Integrated GIS for the Great Lakes Coast

David Hart
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Overview of the Session

- Integrated GIS for the Great Lakes Coast
  - David Hart, UW Sea Grant/LICGF
- Lake Superior Decision Support System
  - Pat Collins, Minnesota DNR
- Wisconsin Coastal GIS Applications Project
  - David Hart, UW Sea Grant/LICGF

A Taxonomy for Great Lakes GIS

- Agency
- Geography
- Resource Management Issue
- Nature of the GIS
- Spatial Data

Great Lakes GIS by Agency

- Sector (government, private, academic, NGO,…)
- Government (international, federal, state/province, regional, county, city/village/township, special district,…)
- Partnership

Great Lakes GIS by Geography

- Great Lake (Huron, Ontario, Michigan, Erie, Superior)(Champlain?)
- Watershed
- Littoral Cell
- Shoreline
- Political/Administrative Boundaries
- Marine Boundaries

Great Lakes GIS by Mgmt Issue

- NOAA Coastal Zone Enhancement Areas
  - wetlands protection; coastal hazards; cumulative and secondary impacts of development; public access to the coast; special area management planning; ocean governance; marine debris; and government and energy facility siting
- Sea Grant Research Topics
  - aquaculture; biotechnology; coastal communities and economies; coastal hazards; ecosystems and habitats; education and human resources; fisheries; invasive species; ocean and coastal technologies; seafood science and safety; urban coast, ports and harbors
The Nature of Great Lakes GIS

- Internet Mapping
- Geospatial Data Clearinghouse
- Data Integration
- Project Support
- Technology Transfer
- Education

Spatial Data for Great Lakes GIS

- CGDI Framework Data
  - Alignment layers (horizontal and vertical control)
  - Land feature/form layers (well defined and observable features)
  - Conceptual layers (interpreted boundaries)
- NSDI Framework Data
  - Geodetic control; orthoimagery; elevation; transportation; hydrography; governmental units; and cadastral information
- Other Spatial Data
  - Bathymetry, land use, wetlands, planimetric features,…

Resources to Find G.L. GIS

- Great Lakes Information Network GIS (www.great-lakes.net/gis)
  - “The Great Lakes Information Network (GLIN) is a partnership that provides one place online for people to find information relating to the binational Great Lakes-St. Lawrence region of North America.”
- Google Search (www.google.com)
Summary

- There are many GIS projects related to Great Lakes GIS (18,600 hits on Google).
- Increasing amounts of spatial data related to the Great Lakes are becoming available on-line.
- Collaborative GIS projects have been initiated for several areas of the Great Lakes and for several coastal management issues.
- How are these projects being used to support decisions about sustainable management of the Great Lakes?