USGS activities, highlights from Eastern Region Town Hall Meeting

Linda C. Gundersen, Acting Regional Director

David P. Bornholdt, Acting Regional Executive, Midwest Area

David P. Russ, Regional Executive, Northeast Area

Jess D. Weaver, Regional Executive, Southeast Area

Presented by
Stephen Terracciano, New York Water Science Center, Coram Office Chief

September 16, 2008

U.S. Department of the Interior
U.S. Geological Survey

Today's Agenda

- Regional centers
- NEDMAC - New England Disciplines Management Council
- Highlights from Science Strategy

USGS

NEDMAC

- Represents four USGS science disciplines Biology, Geography, Geology, Water
- Water Science Centers, CT, MA-RI, ME, NH-VT,PR.
- Eastern region Geography rep. NY
- Coastal Marine Center Woods Hole.
- S.O. Conte Anadromous Fish Research Lab.
- Patuxent Wildlife research Center.

USGS

Oceans Research Priority Plan: Improving Great Lakes Coastal Recreational Water Quality Monitoring and Forecasting

Richard Whitman, Project Manager, Great Lakes Science Center

Jim Morris, Project Coordinator, Ohio Water Science Center

Sheridan K. Haack, Michigan Water Science Center
Donna S. Francy, Ohio Water Science Center
Steven R. Corsi, Wisconsin Water Science Center

USGS

Overall Goal

- To advance the science of monitoring and assessing recreational water quality to provide beach managers with reliable, science-based information to make well-informed beach closure decisions to protect public health.

- Links to USGS Science Strategy - Human Health

USGS

Collaboration Strategy

- Center Managers and scientists in Great Lakes developed a coordination strategy to provide a unified USGS perspective in Great Lakes.
- Obtained stakeholder input on major research needs for beach health in Great Lakes
- Identified research topics for USGS efforts – USGS Great Lakes Beach Health Initiative
- Collaborative effort where capabilities across USGS and with external partners were identified resulting in a comprehensive approach meeting multiple requirements and built on existing resources.

USGS

ER Energy Team Assesses Natural Gas Production

- **Tight Gas Sandstones**
  - Bob Ryder
- **Deep Basin and Geo-pressured Gas – Gulf Coast Assessment**
  - Peter Warwick, Jim Coleman, Paul Hackley, Dan Hayba, Alex Karlsen, Liz Rowan and Sharon Swanson
- **Shale Gas – Appalachian**
  - Bob Milici, Chris Swezey, Jim Coleman, Paul Hackley, Bob Ryder

(Links to USGS Science Strategy – Energy)

