

# Attachment D

**Appeal of CDFW Elkhorn Slough Ecological Reserve Eucalyptus Removal -- PLN 100351**  
**Elkhorn Slough Reserve Responses in blue font**

I appeal this project because the findings and decision are not supported by the evidence.

- It is in violation of the North County Plan.
- It is ideologically driven and flawed, with a lack of science demonstrating benefit.
- It affects four groves of over 1200 trees of great environmental value and the wildlife that rely on them.
- It will harm the Slough environment.
- There has been inadequate noticing and public hearings.

The following findings are in error –

**Findings**

1. Project Description

Removal of 1225 or 1255 trees – there is uncertainty on the real number -- p. 6 versus p. 161. It seems to be 1255 trees. There are other examples of conflicting numbers in the MND.

[The exact number of the trees may have changed since the original count due to mortality and new seedling growth. An exact number is not necessary.](#)

2. Consistency/Suitability

a)

- a. Inconsistent with North County Land Use Plan which emphasizes 1) protecting sensitive habitats and 2) co-existing organisms;  
[This is untrue. See responses below.](#)
- b. Lack of publicity guaranteed no one knew the project was happening – the reason for no comments  
[There was adequate notification of this project.](#)

b)

- a. Inconsistent with good fire management by increasing grasslands and decreasing moisture zones;  
[North Monterey County Fire District disagrees with this statement. Please see accompanying letter.](#)
- b. Inconsistent with local Greenhouse Gas Emissions priorities and state mandates (AB 32)  
[This is untrue. The Climate Change Scoping Plan Update \(required by AB 32\) states that better forest management will include actions that reduces the incidence of catastrophic wildfire, which is a significant source \(almost 50%\) of total black carbon emissions. The scoping plan also calls for "planting trees on lands that were historically covered with native forests." The plan also recognizes that "activities to enhance carbon storage on natural and working lands, such as reforestation or restoration, will require time to fully realize carbon benefits." This project reduces the chances of catastrophic fire and results in the restoration of native oak forests.](#)

c)

- a. Restoration “back to oak woodland which historically dominated the area” – one time period over 100 years ago or more is selected as an ideal ecosystem. This is a belief, not necessarily supported by science.
- b. “...and provides better habitat to bird and amphibian species” – this is not supported by the evidence. The MND does not provide adequate justification for
  - i. why this is better, or

- ii. why removing an established functioning habitat, specifically protected under the North County Land Use Plan, is justified, or
- iii. why creating any impact or disturbance on special status species is justified. There is no characterization of an "ideal" ecosystem in our project plans, but a core mission of CDFW State Ecological Reserves is to manage and preserve California habitats in a natural condition for the benefit of native plants and animals (Fish and Game Code, Division 2, Article 4, #1584)

d)

- a. These eucalyptus trees are historically significant due to their long-term adaption to the area and the long-term habitat established over many generations of different species;  
Historical significance is irrelevant to the goals and mission of a State Ecological Reserve.
- b. Roosting occurs year-round;  
Unclear what this is in regards to. Wildlife impacts are minimal.
- c. How long ago the eucalyptus were planted is unclear from MND;  
Date of planting is not relevant.
- d. Eucalyptus is now rated as "limited invasive" according to Cal-IPC;  
Cal-IPC recognizes eucalyptus as invasive in coastal areas.
- e. This will impact special status species such as the monarch butterfly and honeybee, as well as other species  
Monarch butterflies are not impacted and honeybees are not a conservation target on the Reserve.

g)

- a. The LUAC meeting occurred in 2012 – 3 years ago. Climate change and other environmental factors have considerably worsened, California is in the midst of a terrible drought, and there have been changes in public policy. That necessitates a revisit to this plan.  
The appeal does not identify specifically what changes in public policy were made that would warrant revisiting the plan. The Reserve has been adapting to drought conditions for wildlife since its inception and has made significant reductions in water consumption in both our facilities and wildlife projects. The Reserve has pioneered methods of tracking ecological responses to climate change that have now been adopted by all 28 Reserves in the National Estuarine Research reserve System.

### 3. Health/Safety

- a) This requires the addition of toxic herbicides over a long period of time to this sensitive habitat and adjacent to waterways.  
Herbicides will be used in a manner not harmful to sensitive habitats and waterways.
- b) This increases fire risk due to removal of windbreaks and removal of the moisture-laden zones created by eucalyptus.  
This is not true according to North Monterey County Fire District, responsible agency for fire safety in the area.

### 5. CEQA

- a) This project will cause an increase in CO2 due to
  - a. loss of sequestration and
  - b. ongoing loss of CO2 absorption.
- b) This project will cause a decrease in O2 production.
- c) This is a violation of AB 32.
- d) County Greenhouse Gas documentation lists forest sequestration as an important mitigation measure which is being ignored by this project.



The CEQA Notice of Determination was posted in March 2015, and it was determined that the project will not have a significant effect on the environment. The Mitigated Negative Declaration that was prepared included the required section on Greenhouse Gas Emissions, including a project analysis conducted by an independent consultant, and it included an estimate in the carbon sequestration capacity of the vegetation.

The Climate Change Scoping Plan Update, written pursuant to AB 32, acknowledges that "some actions to reduce emissions and enhance carbon storage in the long-term may result in temporary, short-term reductions in carbon stock, but they are necessary to maintain healthy forests that are more efficient at GHG sequestration and more resilient to future climate conditions. It's important to manage our forests to maximize net climate benefits, increasing sequestration while reducing losses due to fire or other processes, while also considering the broader range of environmental services that forests and other natural lands provide." Removing flammable, non-native eucalyptus will reduce the potential for catastrophic wildfires, while increasing native/natural oak woodland habitat.

