RESOURCE MANAGEMENT THEME

Agriculture
Forestry
Range
Fisheries
Coastal Zone
Water Resources
Non Renewable

Ann Rasberry

Issue:

1. Wildlife habitat modelling
    - suitable habitat

2. Land use/land cover mapping
3. Endangered species monitoring – conservation Reserve Enhancement Program (CREP) – compliance monitoring
4. Geologic mapping – need geology and soils
5. Mapping phragmites (p. australis) invasive species mapping
    - better digital elevation data
    - understory mapping – need to "see" under the forest canopy

Frequency
  - mapping/modelling – 3-5 years
  - monitoring – annually
  - invasive species – annually

Resolution
  - wildlife habitat – 30m or less
  - microhabitat features e.g. rock out crops, snags, caves, vernal pools, etc. – 1-5m
  - CREP buffers – 35-100 ft.
  - Land cover mapping to dominant species level – 5m multispectral
  - Phragmites mapping – don't know what it will take

P.R. Blackwell – Forest Resources Institute

Issue:

1. Forest inventory analyses
    - 3-5 year cycle
    - biomass
    - growth 2 yield

2. Private – non-industrial private forest land monitoring
    - timber inventory health & vigor
    - trends and attitudes
    - annual cycle

3. Sustainable forestry initiative (industrial lands)
    - compliance
    - effectiveness

4. Bottomland Hardwoods
   - species composition

5. SB977 compliance (Texas)
   - tax credit for forest management practices
   - stream-side management 2 ones (where are they?)

Lynda Wayne – NC Center for Geo Info & Analysis

1. Understand/characterize coastal ecosystem
   - impacts of development
   - better planning

2. Change detection, trend analysis, forest composition & health
   - impacts f industry (local & remote) & agriculture

3. Ecotourism – balancing tourism & sustainable ecosystems

Nick Tew – Geological Survey of Alabama

1. Natural resource assessment & management

2. Land use/land cover analysis, change detection, patterns and trends
   - wetlands
   - habitat

3. Geologic hazards
   - sinkholes
   - landslides
   - floods
   - earthquakes

4. Water use/source water protection

Data needs → hires 1-5m. CIR/multispectral

Ag issues
   - total farm management
     - precision farming
     - enviro protection
       - nutrients
       - sediment

Todd Schroeder – Canaan Valley Institute, WV

1. Watershed quality & watershed management
2. Hydrologic modeling
3. Urban sprawl
4. Land use/land cover----→ regional & high resolution/site specific
5. Improved digital elevation data****
6. Urban sprawl/future scenarios modeling/community planning
7. 3D visualization

John Scrivani – VA Dept. of Forestry

1. Forest land use estimates

2. Forest biomass estimates, growth & removal
3. Change detection of harvesting
4. Monitoring of reparian forest buffers

Steve Terry – Miccosukee Tribe-Florida

1. Invasive plants in pastures & wetlands – 1m resolution, quarterly
2. Wetlands change – not necessarily by invasive plants, i.e. undergoing a successional change due to changes in water quality & water quantity, for example 1m resolution, annually
3. Grazing use – are pastures & rangelands being properly grazed, over grazed? – 1m resolution, monthly
4. Water use – where is the water going and who is using it, particularly during drought conditions – is it going to irrigate agricultural crops, such as citrus groves or is it going to irrigate residential & commercial lawns & landscapes?; 10m resolution, weekly during drought

Frank Whitscie – WV Hampshire County assessor

1. Better ground control to assure precisional accuracy of date – some measure of data standardization which would probably be adopted by most agencies
2. Better promotion of NASA products among state and local gov't officials in effect to get support to fund agencies to make better use of the products
3. Mineral inventory

Watershed Planning
1. Conservation practices
   - location of existing land and water quality conservation structures and land use
   - location of needed conservation practices

2. Water sediment load/concentration
3. Channel characteristics
   - cross sections
   - scope
   - vegetation cover
   - elevations
   - channel improvements

4. Predict runoff water quality
   - storm characteristics
   - land characteristics
     - infiltration
     - use
     - scope
     - water control practices

5. Crop water stress/irrigated land

Monitoring beach erosion on a yearly basis
Statewide land use for impact of ecotourism, greenspace

Implement a land use/land cover statewide ------- in MS – 5 acre min. resolution using most up to date imaging and completed as past as possible – classification to be determined by users – 5 years cycle

Develop & maintain a high resolution/positionally accurate transportation coverage

Needs:

1. Imaging at a resolution for detailed wildlife habitat mapping

- 5-10m multispectral
- 3-5 yr. Interval
- state wide coverage

2. Areas to map for wildlife habitat
    - fence rows
    - riparian areas
    - wetlands
    - understory
    - age structure of forest stands

3. Imaging to map forest stands at an interval to determine change in forestry practices