

Remote Sensing and GIS

Day 2, Track 1, P3 B2&4

National Fire Technical Workshop

New Orleans, LA

May 4 - 6, 2004

RS and GIS Themes

- Activity and systems support of *present* EI process
- Research roles for remote sensing
- Consistent methods with most specific data available
 - Intricate yet transparent activity data collection and processing
 - But how to incorporate “local knowledge”?
- Automated
- Facilitate third party data products
 - Frequently updated or geographically specific
 - But is other data used appropriately?

Remote Sensing for Fire EI

- Remote sensed fire activity mapping
Strengths, limitations, availability?
- Burn perimeter vs. blackened area
assessment (acres)
- Fuel loading / vegetation assessment
(ton/acre)

GIS for QC and Augmentation

- Fuel loading assignment by location
- Georeference by legal location and county
- FIPS, timezone assignment for model ready files
- Coordinate system re-projection
- Duplicate and complex checking by proximity, date, reporting system, and name
- QC for spatial domain, water body, etc.

Remote Sensing for Fire EI

- Remote sensed fire activity mapping
Strengths, limitations, availability?
 - Hotspot + burn scar style detection
 - [others?]
- Burn perimeter vs. blackened area assessment (acres)
- Fuel loading / vegetation assessment (ton/acre)

Current RS Activity Systems

- Available satellites / sensors
 - AVHRR, MODIS, LANDSAT
- Historic and near real-time fire activity detection projects
 - North American Fire Mapping Project
 - Environment Canada

GIS for QC and Augmentation

- Fuel loading assignment by location
 - Clip state veg coverage by fire polygon
 - Overlay fire point on national NFDR Fuel grid
- Georeference by legal location and county
 - Interpolate by Nat Atlas TR map, co centroid
- FIPS, timezone assignment for model ready files
 - Overlay point on Nat Atlas county, timezone maps
- Coordinate system re-projection
- Duplicate and complex checking by proximity, date, reporting system, and name
- QC for spatial domain, water body, etc.