NATIONAL WATER QUALITY MONITORING COUNCIL

Working Together for Clean Water

Ground Water in the Pilot Studies

of the National Water Quality Monitoring Network for
U.S. Coastal Waters
and their Tributaries

Subcommittee on Ground Water

May 21, 2007

Background

- Report of the U.S Commission on Ocean Policy
  - Chapter 15
- Ocean Action Plan
  - Charge to ACWI from CEQ and the NSTC
  - Accepted in February, 2005
- ACWI formally accepted the design in April, 2006
    - **Added:**
      - **Small Interagency staff to coordinate next steps**
      - **One or more pilot studies to test concepts and further develop design**
- CEQ charged ACWI & Three Agencies with implementing pilot projects
  - Report due in January, 2008

Network Features

- Clearly defined objectives that address management needs
- Linkages with IOOS
  - IOOS Regional Associations - IOOS Data Management Plan
- Linkage with EPA Programs
  - Coordinated monitoring of resources in upland, coastal, and ocean areas
  - NEPs
  - Beaches
  - National Surveys
- Flexibility over time
- Includes
  - Metadata -- Quality assurance
  - Data management -- Accessible data

Structure of the Design

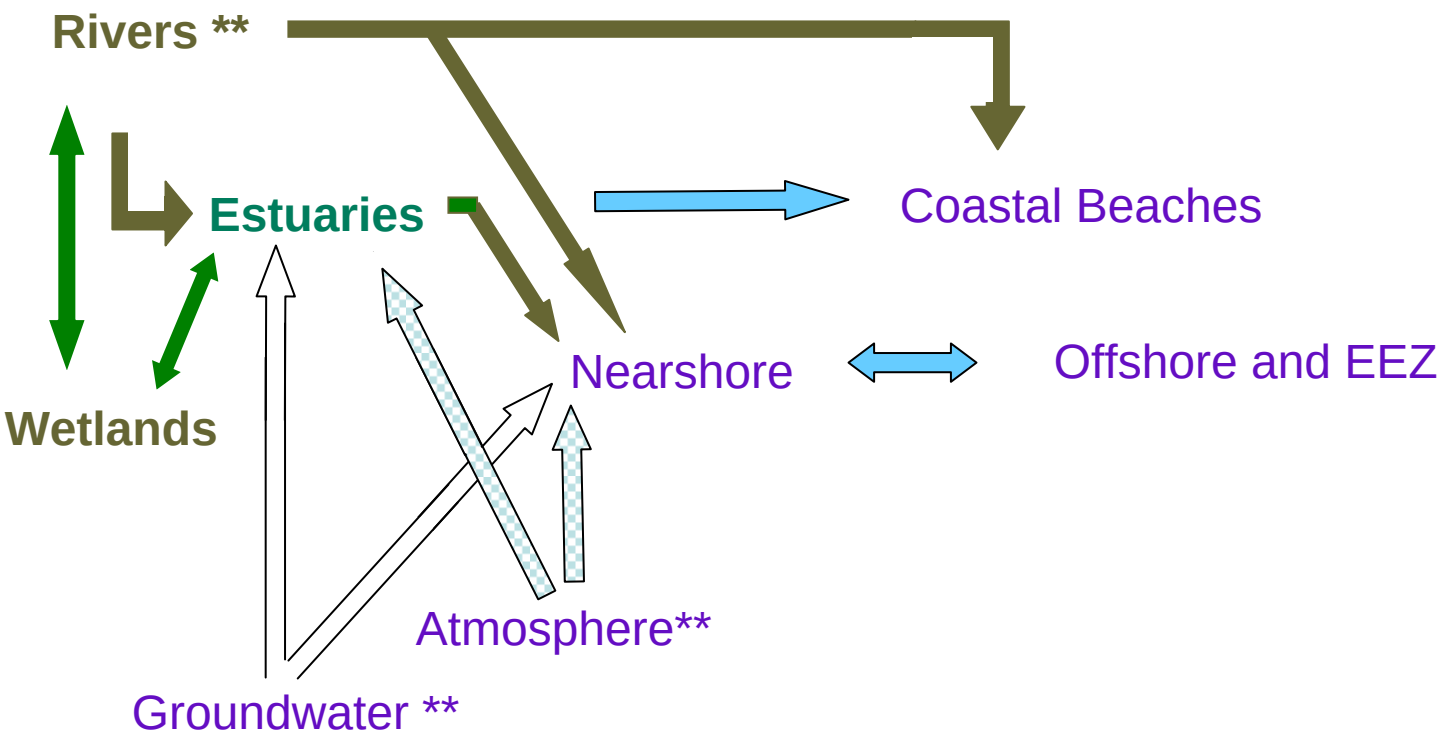
- Nine resource compartments
- Probabilistic designs to characterize resources
- Fixed station
  - Flux measures
  - Continuous monitoring to reveal rapid changes
  - Describe gradients
- Core variables and sampling frequencies specified
- Provisions for data comparability, management & access

