

# EPA's Report on the Environment, Strategic Plan & Performance Report



- EPA Strategic Plan
- EPA Annual Performance Report
- EPA's Report on the Environment

# National Policy Questions

- EPA, states' and tribes' shared mission is to protect human health and the environment. Meeting this mission requires EPA to understand and track trends in
  - The condition of the Nation's air, water, and land; and
  - Associated trends in human health and ecological systems.
- Is the cumulative effect of environmental laws protecting human health and the environment?
- Do data and information drive effective policy, program priorities, management decisions?

# National Water Policy Questions – EPA Perspectives

- Do the Nation's waters provide for the protection and propagation of fish, shellfish, and wildlife and for recreation in and on the water (CWA Section 101 goal)?
- What are the priority stressors threatening achievement of this goal?
  - Nutrients
  - Toxics
  - Flow
  - Habitat
  - Invasive species

# Challenges to Producing National Water Quality Inventory from State Reports

- In 2000, GAO concluded NWQI is not reliable due to “wide variation in” state:
  - Selection of monitoring sites
  - Monitoring methods
  - Assessment methods
  - Stressor identification

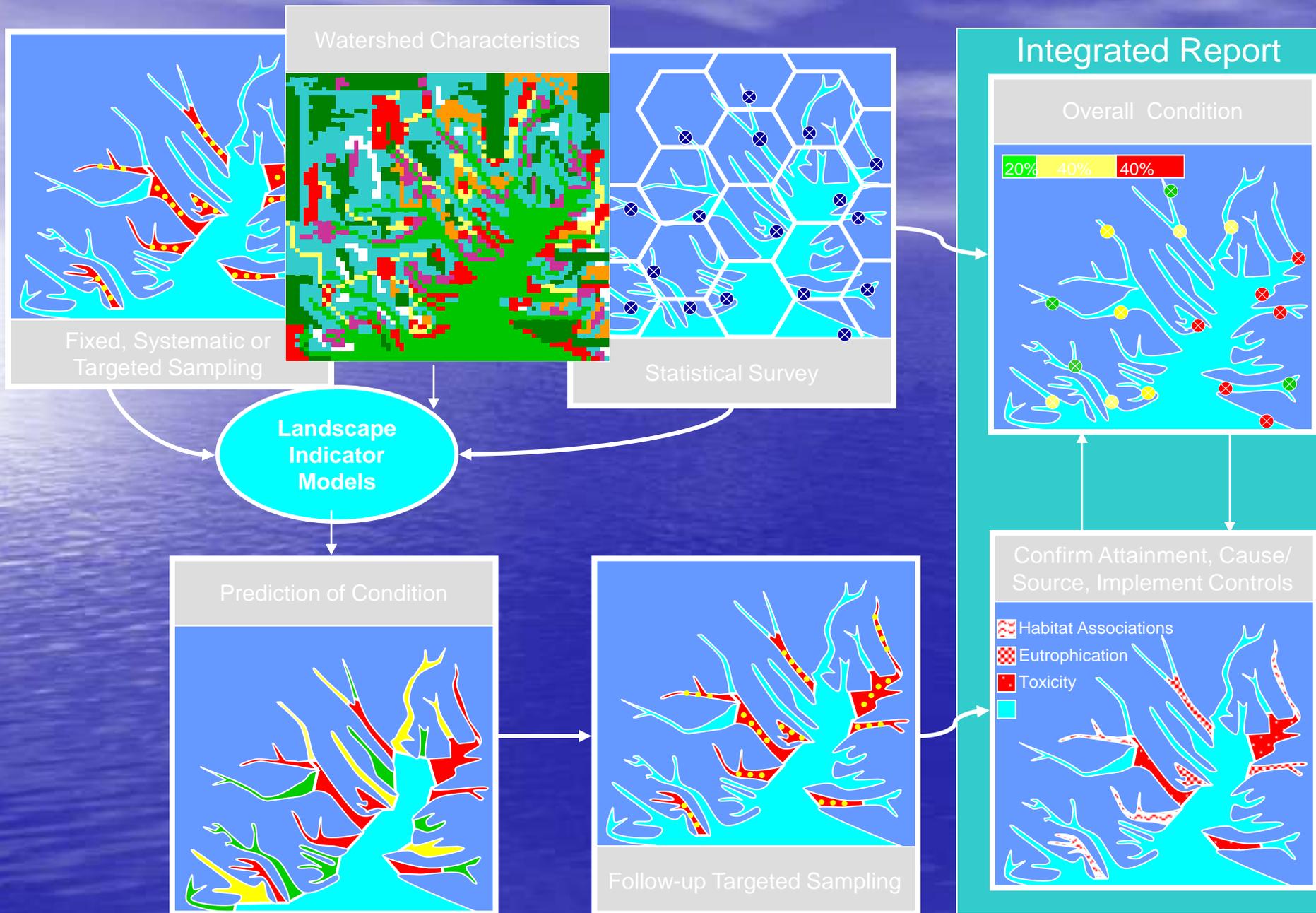
# Monitoring Initiative and EPA Support Framework