## 7. ESHA

Section c: Within 100 feet, ongoing use of herbicides will impact aquatic species

Section d: Substantial special status species are impacted by this project which will be ongoing for years with herbicide and disruption. In addition, it removes habitat and forage.

This is not true, all herbicide use takes place in a manner that will not impact aquatic or special status species.

Section e

Biol-5 – Is annual barley a “native” since that seems to be a requirement for this project?

This statement does not follow logically from Section e Bio- 5, but nonetheless, annual barley is a non-native grass planted for temporary coverage for erosion control. It is a transition planting until native vegetation can be established.

Biol-7 –

- Personnel can only remove special status species they see. How many will they miss?

A USFW approved biologist will monitor project areas before and during project activities. USFW approved biologists are highly trained and very familiar with the species and habitats they are looking for. If a special status species is observed within the project area, activities will cease immediately.

- Project priority is on removal, not protection.

The project priority is to replace non native eucalyptus trees with native oak woodland vegetation, restoring a natural ecosystem on the Elkhorn Slough Reserve.

Biol-10 –

- Every habitat has niches already taken; relocating species crowds habitat.

This statement does not follow logically from Bio-10, section E ("2.7 acres of eucalyptus shall remain uncut at the Sough Marsh site to serve as alternative suitable habitat"), and is unclear. Furthermore, the appeal provides zero evidence to support these statements. Therefore we cannot respond.

- By tree and plant removal, CDFW reduces available habitat, impacting wildlife. Flagging of areas for humans does nothing to mitigate special status species disruption. Most of these “mitigation” measures are only for humans. Therefore, these are not mitigation measures for the species that will be disrupted by these actions.



The mitigation measures spelled out in the MND are to mitigate specifically for potential impacts to special status species. The flagging will inform project workers about areas to be avoided to eliminate the possibility of damage to those plants and plant communities which support wildlife communities.

These are special status species that are impacted by this project, which is particularly alarming.

In short, there are too many important issues at stake for this project to proceed.

Specific issues in detail:

1. Inadequate noticing – A LUAC meeting was held three years ago. Flyers were only posted at the Moss Landing Post Office at that time. There was no other notice of the meeting. Flyers were also posted at the site of the LUAC meeting, Full Gospel Church, 29 Willow Rd, Royal Oaks, CA 95076. Notice was given to over 100 volunteers and staff through email announcing the meeting.

Since that time, by their own account, ESNERR has not held any public meetings to discuss this project.

Signs were posted at Elkhorn Slough only during the holidays, from Dec.15, 2014 – Jan. 22, 2015, at a time when people are typically busy. Most of the signs were posted on the road or at the groves slated for destruction. One sign only was posted at the Visitor Center and only during this brief time period.

The time period for posting CEQA notices was set by the State. During this time approximately 1600 people visited the Reserve, using both the Visitor Center and trails, including a San Francisco Chronicle reporter, who included the project in a newspaper story about Elkhorn Slough in January 2015. (Visitor estimates based on annual and daily pass sales for December 2014 and January 2015 and group visitation numbers).

Notices of public hearing for the CDP permit hearing were posted 6/28/15 - 7/9/15.

ESNERR only posted the project notice and MND on the Elkhorn Slough Foundation website from Dec. 15, 2014 – Jan. 22, 2015, again during the holiday season.

The time period and areas for posting notices was set by the State and was adhered to.

Apparently ESNERR did not send a press release to the news media on the project. The Planning Commission meeting was noticed once in the June 25- July 1 Monterey County Weekly, just prior to the meeting. Only those who read legal notices or Planning Commission agendas (posted just a few days prior) would be informed about this longstanding project but with very little lead time to do research.

ESNERR has been planning this project for several years. There was plenty of time for public meetings and ample public notification. The only possible conclusion is that ESNERR and ESF did not want the public to know about this project and only did what was strictly legally required.

Prior to the commencement of the planning of this project, meetings were held with Elkhorn Slough National Estuarine Research Reserve Stewardship staff and the volunteers monitoring raptors on the Reserve. Over 100 volunteers and staff were informed of the project as it evolved over time.

2. This project is in contradiction to the North County Land Use Plan. The North County Land Use Plan does not distinguish between so-called native and non-native species. Its focus is on protecting habitat and on environmentally sensitive habitat areas. It uses the word "fragile". It calls the viewscape of North County a "scenic" resource which must be protected.

This is demonstrably untrue. LUP, Page 31 "The County should encourage the restoration of sensitive plant habitats on public and private lands. A program to control invasive non-native vegetation should be developed in conjunction with the State Department of Parks and Recreation, State Department of Fish and Game, U.S. Forest Service and the County.

*"...Environmentally sensitive habitats are areas in which plant or animal life or their habitats are rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."* The Land Use Plan puts **"all coastal wetlands and lagoons"** in this category.

*"Perhaps most unique among all of these habitats are the sloughs, the estuarine waters resulting from the mixing of seawater with freshwater. They are also some of the most sensitive."*

*"...A great diversity of plant and animal habitats coexist...Interaction of variables over the years has produced several sensitive or rare habitats and species, many of which will require special attention if they are to be preserved for future generations."*

Below are sections from the Land Use Plan, with emphasis added. Extensive scientific input must have been gathered in the preparation of this document, because, despite the pressures for coastal development, these statements are strict standards.

