

Managing Forests for Fire Resiliency

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SAN MATEO

RESOURCE
CONSERVATION
DISTRICT

Landscape Integrated Pest Management Workshop— March 1, 2023

About the RCD

Since 1939

Boots on the ground

USDA Natural Resources Conservation Service

Boundaries and beyond



The Forests of San Mateo County

- Santa Cruz Mountains bio-region
- Coast Redwood, Douglas Fir, Oak woodlands, Monterey Pine, Tan Oak, Bay Laurel, many more!
- High % within Wildland Urban Interface (WUI)
- Historic Disturbance Regimes
 - Periodic, low-intensity disturbance (fire)
 - Resulting landscape mosaic/diversity
- Threats:
 - Drought
 - Climate Change
 - Pests
 - Interrupted Disturbance Regimes
 - Resulting monotypic forest types



Forest Pests

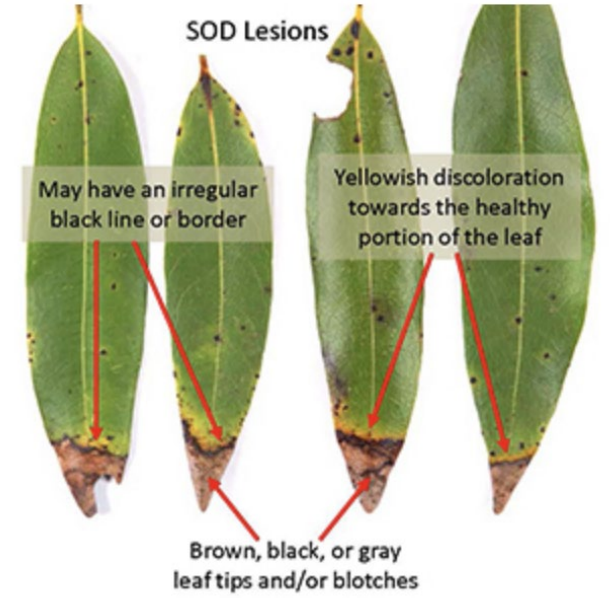
- Sudden Oak Death
 - *Phytophthora sp.*
- Native Insects
 - Bark beetles
 - Defoliators (moths and oakworms)
- Invasive Insects
 - Borers and shot-hole borers
- Overstocked native and non-native vegetation
 - Resulting from lack of disturbance
 - Increases susceptibility of forests to other pests and wildfire

Forest Pests

- Sudden Oak Death
 - *Phytophthora sp.*
 - *Moist climate promotes spread*



SOD Symptoms Guide



Forest Pests

- Native Insects



California Oakworm moths



Bark Beetles

- Invasive Insects



Shot-hole borer



Mediterranean oak borer

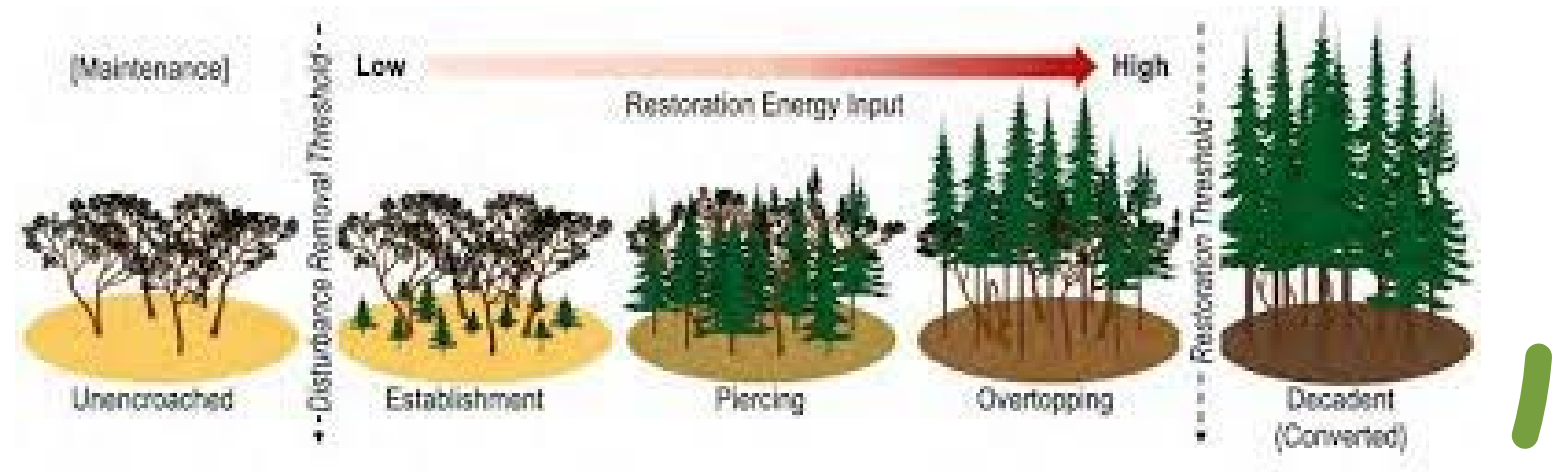
What to do?

