



# Chaparral And CSS on the Los Padres National Forest

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# Topics

- The Lay of the Land
- Land Management Plan Direction
- Land Managers' World
- Recommendations

# The Lay of the Land

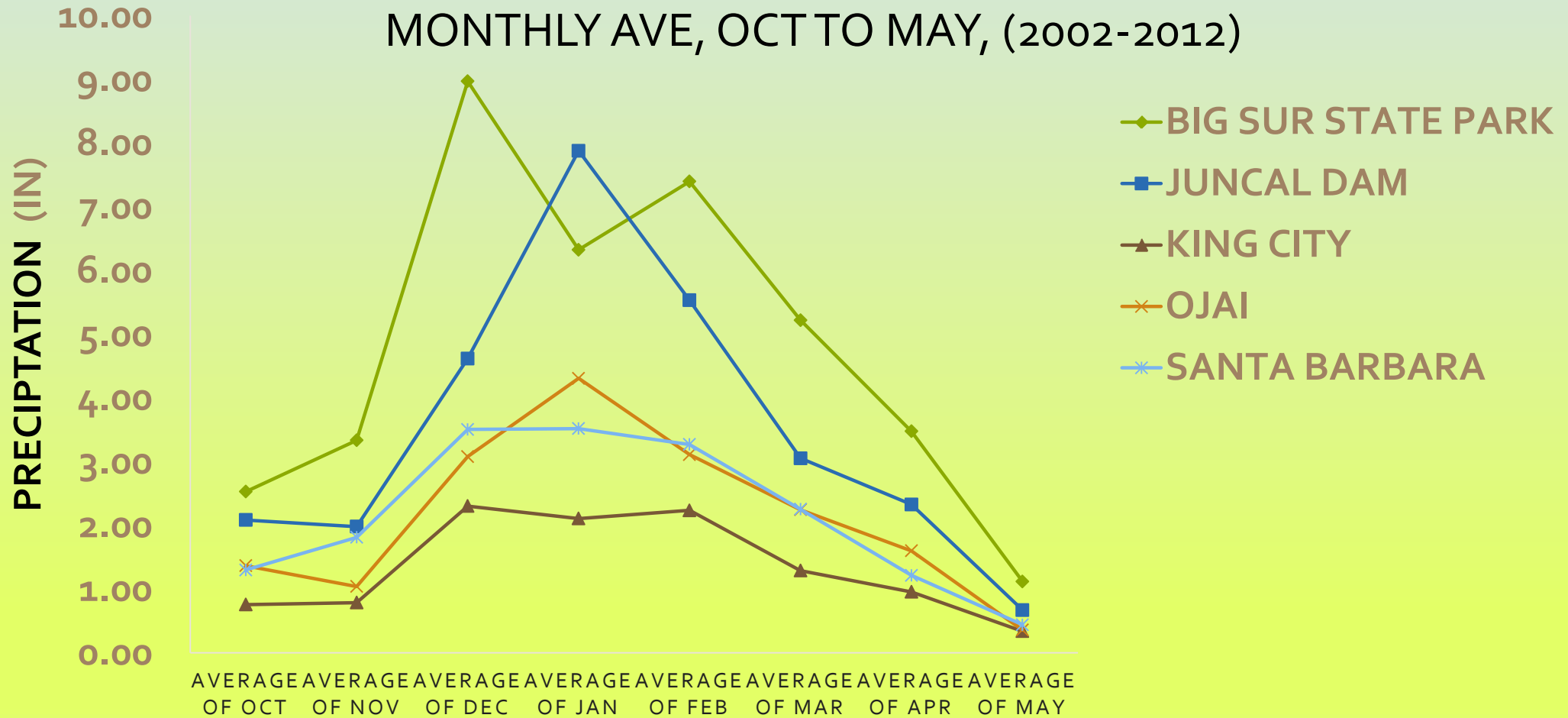
- Spatial Variation
- Vegetation
- Fire

**Los Padres National Forest**  
Established as watershed  
management forest, ~ 75 yrs;  
From Monterey County to  
Los Angeles County  
~2 million acres



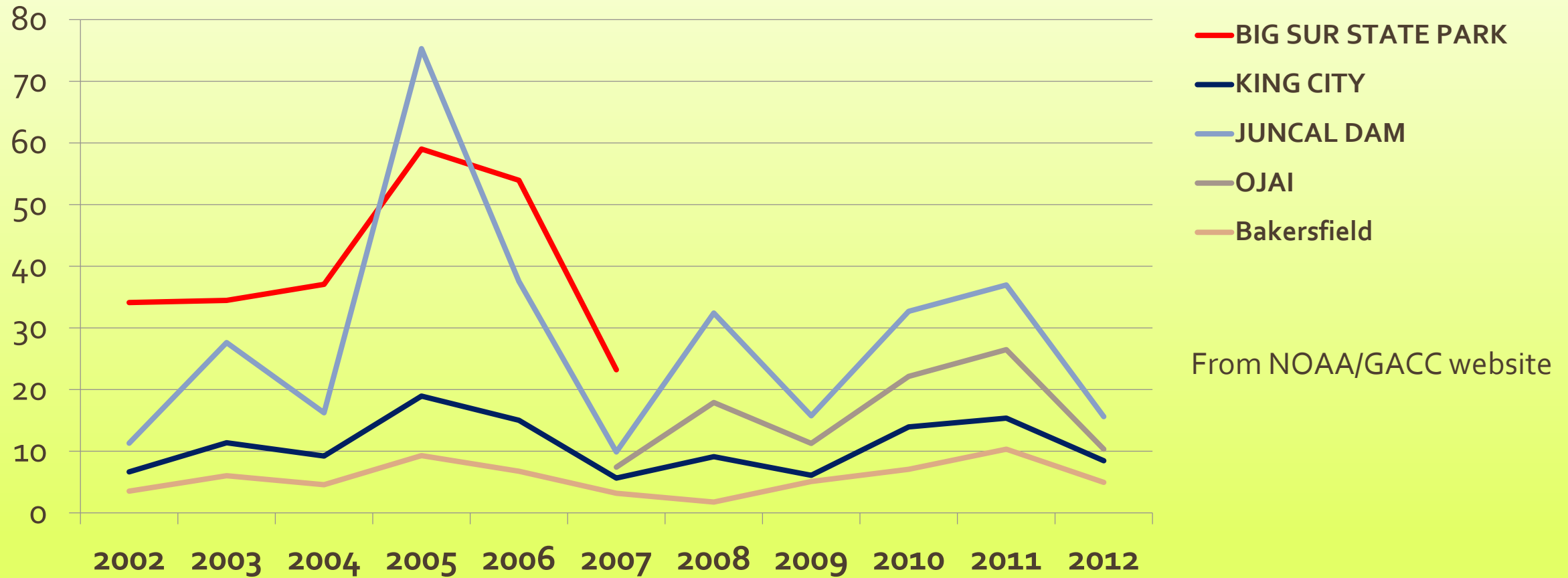
# Precipitation Pattern Variation & Restoration Projects