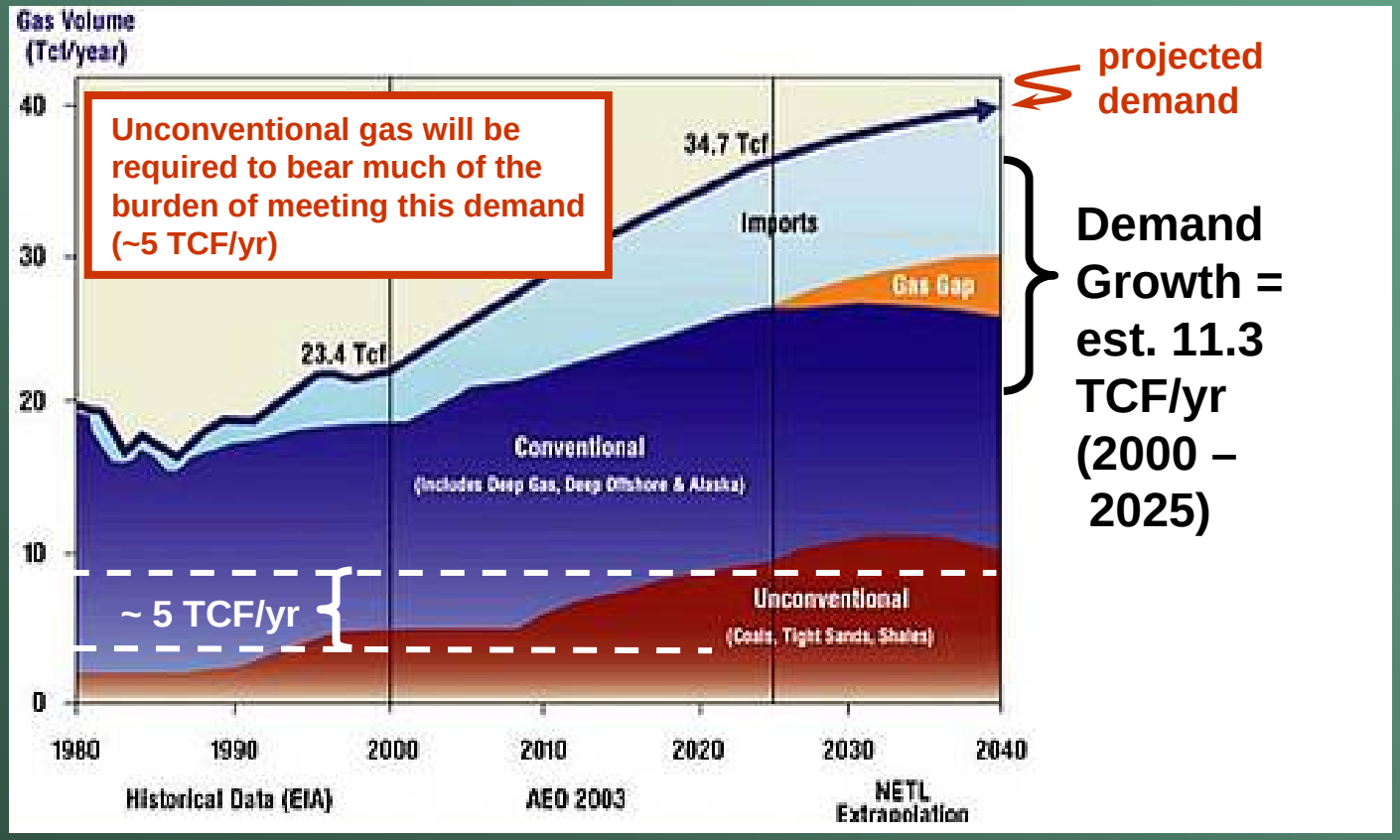
USGS

ER Energy Team Assesses Natural Gas Production (cont.)

- Coal-bed Gas
  - Gulf Coast – Peter Warwick, Paul Hackley
  - Appalachian Basin – Bob Milici, Leslie Ruppert
  - Arkoma Basin – Bob Milici, Chris Garrity
- Appalachian Basin Continuous Gas
  - Bob Ryder, Bob Milici, Chris Swezey

USGS

U.S. Natural Gas Demand vs. Supply : 2000 - 2040



(modified from http://www.netl.doe.gov/technologies/oil-gas/index.html)

USGS

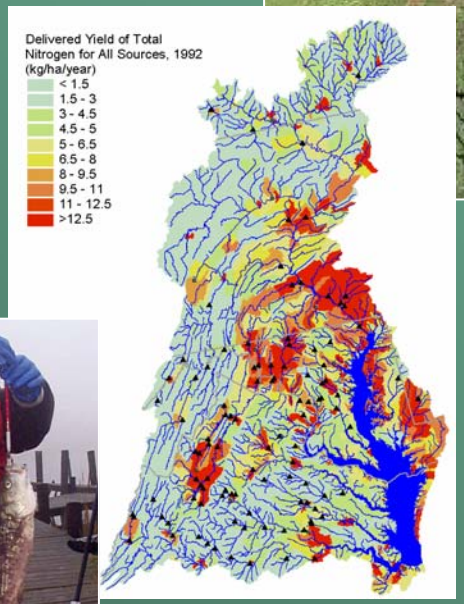
Restoration of the Nation's Largest Estuary