- Management Methods
 - Monitoring
 - Determine where and when pests occur
 - Prevention
 - Do not spread pathogens
 - Treatment
 - Individual tree treatments
 - Tree removal
 - Often difficult/impossible to control at landscape scale



Forest Pests

- Overstocked native and non-native trees
 - Resulting from lack of disturbance
 - Increases susceptibility of forests to pests and wildfire



Forest Pests

- Douglas-Fir conversion of Oak Woodland



Forest Pests

- Eucalyptus



- Overstocking



Forest Pests

- Excessive fuel load and ladder fuels



Forest Pests

- Catastrophic fires



What to do?

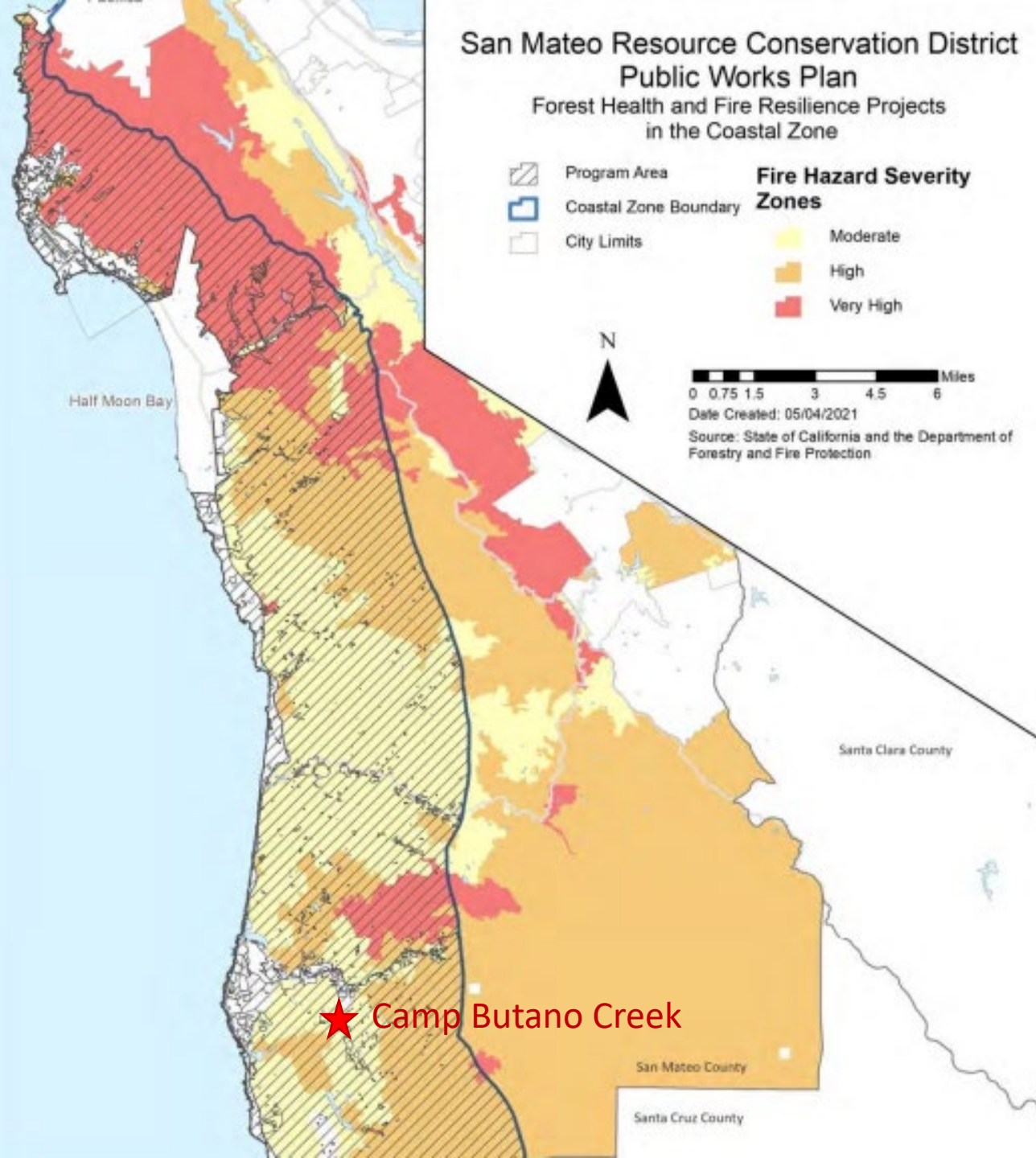
- Management Methods
 - Restore historic disturbance regimes



What to do?