CDFW's project is not compatible with the North County Land Use Plan. It contradicts the purpose, as outlined in the Plan, in setting aside Elkhorn Slough as a Reserve. This project does not protect and preserve but seeks to superimpose a specific template and to disrupt an existing working and healthy ecosystem, with no guarantee of success or profit.

Note that excerpts from the North County Land Use Plan are taken out of context. The compliance of this project with the North County Land Use Plan is clear:

**"North County Land Use Plan**

**2.3 Environmentally Sensitive Habitats**

**2.3.3 Specific Policies**

**A. Terrestrial Plants and Habitats**

5. A fuel reduction program should be developed for North County's oak woodland and chaparral to reduce the potential risk of wildfires, to maintain the vigor of plant communities, and to maintain the diversity and value of habitat areas. Controlled burning should be strictly limited and managed in maritime chaparral areas.

**2.3.4 Recommended Actions**

5. The County should encourage the restoration of sensitive plant habitats on public and private lands. A program to control invasive non-native vegetation should be developed in conjunction with the State Department of Parks and Recreation, State Department of Fish and Game, U.S. Forest Service and the County."

Furthermore, Monterey County has developed a Preservation of Oak Ordinance in line with State mandated protection of oak woodlands.

The language below from the Land Use Plan is very clear --



p. 27 -- *The highest priority is placed upon the preservation and protection of natural resources including **environmentally sensitive habitat areas**, i.e., wetlands, dunes, and other areas with rare, endangered, or threatened plant and animal life.*

This quote actually appears on page 19. It is a quote from The Coastal Act. In its 2013 LCP Update Guide, the Coastal Commission includes a section on what "natural resources" should include, and these include "Protective policies to avoid or minimize the removal of native tree species of special concern"; and "measures to avoid invasive species." In the same update, the CCC suggests that counties "address invasive species, such as a prohibition on the use of non-native invasive plants in . . . locations in or adjacent to sensitive areas; . . . [and that they] consider regionally appropriate policies to promote additional methods of eradicating non-native invasive plants. . ."

p. 30 -- *The need for effective management of these areas is important to protect the abundance and diversity of their natural resources, **many of which are sensitive to disturbance** and have been degraded in the past due to erosion and land use practices. Effective resource management will be increasingly vital in protecting the coast's natural resources as stressed in the California Coastal Act of 1976. Areas of scenic value, **environmentally sensitive habitats**, prime agricultural value, unique communities, and areas of high geologic or fire hazard will require special attention in order to protect the public welfare and **preserve the delicate natural balance** upon which many of the resources depend.*

This very selective excerpt omits the sentence before, which reads "The area east of Elkhorn Slough with its oak and chaparral-covered hills and numerous small canyons and valleys is a resource that has been affected by extensive land clearing and erosion." We are proposing to restore oak woodland where it was cleared and replaced by non-native eucalyptus plantations.

p. 31 -- 2.2.1 Key Policy

*In order to protect the **visual resources** of North County, development should be prohibited to the fullest extent possible in beach, dune, estuary, and wetland areas.*

Again, this is taken out of context. Just lines before this policy the LUP says "North County's scenic resources are plentiful in its beaches and dunes, estuaries and wetlands, hills and ridgelines, and in its cultural, historic, and architectural sites. Some of these resources have suffered abuses in the form of siting of development, erosion, land clearing, and pollution in past years. Restoration of degraded sites, especially those with high visibility, should be a community priority." This project restores areas formerly cleared of native habitat, which were then replaced by non-native eucalyptus; it also opens up views of estuarine habitat for the public.

p.32 -- 2.2.3 Specific Policies

1. *The scenic areas of North County including the coastal beaches and dunes, estuaries, wetlands, slopes adjacent to scenic corridors and viewpoints, and ridges shall be zoned for scenic conservation treatment.*

2. *Where it is found that **highly sensitive scenic areas cannot be effectively protected through public regulation, then the land should be considered for public acquisition.** In such cases, the land should be purchased by agencies **with the capacity to properly manage and supervise the property.***

...

6. *Existing native trees and **other significant vegetation shall be retained to the maximum extent possible, as an essential element of the scenic beauty and character of the North County coastal area.***

The eucalyptus are significant vegetation, and therefore, an essential element.



Again, the text here has been carefully excerpted to omit important information. #6 continues ". . . Removal of native trees and vegetation and landmark trees shall be permitted in accordance with Sections 2.3.2, 2.3.3, 2.6.2 and 2.6.3 of this plan and other policies that may apply."

#### 2.2.4 Recommended Actions

1. *The beaches, dunes, estuaries, and wetlands should be zoned with a district that allows structures associated with the recreational, educational, and aquacultural use of the areas. The **scenic-wooded hills, ridges, and slopes** should be zoned with a district that allows only recreation and low density residential uses and appurtenant facilities that are compatible with the **scenic character of the area**. Procedures and standards should be designated for review of the siting, design, landscaping of, and grading for any structures proposed in these areas. No uses or structures should be allowed that are unnecessarily visible **or that significantly detract from the scenic character of these visual resources**. [many of these wooded slopes are covered with eucalyptus]*

#### p. 33 -- 2.3 ENVIRONMENTALLY SENSITIVE HABITATS

*Within the North Monterey County Coastal Area **a great diversity of plant and animal habitats coexist**.*

*Climate, soils, topography, the extent of marine influence, and the degree of disruption to the natural environment varies greatly. **Interaction of these variables over the years has produced several sensitive or rare habitats and species, many of which will require special attention if they are to be preserved for future generations.***

***Environmentally sensitive habitats are areas in which plant or animal life or their habitats are rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.** These include Areas of Special Biological Significance as identified by the State Water Resources Control Board; rare and endangered species habitat, **all coastal wetlands and lagoons**, all marine wildlife, and kelp beds; and indigenous dune plant habitats.*