- Issues
  - Fisheries, waterfowl, diversity
  - Population growth
  - Degraded ecosystem
- Chesapeake Bay Program
  - Chesapeake "2000" Agreement
- Science
  - Restoration and protection
  - Future approaches

USGS

Unique Role of the USGS

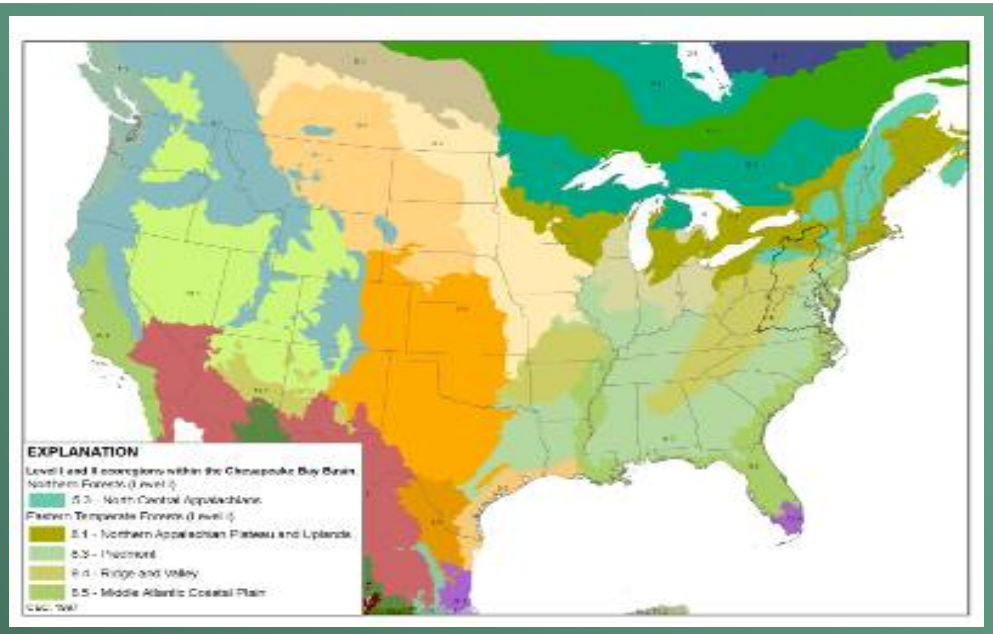
- Integrated science for understanding and managing ecosystem
  - Primary watershed science agency
  - Ecosystem condition and change
- Science is conducted by…
  - Multiple scientific disciplines
  - Monitoring, research, modeling at multiple scales
  - Science plan 2007-2012
- Science supported by…
  - Coordination of USGS National programs, offices, and scientists
  - Interaction with partners



USGS

USGS Science Strategy and Chesapeake Bay

- Address Multiple Science Directions
  - Ecosystems
  - Climate
  - Hazards
  - Health
  - Water Census

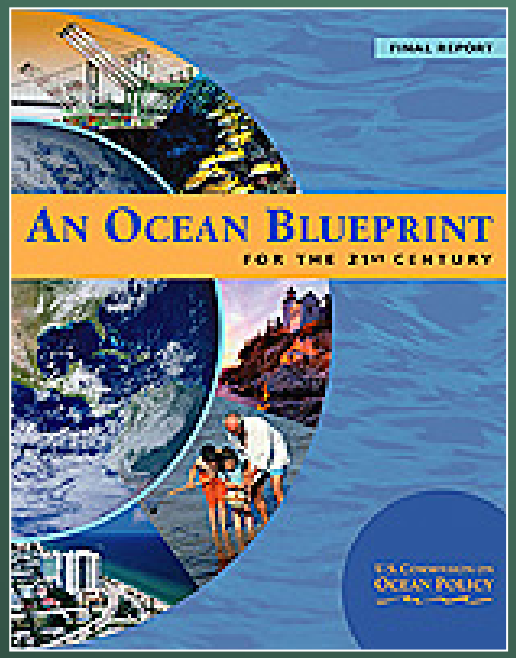


- High quality, evolving research
- DOI, Federal, State interactions
- Congressional interest
- Science applications- COAST