## Mediterranean Climate of Winter Storms and Dry Summers



# Precipitation Pattern Variation and Restoration Projects

## El Niño and La Niña Effect Varies Across LPNF



# Precipitation Pattern Variation and Restoration Projects Elevation, Aspect, Storm Pathways, and Temperature Gradient of Transverse Ranges

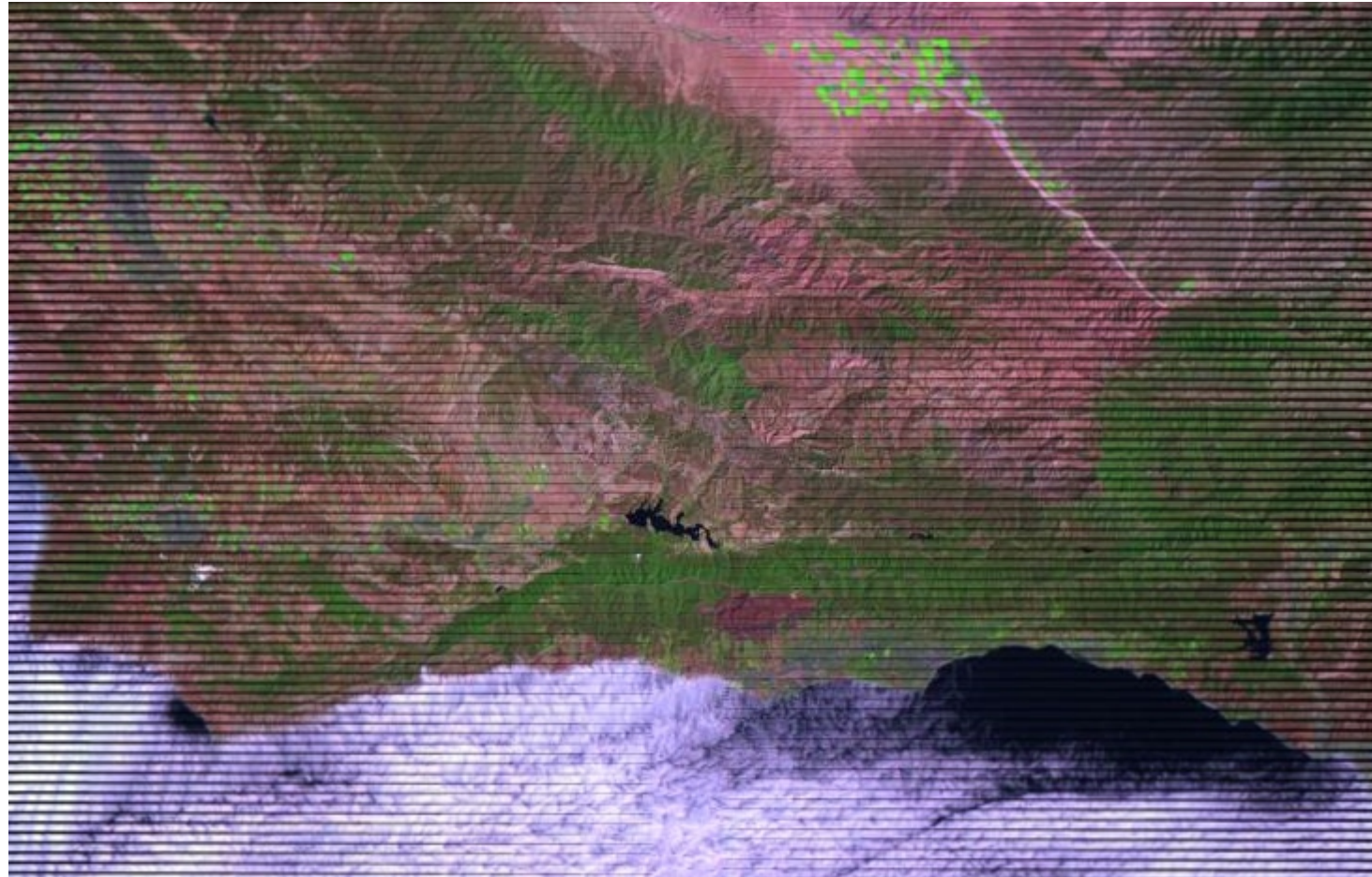


Photo - 2008247 landsat. No correction for lines.

