Tree planting is not a simple solution

Walt Ranch Appeal Hearing
Dec. 14, 2021
Ross Middlemiss, J.D. and Tiffany Yap, D.Env/Ph.D.

Photo: Bryant Baker

Need effective mitigation for the GHG emissions of removing over 14,000 trees

GHG Addendum

- Reduce preserved lands from 248 to 124 acres
- Plant 16,790 trees in previously burned areas

"Tree planting is not a substitute for taking rapid and drastic actions to reduce greenhouse gas emissions." (Holl and Brancalion 2020)

TOP PRIORITY: Preserve existing intact native habitats

Photo: Bryant Baker

The planting plan is flawed mitigation

- Carbon calculations are misleading
- 80% survival rate is unrealistic
- Current site conditions are misrepresented
- Lack of enforcement, unclear funding

California Environmental Quality Act (CEQA)

- CEQA was enacted for the state to "take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state" and to "[e]nsure that the long-term protection of the environment . . . shall be the guiding criterion in public decisions." (Cal. Pub. Res. Code § 21001.)

CEQA Goals and Process

- Analysis supported by substantial evidence
- Public participation
- Mitigation & Alternatives to reduce impacts
- Informed decision-making

CEQA Mitigation Must Be Effective

Mitigation of a project's environmental impacts is one of the "most important" functions of CEQA. (*Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41.)

The effectiveness of a proposed measure must be supported by substantial evidence. (*See Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1116-17.)

Flawed calculations undermine the planting program's effectiveness

- The project must mitigate emissions of 27,528 MTCO2e within the 30-year project lifetime.
- Using a 0-99-yr average to calculate what happens before year 30 defies logic and does not constitute substantial evidence. (See *Grey v. County of Madera* (2008) 167 Cal.App.4th 1099, 1116-17.)

Lack of information regarding condition of planting areas

CEQA requires the disclosure of sufficient information to understand how mitigation will be implemented and whether it will successful. (*See Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260.)

Why it matters: plantings in the wrong area won't survive, and may interfere with natural regeneration

80% survival rate is not backed by science

- Mitigation must be realistic, and there must be evidence a performance standard can be met. (*See Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017)17 Cal.App.5th 413, 433.)

Vague monitoring program

- The monitoring program is vague, and does not include objective success criteria for the planting program, in violation of CEQA. (See *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 93; *see also Golden Door Props. v. County of San Diego* (2020) 50 Cal.App.5th 467, 520-24.)

The planting plan is flawed mitigation

- Carbon calculations are misleading
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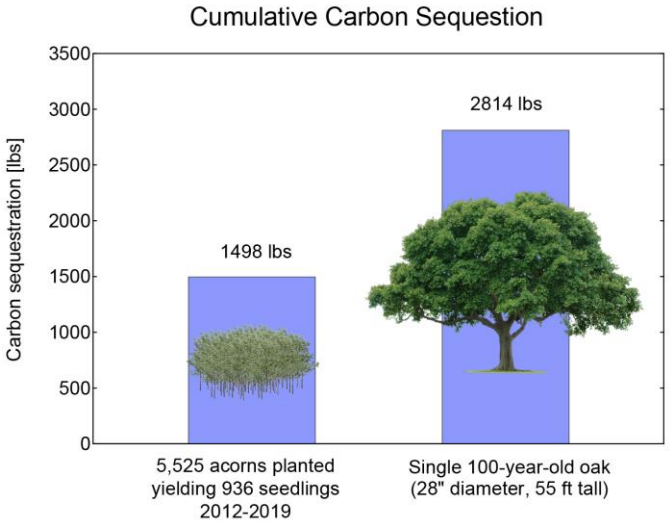
Calculations are misleading

- 248 acres preserved: 111 MT C/acre→ 27,528 MT C
- 124 acres preserved: 111 MT C/acre→ 13,764 MT C
- i-Tree (trees 0 – 99 years old)
  - 54.7 kg C/year*30 years*16,790 trees → 27,552 MT C
- US Dept of Energy (trees 0 – 30 years old)
  - 0.6 to 7.3 kg C/year → 1,854 MT C (slow-growing oaks)
  - 1.2 to 28.7 kg C/year → 6,876 MT C (fast-growing oaks)