USGS

The U.S. Ocean Action Plan

The U.S. Commission on Ocean Policy: *An Ocean Blueprint for the 21st Century (2004)*



Societal Challenges (selected)

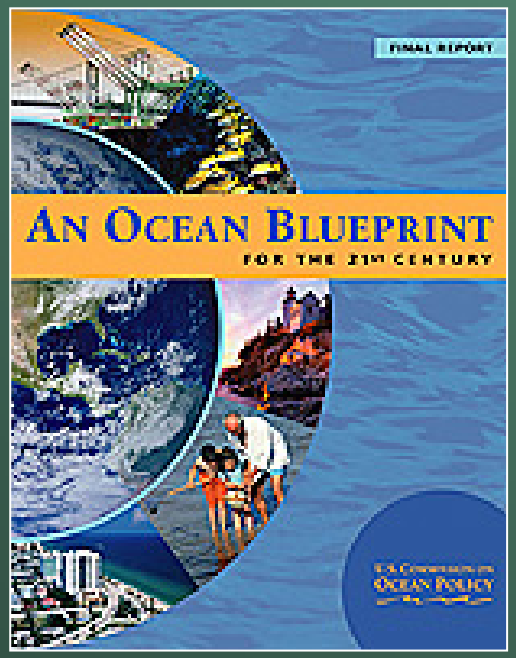
- **Managing Coasts and Their Watersheds**
- **Understanding Impact of Climate Change on Coasts and Oceans**
- **Guarding People and Property Against Natural Hazards**
- **Conserving and Restoring Natural Habitat**

Echoing the USGS National Coastal Program Plan

USGS

The U.S. Ocean Action Plan (cont.)

The U.S. Commission on Ocean Policy: *An Ocean Blueprint for the 21st Century (2004)*



- **Managing Sediment and Shorelines**
- **Addressing Coastal Water Pollution**
- **Achieving Sustainable Fisheries**
- **Protecting Marine Mammals, Endangered Species, and Corals**
- **Managing Offshore Energy and Other Mineral Resources**

Echoing the USGS National Coastal Program Plan

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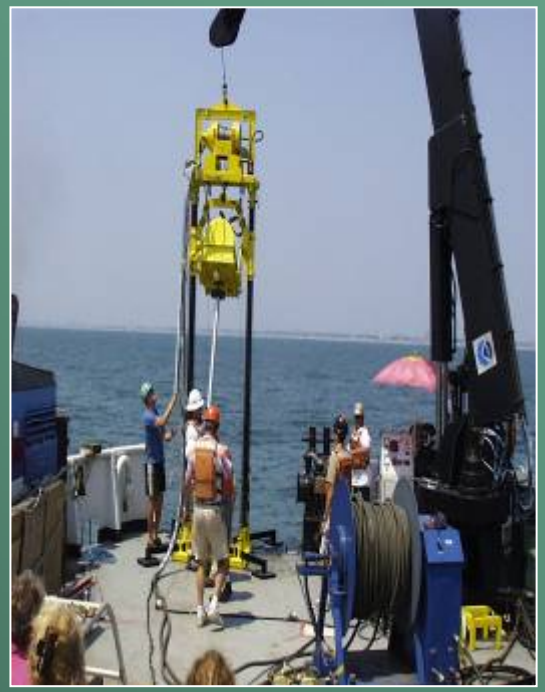
USGS Eastern Region Research Priorities

Interplay of Coastal, Global Change, Ecosystem, and Water Issues

- Seabed and Benthic Habitat Characterization
- Assessment of Coastal Change
- Sediment Transport Modeling
- Leaky Coastal Margins
- Methane Hydrate Properties and Occurrence
- Invasive Species
- Nutrient and Contaminant Loading
- Storms and Contaminants Impacts
- Climate Change and Coastal Habitats
- Modeling Anadromous Fish
- Migratory Marine Birds
- Fish Health and Passage



