chlorophyll a
- total suspended solids (TSS)

### Sediment Quality

- sediment contaminants
  - . (organics & metals)
- sediment TOC
- sediment toxicity (amphipod)
- percent silt/clay

### Biota

- Fish/Shellfish*
- community structure (*fish*)
  - tissue contaminants
    - . (organics & metals)
  - external pathology (*fish*)

### *Benthos*

- community structure

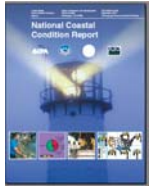
### Habitat

- SAV (presence/absence)
  - west coast & gulf coast*
- basic habitat type
  - (*e.g., open water, tidal flat*)
- marine debris (presence/absence)

## The Role of the National Coastal Assessment

NCA will help address some basic questions:

- What are the conditions of estuarine resources in the U.S., how are they changing, and what are the causes of those changes?
  - To document conditions, we need to systematically gather data, in addition to tapping into expert opinion
- How well different coastal condition indicators, and monitoring designs work?



## The Future – A National Strategy: Research and Monitoring within an Integrated Assessment Framework



- **Tier 1: Characterization of the Problem**
  - Broad scale response properties
  - (surveys, automated collection and / or remote sensing)
- **Tier 2: Diagnosis of Causes**
  - Issue or resource specific surveys and observations
  - (focusing on cause and effect interactions)
- **Tier 3: Diagnosis of Interactions and Forecasting**
  - Intensive monitoring and research index sites with higher spatial and temporal resolution to determine specific mechanisms of interaction.
  - Needed to build cause and effect models



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### Goals:

- **Assess the ecological condition of estuarine resources.**
  - Based on unbiased data of know quality
- **Determine reference conditions for studies on ecological responses / stressors.**
- **Build infrastructure in states and EPA Regions.**

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### Strategy:

- Partner with state resource agencies for collection, processing, and analysis of samples
- Develop state and regional infrastructure
- Develop state and regional understanding

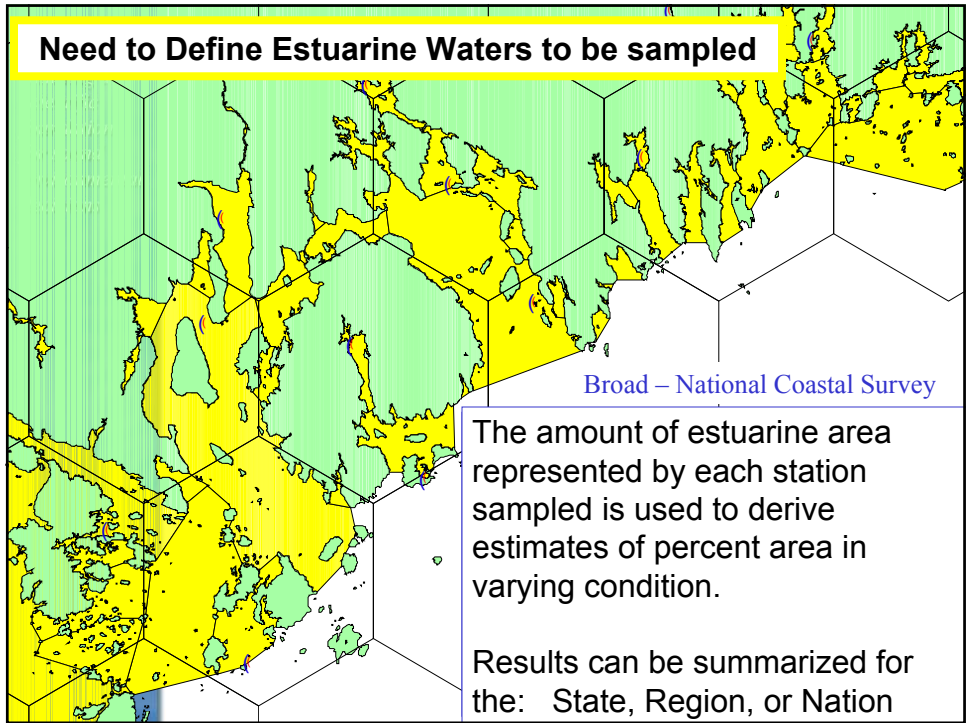
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### Approach:

- Utilize consistently measured indicators to assess and help explain estuarine condition
- Utilize Probability surveys
  - Extrapolates to all of estuarine waters
  - Addresses 305(b) requirements & GPRA
  - 100% assessed waters
- Incorporate existing monitoring programs, & develop hybrid monitoring designs



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**Approach in Northeast**

Consider Merger of Existing Monitoring Programs with Probability Survey Designs

Existing Programs –

- fiscal and human resource investment
- valuable environmental information



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### Choices for Existing Programs

Replace all existing sites with randomly selected stations

- lose ability to track trends

- loss of investment in data

Use existing sites

- inferences to non-sampled sites?

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Combined set of LISS sites could be treated as probability sites representative of the open water portion of the Sound and incorporated into the design