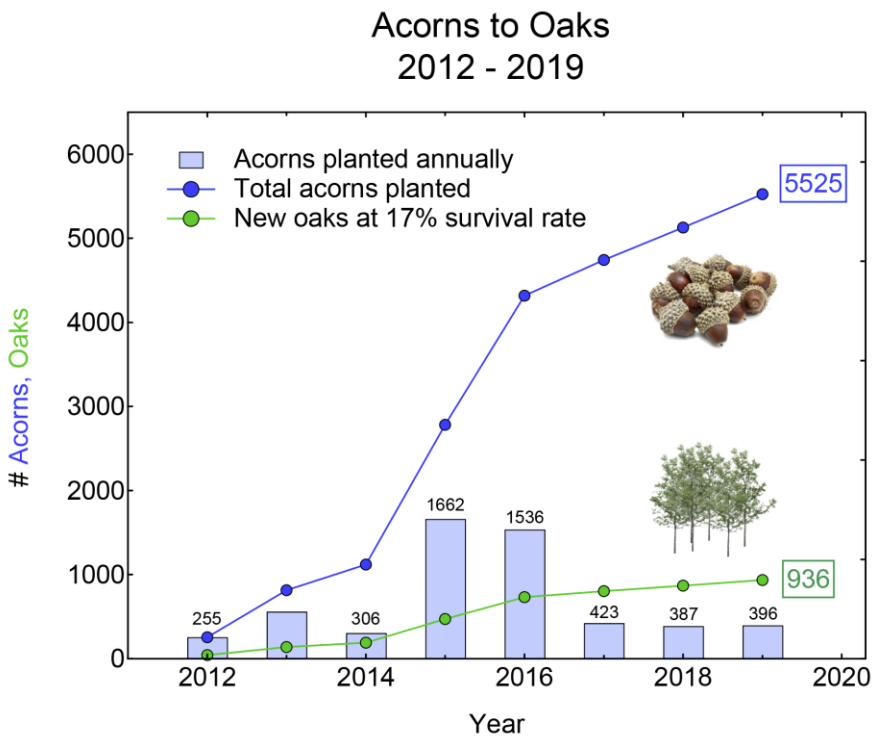


Stilwater 2021

Success of Tree Planting Program is not guaranteed

How will Applicant attain goal of 80% survival rate?

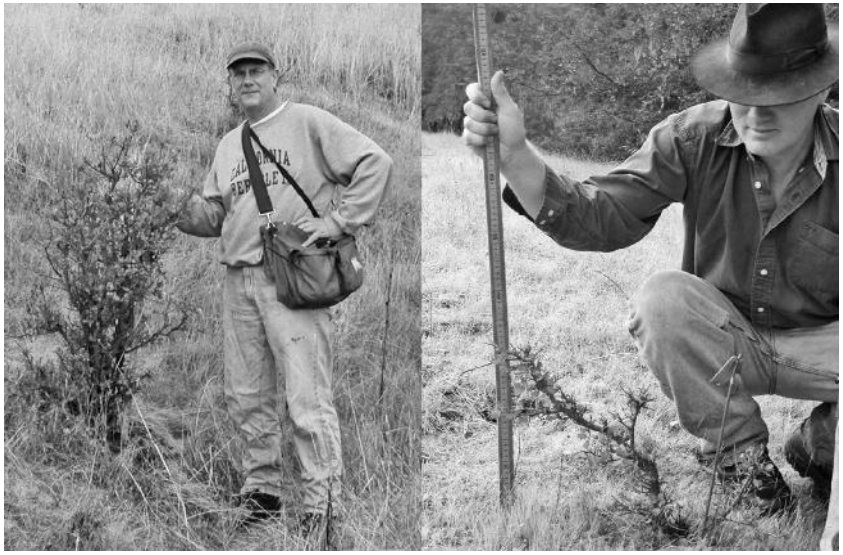
Acorns to Oaks Program: 17% survival



Stilwater 2021

Growth and persistence of blue oak seedlings after 41 years in protected areas (Koenig and Knop 2007)

- 19% survival
- Mean height 2.5 ft; Range 0.9 to 6.5 ft
- Annual growth rate < 1 cm/year



41-year-old blue oak trees, ~3.7 feet tall (left) and ~1 foot tall (right).