***The Coastal Act emphasizes the importance of maintaining environmentally sensitive habitats and further stresses that future development within or adjacent to sensitive areas must be appropriate with respect to type of use, siting, and design to ensure that the sensitive areas are not degraded or threatened.** Only coastal-dependent uses are permitted within **sensitive habitat areas** including nature education and research, hunting, fishing, and aquaculture.*

*Among the sensitive habitat areas found nearest the coast are the Monterey Bay itself, the delicate dunes and beaches, and the large sloughs and saltwater marshes--each with a different and changing degree of salinity. A unique community of vegetation and wildlife is supported in each area. Inland portions of the North Monterey coastal area also support a diversity of sensitive habitats including: riparian corridors, freshwater marshes, and maritime chaparral. These have been threatened to varying degrees by agricultural and residential uses.*

***Perhaps most unique among all of these habitats are the sloughs**, the estuarine waters resulting from the mixing of seawater with freshwater. **They are also some of the most sensitive.** The sloughs provide a sanctuary for harbor seals, sea otters, and a great variety of fish and birds.*

***The list of rare and endangered species of plants and animals is lengthy for this area and***

*many of these species exist only in the most sensitive and limited habitats. In order to preserve the viability of these habitats and the plants and animals they support, they must be protected from the damaging effects of development or inappropriate activities such as off-road vehicle use, hunting, and inappropriate spraying of pesticides and herbicides. In some cases, the protection warranted will entail public acquisition of property, and subsequent designation as a preserve or sanctuary with supervision of activities. Such protection may be necessary for some of the dune areas along the coast which are still privately owned.*

...

*Protection in the form of land use regulation and design review of development projects in the vicinity of an environmentally sensitive habitat should be adequate in most other cases.*

*Programs designed to alert the public to the locations of **environmentally sensitive habitats** and to educate them about **the habitat's uniqueness and fragility** may be a useful tool in protecting areas affording major public access.*

These excerpts attempt to characterize eucalypts as environmental sensitive habitat. However, earlier work done regarding ESHA in Monterey County (Draft Findings of the Monterey County LCP Periodic Review: Chapter 3: Environmentally Sensitive Habitat Areas. page 161) has described eucalyptus as an "aggressive nonnative species" that "may alter ecosystem functions such as nutrient cycles, hydrology, and wildfire frequency, and the natural community structure through direct competition for resources and space, the exclusion of some species through allelopathic affects, and the hybridization of rare, threatened, or endangered species."

3. The California Invasive Plant Council (Cal-IPC) classifies Eucalyptus globulus as "**limited invasiveness**"— its lowest rating. Cal-IPC also notes that some groves are actually shrinking. Despite that, the MND repeatedly asserts that eucalyptus are invasive, such as these statements:

"This project maintains and potentially expands native oak woodlands where they are currently threatened by **encroaching** non-native eucalyptus. (MND, p. 34)

"ESNERR uplands now include almost 50 acres of the **invasive** non-native eucalyptus tree, Eucalyptus globulus." (MND, p. 5)

The MND references Cal-IPC but only for plants.

**BIO-13** – ... **The California Invasive Plant Council's (Cal-IPC) high rated invasive weeds shall be removed from the project areas using manual or chemical methods for three years following initial eucalyptus tree removal.** – MND, p. 38

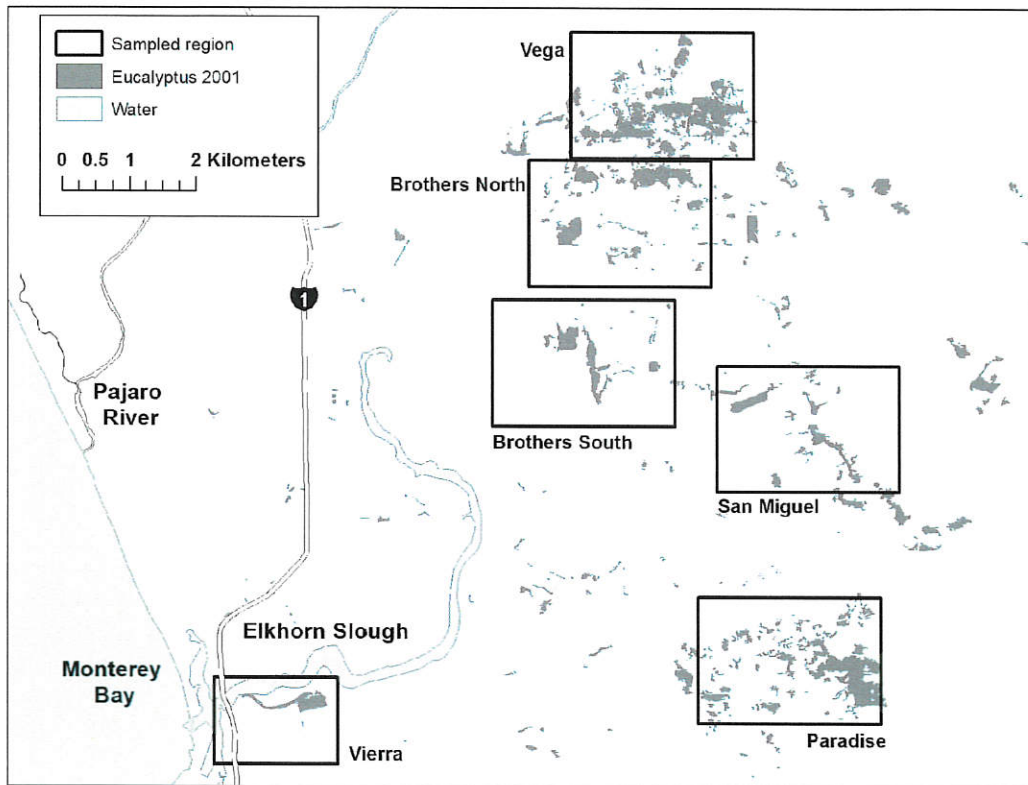
Why doesn't the MND mention Cal-IPC's designation for eucalyptus? Because it negates the rationale for this project.

