CWA Section 106 Monitoring Initiative

Presentation for
New England Association of Environmental Biologists
March 27, 2008

Monitoring Initiative Drivers

- Critiques of state and EPA monitoring and reporting on water quality
- CWA 106 Workload model documents budget gap
- ASIWPCA reports that monitoring is first program cut
- Without adequate monitoring, we cannot address accountability for water resource protection and restoration

Drivers for Monitoring

- Clean Water Act 305(b)
  - States must report on condition of all waters
  - Specifically the extent that support healthy aquatic life and recreation in and on the water
- Section 303(d)
  - States must submit prioritized list of waters that do not meet WQS and need a TMDL
  - Develop and implement TMDL
- Other CWA programs
  - Setting & refining Water Quality Standards
  - Issuing and ensuring compliance with NPDES permits
  - Managing NPS to meet WQS

Limitations of Traditional State 305(b) Reports

- Nationally, a small portion of water resources are assessed
  - Rivers and Streams – 19%
  - Lakes and Reservoirs – 37%
  - Bays and Estuaries – 35%
- Methods to define extent of water assessed vary
- Indicators, parameters, and sampling procedures vary
- Data not sufficient for assessments of water conditions beyond specific sites sampled

Monitoring Initiative Objectives

- Strengthen State monitoring programs through developing and implementing monitoring strategies ($10 million)
  - Implement strategies to fill water monitoring gaps
  - Examples include data management, water quality standards development, probability designs
- Assess the condition of all of the Nation's waters and changes over time ($8.5 million)

Enhancing State Monitoring Programs with Monitoring Initiative Funds

- Developed State monitoring strategies
- Managing data systems to store and share data
- Increasing technical capabilities for assessing biological condition of waters
- Upgrading laboratories and analytical expertise
- Supporting development of nutrient criteria
- Adopting statistical survey design as a component of their monitoring network
  - 30 States are currently doing so

Refinements to Monitoring Initiative Allocation

- President's budget request
  - Continuation of the $18.5 million set-aside within 106 grants for Monitoring Initiative to be used for statistically representative water monitoring
- Appropriation's report language
  - Use of these funds is not limited to only those monitoring activities that meet standards for statistically representative monitoring programs
- EPA plans to continue current allotment with performance–based component
  - 5 additional States each year adopt statistical surveys into their monitoring programs
  - For each State below target, 20% of capacity building funds will be redirected to States that are implementing statistical surveys

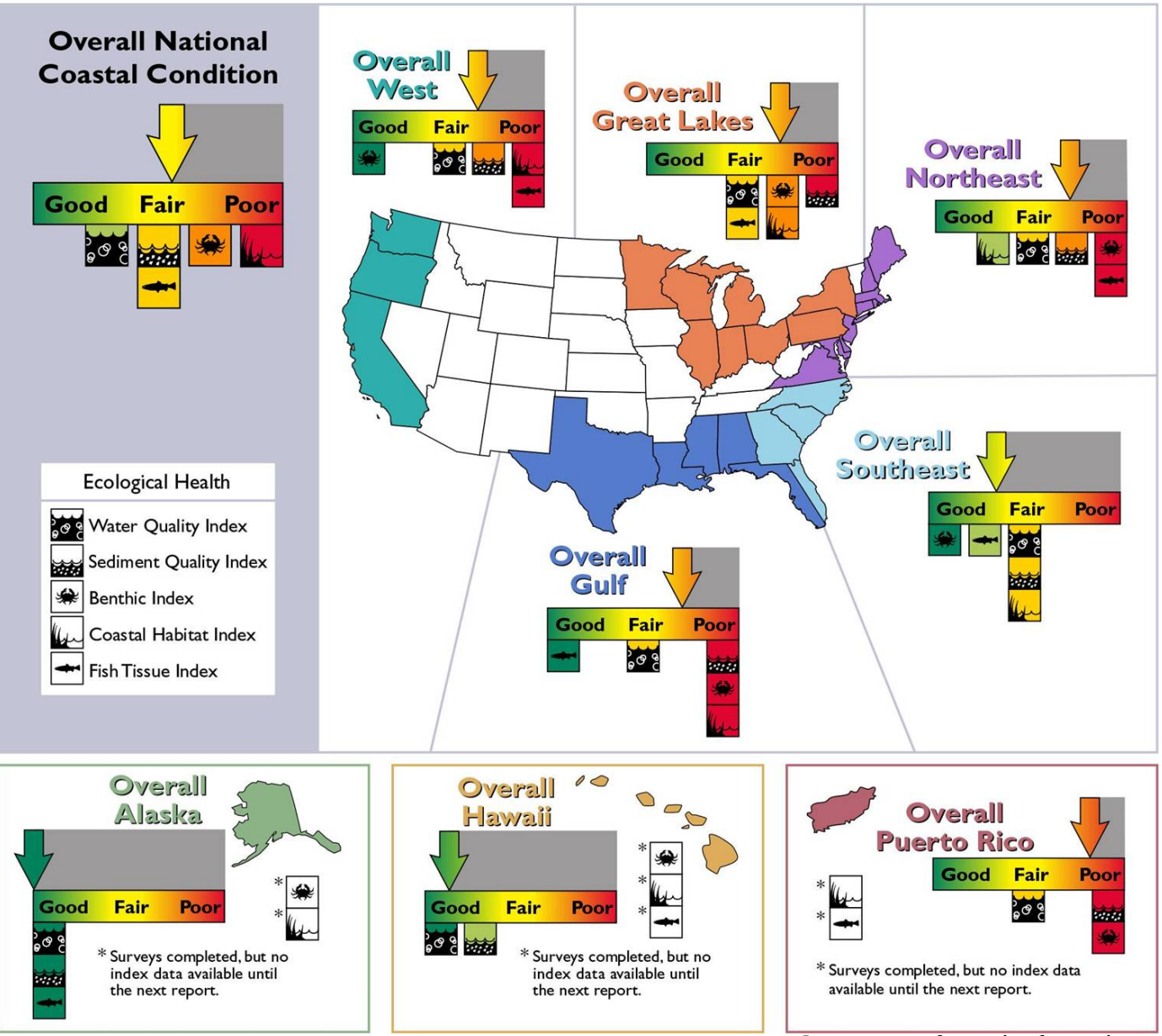
EPA/State Collaboration to Survey the Nation's Waters