Fire-resilient Landscapes


Coast Live Oak, 4 months post-fire


Coast Live Oak 4 months post-fire


Black oak, 14 years post-fire


Coast Live Oak 17 months post-fire

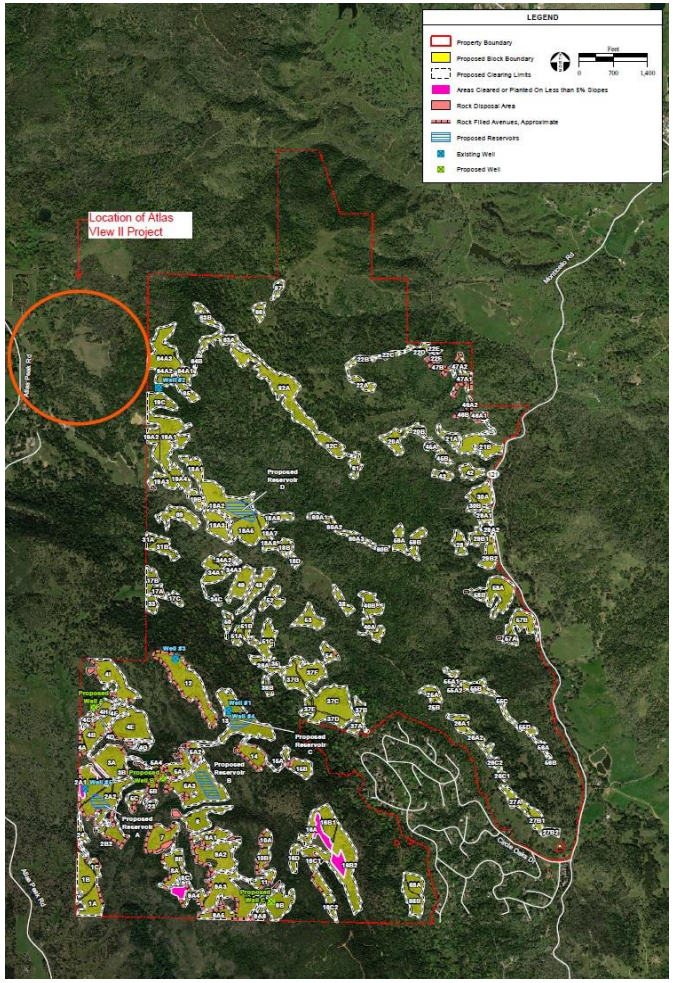
Photos: Bryant Baker

Fire-resilient Landscapes

- Sonoma County (Ackerly et al. 2019)
  - Burned in 2017 Tubbs Fire
  - 13.2% was unchanged
  - 22.1% experienced low-severity fire
  - 35.8% experienced medium-severity fire
  - 28.9% experienced high-severity fire.
- Pepperwood Preserve
  - 73% of trees survived
  - High levels of resprouting
- “Stands of hardwoods are likely to recover after fire with limited change in species composition.”

Atlas View II Project

Burned in 2017 and 2020 fires. Estimated ~ 70% oak survival



"Due to the moderate to good survival of woodlands, the site should resemble its pre-fire structure within 5 to 10 years." (Northwest Biosurvey 2021)