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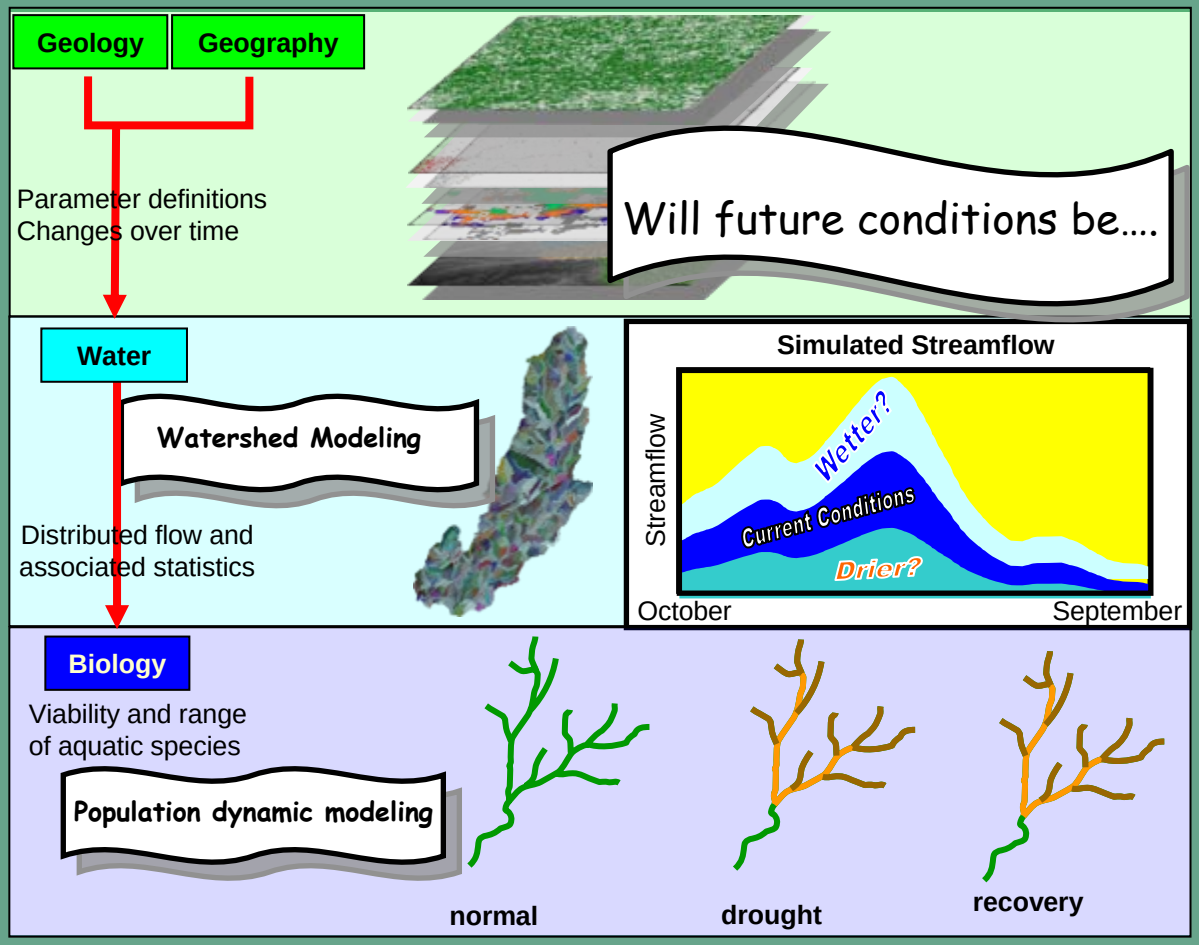
Flint River Initiative



USGS

Manatee Project in the Florida Integrated Science Center

- Radio telemetry and global positioning system studies
- Manage propeller scar data
- Improve aerial survey techniques
- Develop a shared population model for population projections
- Merge manatee habitat use data with hydrology models