Cal-IPC did indeed recently revise its *E. globulus* state-wide ranking, after the MND was complete, changing it from "Moderate" to "Limited." Limited is defined as "These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score." In explaining the change, Cal-IPC writes "this change is due to evaluating *E. globulus* across the entire state, rather than focusing on coastal areas where it is most prone to spreading. . . Though not all *E. globulus* stands are expanding, **those in moist coastal habitats often expand at a significant rate. . .**"

This last statement relies, in part, on data reported in an Ecological Applications paper (*in press*) authored by Reserve researchers. An aerial photo analysis tracking 6 eucalyptus stands in the Elkhorn Slough watershed between 1931 and 2001 showed a 50-400% increase in eucalyptus stand size, and is supported by our observations in the field of spread of groves via seedlings. The table and images below are from the in-press paper. We have long recognized that eucalyptus spread in our watershed, and Reserve stewardship staff regularly remove eucalyptus seedlings from Reserve lands.

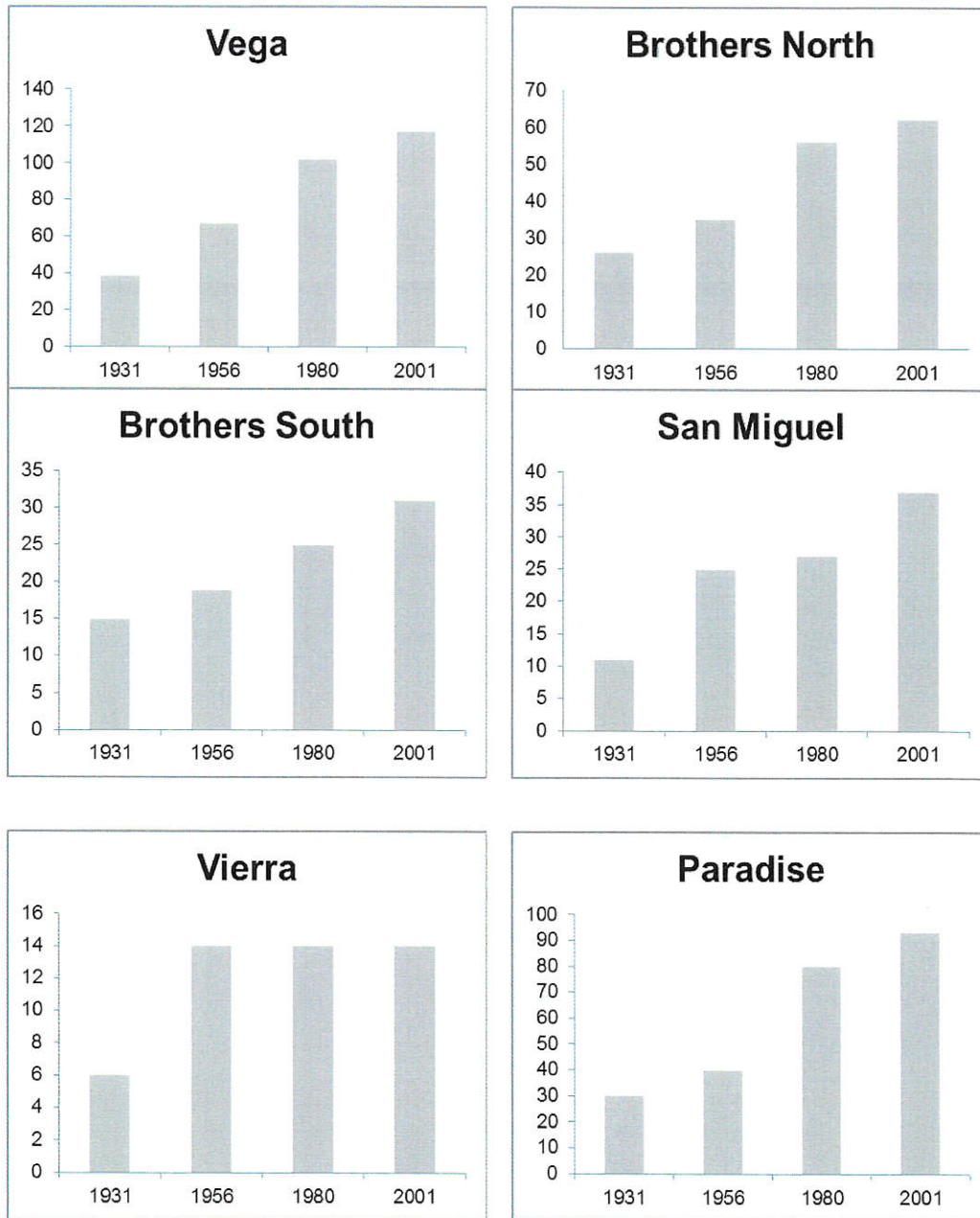


**Appendix 2.** Areas analyzed for the eucalyptus time series, 1931-2001. Name for sampled area given adjacent to region's polygon.





