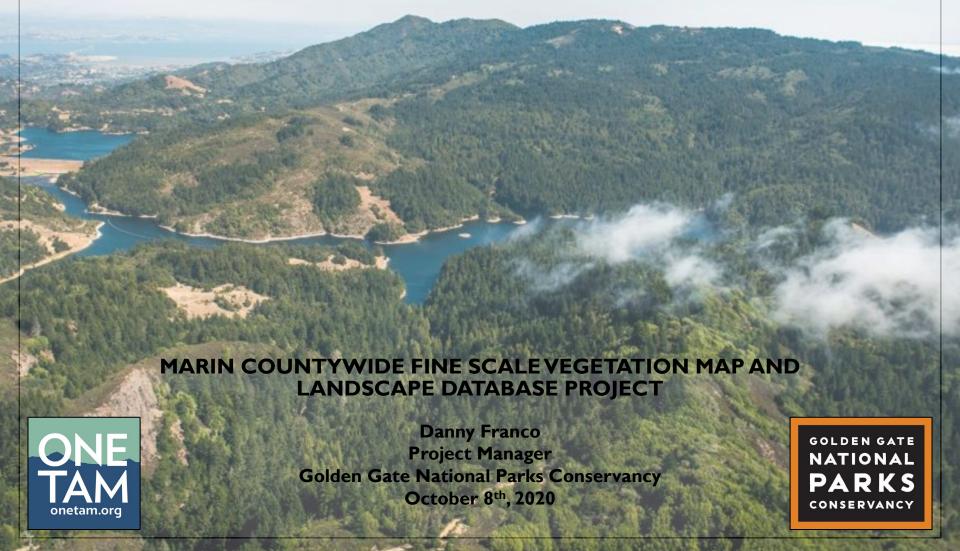
IDENTIFYING PROBLEMS AND SOLUTIONS: THE WORK OF THE ONE TAM PARTNERSHIP





"perhaps the highest priority need for assessing condition and trend of key vegetation community and rare plant indicators is having accurate and consistent mountain-wide spatial vegetation data."

MEASURING THE HEALTH OF A MOUNTAIN:

A Report on Mount Tamalpais Natural Resources

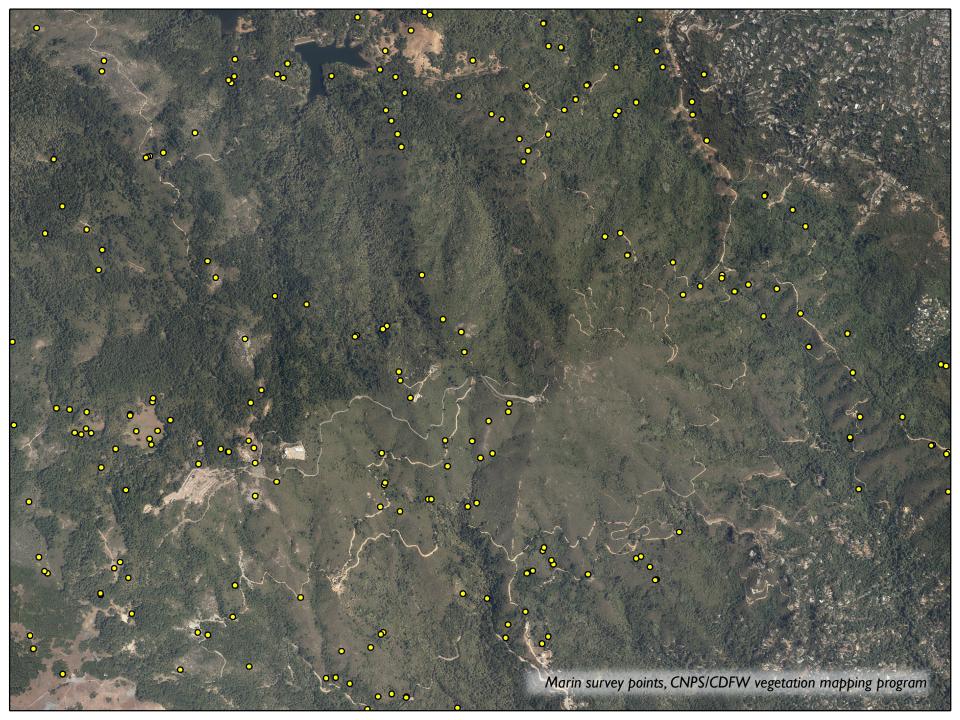
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PRODUCTS AND SCHEDULE

Milestone	Status
6-inch, 4-band ortho imagery acquisition and post processing	Completed June 2018
Vegetation Field Sampling for floristic classification	Completed July 2019
QLI Lidar Acquisition	Completed Winter 2019
I-foot countywide lidar derived contours	Completed December 2019
Additional lidar derived products (DEM, DSM, hillshade, raw ladder fuels raster, canopy height model, canopy closure model, etc.)	Completed January 2020
Draft Vegetation Lifeform Map	Completed March 2020
Lidar derived hydrological system mapping (NHD update)	In process
Marin countywide vegetation classification analysis, descriptions and key	In process
Countywide lidar derived impervious surfaces layer upgrade	In process
Draft Fine Vegetation Scale Map to local expert review	February 2021
Complete Fine Scale Vegetation Map	May 2021
Accuracy Assessment and Final Report	June/July 2021

"To effectively care for ecosystems and infrastructure, citizens, landowners, politicians, scientists, stewards and agencies must know the location and distribution of resources across the landscape."