- **Increase CWA Section 106 Grant to States and Tribes**
  - \$10 M for monitoring strategy implementation
  - \$8.5 M for state and tribal participation in NARS
- **EPA Technical Assistance**
  - Coordinate National Aquatic Resource Surveys
  - Develop Water Quality Exchange (WQX) tools and improved STORET warehouse
  - Develop Geospatial Tools, including NHD Plus, HEM

# Combination of Monitoring Tools Support Management Needs

<b>Targeted monitoring</b>	<ul style="list-style-type: none"><li>• Assess WQS attainment for specific segments</li><li>• Measure localized water quality trends</li><li>• Identify sources of pollutants to specific waters</li><li>• Support development of local management measures</li></ul>
<b>Statistical survey</b>	<ul style="list-style-type: none"><li>• Describe proportion of all waters supporting CWA goals, with documented confidence</li><li>• Measure water quality trends and program effectiveness</li><li>• Inform management priorities and control strategies for widespread problems</li><li>• Prioritize follow up monitoring</li></ul>
<b>Modeling and landscape analysis</b>	<ul style="list-style-type: none"><li>• Support development of local management measures</li><li>• Predict where water quality is likely impaired</li><li>• Predict water quality changes</li><li>• Prioritize targeted monitoring</li></ul>

# Streamlined Monitoring – Using the Tools Together



# National Aquatic Resource Surveys

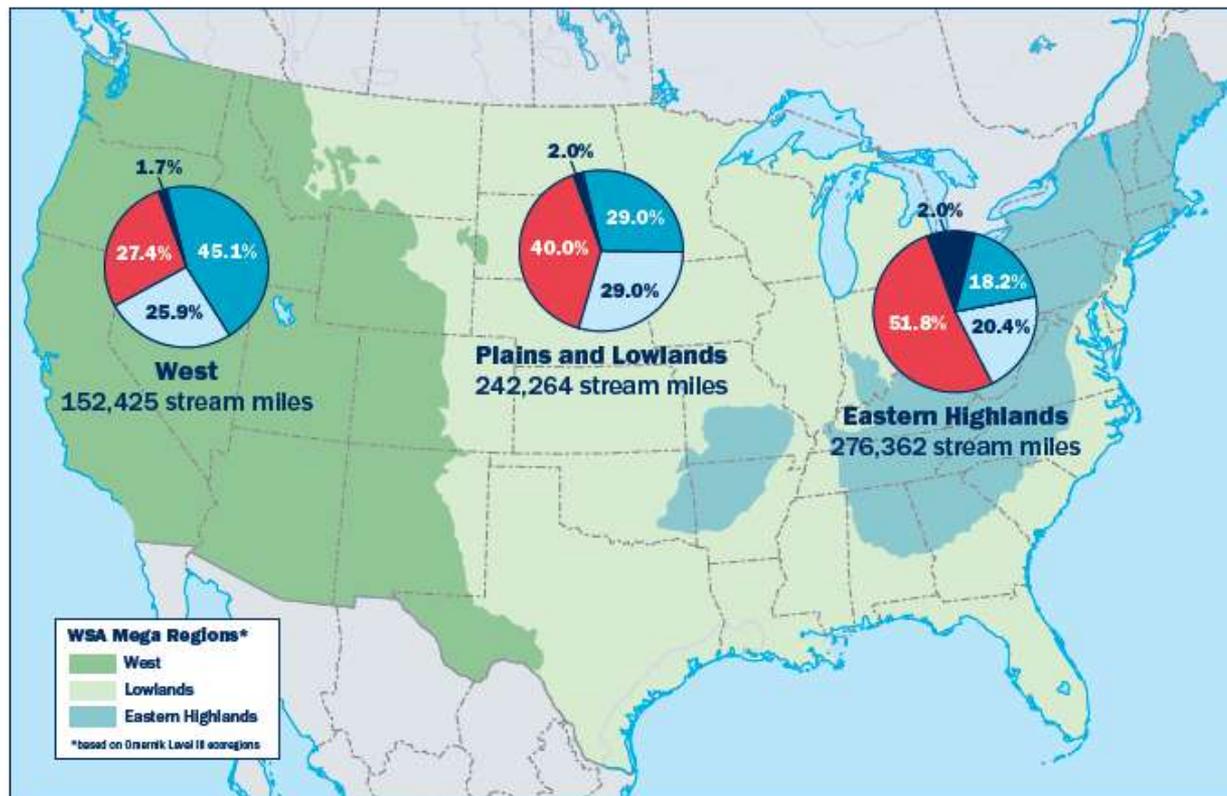
- **Short-term strategy**

- Rotate through water resources
- Use standardized design
- Use standardized methods

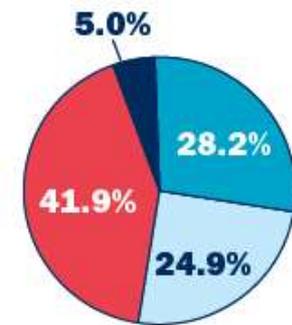
- **Long-term vision**

- State-scale surveys roll into national surveys
- More flexibility in methods, implementation, schedule, with appropriate rigor
- Develop vision and roadmap for getting there