Structure of the Design

- Nine Resource compartments
- A Continuum of Observations
  - Estuaries
  - Nearshore
  - Offshore and EEZ
  - Great Lakes
  - Coastal Beaches
  - Wetlands

  With Flow and Flux from:
  - Rivers
  - Atmosphere
  - Groundwater

A Continuum of Observations



* The **Great Lakes** are similar to estuarine and near shore areas

** Quantified as flow and pollutant flux

What Are the Benefits ?

- In-depth assessment of the water quality and health of the Nation's coastal waters
  - Pollution loading patterns
- Data sharing and comparability among agencies
- Data made accessible
  - Quality assurance and quality control plans
- Related to IOOS through
  - Scale of the data
  - Comparable data management
  - Role for Regional Associations

The Network Extends Many Existing Monitoring Programs

• Rivers **	• Uses, but adds to existing USGS streamflow stations • Can use the procedures developed for the NWS
• Estuaries	• Probabilistic as in the NCA, but much greater detail • Adds fixed sites in transects • Adds some continuous monitoring sites, NS&T sites
• Coastal Beaches	• Uses “Beaches: data but analyzes it differently
• Wetlands	• New - Will use the procedures developed for the NWS
• Nearshore	• Will extend the NCA procedures out to 3 miles • Adds NOAA Sanctuaries, Research reserves
• Offshore and EEZ	• New - Will use IOOS studies
• Atmosphere**	• Will use the NADP – Possibly add stations
• Groundwater **	• Will help build the groundwater monitoring network

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Network Implementation: Overall Process

- Phase 1: Network design Completed
- Phase 2: Conduct 3 pilot studies
  - Underway now
  - Report in January, 2008
- Phase 3: Demonstration projects
  - Contingent upon new funding
- Phase 4: Nation-wide implementation
  - Probably in stages

Pilot studies & Demonstration projects

- Pilot Studies – Partnerships To:
  - Conduct inventory of on-going monitoring
  - Make the Network design more specific
  - Identify gaps
  - Investigate data comparability and data sharing issues
  - Undertake with existing resources in 2007
- Demonstration Projects
  - New instrumentation and field work to fill gaps
  - New resources required
  - Calendar year 2008 and beyond

Pilot Study Selection Criteria

- Identify and commit resources, including in-kind contributions
- Agree to complete Pilot Study and prepare draft report by January, 2008
- Ability to leverage on-going Federal efforts and cooperative efforts in study area

Pilot Study Criteria (cont.)

- Identify water-quality resource management needs
- Organize and integrate current monitoring projects into template that could be augmented by Network design

Pilot Study Interest

Twelve Proposals

- Lake Michigan
- Delaware River Basin
- San Francisco Bay Regional Partnership

- Albemarle-Pamlico National Estuary Program
- Ashepoo-Combahee-Edisto (ACE) Basin + Parks
- Gulf of Maine Ocean Observing System – Great Bay NEP
- Gulf of Mexico Alliance
- Pascagoula River Basin
- NOAA Atlantic Oceanographic and Meteorological Laboratory
- Potomac River w/in Chesapeake Bay Watershed
- Puget Sound

NEP

NEP

NEP

NEP

NEP

Current Status

- Pilot study sites selected
- Invited all to participate
- During Pilots, Interagency working group will
  - Refine the network design
  - Work together to produce the products
  - Report every 4 months to JSOST, SIMOR, and SWAQ
  - Keep potential partners in future phases informed of our work