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Festuca californica
                                           Arbutus menziesii – (Quercus agrifolia) Pteridium aquilinum – Grass
                                                                                                                           Sequoia sempervirens - Acer macrophyllum - Umbellularia californic
                                                                            Danthonia californica – Nassella pulchra
                 Thermopsis californica – Bromus carinatus – Annual Bromeo
                                                                                                             Adenostoma fasciculatum – Diplacus aurantiacus
                                                                         Typha (latifolia, angustifolia)
                 Arctostaphylos montana
                                                                                                                                             Sequoia sempervirens – Umbellularia californica
                                                                                                         Sequoia sempervirens – Arbutus menziesii / Vaccinium ovatum 🥻
                                          Arbutus menziesii – (Quercus agrifolia) Acer macrophyllum
                                                                                                                                          Arctostaphylos glandulosa
                             Quercus agrifolia – Arbutus menziesii – Umbellularia californica Arbutus menziesii – (Quercus agrifolia)
                                         Chrysolepis chrysophylla – Arctostaphylos glandulosa Quercus wislizeni - Arctostaphylos glandulosa Eriodictyon californicum / Herbaceous
                                   Arctostaphylos montana
                                                                              Quercus parvula (shrub)
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                                                                             Chrysolepis chrysophylla / Vaccinium ovatum
                           Arctostaphylos glandulosa

    Arctostaphylos glandulosa – Quercus wislizeni

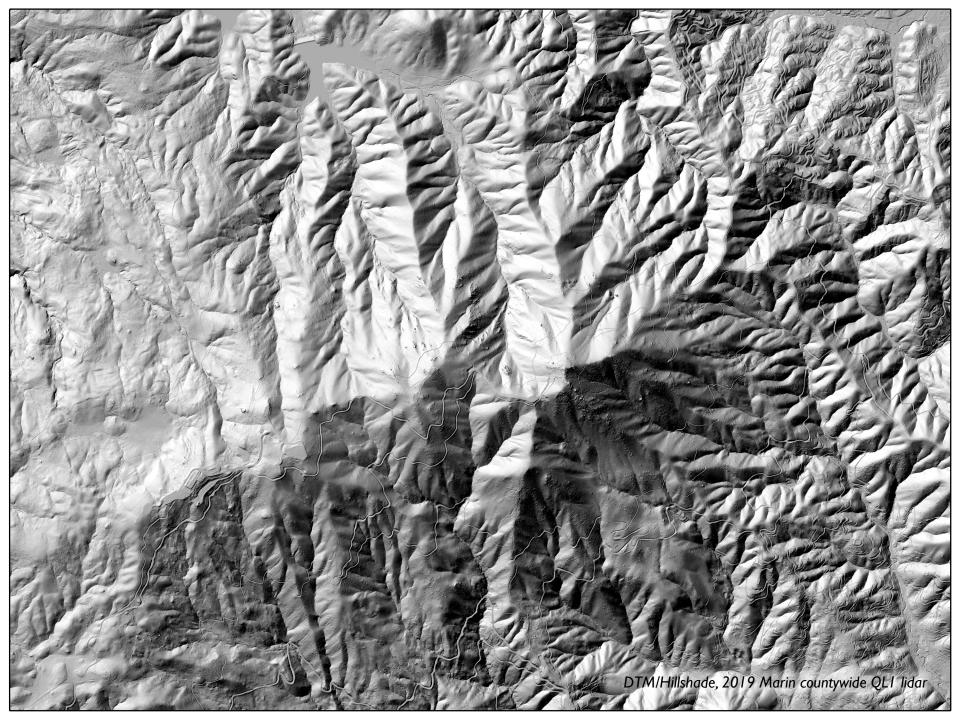
                          Adenostoma fasciculatum Serpentine

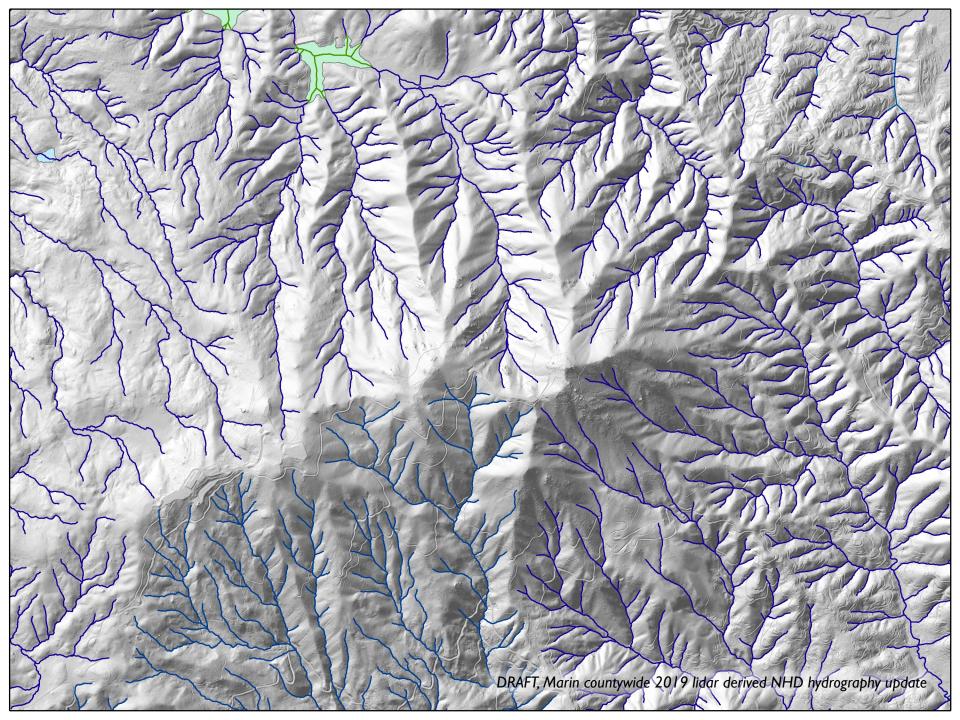
    Pseudotsuga menziesii – Chrysolepis chrysophylla – Notholithocarpus densiflorus