**Fig. 4** Eucalyptus grove size over time for the six sampled regions in the Elkhorn Slough watershed. Years are on the X axis; eucalyptus grove size in hectares is on the Y axis. Region names are as they appear in Appendix 2.



**Fig. 5** Eucalypts reproducing by seed on the edge of a mature woodland in Santa Cruz County, CA. (Photo: Tim Hyland)



4. Air Quality:

Cutting down these trees would cause the **release** (due to loss of sequestration) of **1,451 metric tons of CO2** equivalent (CO2e, Ducks Unlimited stats<sup>i</sup>). Plus the emissions generated by the project are estimated at **268.84 metric tons of CO2** equivalent (CO2e).<sup>ii</sup> The estimated total is **1,720 metric tons of CO2** released.

[Air quality was addressed in the project's Mitigated Negative Declaration and was determined to have no impact. This appears to be a greenhouse gas argument. See response for item # 8, below.](#)

5. The eucalyptus trees also actively **absorb** and **mitigate CO2** in Monterey County, and they **generate O2**. The MND fails to mention these important positive impacts which this project would destroy.

I found a range of values for CO2 absorption per tree, from 13 lbs per year to 48 lbs per year. That equates to **16,315 – 60,240 lbs of CO2 absorption per year**.

In addition, there was a range for O2 production per tree – 200-6000 lbs per year. That equals **251,000 – 7,530,000 lbs of O2 per year** lost if this project goes through. Several sources said that one tree provides enough oxygen for two humans. Two trees provide enough for a family of four.

[Please see response under item #8, below.](#)

6. The MND compares project emissions to California as a whole. The appropriate metric is to reference Monterey County or this particular location. That allows the cumulative impacts in this particular area to be properly evaluated.

This loss would combine with other Monterey County recent losses or projected losses due to development, such as the Veterans Cemetery (loss of coast live oaks), the Ferrini Ranch (loss of



coast live oaks), the Big Sur Land Trust eucalyptus elimination project, and the proposed Monterey Downs development with its projected loss of approximately 40,000 coast live oaks. This is local cumulative loss of trees with its attendant impacts.

Combine this with the rising death toll locally of trees due to drought. My family's neighbor just had three dead trees felled, with three more dead ones soon to be cut down close by. That is six large trees dying suddenly in less than an acre. This represents an ominous growing loss of carbon sequestration, a loss of CO2 mitigation, and a loss of O2 production.

This county cannot afford to intentionally take more trees. Doing so contradicts this county's goals as well as state goals to reduce CO2.

Climate change is now. If climate change is truly the emergency situation which local, state, and federal officials claim, then the loss of trees to ideologically driven projects with questionable benefits is a luxury we cannot afford.

[Please see response under item #8, below.](#)

7. Due to these facts, this project is in conflict with the Unincorporated Monterey County Greenhouse Gas Emissions Inventory 2005 Baseline Report, produced in 2010.

*The County of Monterey has taken steps toward reducing its impacts on the environment by quantifying its 2005 GHG emissions from local government operations and its community. **Staff and policymakers have chosen to take a leadership role in addressing climate change, and this leadership will allow the County of Monterey to make informed decisions to create and implement innovative approaches to reduce its emissions.**<sup>iii</sup>*

[Please see response under item #8, below.](#)

8. CDFW is in violation of AB 32 for this project. AB 32 mandates that the state reduce CO2 emissions. CDFW is on the Climate Action Team charged with implementing AB 32.

*The passage of AB 32, the California Global Warming Solutions Act of 2006, marked a watershed moment in California's history. By requiring in law a sharp reduction of greenhouse gas (GHG) emissions, California set the stage for its transition to a sustainable, low-carbon future.*

*... Pursuant to AB 32, ARB must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions.*

*[AB32 states]*

*(a) Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.*

*(b) Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity*



*supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the state.<sup>iv</sup>*

*In 2006, California passed the Global Warming Solutions Act (AB 32) which charged the California Air Resources Board (CARB) with implementing a comprehensive statewide program to reduce greenhouse gas emissions. AB 32 established the following greenhouse gas emissions reduction targets **for the state of California:***

- 2000 levels by 2010
- 1990 levels by 2020
- 80% below 1990 levels by 2050<sup>v</sup>

- a. The net effect of this project is to increase CO2 emissions.
- b. This project diminishes forest sequestration, in violation of the AB 32 Scoping Plan.

*The resulting AB 32 Scoping Plan was adopted by CARB [California Air Resources Board] in December 2008. It established the following measures that **the State will take to meet the greenhouse gas emissions reduction targets:***

Item #14 on the CARB list is, "Preserve forest sequestration".

The CEQA Notice of Determination was posted in March 2015, and it was determined that the project will not have a significant effect on the environment. The Mitigated Negative Declaration that was prepared included the required section on Greenhouse Gas Emissions, including a project analysis conducted by an independent consultant (Ducks Unlimited), and it included an estimate in the carbon sequestration capacity of the vegetation.

The Climate Change Scoping Plan Update, written pursuant to AB 32, acknowledges that "some actions to reduce emissions and enhance carbon storage in the long-term may result in temporary, short-term reductions in carbon stock, but they are necessary to maintain healthy forests that are more efficient at GHG sequestration and more resilient to future climate conditions. It's important to manage our forests to maximize net climate benefits, increasing sequestration while reducing losses due to fire or other processes, while also considering the broader range of environmental services that forests and other natural lands provide." Removing flammable, non-native eucalyptus will reduce the potential for catastrophic wildfires, while increasing natural oak woodland habitat.