- Management Methods
 - Understory Mastication
 - Forest Thinning
 - Invasive species removal using manual, mechanical and herbicide methods
 - Broom sp.
 - Hypericum
 - Eucalyptus
 - Prescribed Fire





Project Site: Camp Butano Creek

- Total: 41.3 acres
- Basic Treatment:
 - Manual and Mechanical (mastication) treatment of understory vegetation
 - Primarily slopes less than 40%
 - Dead, hazard, and diseased trees
 - Live trees up to 8 inches DBH
 - Material left on-site
 - Manual treatment by crew near sensitive resources and important infrastructure



Before Treatment



After Treatment





Before Treatment



After Treatment



Before Treatment



After Treatment



Before Treatment



After Treatment

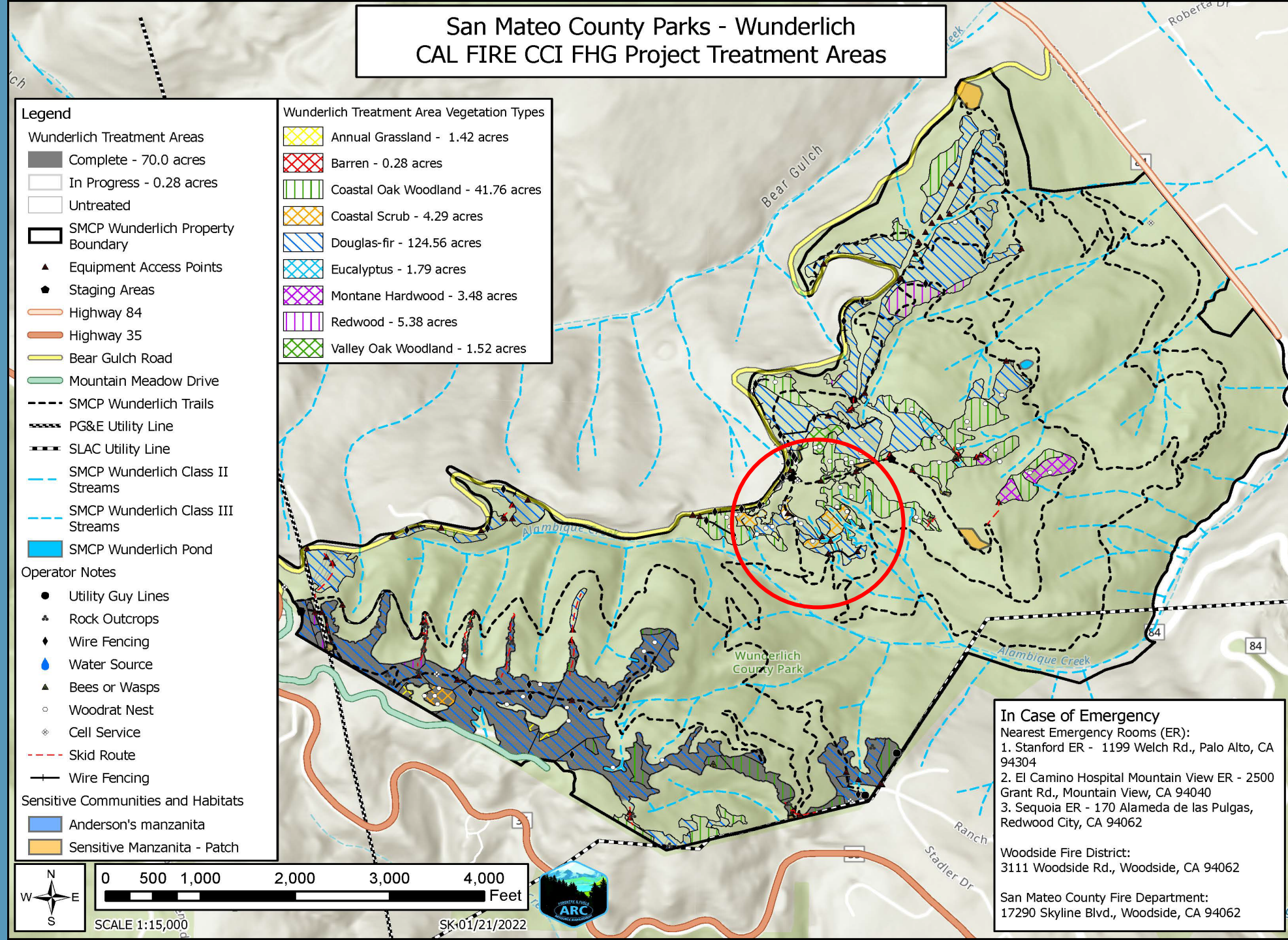
Project Site: Huddart and Wunderlich County Parks

