

Parks, Recreation, and Open Space Commission Meeting
March 14, 2024









# Project Team



City of Albany



Restoration Design Group



Nomad Ecology



Creekside Science



# Purpose Statement

The City seeks a comprehensive plan for the phased removal of dead and dying eucalyptus trees on Albany Hill and the restoration of habitat for monarchs and native plants and wildlife in a way that creates self-sustaining ecosystems with low fire hazards and minimal maintenance requirements









# Session Goals

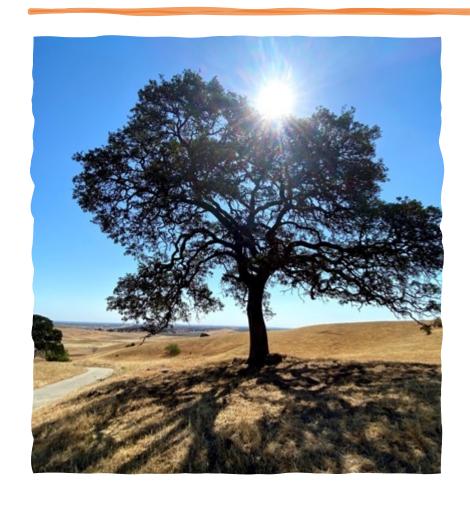
- 1. Provide an overview on project progress
- 2. Share design phase exercises and present priority explorations
- 3. Solicit input from PROS Committee and the public



# Project Timeline



# Design Phase Goals



Priority Criteria were established based on public feedback, project mandates, and client goals.

Rather than STARTING at a place of compromise, the team wanted to explore what options might exist if we allowed each priority area free reign to arrive at an ideal management plan / removal strategy from a single perspective

By taking each priority and exploring its best expression, we have three very different sets of options from which to create our final composition and strategy