Insolation, rainfall, and geology/soils affect vegetation type, especially in Transverse Ranges.

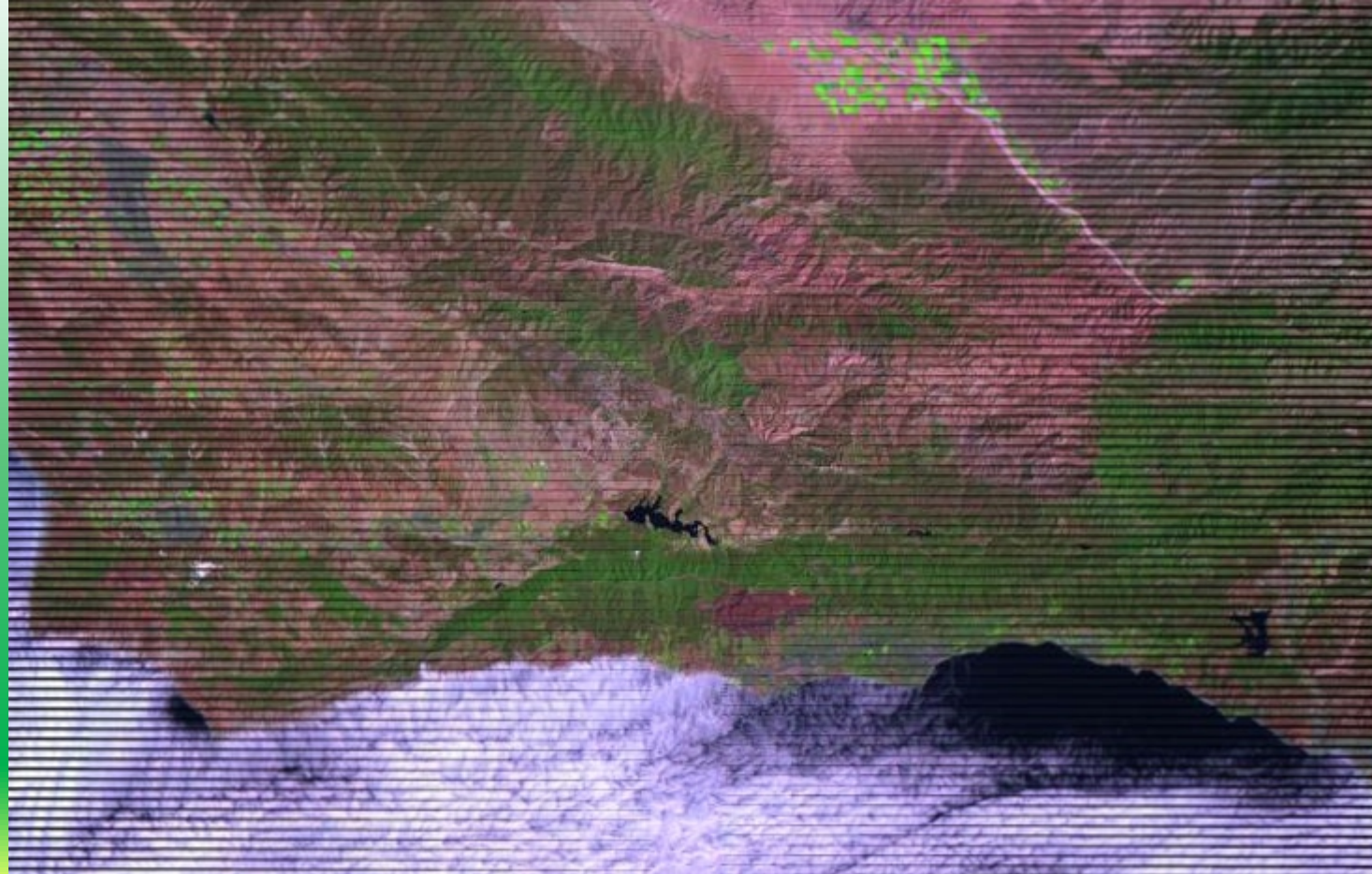


Photo - 2008247 landsat. No correction for lines.



# LPNF Cycles

## 'A Norm of Disasters'

Drought →

(Fire →)