- Create partnership to design and implement surveys
- Report on status and trends in condition of all waters in a cost-effective manner
- Examine key stressors, their prevalence and impact on water quality to support national and regional priority setting
- Report on effectiveness of water quality management efforts in protecting and restoring waters
- Support State capacity for implementation of statistical surveys with consistent indicators

Biological Indicators are Core to Surveys

- Lakes (2007) – zooplankton, phytoplankton, sediment diatoms, macroinvertebrates
- Rivers and streams (2008/9) – fish, macroinvertebrates, periphyton, phytoplankton
- Coastal (2010) – macroinvertebrates and possibly others, the team is planning an indicator meeting this spring
- Wetlands (2011) – vegetation and others TBD, the team is planning an indicator meeting this summer

National Coastal Condition Report



All coastal States and Puerto Rico participated in monitoring

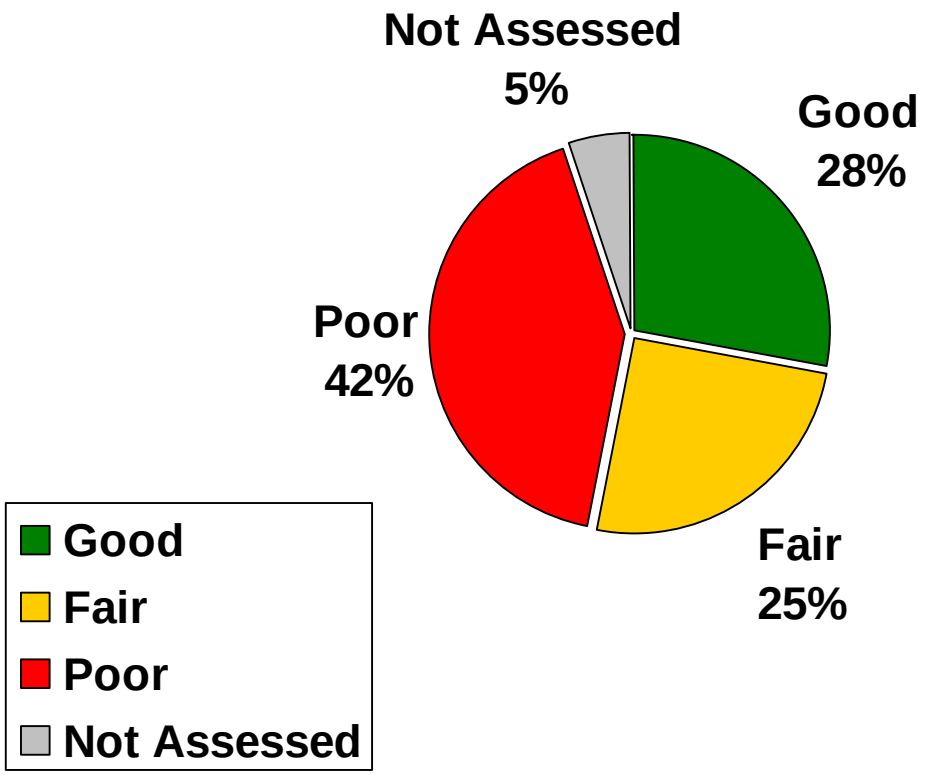
Data support status and trends at regional, State and local scales

Strong support among states to continue partnership with EPA, NOAA, others

Built State capacity to assess coastal waters

Summary of results from the National Coastal Assessment III (2008)

2006 Wadeable Streams Assessment



Biological Condition of Streams (Index of Biotic Condition)

- First national baseline condition of streams
  - The WSA found 28% of streams in good condition, compared to least-disturbed reference condition.
- Identified information on key stressors
  - Across the US 25-30% of streams have excess sedimentation or high levels of nutrients, respectively.
  - These streams are twice as likely to have poor biology.

National Water Resource Survey Schedule

	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Lakes	Field	Lab, data	Report	Research	Design	Field	Lab, data
Rivers	Design	Field	Lab, data	Report*	Research	Design	Field
Streams	Research	Design	Field	Lab, data	Report	Research	Design
Coastal	Report	Research	Design	Field	Lab, data	Report	Research
Wetlands	Research	Research	Research	Design	Field	Lab,data	Report

*The rivers and streams results will be combined into one report issued in 2011, that covers condition of both rivers and streams and changes in stream condition since the baseline report that was finalized in 2006.

Implementation of National/Regional Surveys

- Short-term strategy
  - Rotate through water resources
  - Use standardized design
  - Use standardized methods
- Long-term vision
  - State-scale surveys roll into national
  - Explore options for more flexibility in methods, schedule, etc.
  - Develop vision and roadmap for getting there

How can Surveys Better Support Bioassessment?

- Raise visibility (public, congress, managers) of biological indicators for all water resource types
- Promote use of multiple assemblages for all water resource types
- Increase focus on reference condition, e.g. regional gaps and effect of regional variability
- Promote method performance criteria and comparability
- Explore applications of BCG/GSG framework