# PUBLIC INVOLVEMENT

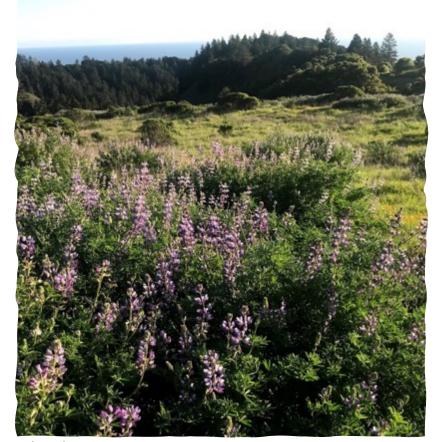


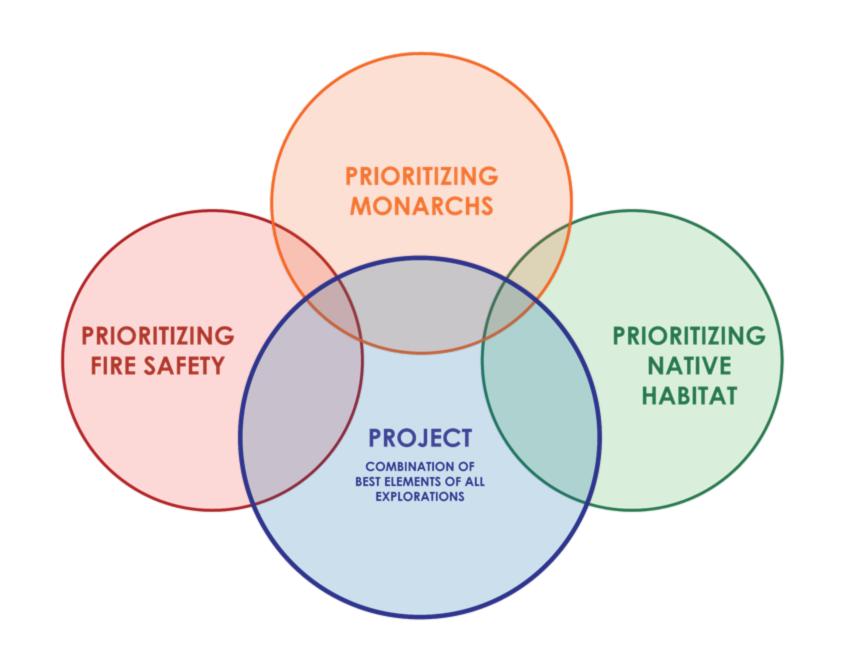
Photo by Grey Hayes

#### LISTEN -

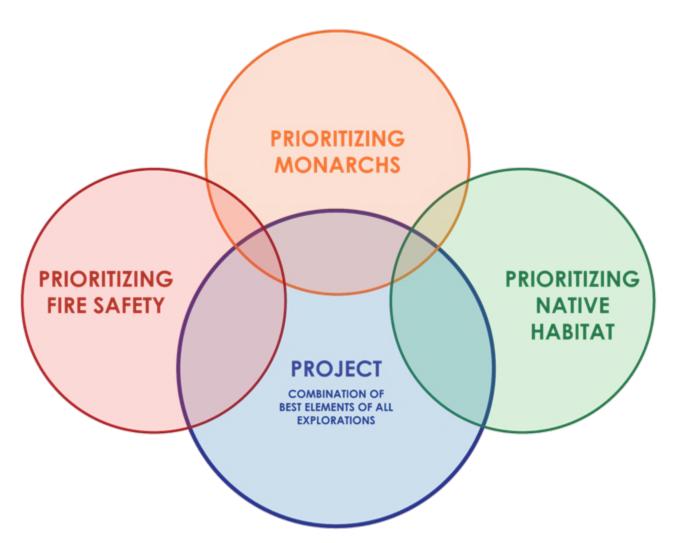
to all three explorations with the understanding that none of them are an *actual* proposal, but were created as **tools of discovery** 

#### VOICE -

your values and priorities by filling out the survey on paper or online



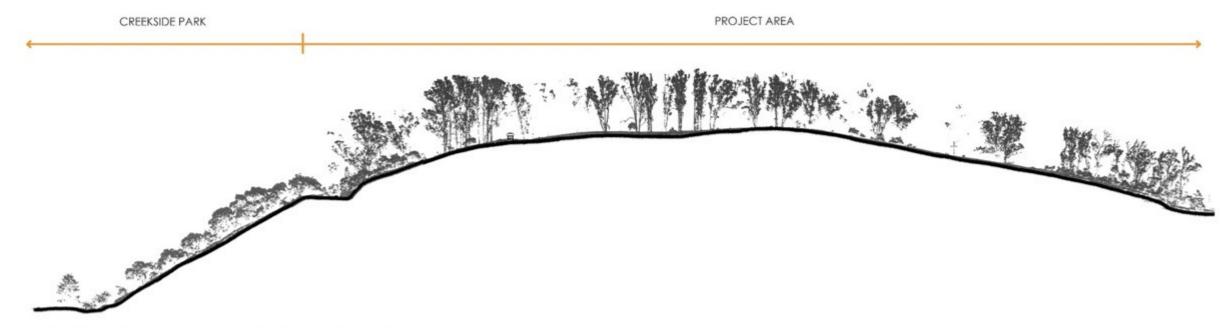
# Concept Exploration Phase Diagram



### Existing Conditions and Section Locations



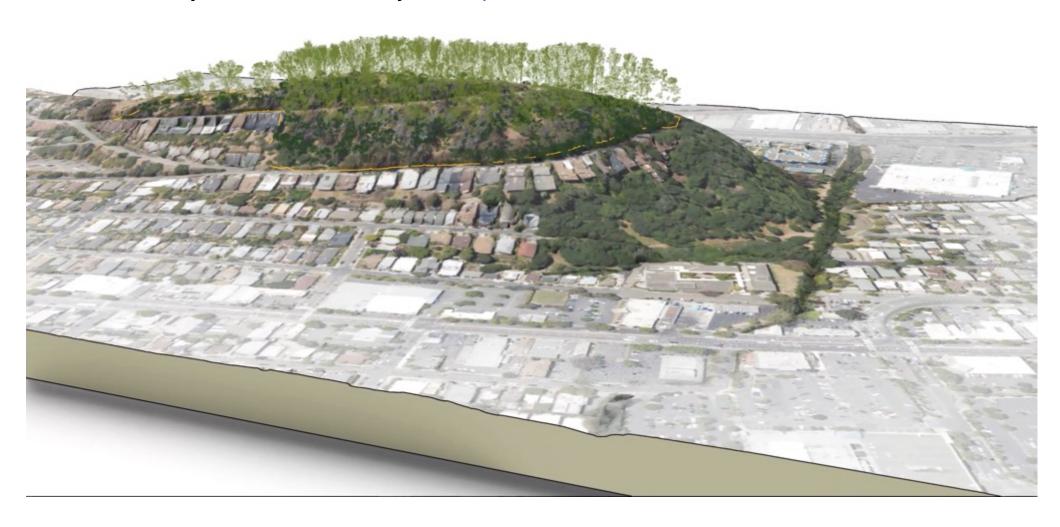
SECTION A - EXISTING CONDITIONS (LOOKING NORTH)



