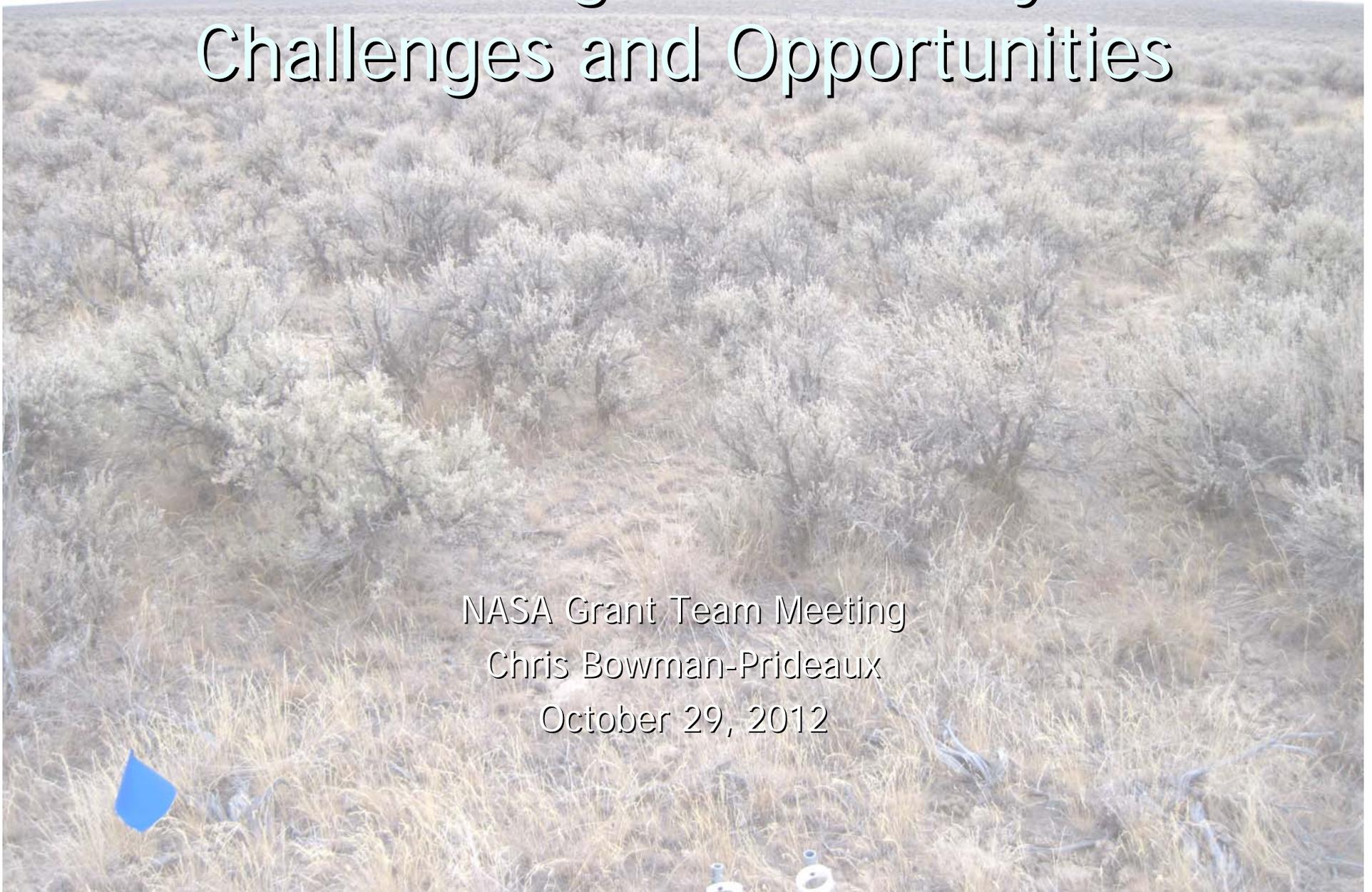

Wildfires in Sagebrush Ecosystems: Challenges and Opportunities

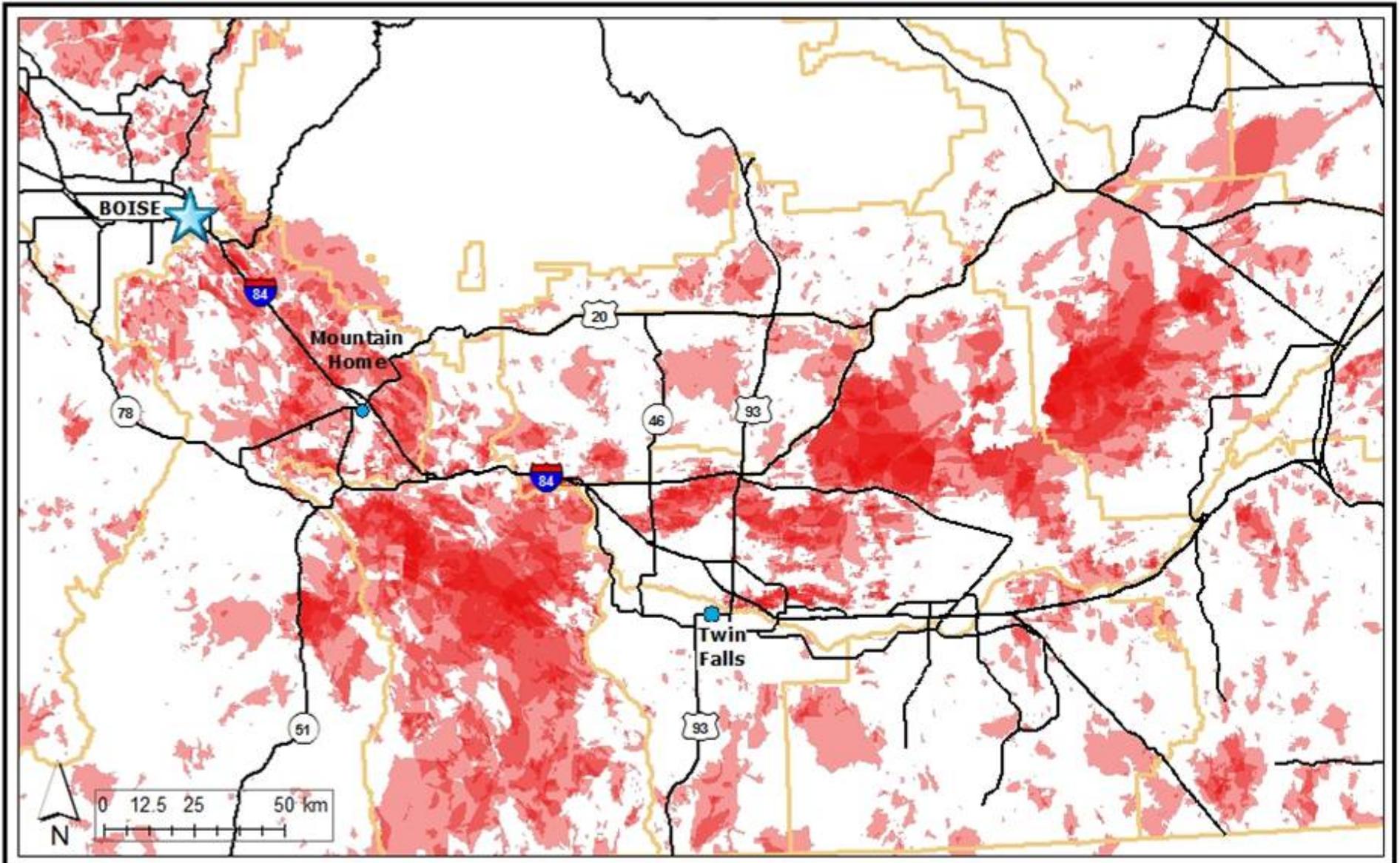
NASA Grant Team Meeting
Chris Bowman-Prideaux
October 29, 2012







Fires in Southern Idaho





Sagebrush Project

- Diversity & Productivity
 - Edge & Patch size
- Species Area Relationships
 - Larger patches have more diversity & propagules
 - How large does a patch need to be to give a burned area similar productivity or diversity as the edge?
 - Where should we focus limited funding for restoration efforts?

