



**AG +
OPEN
SPACE**
SONOMA COUNTY

L A N D F O R L I F E

The Watershed Collaborative *Shared Priorities for Watershed Resiliency*

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Sonoma County Watershed Collaborative

- Board Request – engage watershed groups
- October 16 – convened at Sonoma Ag + Open Space
- Build on County emergency response & Watershed Emergency Response Team (WERT)
- Inform Office of Recovery & Resiliency

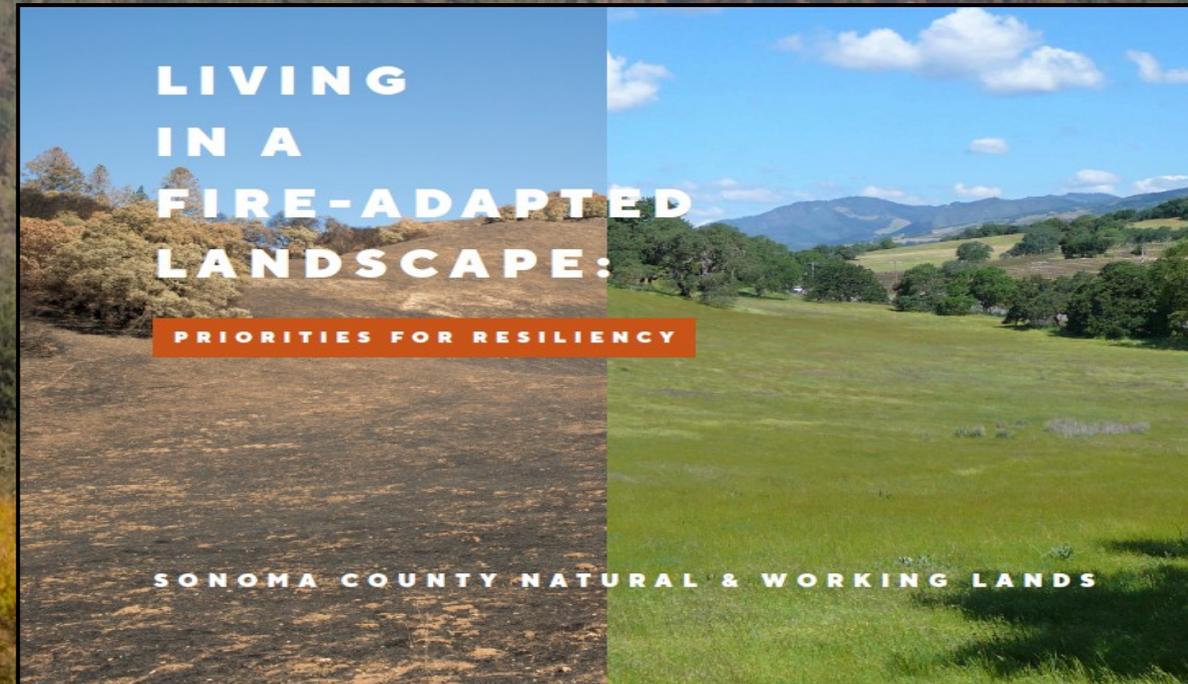


175 People
65+ Organizations

Watershed Collaborative

Working Groups/Focus Areas:

- Data, Assessment & Planning
- Education & Outreach
- Land Management
- Legislative, Policy & Funding
- Working Lands



Watershed Collaborative Overall Priorities

- Support landowners and land managers in assessing and mitigating watershed impacts from the 2017 North Bay fires
- Increase community awareness and preparedness for living in fire-prone landscapes
- Evaluate the response of natural and working lands to the fires to inform recovery, vegetation management, and fire-preparedness efforts
- Identify and implement practices – including land conservation, fuel-load management – that maximize the resiliency of natural and working lands to climate change and future disasters
- Ensure long-term attention to community and ecosystem resiliency through policy, long-term funding, and established working groups
- Permanently protect a network of lands that support biological diversity through changing climate conditions and prevent development in high risk areas
- Prioritized Compilation/Not Consensus



Fire, Flood, Drought, Climate Change

Watershed Resiliency: All Four Horses



Data & Analysis Investments | Partnerships

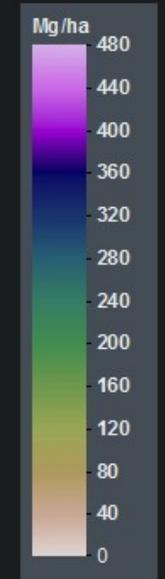
– Pre-fire:

- LiDAR
- Fine Scale Vegetation & Habitat Map
- Imagery

– Post-fire:

- Building & expanding via lens of extreme events

LIDAR AGB 2013 - 30m





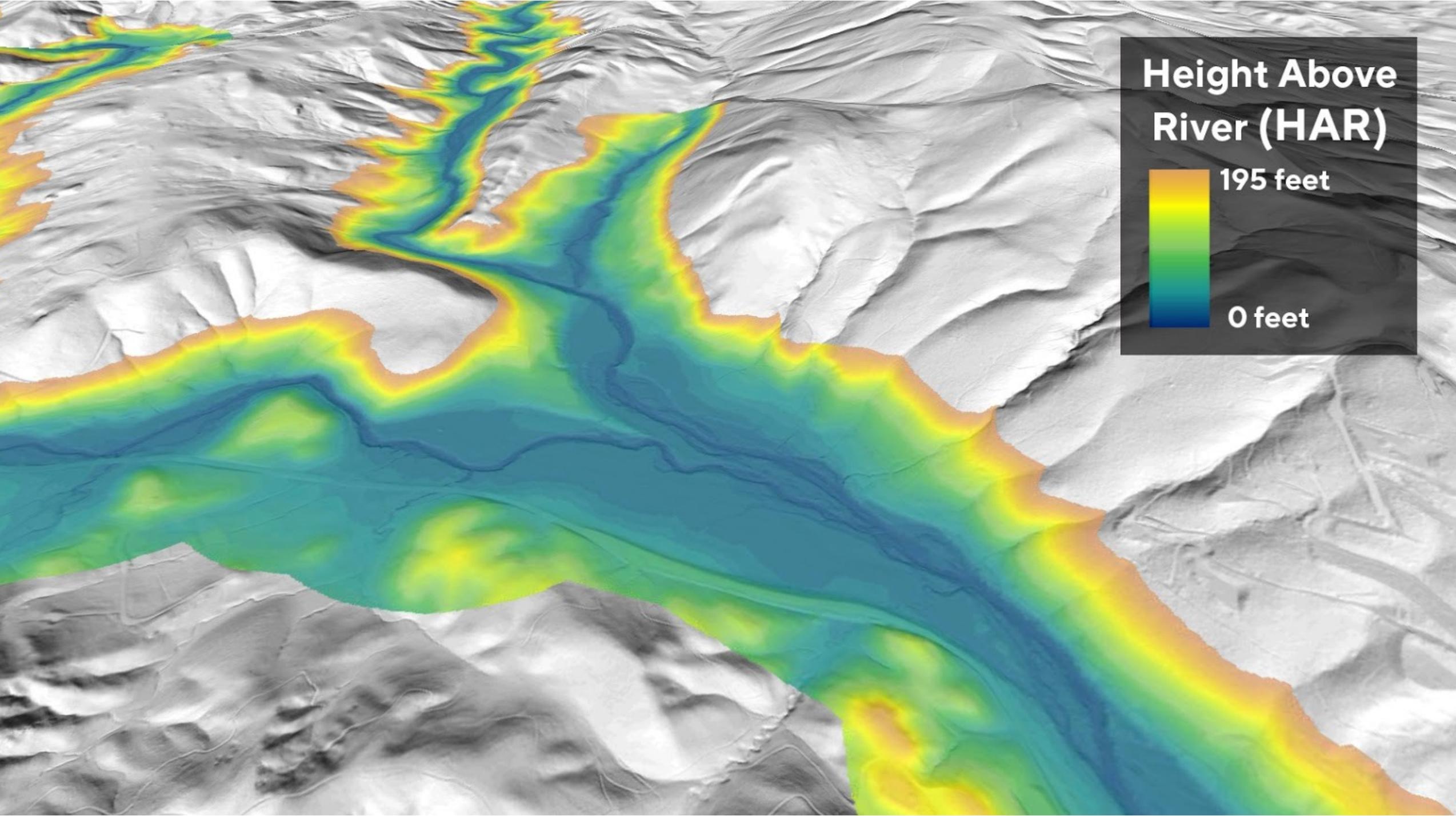
Riparian Corridor Conservation

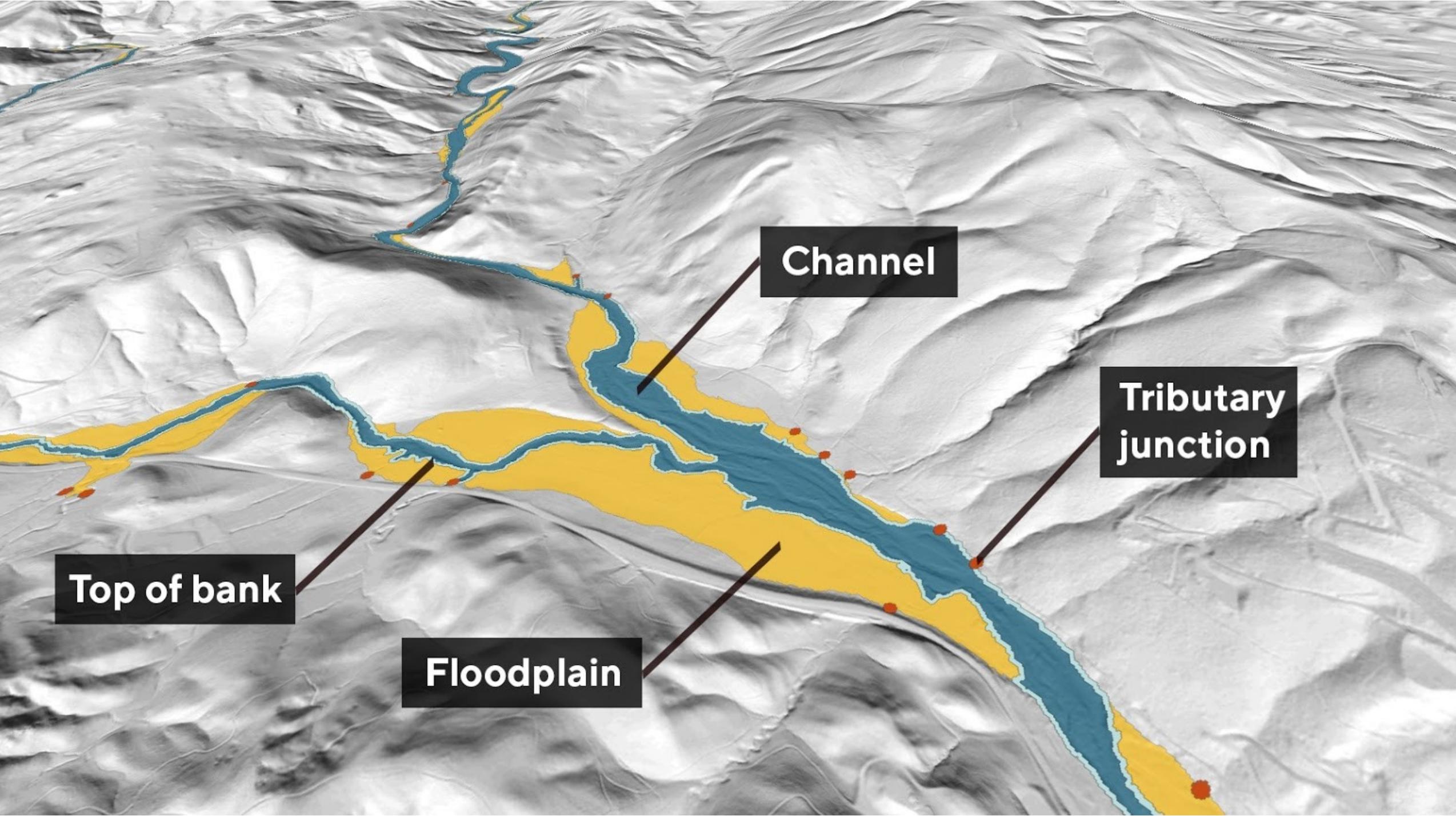
How wide for long term function?