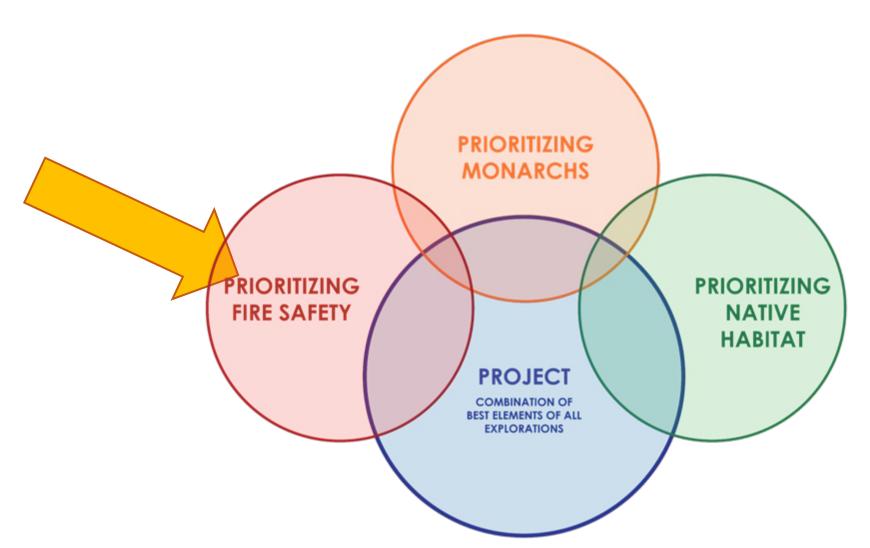
SECTION B - EXISTING CONDITIONS (LOOKING EAST)

### Site overview

Flyover around Albany Hill <a href="https://vimeo.com/923914498">https://vimeo.com/923914498</a>



# Concept Exploration Phase Diagram

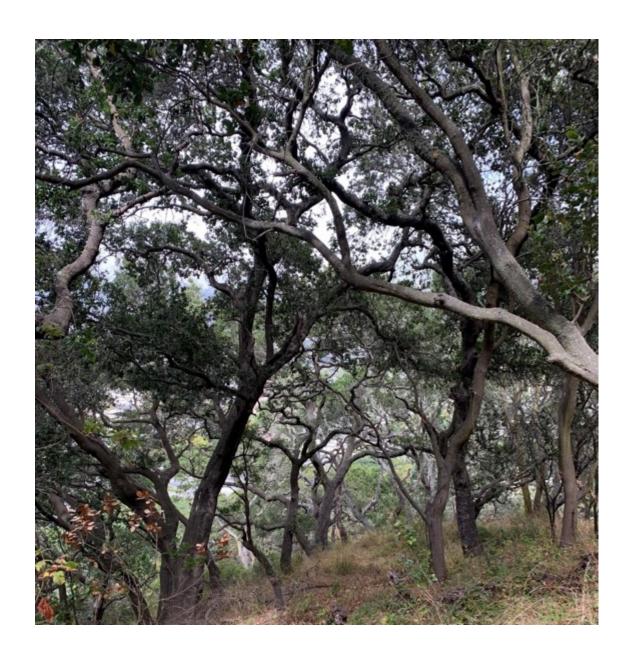




# Fire Safety

What would be the ideal management plan and final design for Albany Park if the only criteria was Fire Safety?

- What is the long-term ideal vision for Albany Hill?
- What components are a priority temporally and functionally?
- What changes best protect Albany citizens and the environment?



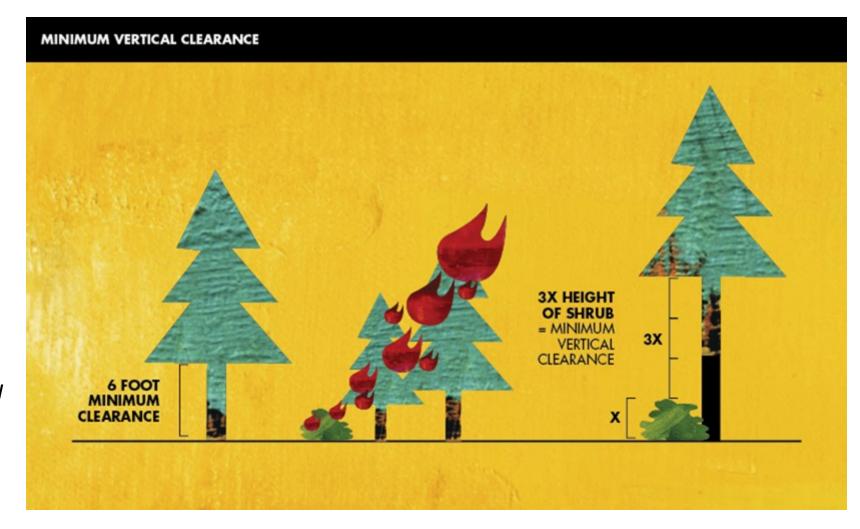
# Fire Department Priorities

- Good access to the Hill for Fire Department Equipment and personnel
- Disconnected canopy and understory
   interrupt fire ladders
- An aesthetic, enjoyable park create a model for fire safe AND beautiful public spaces
- Remove eucalyptus and replace with more appropriate canopy species

# Fire Ladders - connecting fuel types

Eucalyptus shed highly flammable bark and accumulate leaf litter which does NOT decompose readily.