Grant Goals Addressed

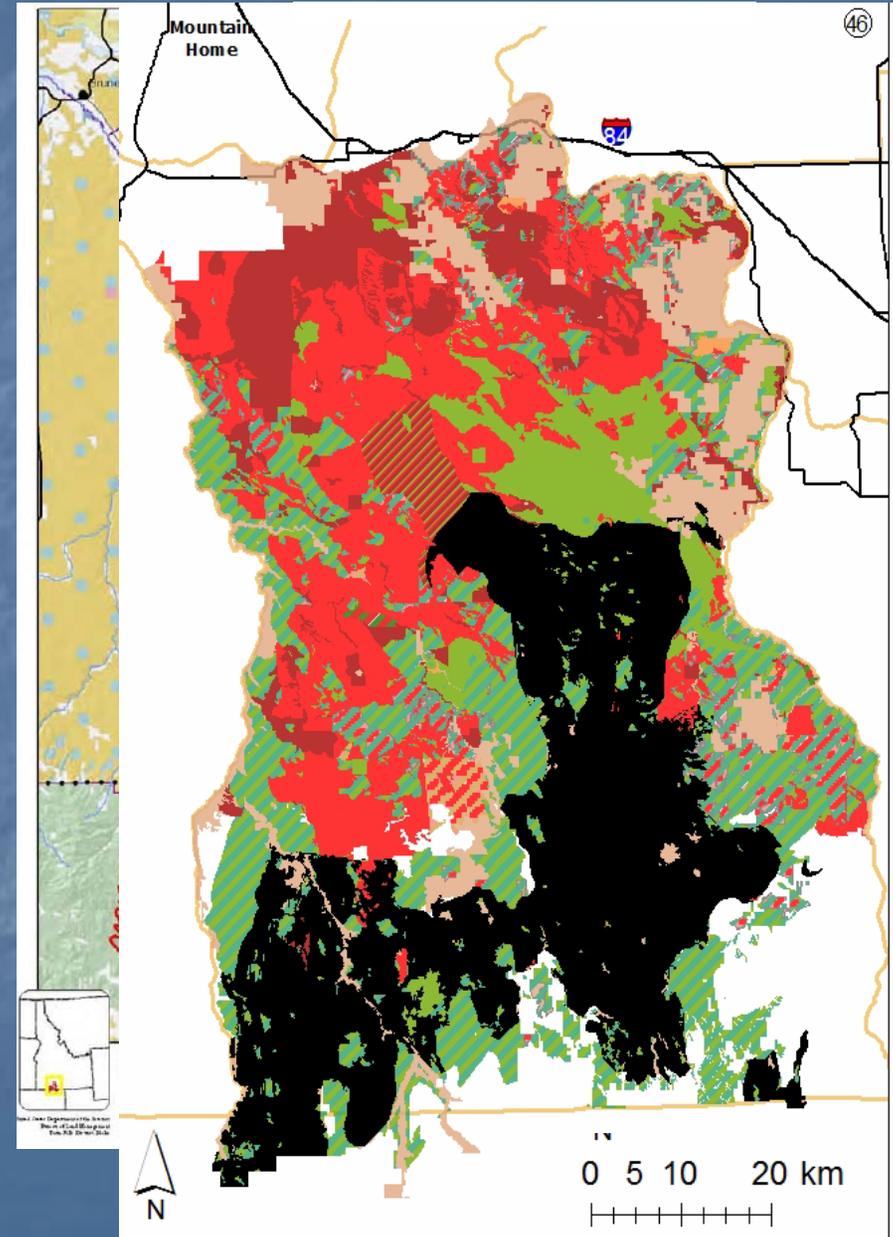
- Impact of extreme fire events on natural systems
- Characterize recovery processes and trajectories

Extreme Fire

- Murphy Fire Complex
 - Containment > \$ 9.8 million
 - Burned > 650,000 acres
- Vegetation Data

Legend

- Native Grass
- Artemisia
- Artemisia/Native Grass
- Crested Wheat
- Artemisia/Crested
- Cheatgrass
- Artemisia/Cheatgrass
- Other
- Shrub/Crested
- Recent Burn
- StateHwys
- BLM Field District