Flood & Landslides

Renders averages meaningless

# There were 38 vegetation types analyzed for Land Management Plan (early 2000's).



# LMP Shrub Types -- Borchert

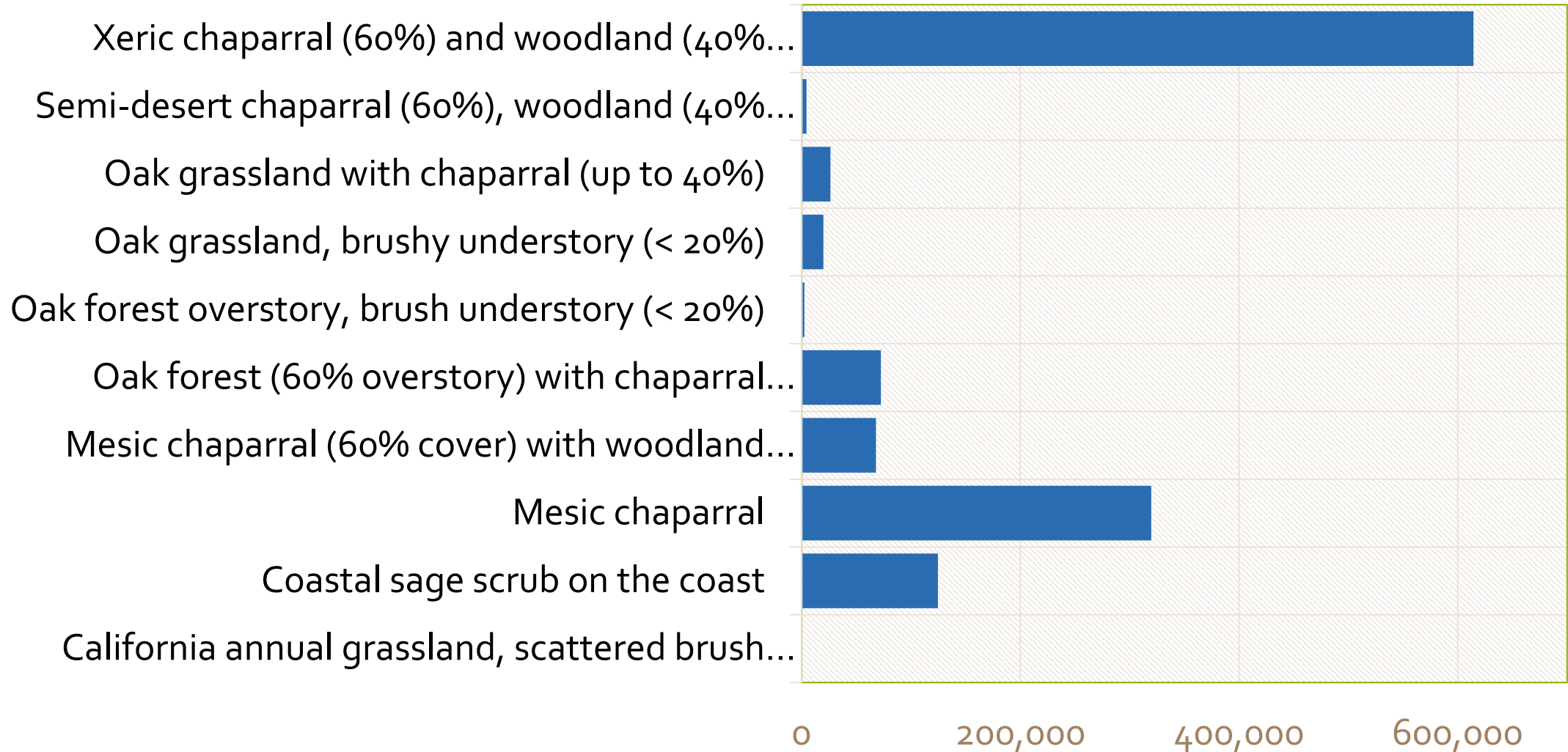
Coastal Sage Scrub, Chaparral, and Mixed Chaparral

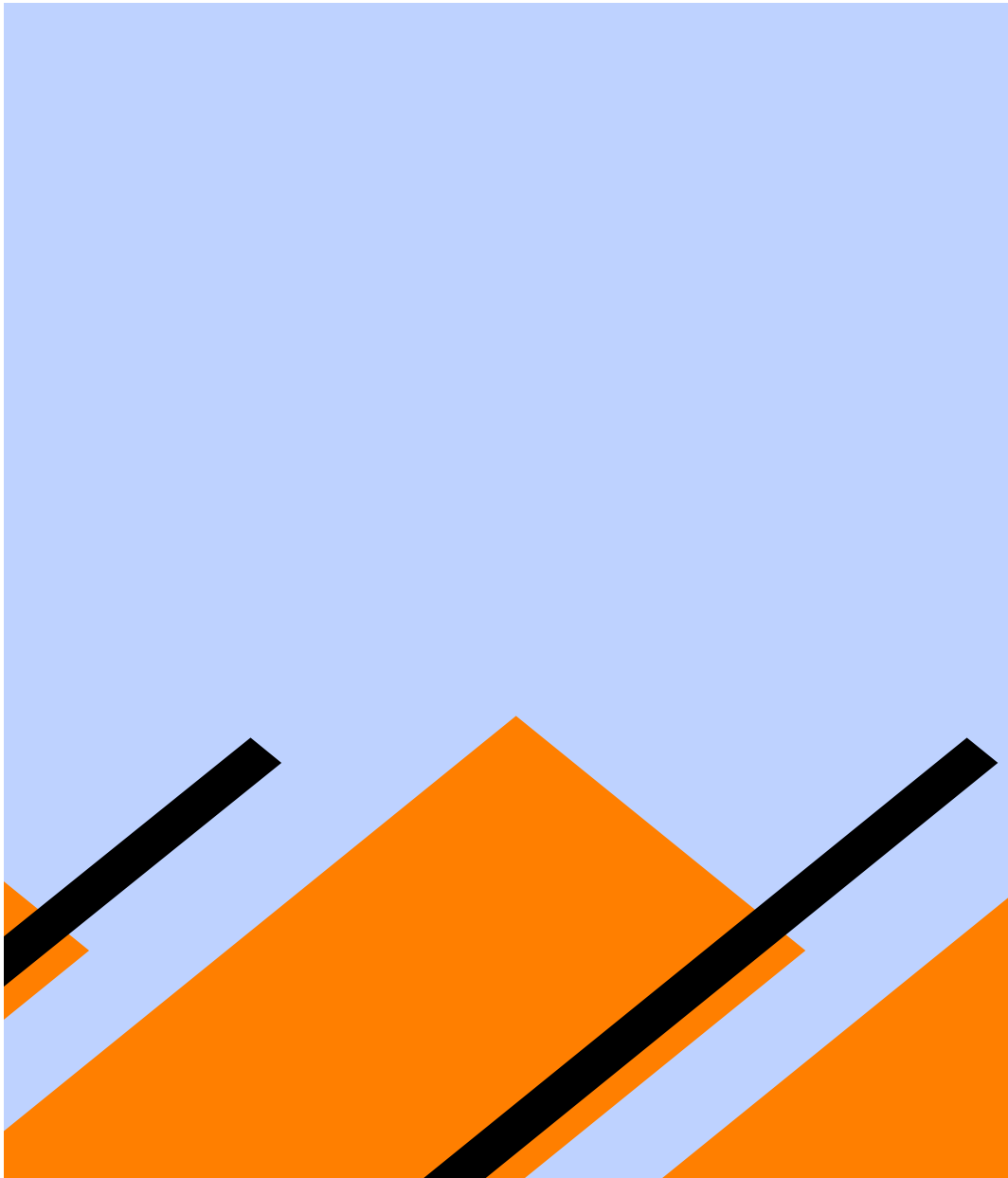
~Half of Los Padres National Forest landbase is shrub-dominated vegetation.