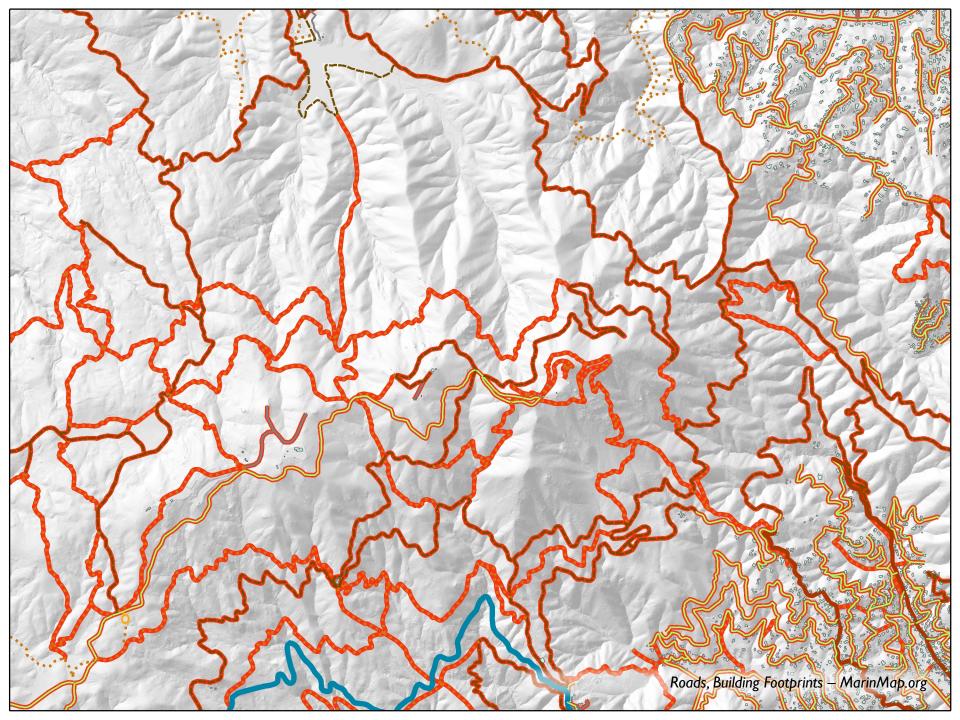
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             Arctostaphylos montana
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                 Carex amplifolia
                                                                                 Quercus wislizeni – Arctostaphylos glandulosa Arctostaphylos glandulosa – Quercus wislizeni
                                    Pseudotsuga menziesii – Umbellularia californica Notholithocarpus densiflorus – Arbutus menziesii
                                                                                                                                                 Adenostoma fasciculatum
                                        Quercus durata / Allium falcifolium – Streptanthus batrachopus
                                                                                                                                                   Chrysolepis chrysophylla / Vaccinium ovatum
                                                                                                      Arctostaphylos glandulosa – Adenostoma fasciculatum
                                                           Arctostaphylos glandulosa
              Sequoia sempervirens / (Pteridium aquilinum) – Woodwardia fimbriata Quercus agrifolia – Quercus chrysolepis – Quercus parvula (shrub) Chrysolepis chrysophylla / Vaccinium ovatum
                                                                                           California Annual Herb/Grass Group
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                      Notholithocarpus densiflorus – Arbutus menziesii Arbutus menziesii – Umbellularia californica
                             Notholithocarpus densiflorus – Quercus chrysolepis
Quercus wislizeni – Arctostaphylos glandulosa

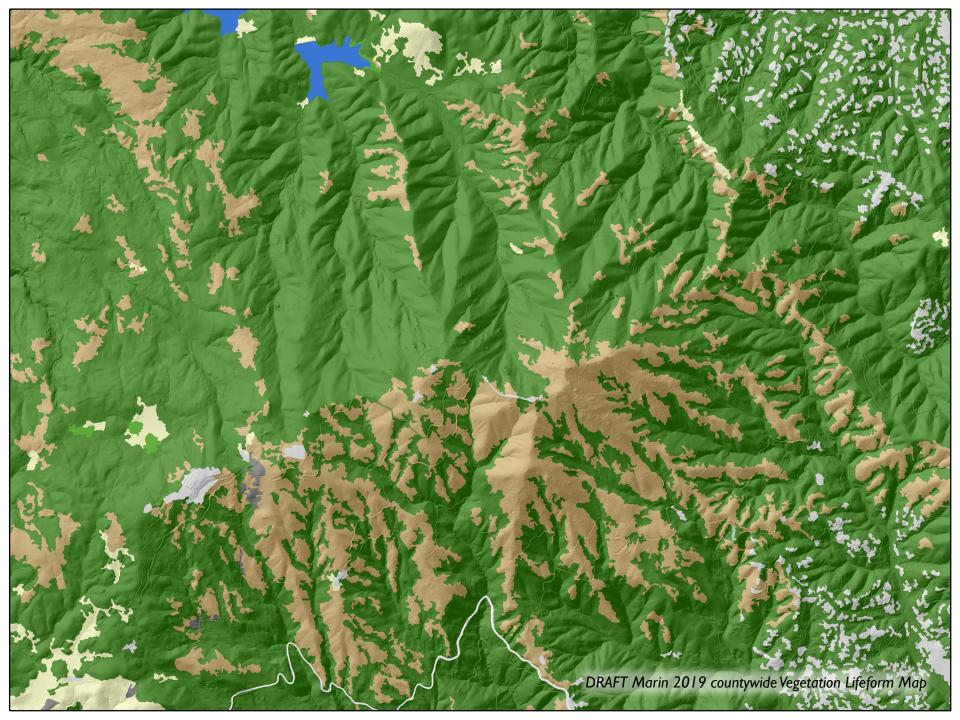
    Arbutus menziesii – Umbellularia californica