New evidence from staff report

Gray pine:
- Not fire resistant
- Post-fire seed germination

Oak: Epicormic resprouting

Survived with little burning

Photo 1c
Source: Ascent Environmental, November 16, 2021

Basal resprouting

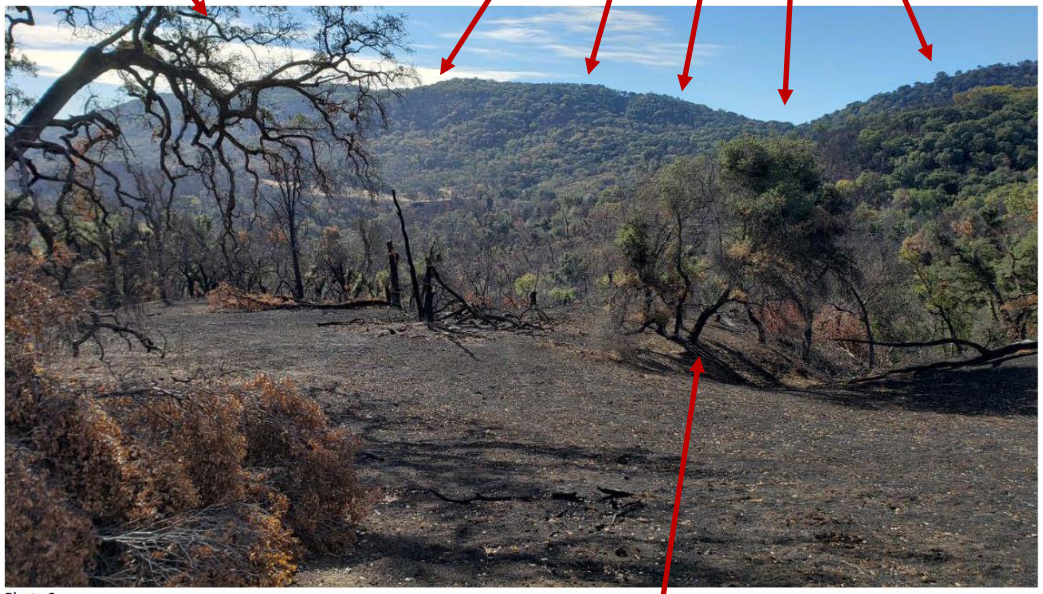


Photo 2
Source: Hall Brambletree Associates, November 14, 2020

Oak: Survived with little burning

New evidence from staff report

Shrubs: Basal resprouting

Gray pine (survived)

Survived with little burning

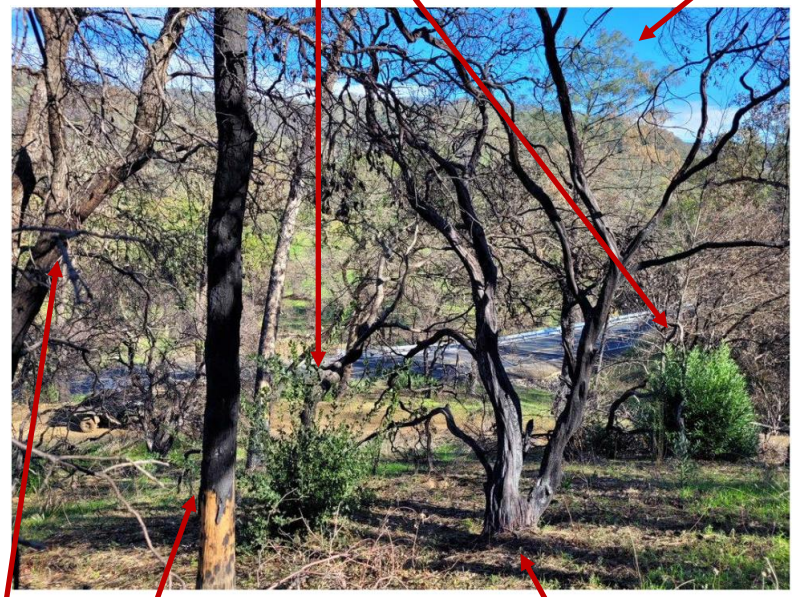


Photo 3b
Source: Ascent Environmental, November 16, 2021

Photo 1d
Source: Ascent Environmental, November 16, 2021

Gray pine (dead)

Oak: status unknown

Manzanita:

- Typically killed by fire
- Post-fire seed germination

Gray pine (many survived)