Their physical structure and tendency towards limb failure make Eucalyptus a source of fire ladders from ground to canopy.



# FLAT TO MILD SLOPE (LESS THAN 20%) MILD TO MODERATE SLOPE (20%-40%

# Fire Ladders – steep terrain

Keeping groups of shrubs and trees disconnected reduces the risk of fire spread through the landscape. Distances need to increase with slopes.

Retaining existing Oaks and woody shrubs (Toyons, etc.) is possible within this spacing criteria, and these canopy gap allowances can inform future planting on Albany Hill.

# Priority Tree Removal List



- Pressing need for eucalyptus removals prior to onset of project
- Task was to list top 100-150 trees for ASAP triage
- Team reviewed the arborist reports, fire safety and life safety criteria
- No trees within Monarch cluster sites or windbreak trees were included

# Priority Tree Removal Criteria

#### FIRE SPREAD RISK PRIORITY



63 TREES
FIRE REPORT FUEL MODELS\*

#### CRITERIA FOR INCLUSION:

- 1. 163/TU3:
- Trees rated with spread rate high and flame moderate
- Represents treed areas with a significant amount of understory and ladder fuels, flame lengths can be moderate to high with torching trees likely
- 2. TL9 189 / TL5 185:
- most hazardous timber-litter fuel model
- can produce high flame lengths and rapid spread
- stands categorized as TL9 can be expected to produce firebrands long distances

\* See figure 3 (pp9) and table 1 (pp14) of "Characterization of Fuels Fire hazards Recommendations" WRM, 2022

#### RESIDENTIAL TARGET PRIORITY



95 TREES

TREES WITH IMPACTS TO ADJACENT PRIVATE PROPERTY

#### CRITERIA FOR INCLUSION:

- 1. Eucalyptus within 100' of a private residence
- 2. TRAQ2 arborist report listed 'residence' as target if the tree failed
- TRAQ2 arborist report listed tree as Dead



# Fire Safety Concept Exploration

#### Question we Asked:

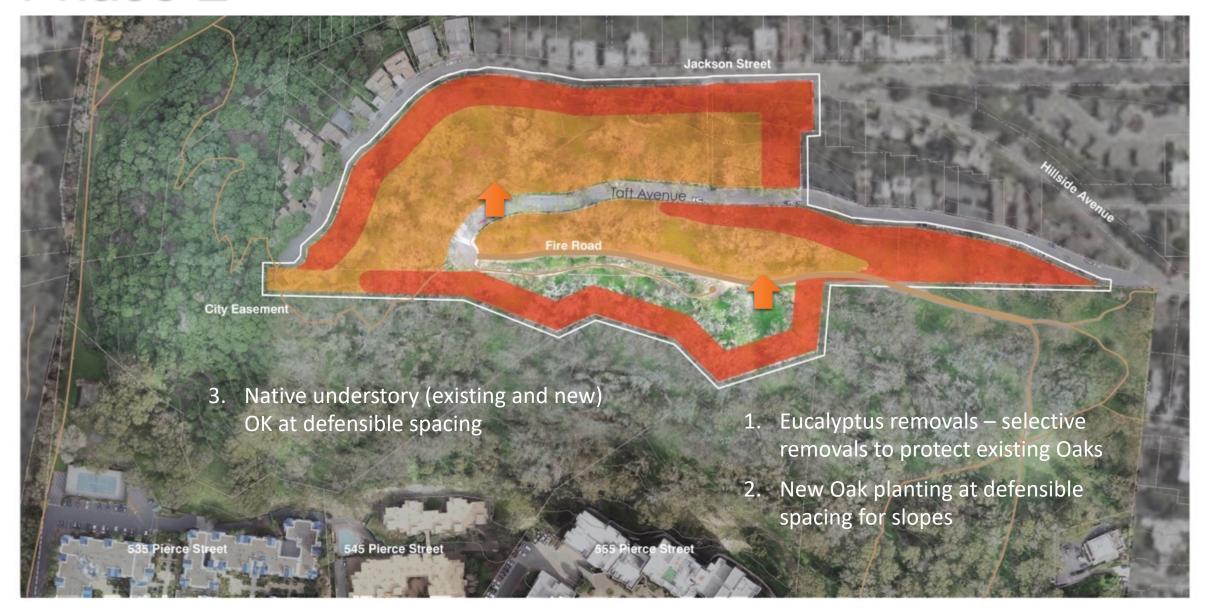
If there were no other factors at play, what would be the ideal configuration and action plan to maximize fire safety on Albany Hill?



### Phase 1



### Phase 2



### Phase 3



# Design to meet anticipated changes to the Fire Regulations for Albany Hill

Albany Hill neighborhoods are designated as Wild Urban Interface (WUI). New requirements will affect vegetation management practices in WUI areas.