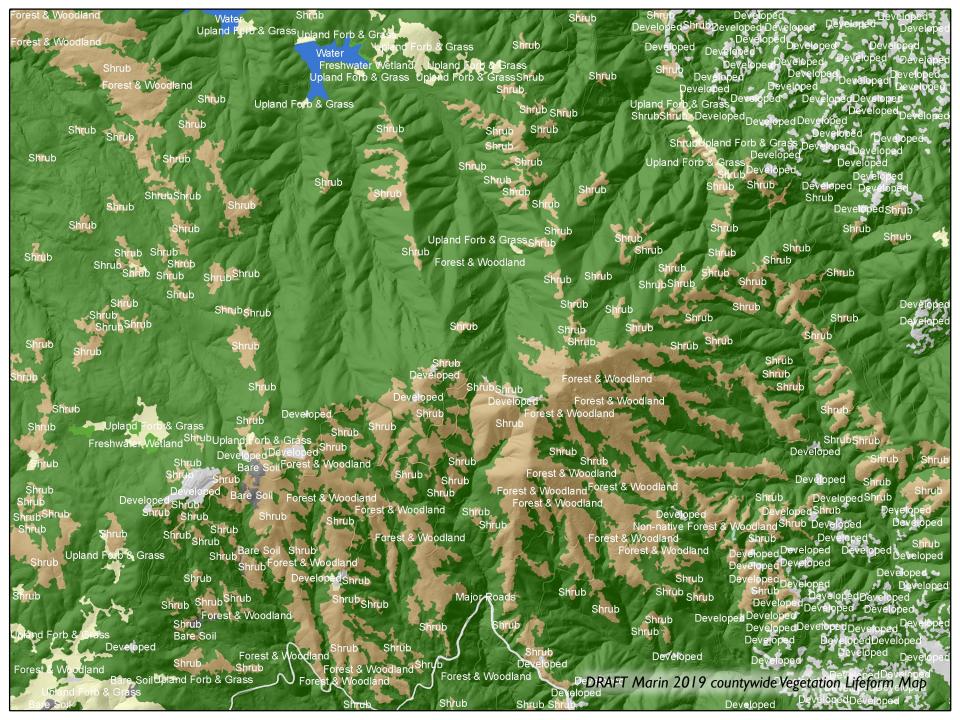
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                            Adenostoma fasciculatum Serpentine Arctostaphylos sensitiva
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                                 Umbellularia californica – Quercus agrifolia Umbellularia californica (Pure - Coasta
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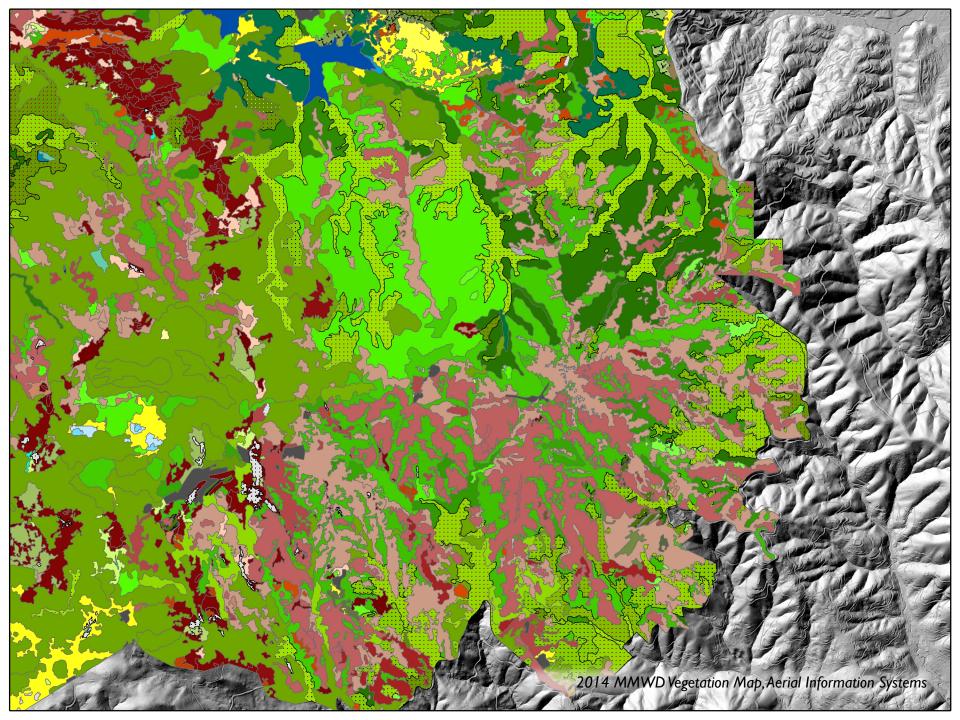