- Meandering
- Topographic diversity
- Vegetation community succession/diversity
- Large wood recruitment
- Floodplain wetlands
- Groundwater recharge

Integrating extremes? Floods, Fires, Droughts







Channel

**Tributary
junction**

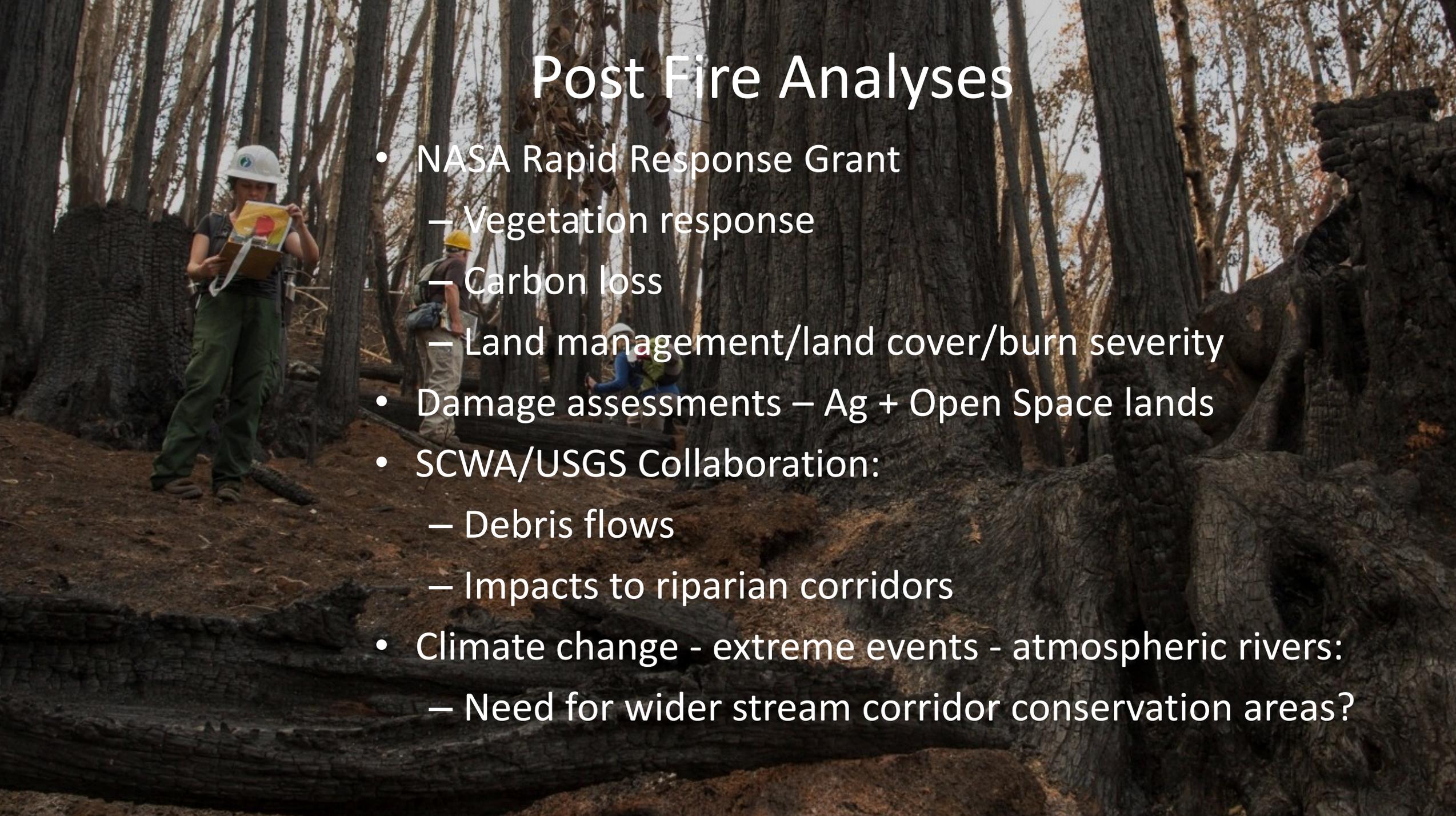
Top of bank

Floodplain



Post Fire Analyses

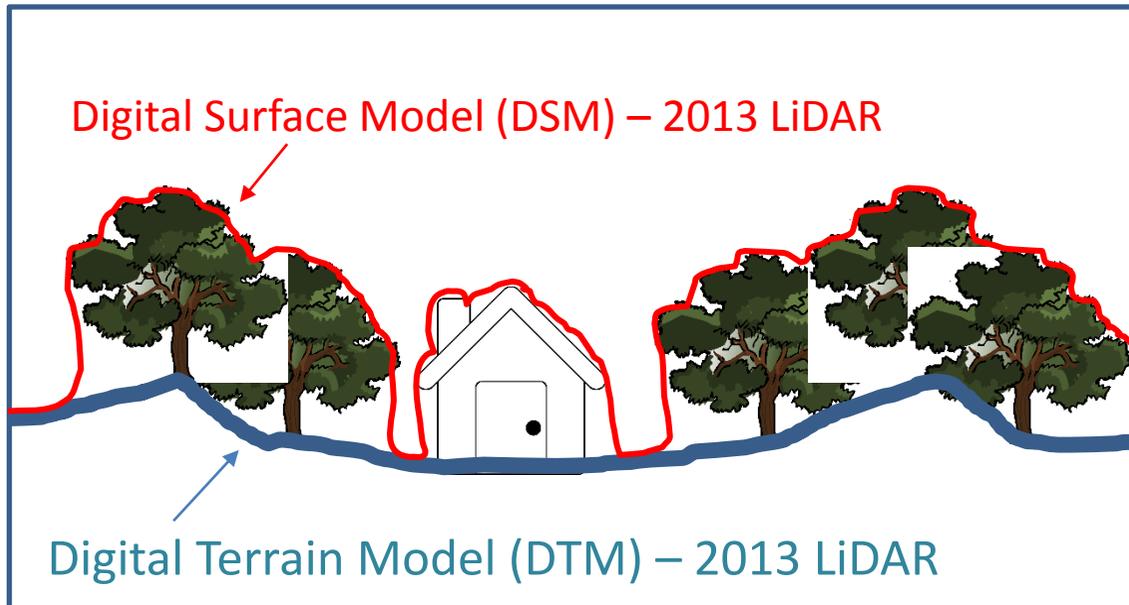
- NASA Rapid Response Grant
 - Vegetation response
 - Carbon loss
 - Land management/land cover/burn severity
- Damage assessments – Ag + Open Space lands
- SCWA/USGS Collaboration:
 - Debris flows
 - Impacts to riparian corridors
- Climate change - extreme events - atmospheric rivers:
 - Need for wider stream corridor conservation areas?