- New Fire Hazard Severity Zone Maps for Local Responsibility Area (LRA) will be issued soon.
- We anticipate more stringent criteria for Albany Hill vegetation management requirements.
- This will impact management choices on the Hill.
- Parts of Chapter 49 of the California Fire Code will be required.

### **PRO**

- Reduces fire risk for all of Albany, not just adjacent properties
- Reduces liability for City by retaining no eucalyptus on City property
- Provides a model for how defensible space can look and feel: an enjoyable, beautiful public park adjacent to neighborhoods
- Ample eucalyptus stands are still present on Albany Hill (off of City property)

### CON

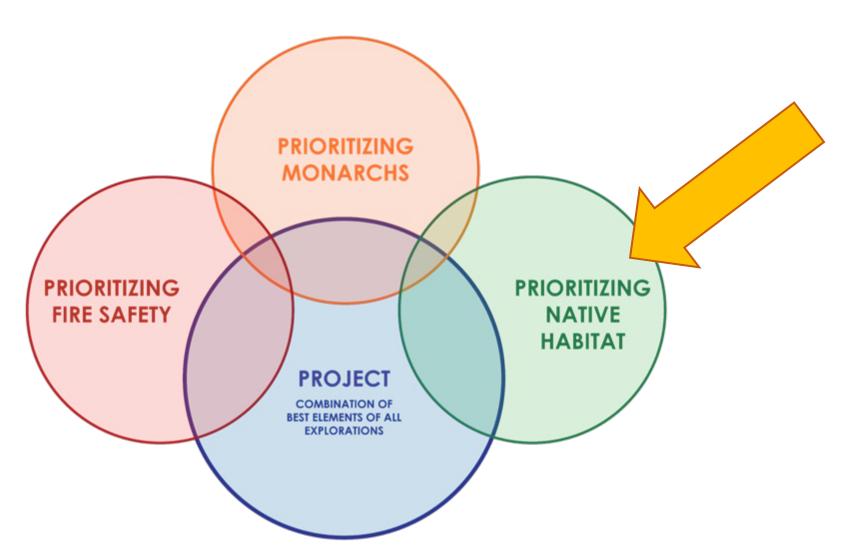
- Monarch habitat will shift to private property which reduces visible public access to cluster sites
- Understory extents and composition driven by fuel models, not habitat opportunities

## COST IMPLICATIONS

Least expensive exploration \$

- General removals only
- No active restoration
- Replacement trees = Oaks

# Concept Exploration Phase Diagram





# Native Habitat Concept Exploration

#### Question we Asked:

If there were no other factors at play, what would be the ideal configuration and action plan for Albany Hill to foster an ecologically diverse island in the City, and a haven for wildlife?

# Ecological Island

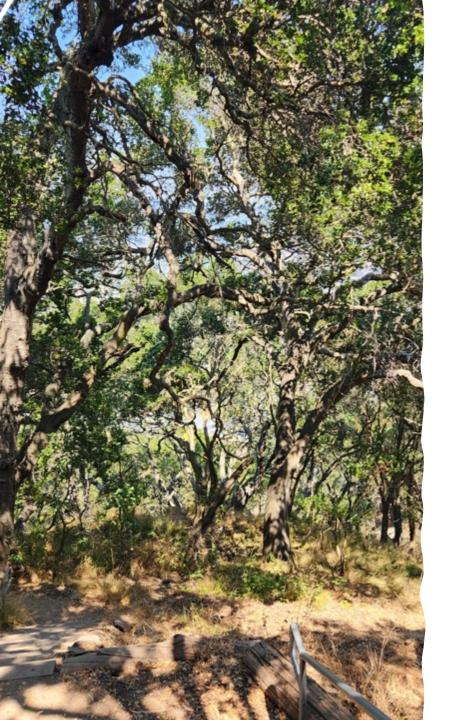
- Albany Hill is an ecological island with a large diversity of native plants.
- It is the only significant topographical feature in the East Bay that is immediately adjacent to the Bay, directly across from the Golden Gate where it receives fog and cool winds.
- Plants that are adapted to cooler climates can persist on the Hill.





#### What is there now?

- Coast Live Oak Woodland
- Eucalyptus Forest
- Grassland Openings
- Riparian Zones at the North and East end of Hill