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Actostaphylos montana

Actostaphylos montana

Description of the control 
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Arctostaphylos glandulosa–Adenostoma fasciculatum Sequoia sempervirens
Umbellularia californica Sequoia sempervirens
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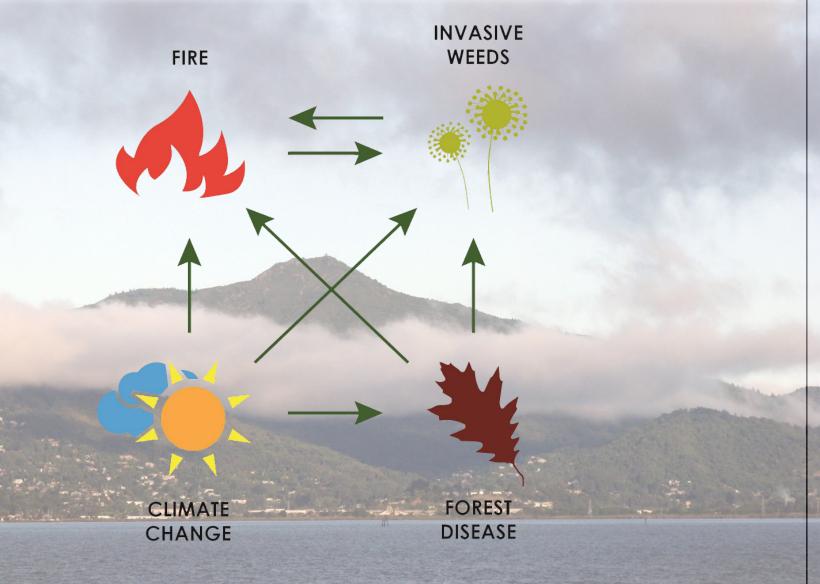
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                                                                                         ual and Perennial Grassland
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How does the fine scale vegetation map and landscape data help us adapt to and mitigate impacts from climate change?