New evidence from staff report

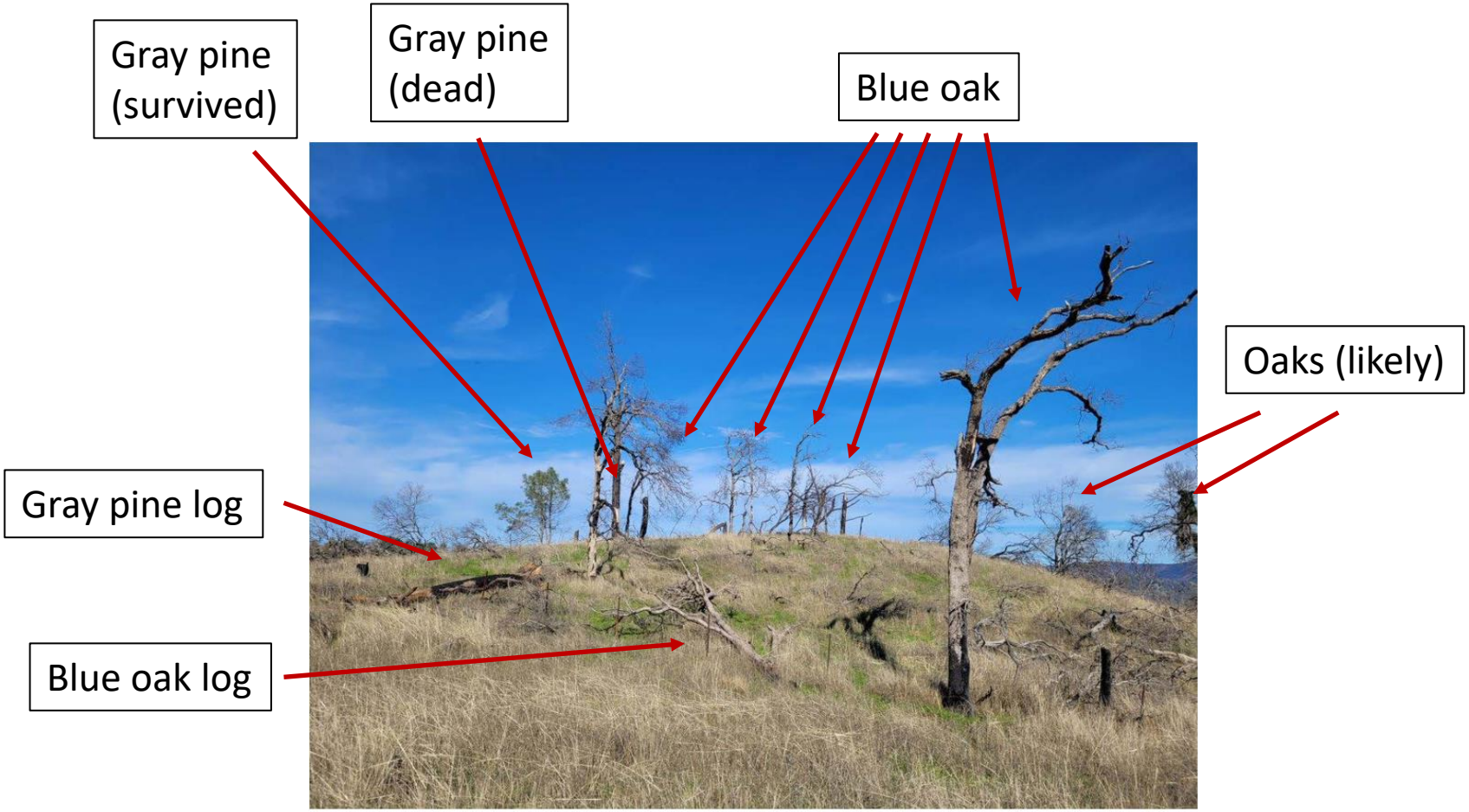


Photo 1e
Source: Ascent Environmental, November 16, 2021

Lack of enforcement, unclear funding

- Success criteria are not adequately defined
- Timeline of mitigation is not provided
- Reliance on partners and volunteers to propagate and plant seedlings?
  - "…replanting can occur over a period of a few years, or shorter depending on the level of participation from partners." (April 28, 2021 Ascent Memo)
- Long-term funding?

Preserving intact native habitats is the best way to combat the climate crisis

- Prioritize preservation of 248 acres of intact oak woodlands that would otherwise be developed
- “Tree planting must be carefully planned and implemented to achieve desired outcomes.” (Holl and Brancalion 2020)

Walt Ranch. Photo: Napa County