Assessment Name:

Southern Sierra Nevada

Presented by:

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Scale:

Between regional and forest/landscape

- 3 early adopter Forests
    - Inyo
    - Sierra
    - Sequoia

Management issue:

- Defining spatial strategic fire management objectives in Forest Plan
    - Need to be covered under NEPA
    - Great need to simplify management objectives in WFDSS
- Increase pace and scale of ecological restoration through the use of wildfire
    - Fire management planning must take advantage of 2009 guidance
    - Mechanical treatment options are highly limited
    - Holistic wildfire management needed to increase pace and scale
- Alignment to the National Cohesive Strategy
    - Manage and analyze risk
    - Restore and maintain landscapes
    - Create fire-adapted communities
    - Improve fire response

Project Management:

- Staffing
    - Need to have fire management represented on forest planning team
        - Time commitment is high especially for Early Adopter Forests
    - Agency Administrators need to be engaged and supportive.
- technical support
    - Pyrologix LLC – provided initiative fire modeling and risk assessment products
    - April Brough – GIS: HVRA, LCP and development of strategic fire management zones
    - Don Helmbrecht – Vegetation Condition HVRA
- amount of time
    - About 15 months from LCP calibration to strategic fire management zones in NOI.
    - Due to glitches in FSim and modeling redo it will be 20 months to final zones.
- funding sources
    - Appropriated fire/fuels funds used for this risk assessment

Fuel and fire behavior modeling:

- fire modeling systems
  - The large fire simulator (FSim)
    - Two scenarios
      - All large fires suppression
      - Lightning fires no suppression
- Fire occurrence data sources
  - FPA multi-jurisdictional fire occurrence data
  - Fire occurrence density grid used
  - Applied to 8 ecologically based areas
- weather data sources
  - WIMS data
    - Processed using Fire-family Plus
  - RAWS assigned to the 8 ecologically based areas
- fuel data sources
  - LANDFIRE 2008 calibrated using CALVEG data in some areas
    - LANDFIRE Zone Seam-lines can be challenging to fix
  - Calibration workshop with fire/fuels specialists from the Forests
  - LANDFIRE Total Fuels Change tool (LFTFC) was used
- technical support
  - Pyrologix LLC – compiled and processed weather and fire occurrence data
  - April Brough – compiled spatial fuels and vegetation data to make a calibrated LCP.
- time spent
  - Parts of 5 months

HVRAs

- What were the HVRAs (Ranked by RI)
  1. Human Habitation
  2. Major Infrastructure
  3. Watersheds (drinking water)
  4. Critical terrestrial habitat
  5. Timber
  6. Private inholdings
  7. Recreation and Administrative Infrastructure
  8. Visual Resources
  9. Vegetation condition
- Who identified them
  - Initially used an ecosystem services analysis list from Bioregional Assessment.
  - Refined at a later date by resource specialists.
  - No one really wanted to do this until they saw the value in the risk assessment.
- data sources
  - Regional

- o National
- o Forest
- o Modeled
- response functions
  - o Workshop with fire/fuels and resource specialists
- relative importance weighting
  - o Forest Supervisors
    - Originally adamantly against do this
    - Finally did it quickly once cornered into
    - This was far from the best process but the RIs selected were similar other done before.

How the results are being used

- Aid in the development of strategic fire management zones in Forest Plans.
- Help in restoring and maintain landscapes
  - o Identifying areas of low risk and high chance of obtaining resource objectives
    - Re-instill a sense of place in which positive outcomes from wildfire can happen.
    - Change the statuesque fire response especially in low risk "Maintenance" areas.
- Create fire-adapted communities
  - o Identifying areas of high risk to communities and infrastructure
    - Risk and fire behavior based, not just a buffer
    - Can help prioritize fuels dollars to areas of highest risk
- Improve fire response
  - o Help prioritize fire response by assessing risk/benefit upfront.

Highlights and lessons learned

- Summarizing risk assessment outputs into useful fire management zones was/is challenging.
- Summary units should be real in a fire management context and need to smaller than HUC12.
- Models only help inform and there is a great need to have validation from people.
- Since this is new all of it takes a lot longer than you think.
- HVRAs and summary units need to be developed far in advance of the modeling.
- Few folks have time for planning; even fewer fire management folks do.
- No one likes change; duh!
- The technical part is fast and easy compared to the sharing of information and collaboration.