9. Eucalyptus groves are not deserts. They are habitat for hummingbirds, monarchs, honeybees, egrets, herons, hawks, owls, salamanders, newts, and a whole array of creatures big and small. These are ecosystems, communities, organic systems, connected webs, surviving in an increasingly challenging environment.

Elkhorn Slough Reserve staff, working with outside researchers, have investigated this topic for over 10 years. In our upcoming Ecological Application paper, we detail comparisons of habitat value for local native oak trees and blue gum eucalyptus. The results varied by plant and animal type. Bird species richness and abundance did not differ significantly between oaks and eucalyptus, and birds were clearly documented using both coast live oak and eucalyptus groves. At Elkhorn Slough, hummingbird abundance did not differ between oaks and eucalyptus. On the other hand, understory plants endemic to the Western United States did poorly under eucalyptus, as did native amphibians. Arthropod richness also suffered under eucalyptus. We conclude our paper by stating "our study provided no support for the contention that eucalypt woodlands are poor sites for birds. . . However, our results revealed that other metrics of biodiversity were significantly affected by eucalypt planting and spread in this watershed. Our data suggest that land managers could enhance abundance of native understory plants, particularly perennials and species with ranges limited to Western North America, as well as amphibian abundance and arthropod richness through restoration of oak groves at sites currently occupied by eucalypt groves."

Based on these and earlier data, Reserve staff are proposing to remove only a portion of the site's eucalyptus, restoring them to oak woodland where appropriate. Where nesting egrets, herons, raptors, and cormorants or monarchs have been documented, eucalyptus will be left in place. But where habitat can be improved for native understory plants, amphibians or insects, eucalyptus are planned for removal. We believe this is a sound ecological approach.

10. CDFW admits that eucalyptus groves provide valuable habitat.

From [CDFW News](#), March 2014 –

In Central California, the City of Merced's Wastewater Treatment Plant Wetlands offers 300 acres of seasonal wetlands that provide habitat for migrating waterfowl, song birds and raptors. **A eucalyptus grove on the property also supports great blue heron and great white egret rookeries.**

Then why is CDFW proposing to remove valuable habitat?

[Please see response to item #9, above.](#)

11. Egrets and herons nest in colonies. Removing groves displaces colonies of birds.  
[Eucalyptus groves used as rookeries or nesting sites will not be removed.](#)
12. There are 13 groves. CDFW plans to remove four at the present time. It may remove the others later. Why would CDFW remove nesting areas when birds are suffering so many stressors now?  
[Active nesting areas will not be removed.](#)
13. Birds live in trees not just during breeding season, but throughout the year. This plan eliminates year-round living quarters for birds and other wildlife. This increases pressure on remaining groves, causing overcrowding, and birds will leave.

The sloughs in Moss Landing and Watsonville have already seen a huge reduction of bird life over the years since European (non-native) immigrants started farming there. Bird populations overall are dropping drastically. Eliminating nesting grounds is counterproductive, and is the opposite of good land conservation and management.

Especially when one of the groves is on a site called Hummingbird Island.

[Please see response to item #9, above.](#)

14. **Eucalyptus trees provide important winter forage for species such as monarchs, bees, and hummingbirds, because they flower from November – April. Barley grass and Coast Live Oak do not provide that forage.**

Monarchs and bees are already facing population declines and habitat loss. Many organizations are pledging to protect them. This project takes further habitat from these struggling species.

[Please see response to item #9, above.](#)



15. From the MND:

“Research done by ESNERR staff and graduate students has shown 1) that without control, local eucalyptus groves expand, displacing adjacent habitat, including native oaks, 2) that native amphibians are more abundant in local oak woodlands than adjacent eucalyptus stands, and 3) that eucalyptus growing near ESNERR ponds utilize more water than nearby oaks (ESNERR, unpublished data)” – p. 5-6

- This is not peer-reviewed data.

[The data for items 1 and 2 are now peer-review and the resulting paper is in press.](#)

- If these trees are so expansive, why haven't they taken over the slough? These groves have been in place since before the 1930s as far back as the late 1800s. That's 100 years or more. This may be one reason Cal-IPC downgraded its rating of eucalyptus to limited invasiveness.

[Please see response to #3, above.](#)

- Water use is different depending on the species. Is CDFW suggesting that willows or other plants or trees should be eliminated simply because they use more water than oaks? These are facts of life, not crimes.

[CDFW is not suggesting the removal of willows or other plants due to water use.](#)

- Animals have preferred habitat – another fact of life. Monarch butterflies, for example, prefer eucalyptus as a food source and to live. Destroying habitat preferred and/or enjoyed by native species to theoretically increase another species is illogical. Again, the North County Plan repeatedly calls the slough area “sensitive habitat”. This project violates the plan by disrupting intact sensitive habitats in place for about 100 years.

[There is no plan to remove “sensitive habitat” as described by the County.](#)

- It is natural for habitats to expand and contract. Ecosystems are not set in stone. Oak habitat is expanding with the drought and warming climate. Colder climates favor other trees. What point in time is CDFW declaring the “perfect” time to judge ecosystem purity?

[There is no intent or desire to assess “ecosystem purity.”](#)

16. Elkhorn Slough personnel have reportedly stated that poop from nesting egrets and/or herons eventually kills the host tree.<sup>vi</sup> If eucalyptus trees are killed, the birds will nest in and kill other trees including natives. By cutting down the eucalyptus, CDFW would, in effect, be killing other trees.