USGS

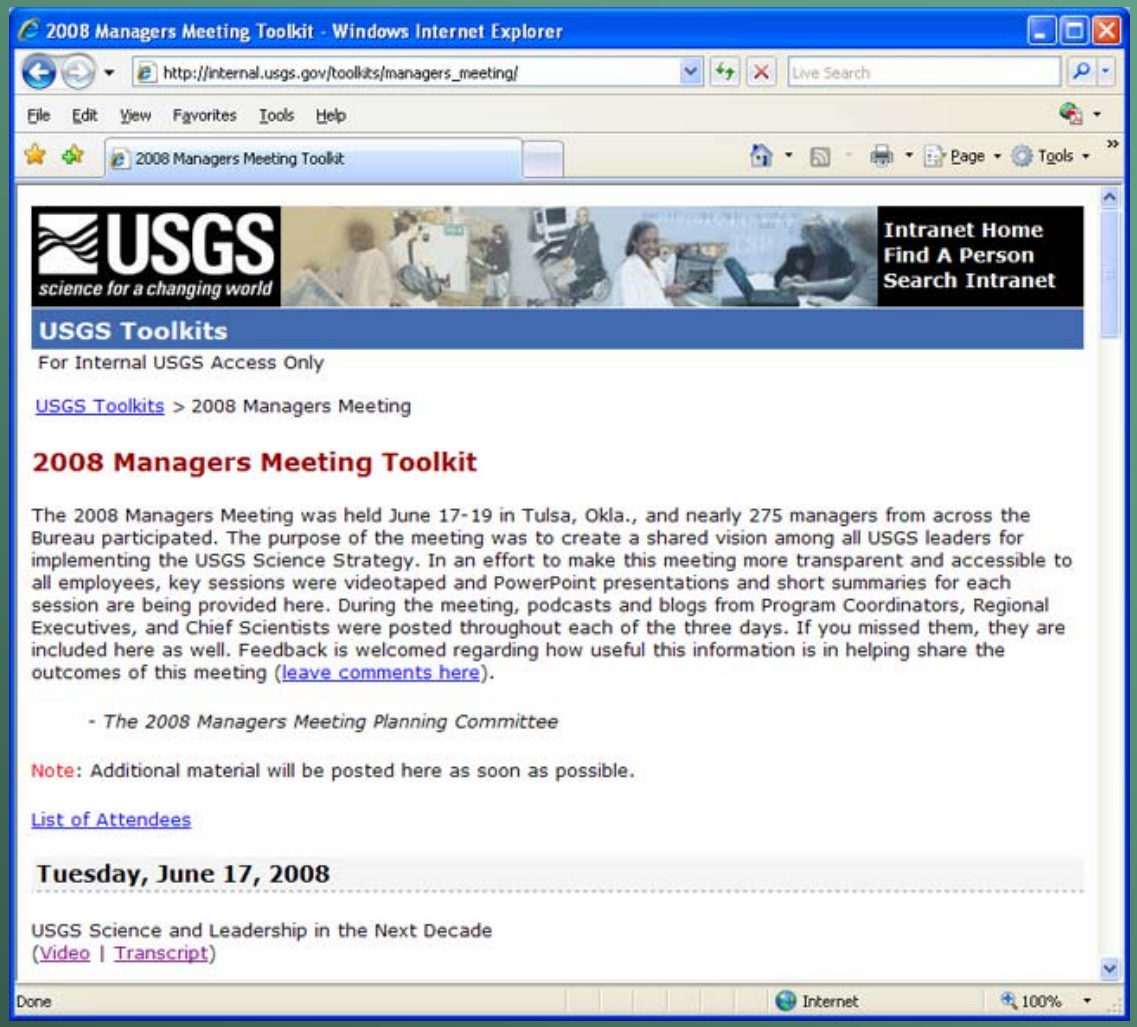
Discussion

Time for your questions, concerns, and observations.

USGS

Comments

http://usgs.gov



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September 16, 2008

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