Challenges

- BLM Emergency Stabilization & Rehabilitation
 - No Natural Recolonization
 - Not Appropriate for SAR questions



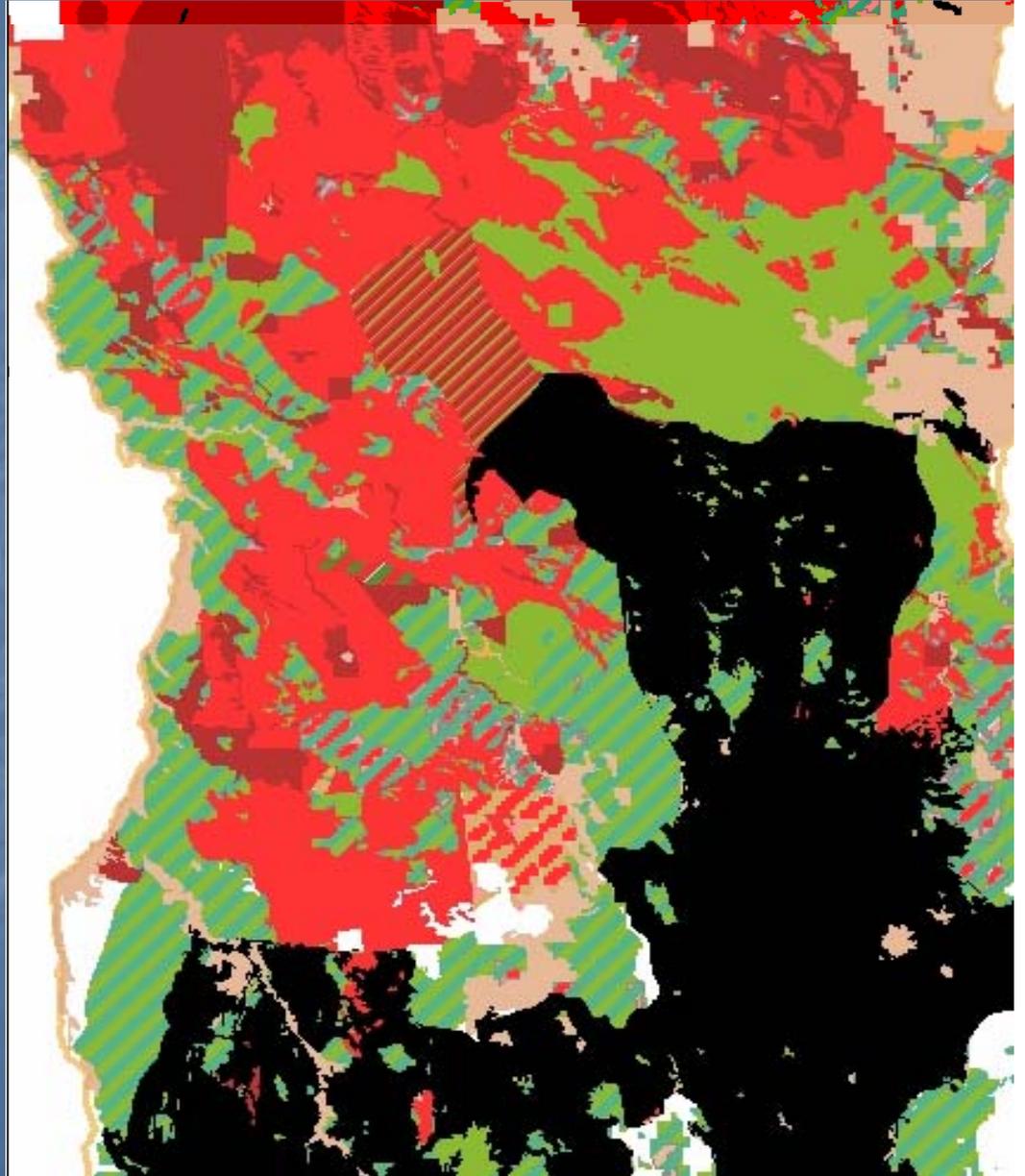
Challenges

- Define “Edge”
 - Unburned vegetation
 - Road
 - Fire break
 - Back fire



Challenges

- Fires Don't Always Leave Patches
- Kinyon Fire
 - Complete Vegetation loss

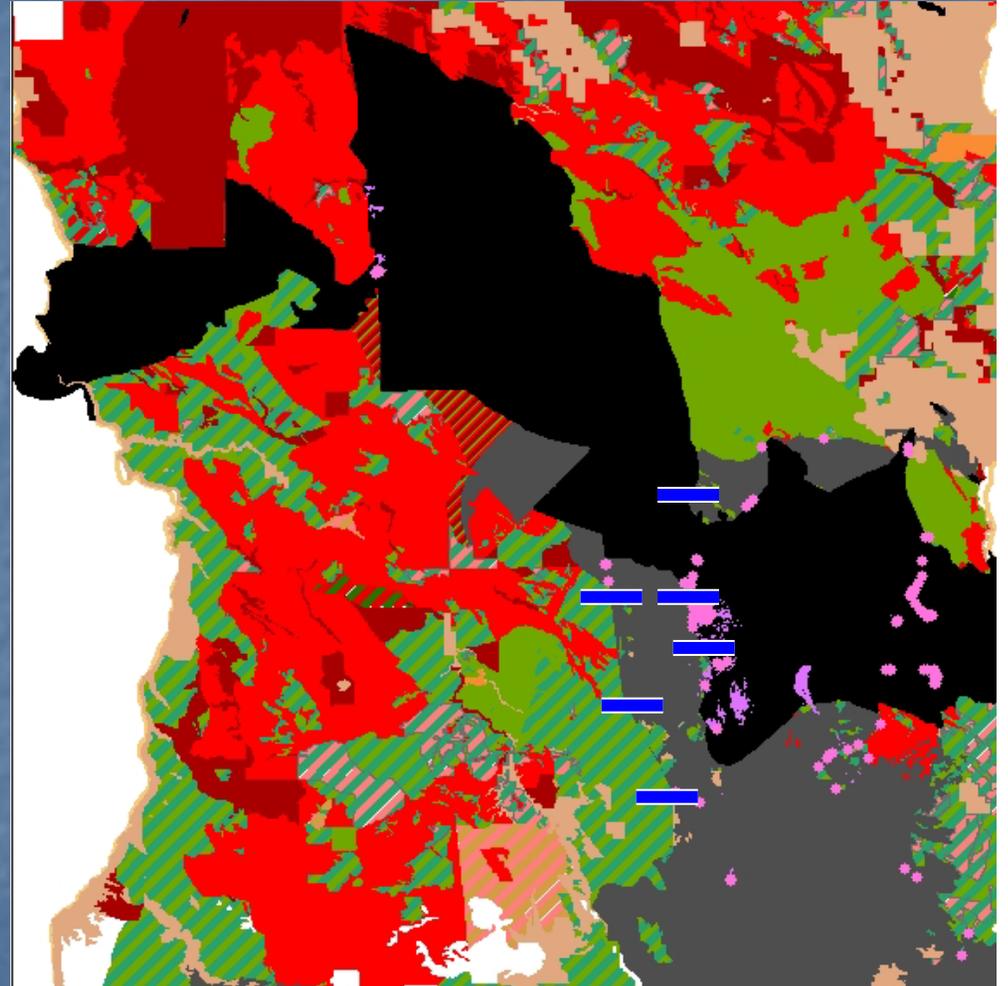


Kinyon Fire



Opportunity

- Compare Kinyon to Murphy
 - Similar location & Ecosystems
- Look at pollinators and plants
 - Post-fire & Recovery



Insect Transects



Opportunity

- Combination of field work & remote sensing
 - Biomass
 - Gross Primary Production, Chlorophyll, LAI
- Change in production
 - Sagebrush
 - Native Grass
 - Nonnative Annual Grass
 - Nonnative Perennial Grass

Grant Goals Addressed

- Short and Mid-term change on natural systems
- Characterize recovery processes and trajectories
- Success or failure of efforts based on stakeholder goals

Questions or Thoughts

