

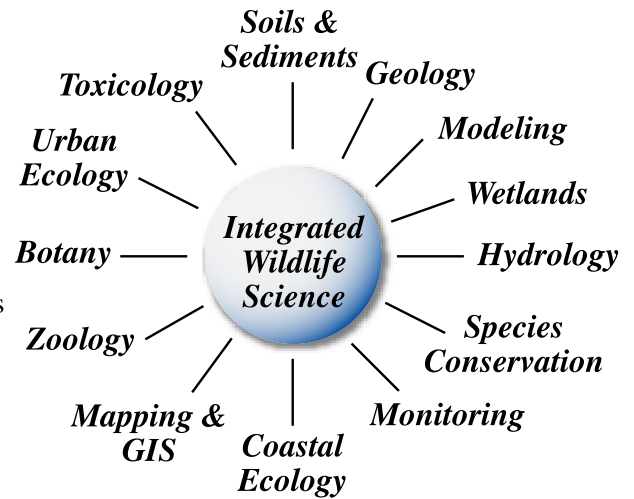
## Patuxent Wildlife Research Center

### Integrated Science At Patuxent -- Working Together In A Changing World

*Patuxent Wildlife Research Center uses an integrated science approach to build on its foundation of scientific expertise and specialization. A multi-disciplinary approach is vital for addressing the complex nature of natural ecosystems and modern environmental problems. Center products reflect a blending of contributions of the multiple disciplines involved in integrated science.*

#### APPROACHES TO INTEGRATED SCIENCE

- Patuxent shares resources, decision-making, and talent with partners within the U.S. Geological Survey and other federal agencies to conduct integrated science
- An adaptable team approach to science organization encourages development of multi-disciplinary and interagency teams to address complex problems requiring multi-disciplinary approaches
- Multi-disciplinary science teams are given authority to make decisions and implement actions
- Electronic communication permits real-time linking of scientists and distribution of products to natural resource managers



#### EXAMPLES OF MULTI-DISCIPLINARY PROJECTS

- Shoreline Monitoring at Cape Cod National Seashore -- *Agencies:* USGS, National Park Service. *Scientific disciplines:* geology, coastal geomorphology
- Developing Tools to Monitor and Predict Effects of Nutrient Enrichment on Estuaries at Acadia National Park -- *Agencies:* USGS, National Park Service. *Scientific disciplines:* wetland ecology, hydrology, biogeochemistry
- Innovative Uses of Stable Isotope Ratio Technology in Understanding Wetland Ecosystems and Landscapes -- *Agencies:* USGS, Louisiana State University, Carnegie Institution of Washington, Canadian Wildlife Service, Environment Canada, University of Quebec. *Scientific disciplines:* wetland ecology, hydrology, wildlife biology, geochemistry, estuarine ecology, chemistry
- Hydrologic Monitoring at Cape Cod National Seashore -- *Agency:* USGS. *Scientific disciplines:* freshwater wetland ecology, surface and groundwater hydrology
- Water Quality Monitoring at Northeast Creek, Acadia National Park -- *Agencies:* USGS, National Park Service. *Scientific disciplines:* surface water hydrology, stream-flow hydrology, water chemistry
- Integrating the Effects of Land Use and Global Change on Hydrology and Vegetation of Northern Great Plains Wetlands - *Agencies:* USGS, South Dakota State University, Desert Research Institute-Reno, and The Nature Conservancy. *Scientific disciplines:* landscape ecology, hydrology, geography, systems modeling

#### EXAMPLES OF INTEGRATED SCIENCE PLANNING TEAMS

- Chesapeake Bay Team -- USGS interdivisional and federal and state interagency; scientific disciplines: hydrology, geology, chemistry, geography, fishery biology
- Habitat Management Team - USGS and federal and state interagency forum