- Total: 402.1 acres
 - ~106 acres treated so far
- Basic Treatment:
 - Mechanical mastication of understory vegetation
 - Primarily slopes less than 40%
 - Live and dead trees up to 8 inches DBH
 - Material left on-site



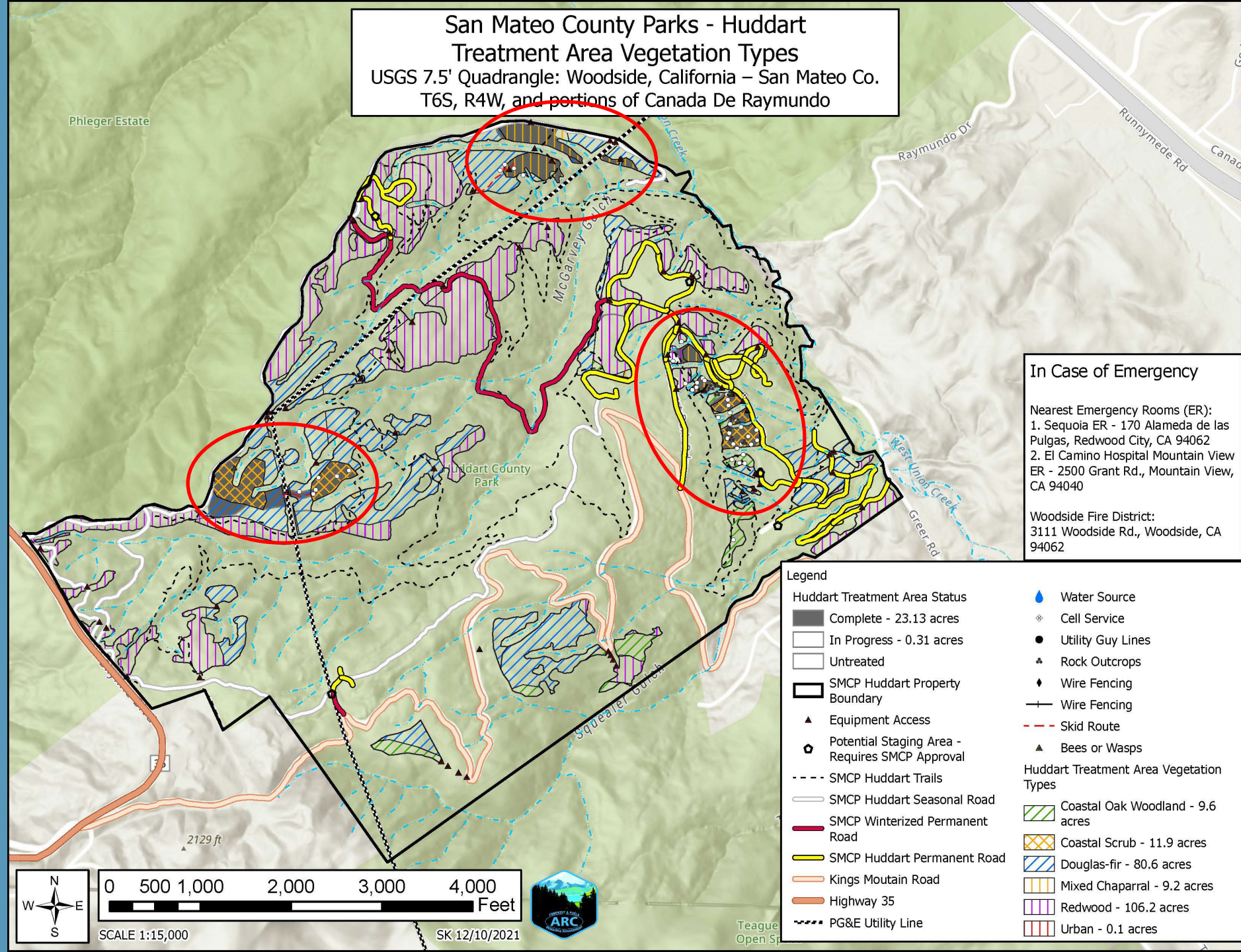
Wunderlich County Park

- 83 acres treated as of 2/4/2022
- Brief Winter hiatus as we allowed soils to dry
- Targeted chaparral and coastal scrub communities outside of nesting bird season