# What do we want to bring forward?

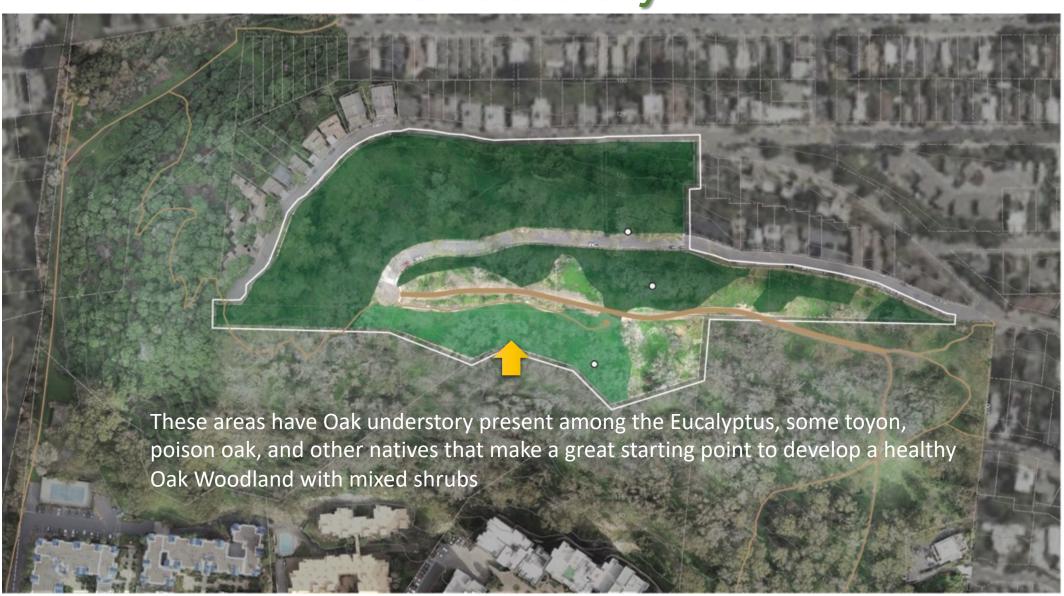
- A. Oak Woodland with Shrubs
- B. Open Oak Grasslands
- C. Native Coastal Grasslands



# Oak Woodland with Grassland Understory



# Open Oak Woodland with Shrub Understory





#### **Native Grasslands**





# How do we restore these habitat types?

- Abundant native plants are present for seed collection and native plant enhancement throughout Albany Hill – collect seed this spring and summer
- Pre-removal survey and protection measures for existing stands of natives
- Selective and Basic Eucalyptus removals phased at different times
- Prioritize minimizing ground disturbance
- Utilize eucalyptus mulch extensively for invasive weed control and soil stabilization
- Reuse Eucalyptus logs to create planting opportunities

Selective Eucalyptus Removal



## General Eucalyptus Removal





## Create Future Snags for Wildlife



#### **PRO**

- Creates a complex CA native habitat mosaic on a unique landform near the Bay
- Provides for multi-species benefits
- Creates resources for future restoration efforts on adjacent parcels
- Maximizes opportunities for cultural use (tribal, educational, and research opportunities)
- Maximizes opportunities for community and tribal participation

#### CON

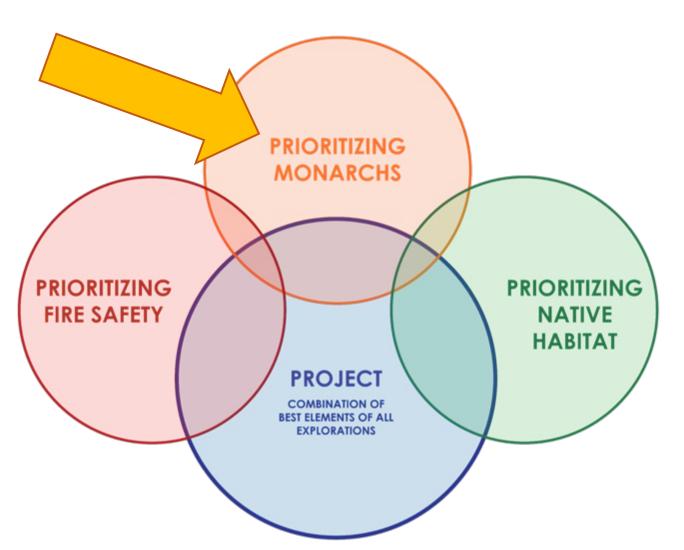
- Monarch habitat will shift to private property which reduces visible public access to cluster sites
- More complex maintenance tasks
- More intensive efforts for native understory protection during eucalyptus treatment and removals
- More competency requirements for contractor

#### COST IMPLICATIONS

Most expensive exploration \$\$\$

- Pre-removal native plant identification and protections
- Two removal types/sets of criteria
- Plant amplification / seed collecting / contract growing
- Active restoration (planting, nurse logs, snag creation)