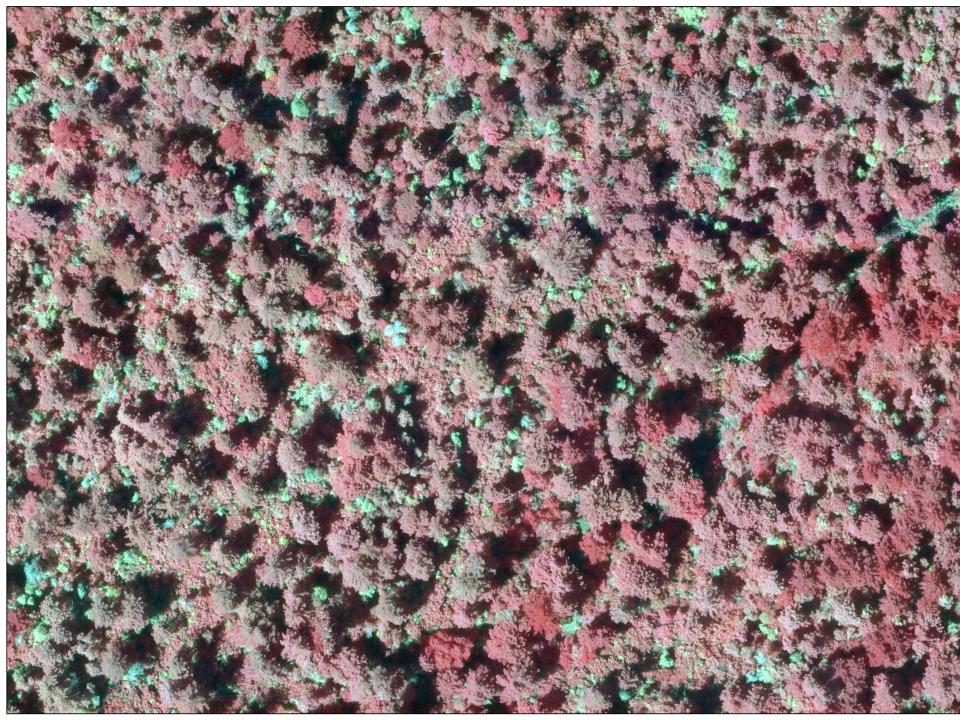
INTERACTIONS BETWEEN CLIMATE CHANGE AND POTENTIAL THREATS TO ECOSYSTEM HEALTH

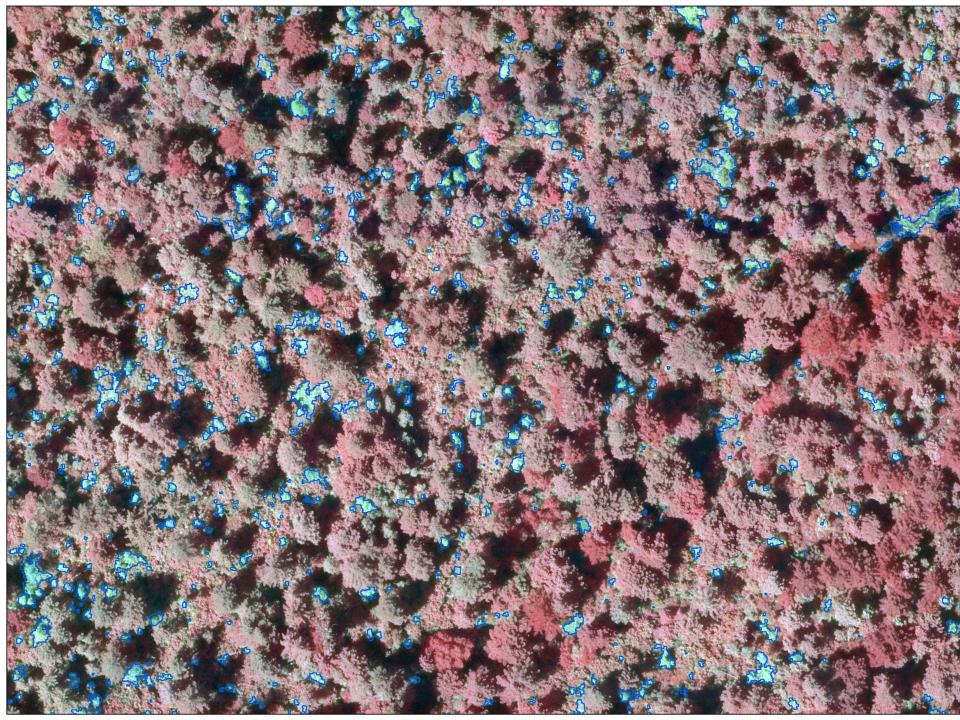


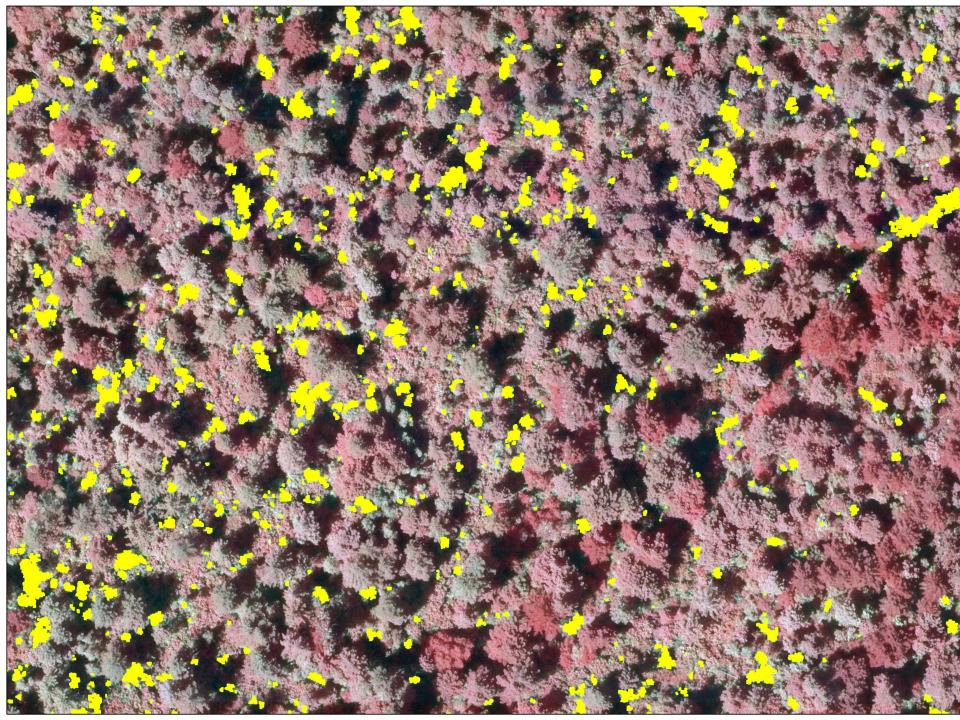
Source: MMWD Biodiversity, Fire, and Fuels Integrated Plan, October 2019

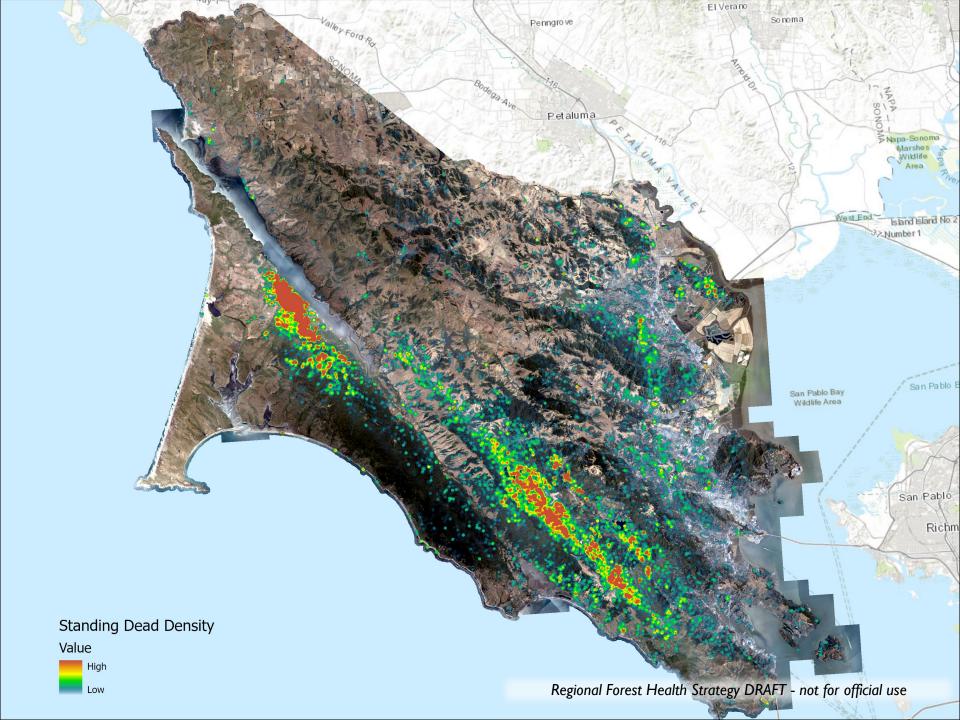


Source: PORE NPS, Bishop Pine on the ridge between the Coast Trail and Limantour Road, 2010 vs. 2018