~ 10% are chaparral mixed~ with other vegetation types.

~6% landbase is coastal sage scrub.

# 2002 Mapped Chaparral Types





## Dibblee Story



# LPNF Cycles

## 'A Norm of Disasters'

Drought →

**Fire** →

Flood & Landslides

# Fire summary 1980 - 2009

2,384 Ignitions

< 1 acre	1,349	56.5%
< 10 acres	678	28.4%
< 100 acre	194	8.1%
< 270 acres	58	2.4%
< 910 acres	42	1.8%
< 4600 acres	31	1.3%
< 240,207	32	1.3%

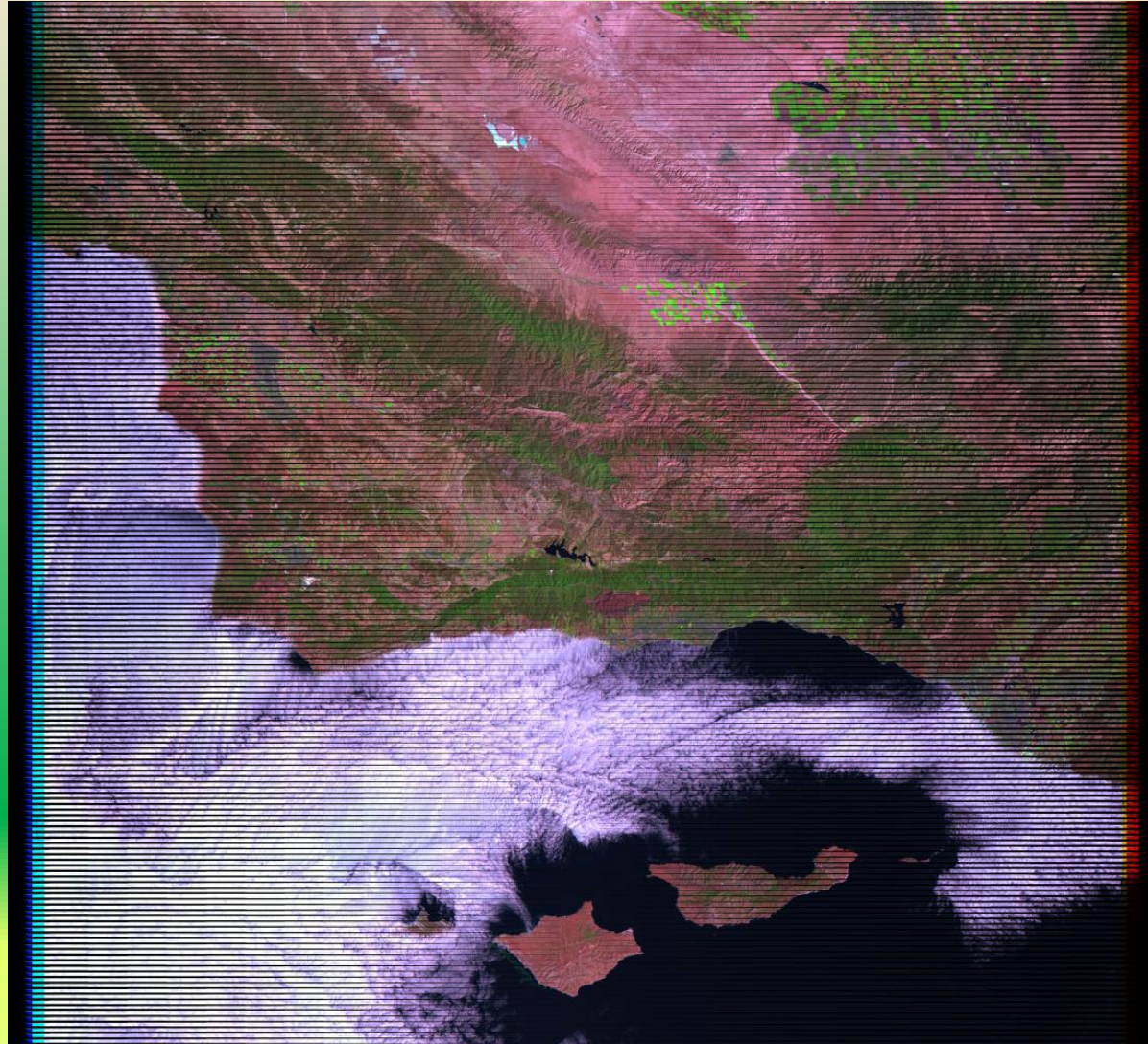


# Land Management Plan Direction PreEuroamerican Fire Regimes

# Ignitions

- **Natural Start**
  - **Lightning Complex**
  - **Heat Anomalies**
  - **Native American practices**
- **Anthropogenic**

Fire behavior varies across days and sites.