# Wadeable Streams Assessment Condition of the Resource



## National Summary

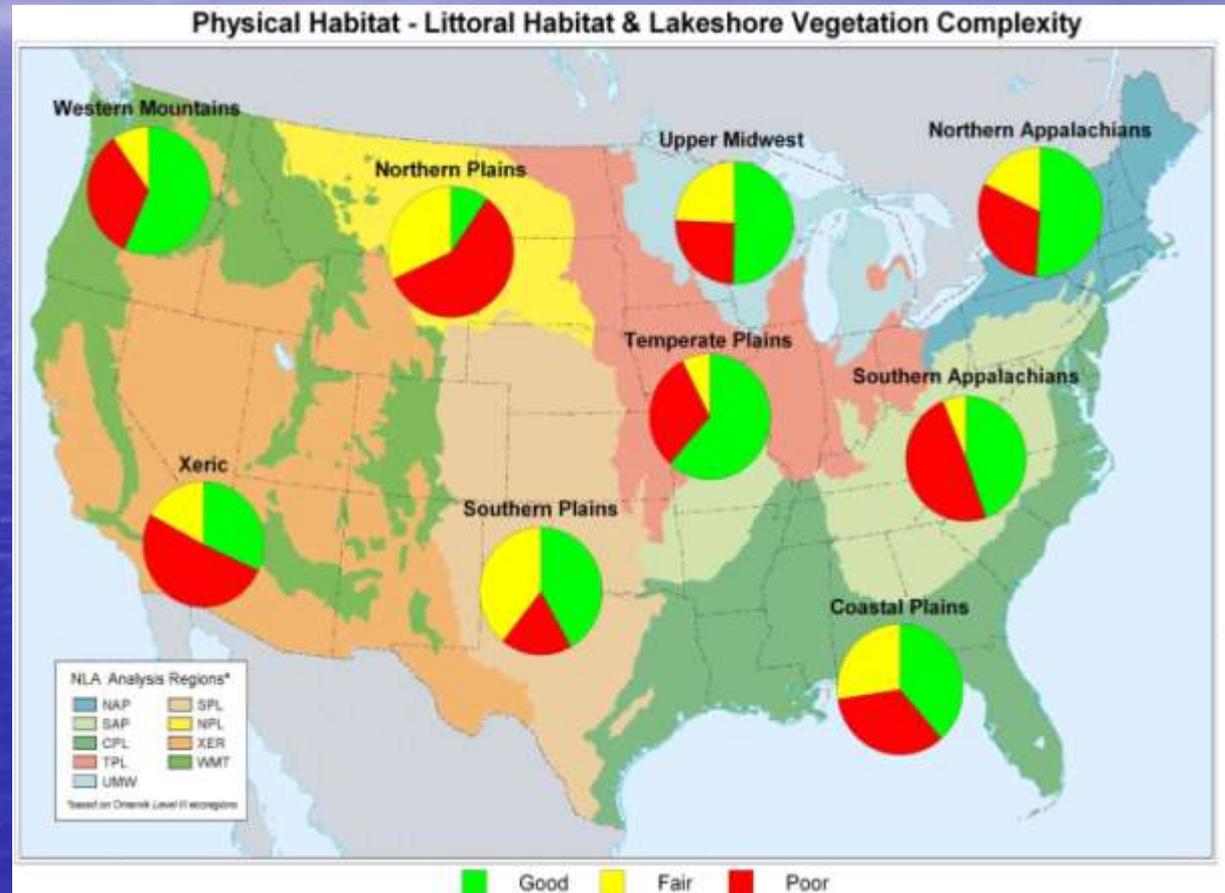


## Biological Condition of Wadeable Streams

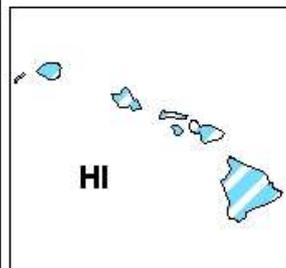


# Poor Habitat Quality Increases Risk of Degraded Biology 300%

- National Summary:
  - 47% of lake shorelines in good condition
  - 20% are in fair condition
  - 32% are in poor condition
- Assessment thresholds based on regionally explicit reference expectations.



# Use of Probability Surveys as a Component of State Monitoring Program



## Status of State Use of Probability Surveys

-  Adopted state scale survey (40)
-  Piloting/Investigating use of state scale survey (7)
-  Not currently pursuing state scale survey (3)

August 25, 2009

# Challenges to Producing National Water Quality Inventory from State Reports

- 2010 progress and potential

- Survey condition of the nation's water resources—coastal, lakes, rivers and streams, wetlands
- Harmonize survey design across scales
- Promote consistent methods and assessment
- Explore comparability where lacking consistency
- Advance data analysis (reference approach, relative risk, CADDIS, NHDPlus)

# Using Data to Protect and Restore Human and Ecological Health

- Track status and trends of water, air and land resources
- Analyze the effectiveness of environmental programs and adjust actions accordingly
- Develop human and ecological health thresholds and criteria
- Protect public health
  - Fish consumption advisories
  - Air Quality Index
- Respond to emergencies and conduct clean-up activities
  - National Coastal Assessment data provided baseline information for evaluating the impacts of Katrina near New Orleans

# National Environmental Status and Trends Indicators – Water Pilot

- **Water Quantity**

- How much water do we have?
- How much water do we use?

- **Water Quality**

- How much of our waters support healthy aquatic communities?
- What is the physical and chemical condition of our waters?
- How much of our waters are suitable for human use and contact?

# Looking Forward

- What would GAO say now?
- What foundation are we laying for the next 40 years of CWA implementation?
- What role will monitoring play in supporting the next leap forward?
- Will we create a sustainable approach to integrating monitoring and assessment to meet our full range of policy and program needs?