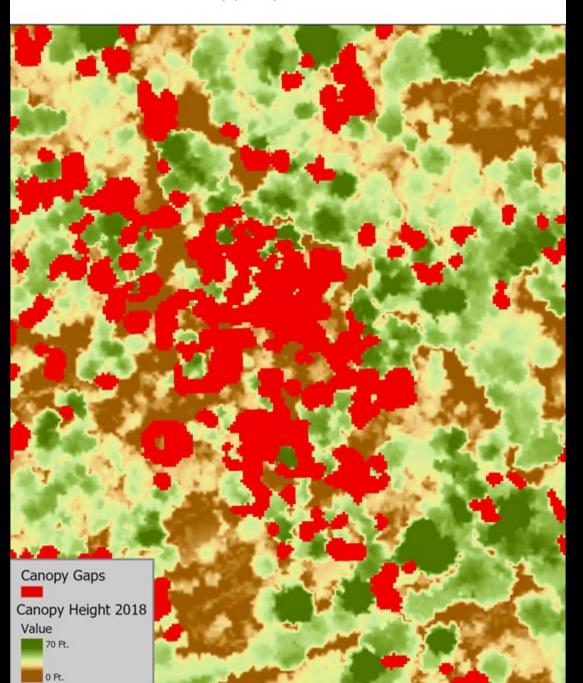


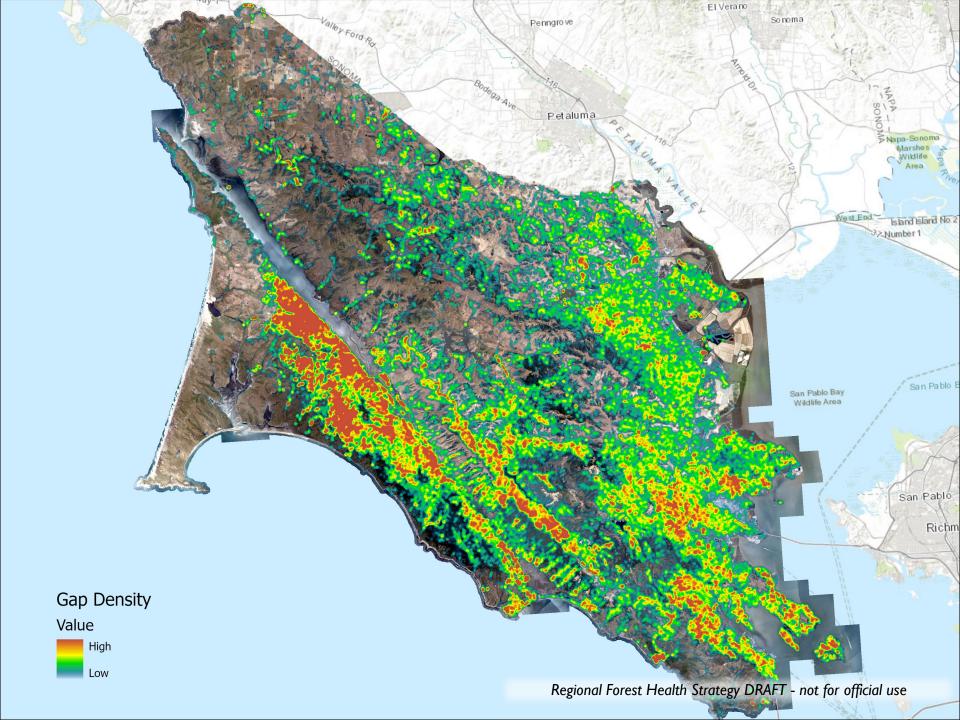


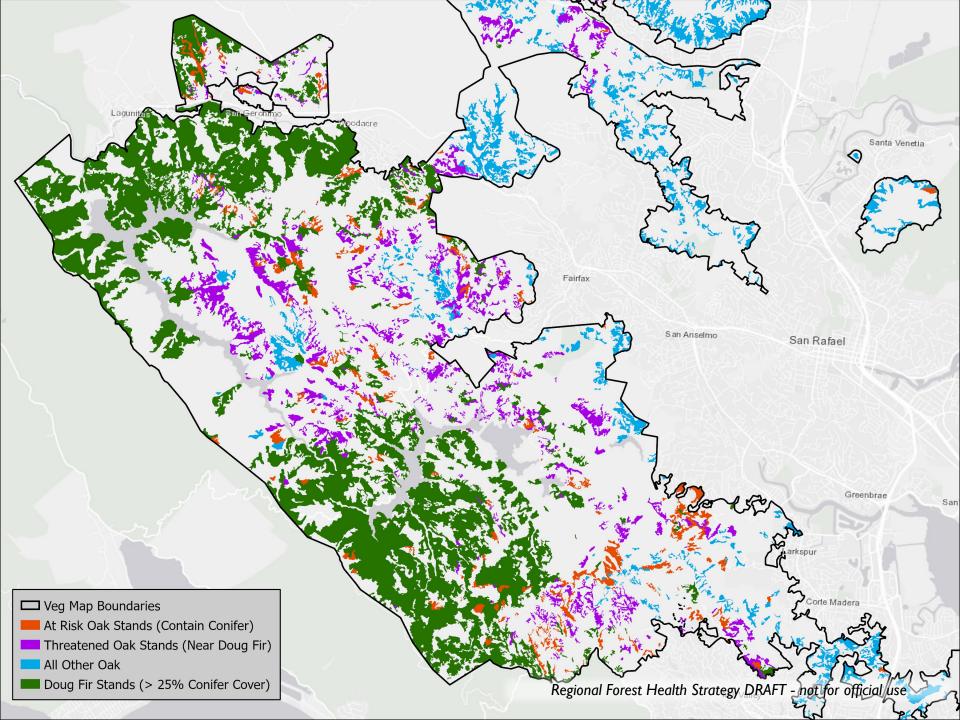




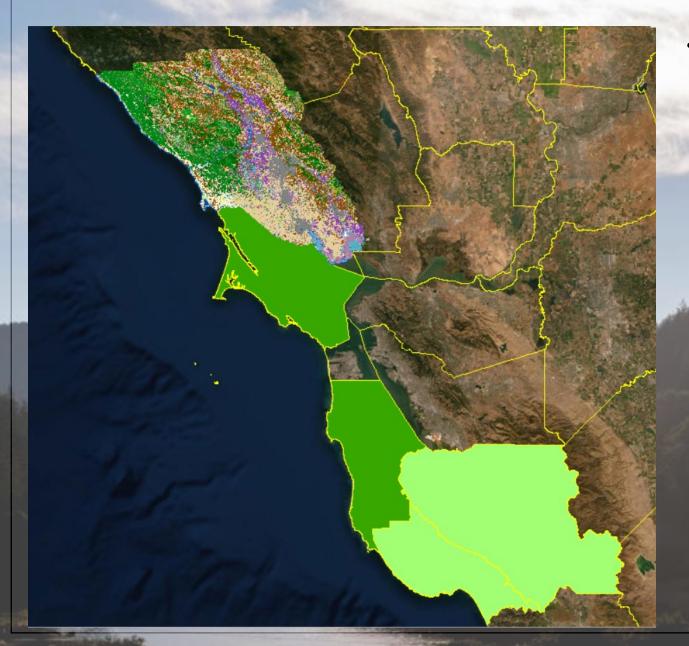
Canopy Gaps 2010-2018



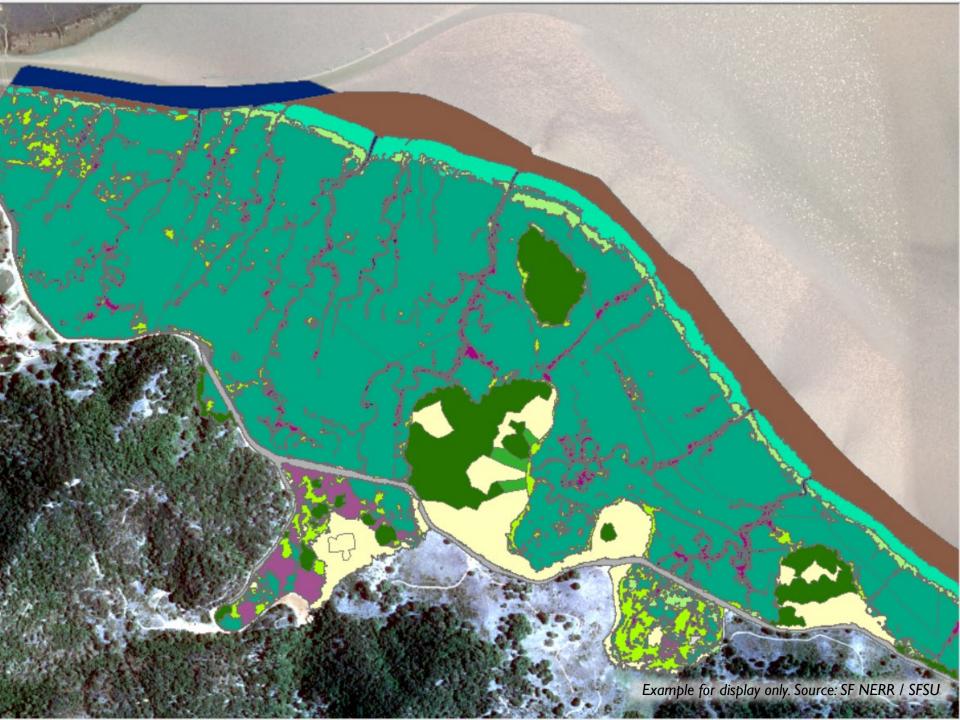




CASCADING IMPACTS FROM COLLABORATION



- Began with Sonoma County – completed in 2017.
- Followed by Marin, San Mateo and NPS/Presidio Trust portions of San Francisco Counties.
- Initiated in Santa
 Cruz and Santa Clara
 Counties
- Extended in 2019 to include mapping tidal wetland vegetation to the alliance level in all but Sonoma County.





THANK YOU! **GOLDEN GATE NATIONAL PARKS CONSERVANCY ONE TAM MEMBERS AND PARTNERS:** NPS, MARIN COUNTY PARKS, STATE PARKS - BAY **AREA DISTRICT & MMWD** CNPS/CDFW VEGETATION MAPPING PROGRAM **TUKMAN GEOSPATIAL OUANTUM SPATIAL KASS GREEN & ASSOCIATES VANCE RUSSELL** MIKE VASEY - NERR **SHELLY BENSON JOSH COLLINS - SFEI** NATE HEROLD - NOAA, COASTAL MGMT. **GREATER FARALLONES ASSOC. & NMS MALT & MARIN RCD USGS 3DEP & CA DWR** CA STATE COASTAL CONSERVANCY **CA NATURAL RESOURCES AGENCY SONOMA AG + OPEN SPACE** CA LANDSCAPE STEWARDSHIP NETWORK

THE REAL PROPERTY.

Please email me to receive future product updates and data access

dfranco@parksconservancy.org