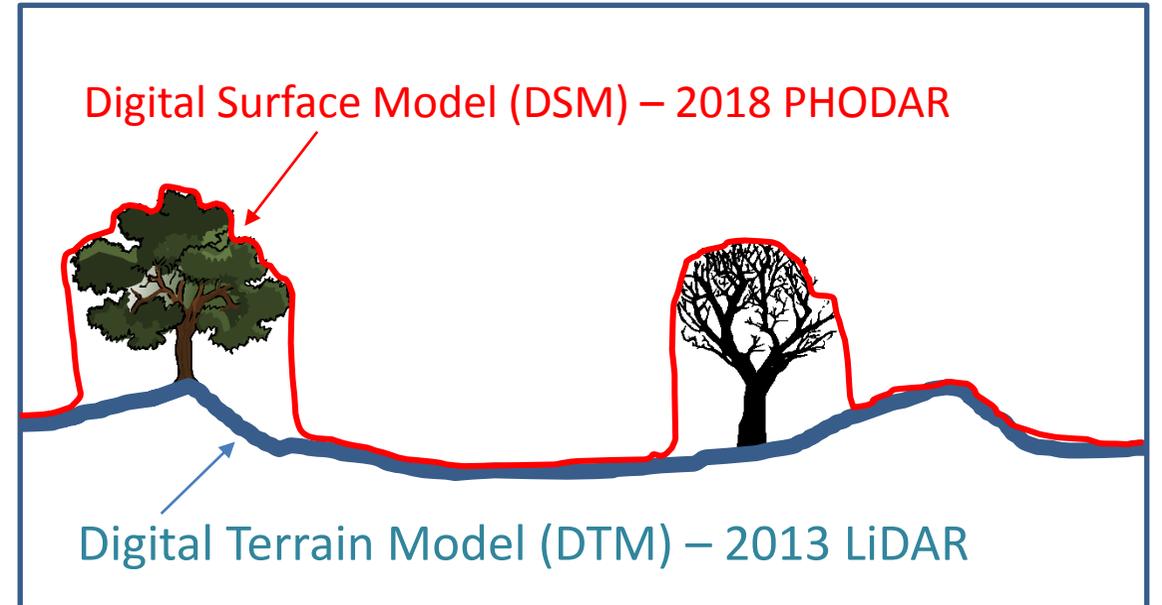


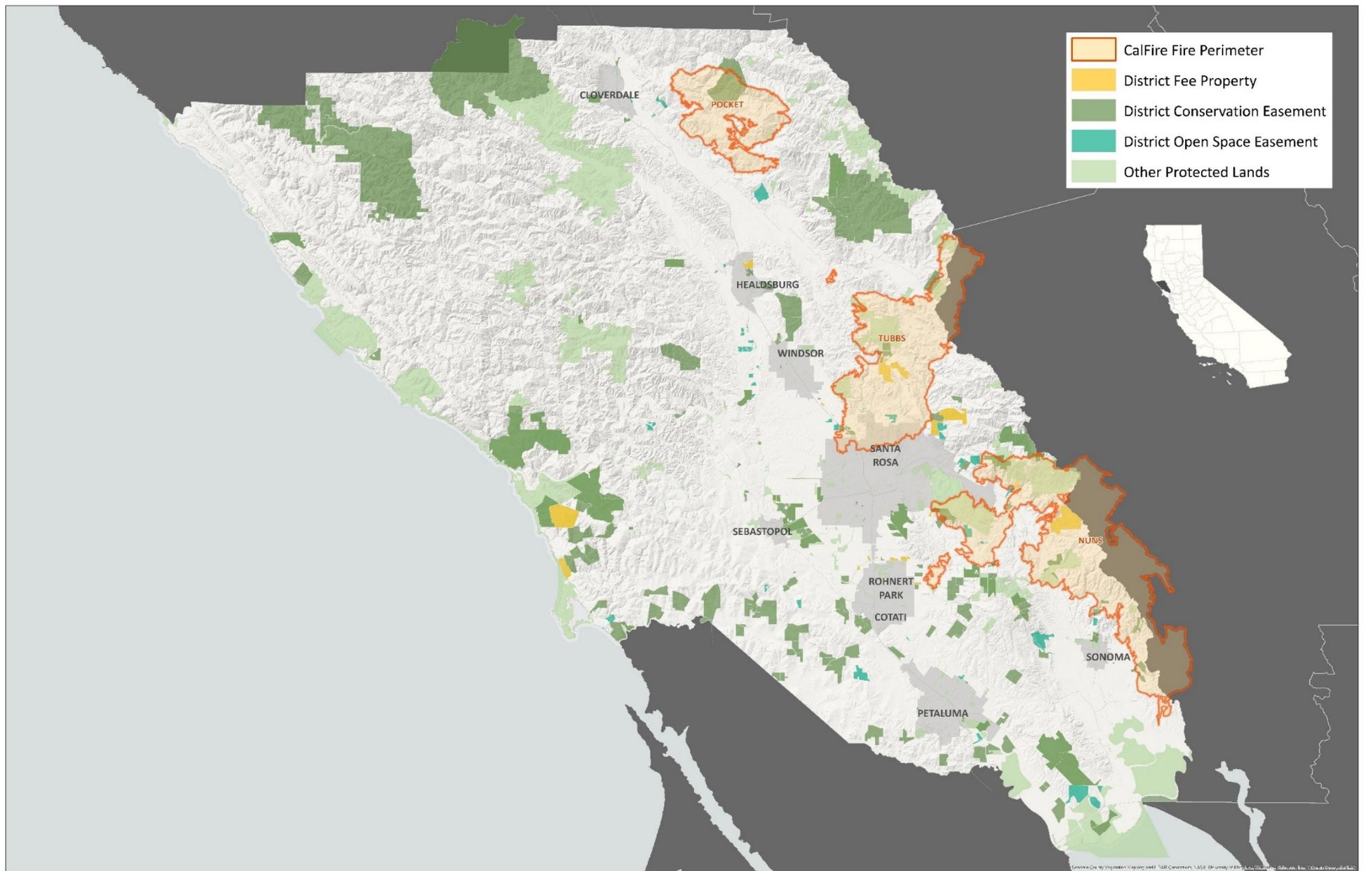
NASA Rapid Response Grant

Pre-Fire Digital Elevation Models



Post-Fire Digital Elevation Models



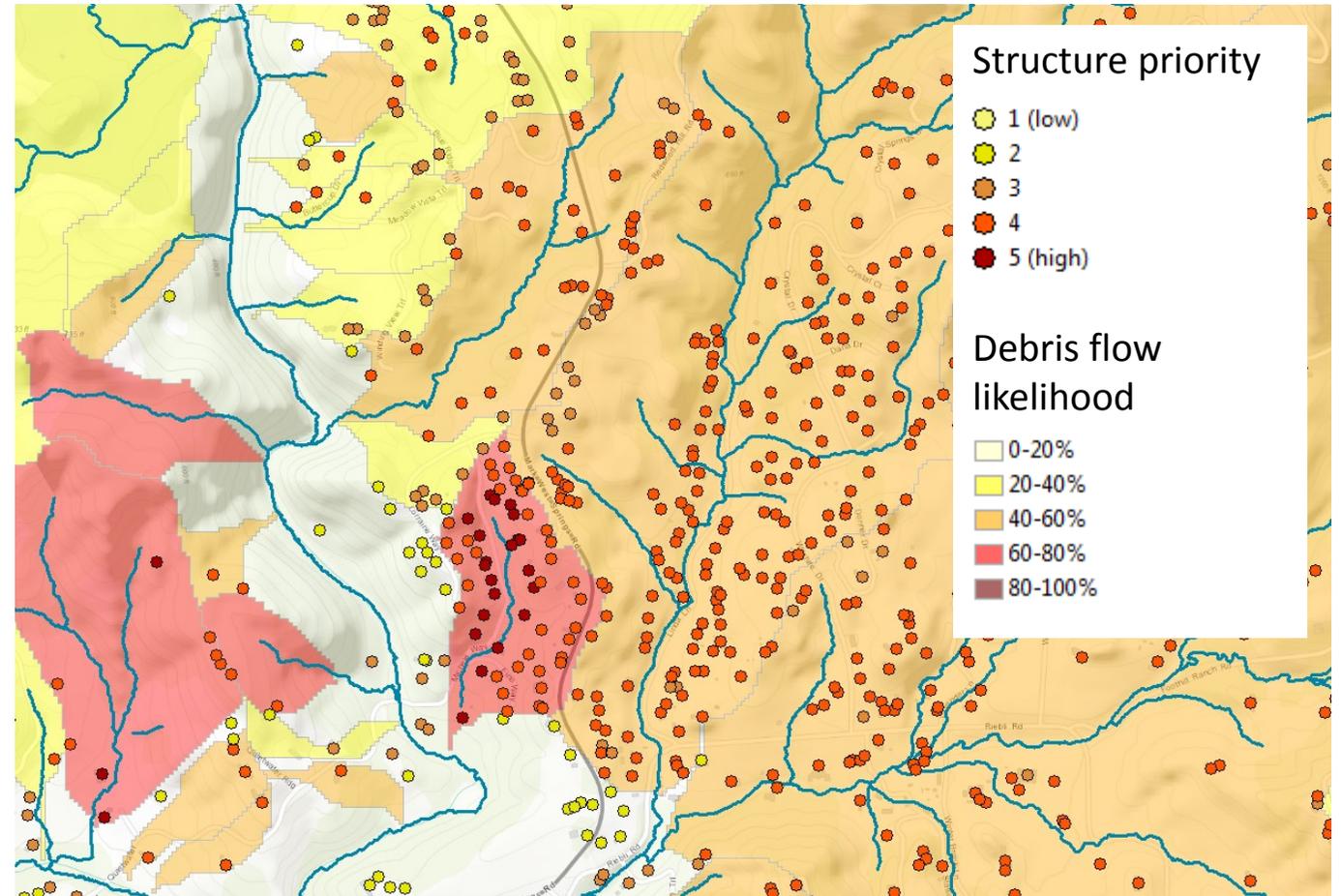


Stream Pollutant and Debris Flow Hazards

Prioritization based on:

- Structure damage (CalFire structure damage assessment)
- Proximity to streams (flow path analysis)
- Debris flow hazard potential (USGS debris flow model)

High priority for destroyed structures that are close to streams and that have high probability of debris flow activity under heavy rainfall conditions (16mm/hr)



Next Steps

- **Watershed Collaborative Report**
- **Support Network: Office of Recovery & Resiliency**
- **Continue Multi-jurisdictional Collaboration**