## SH5 (145)

### High Load, Dry Climate Shrub

**Description:** The primary carrier of fire in SH5 is woody shrubs and shrub litter. Heavy shrub load, depth 4-6 feet. Spread rate very high; flame length very high. Moisture of extinction is high.

Fine fuel load (t/ac) 6.5

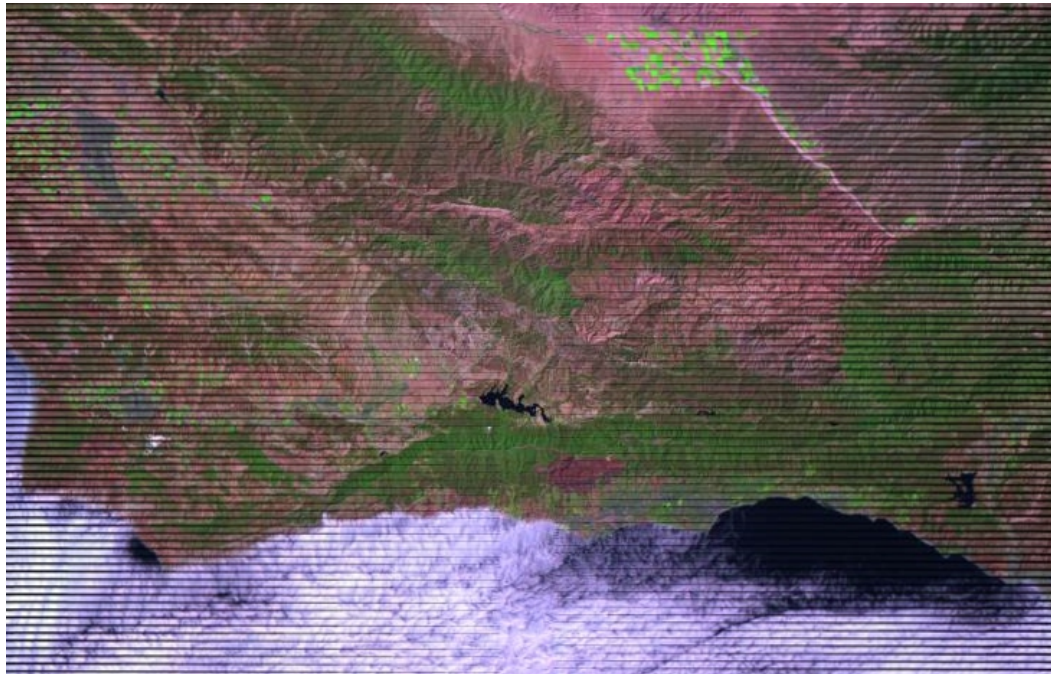
Characteristic SAV (ft-1) 1252

Packing ratio (dimensionless) 0.00206

Extinction moisture content (percent) 15



# Fire Intensity Indicators Used for Burned Area Emergency Rehab



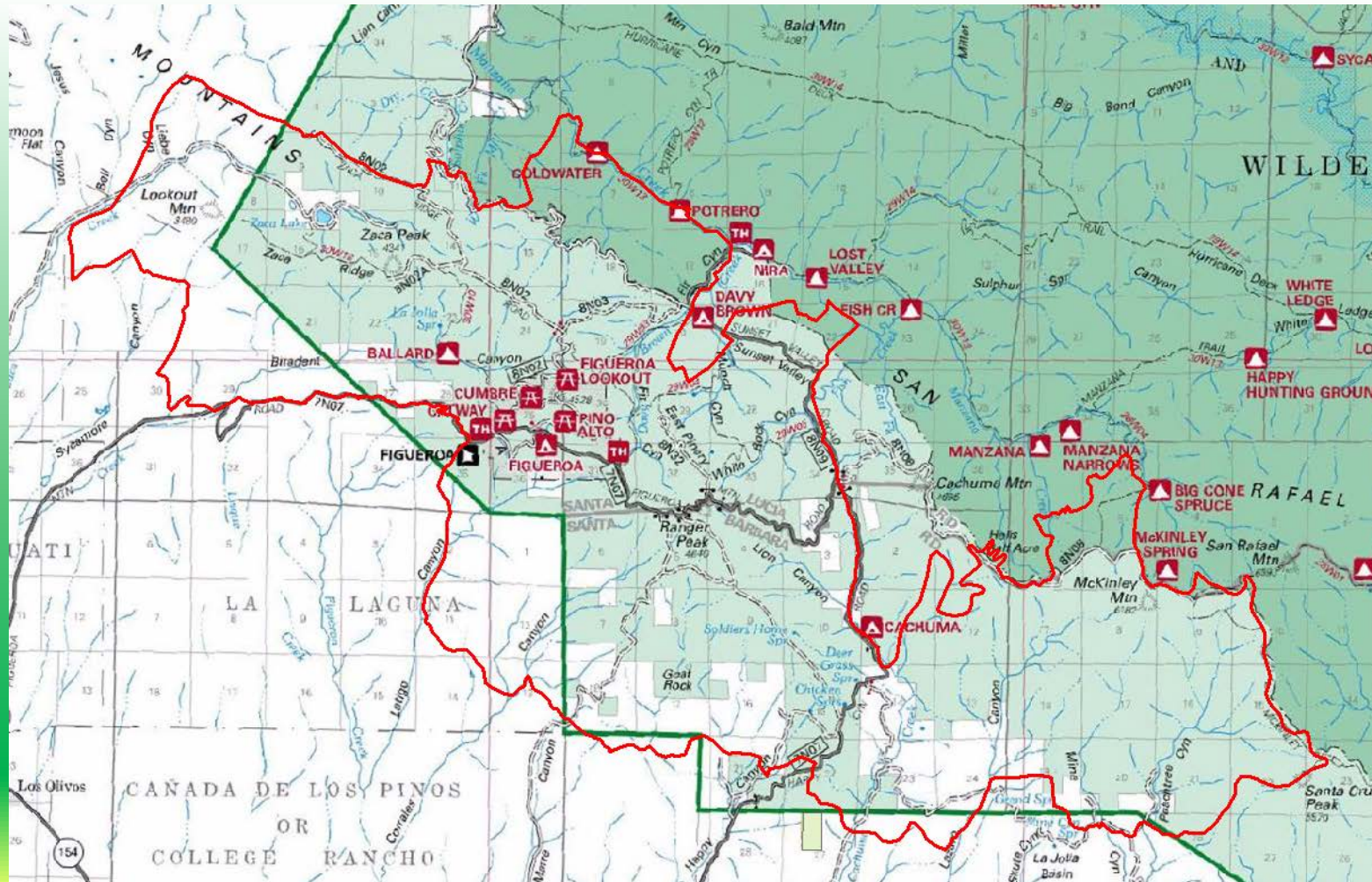
INDICATOR	LOW	MODERATE	HIGH
Ash Color	Dark		White/red color
Ash Depth	Sparse		Over 5 cm (2") depth
Fuel size burned	<0.6 cm (1/4") diameter		2+ cm (3/4")
Shrub canopy burned	< 40%		➤ 80%
Litter	Singed litter	charred	ash
Plant root crown			burned
Soil crust			present