## Concept Exploration Phase Diagram





#### Monarchs

#### Monarch Habitat

- Solar Access
- Wind protection

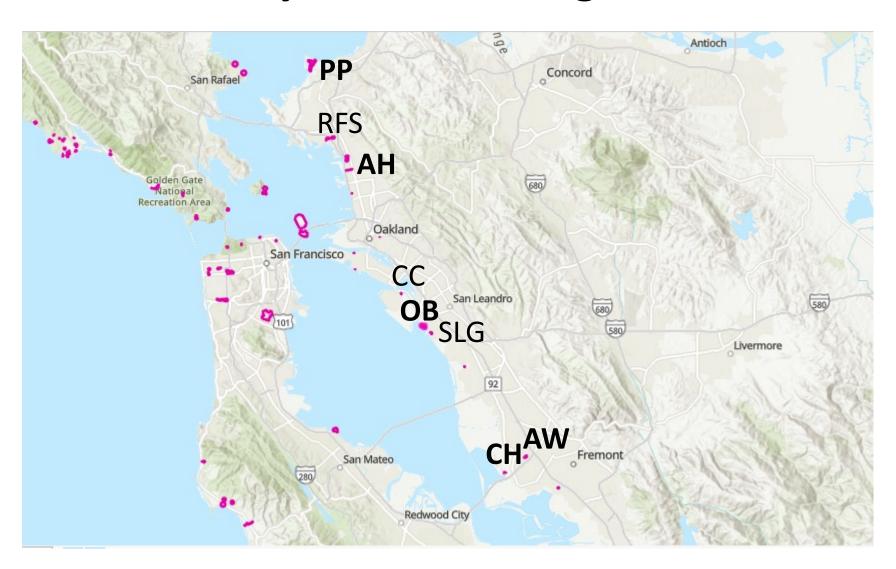
"Albany Hill supports overwintering monarch butterflies because of specific forest canopy structures that provide suitable wind shelter and insolation (sunlight)."

Creekside Science, 2022

#### Ancestral Condition – Monterey Pines Pt. Lobos State Reserve 2011



#### **East Bay Overwintering Sites**



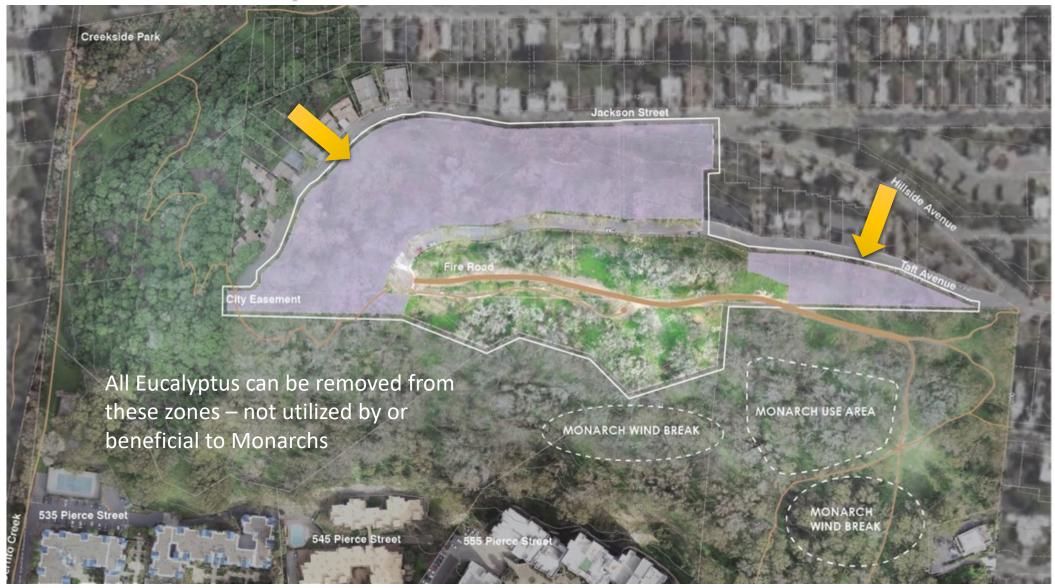


# Monarch Priority Concept Exploration

#### Question we Asked:

If there were no other factors at play, what would be the ideal configuration and action plan for Albany Hill to continue to provide overwintering habitat for Monarchs on the ridge?

#### No Impacts to Monarchs Zone



## **Existing Monarch Use Areas**





# What do we plant for the future?

- Replacement trees need to have a better fire profile (reduce ground fuels and ladders created)
- Drought tolerant and adapted to a rocky, coastal soil profile
- Provide the morphology needed for Monarch use (leaf shape and general structure)
- Less invasive don't plant a future problem!
- Project may test several species