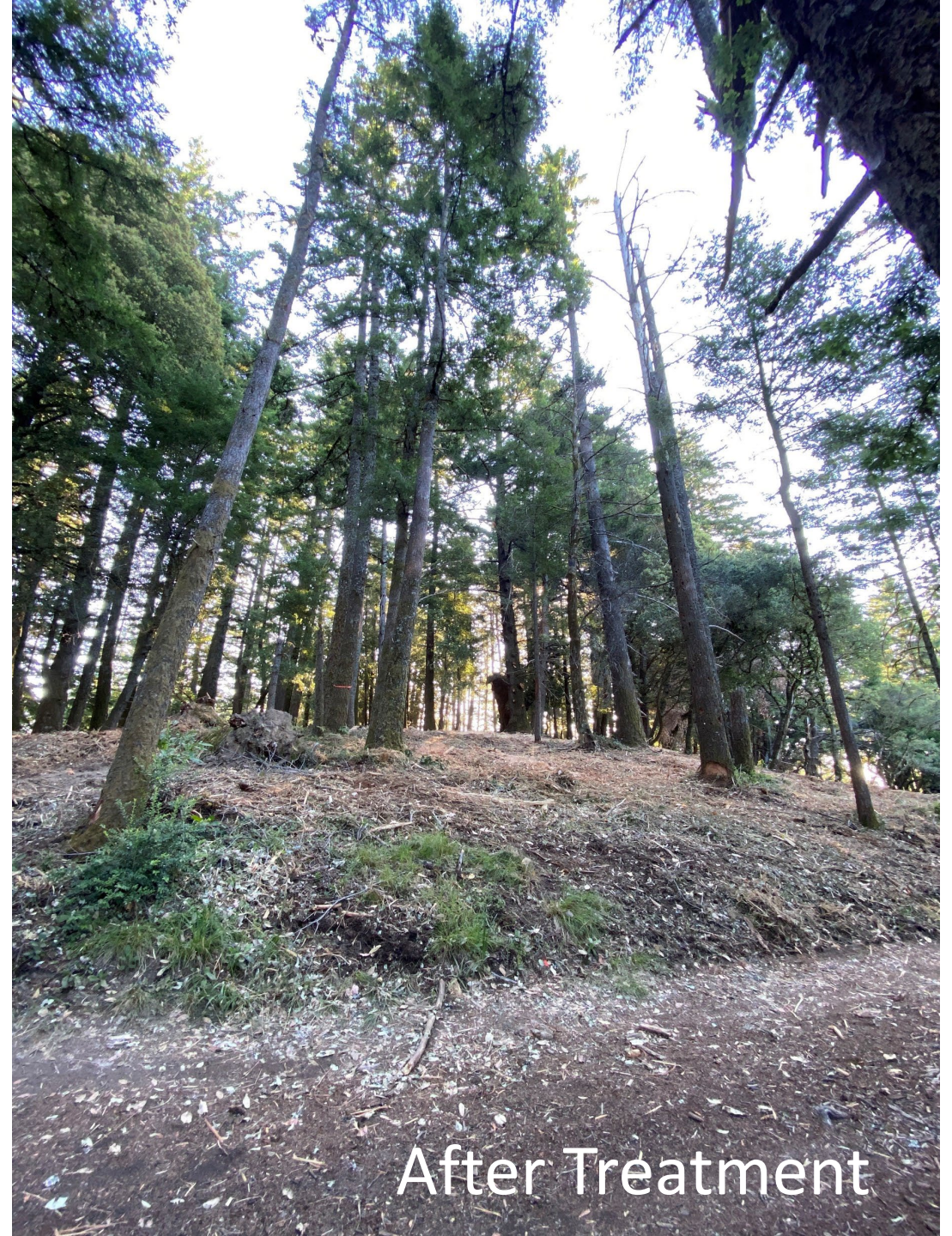
Wunderlich County Park

- ~24 acres treated as of 2/4/2022
- Targeted chaparral and coastal scrub communities outside of nesting bird season





Before Treatment



After Treatment



Before Treatment



After Treatment



Before Treatment



After Treatment





Questions?