There were 3244 fires mapped for fire severity.

1980 to 2010

	Count of Patches	Sum of Acres
Unchanged	814	1,591,660
Light	814	2,924,890
Moderate	810	3,068,954
High	781	3,481,853
Not Mapped (blank)	25	38,058
Grand Total	3244	11,105,414

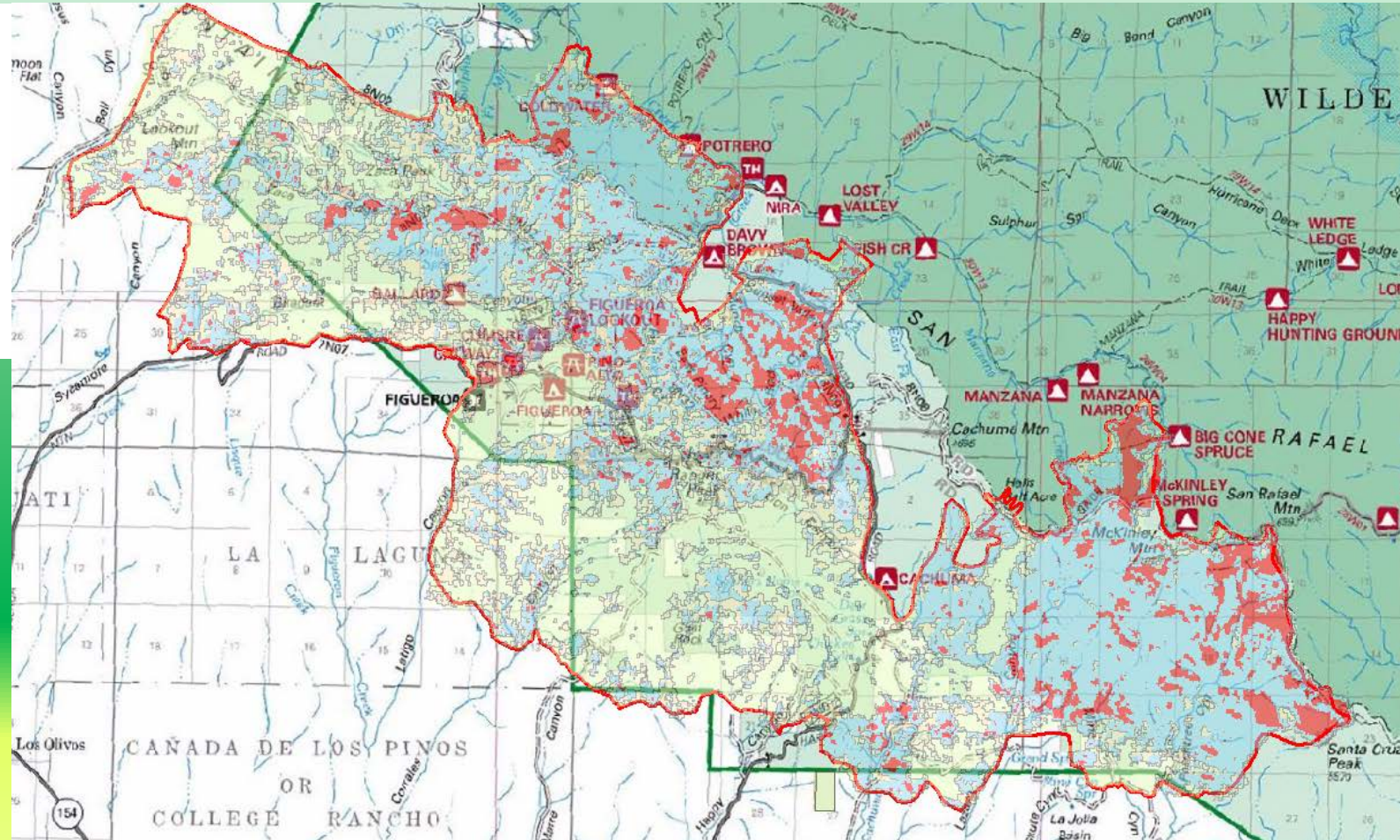
# Marre Fire Perimeter, Figueroa area, Santa Barbara County