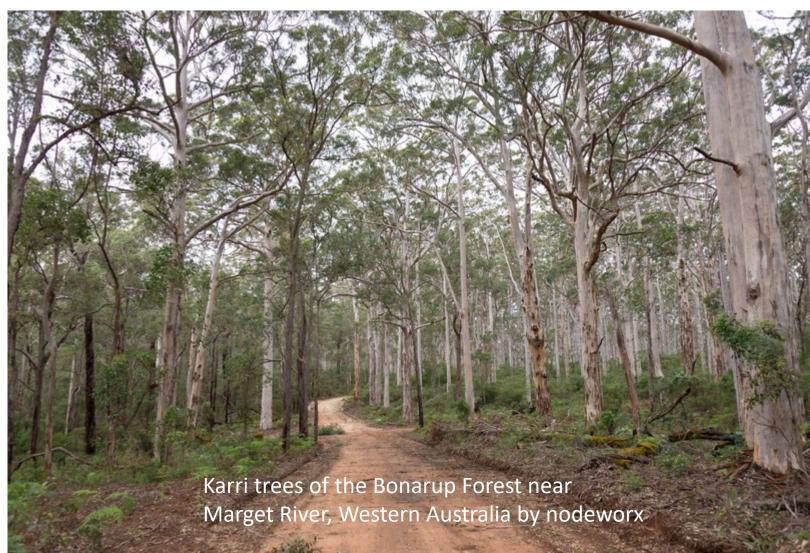
## Eucalyptus globulus – Tasmanian blue gum





#### Eucalyptus diversicolor – Karri





## Lyonothamnus spp- Catalina Ironwood



## Monarch Support Areas



#### **PRO**

- Maintains the structures and resources needed to support current use patterns by Monarchs
- Albany Hill remains a special area for public viewing of monarch overwintering
- Doesn't prevent the removal of failing E. globulus in many areas

#### CON

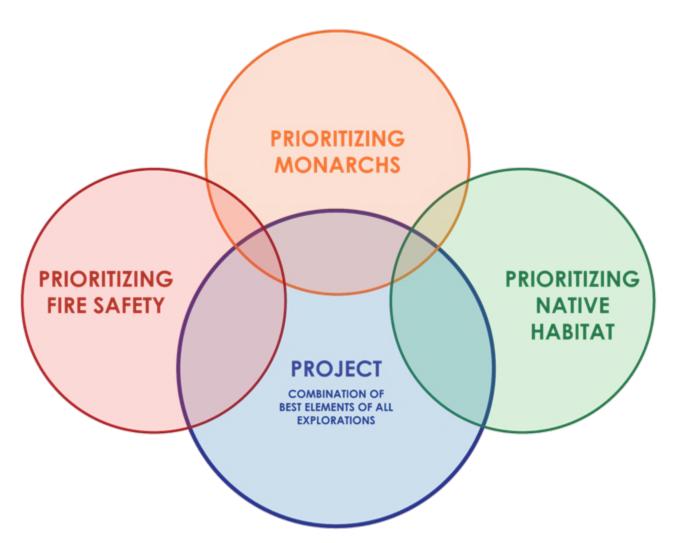
- Eucalyptus stands remain in high-fire risk areas
- E. globulus stands that are retained may continue to expand into City property unless actively curtailed and controlled
- Introduction of new exotic species
- Risk of limb fall and other liability issues still in play over public access areas
- Does not provide a fire break between privately owned E. globulus stands and those retained on City property

#### COST IMPLICATIONS

Blended / Mid-Level Costs \$\$

- General and selective removal strategies
- Fewer removals than other explorations
- New planting costs (nectar sources and replacement trees)

## Concept Exploration Phase Diagram



#### **SUMMARY**

	FIRE SAFETY	MONARCHS	NATIVE HABITAT
PRO	<ul> <li>Reduces fire risk and liability</li> <li>Will be a model for defensible space in the area</li> <li>Ample eucalyptus stands are still present on the hill</li> <li>Fulfills civic duty towards community safety</li> </ul>	<ul> <li>Maintains existing structures and resources to support current monarch-use patterns</li> <li>Albany Hill remains a special area for public viewing of monarch overwintering</li> <li>Doesn't prevent the removal of failing E. globulus in many areas</li> </ul>	<ul> <li>Creates a complex CA native habitat</li> <li>Provides multi-species benefits</li> <li>Creates resources for future restoration</li> <li>Maximizes opportunities for cultural use</li> <li>Maximizes opportunities for community involvement</li> </ul>
CON	<ul> <li>Monarch habitat will shift to private property</li> <li>Understory extents and composition driven by fuel models, not habitat opportunities</li> </ul>	<ul> <li>Eucalyptus stands remain in high-fire risk areas</li> <li>E. globulus stands that remain may expand into City property</li> <li>Hazards and liability still present in public access areas</li> <li>Does not provide a fuel break between private and city property</li> </ul>	<ul> <li>Monarch habitat will shift to private property</li> <li>More complex maintenance and restoration tasks</li> <li>More intensive efforts during eucalyptus treatment and removal</li> </ul>
COST	\$	\$\$	\$\$\$

#### Next Steps and Timeline

#### SHARE YOUR PRIORITIES

• Place your survey in the back, or go online to fill it out



https://www.albanyca.org/albany-hill

#### NEXT MEETINGS

- Late spring 2024 -- Present combined plan to 2<sup>nd</sup> PROS Commission meeting
- Summer 2024 -- Present to City Council
- PUBLIC INPUT Will be solicited at each step along the way.