# The Marre Fire had a low amount of vegetation that burned at high severity.

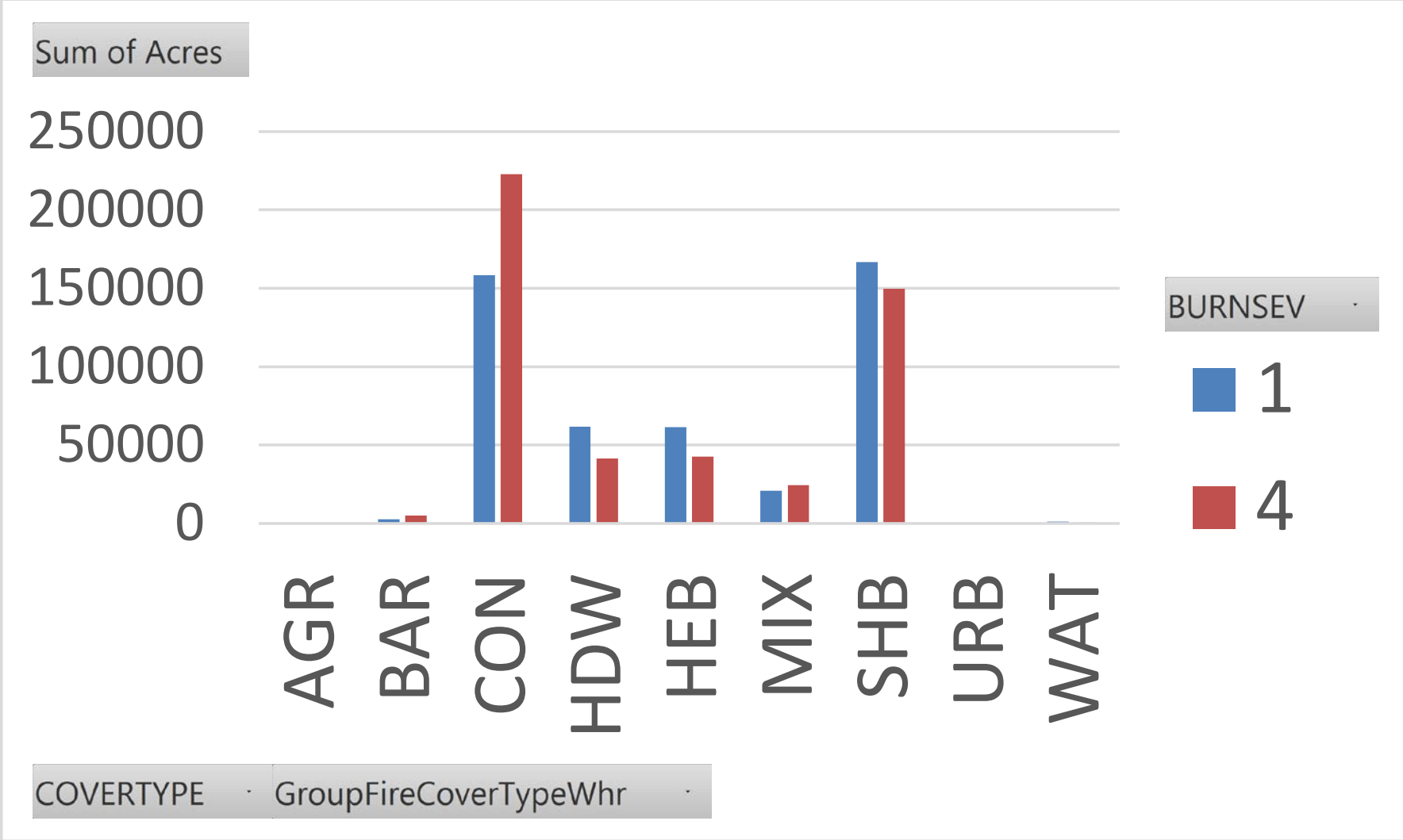
## Layers

- VegBurnSeverity10\_3 selection
- <all other values> BURNSEV
- High
- Moderate
- Low
- Unchanged
- Not mapped; clouds, etc.





# Within each fire, compare burn severity with Vegetation Type



# Decision Space of Land Managers

Laws , Rules, Reg'ns - LMP

Budget



Public

Program of Work (Priorities)

# Land Managers' Decision Space

Do something – Presuppression

Do something -- Postfire

Watch and Wait

No Decision

“No Decision IS a Decision”

# Presuppression Projects

- Fuelbreak – WUI AND Resource Protection
- Broadcast Burns -- Mosaic
- Thinning – Reduce probability of crown fires

# (Jamie's) Important Factors For LPNF Fire Recovery Natural Regeneration or Restoration

- Existing vegetation
- Fire Behavior
- Post fire weather

# Ecological Factors Affecting Postfire Recovery of Existing Vegetation

**% Resprouters or % seeders of the Dominant/codominant species**  
**Dispersal mechanisms**



# Recommendations

**Call ahead before doing fieldwork, every trip.**

- **SO employee and the**
- **District Ranger**

**When reporting, visuals should be 80% of the summary and provide a map. Contact two employees to state which sites on the Forest are included in the paper.**

**Thank you.**

# What happened here?