[The current location of a heron, egret, and cormorant rookery site is located in a protected eucalyptus grove. We have no plans to remove this grove or rookery site.](#)

17. The MND jumps from “preliminary data **indicate**...this **suggests**... removing the eucalyptus could **potentially** increase the amount of water...” (p.30) to the conclusion “Research done by ESNERR staff and graduate students **has shown**... 3) that eucalyptus growing near ESNERR ponds utilize more water than nearby oaks (ESNERR, unpublished data)” (summary on p. 5-6)

***Preliminary data** from ESNERR researchers **indicate** that eucalyptus transpire approximately twice as much as adjacent coast live oaks. This **suggests** that ESNERR eucalyptus use more water than oaks, and put added pressure on already stressed underground water reserves in the region. Therefore, removing the eucalyptus **could potentially** increase the amount of water available to Reserve ponds that support two listed amphibians, the California red-legged frog and the Santa Cruz long-toed salamander, and one State species of concern, the western pond turtle. (p. 30)*



Eucalyptus may scavenge water more readily from the air and from fog since it is adapted to arid climates. Fog drip from leaves can also mitigate groundwater uptake.

Data from Reserve monitoring (Summer 2015, unpublished data) detected very little soil moisture in Reserve eucalyptus groves. More moisture was detected under oaks.

Underground reserves are stressed by area agriculture which has unsustainably been drawing down the aquifers for years. To blame this on trees is misplaced. CDFW is basing a removal policy by scapegoating and fails to confront the real problem.

The Reserve is not attempting to mitigate overdraft of the aquifer with this project. CDFW instituted a state-wide water reduction program at the Elkhorn Slough Ecological Reserve reducing water consumption by half.

How much water would be saved by removing land from agricultural use in the vicinity of the Reserve? This would have many other benefits including lessened erosion and silting of waterways, decreased air and water contamination from herbicides, pesticides, and fertilizers, and the possibility of revegetation.

The Elkhorn Slough Foundation, the Elkhorn Slough National Estuarine Research Reserve/Ecological Reserve work together to remove damaging agricultural properties from production, restore degraded slopes, prevent erosion into the waters of the Elkhorn Slough, all the while maintaining a healthy and viable economic working landscape that includes sustainable farming practices. To date almost 4000 acres have been conserved.

18. Eucalyptus groves actually create moisture zones and stay green during drought conditions – extremely valuable for the plants, animals, and insects that depend on them.

Data from Reserve monitoring (summer 2015, unpublished data) found that soil moisture is higher in oak woodland than eucalyptus groves.

*Preliminary data from ESNERR researchers indicate that **eucalyptus transpire approximately twice as much as adjacent coast live oaks.** (p. 30)*

California is in a horrible drought. No one has any idea when it will end.

In the MND photos of “before” and “after” tree removal – p. 19-25 --

- a. Which landscape is going to be drier?
- b. Which photos show cool, shade-creating, earth-shielding habitat?

The before and after images in the MND are meant to show only viewshed. The long term effect of this project will be to restore native habitat. This project is guided by results from an earlier Reserve eucalyptus removal project. In the 1990s, a dense 13 acre eucalyptus stand was removed, and Reserve staff and volunteers worked together to replant native oaks, grasses, flowers and shrubs, and to document plant survival. Today the area is a maturing oak grove, interspersed with large patches of California oat grass and coastal scrub (picture of the restoration area, as it appears today, below).



19. "Plantings will be maintained by watering and weeding. Plants will be watered the first summer if necessary."<sup>vii</sup>

This project will not only remove habitat and moisture-retaining vegetation and trees, but it will require inputs of scarce water. With this drought, plantings will require constant water and care.

In a very real sense, this project is not sustainable. Further reading under "Revegetation" (p. 9-10) shows big questions about whether and which "native" species will survive, and the amount of tending necessary for these "native" species.

If they are native and adapted to this area, shouldn't they thrive more easily than non-native species?

The Elkhorn Slough Ecological Reserve has 35 years of experience re-vegetating sites in the Elkhorn Slough watershed. A common practice for success in ecological restoration is to water plantings the first year.

20. "The removal of the groves will convert 13.6 acres of eucalyptus forest to grassland." p. 163, MND.

As stated elsewhere, the eucalyptus groves will be converted to native oak woodland habitat, or coastal scrub or coastal prairie in small areas where appropriate. This statement was used for the Ducks Unlimited's conservative estimate of change in carbon sequestration capacity of the project site, and is just the immediate, not the long-term result of the project.

Fire is not a major issue for the Reserve, since there are no dwellings and few buildings in the slough. Fire is not mentioned in the MND. Yet, fire was raised by CDFW at the Planning



Commission hearing. Grasslands are a very fire-prone setting, and CDFW seeks to expand existing grasslands.

There are three dwellings on the Reserve, and fire is a major issue for the Reserve, and neighboring homes along Elkhorn Road. The neighborhood adjacent to the Reserve's largest eucalyptus grove has been designated a "high" fire hazard severity zone by CAL FIRE.

“...it cannot be over emphasized, moisture content is one of the most important factors in determining wildfire risk... Fire Science has proven that every living tree — regardless of its species — due to its moisture content and canopy coverage of ground fuels, contributes to wildfire hazard **mitigation**.” -- fire expert David Maloney

It is surprising that the 2009 letter from David Maloney<sup>viii</sup> and information from other fire experts have not been used to create a more scientific policy within CDFW and other state agencies. By removing the eucalyptus that provide windbreaks and fire damping due to their moisture content and transpiration, CDFW is creating a greater fire risk on the Reserve. Since CDFW has not utilized this type of expertise, this raises questions about the scientific basis of other statements CDFW makes in this MND.

David Maloney, retired firefighter and expert on the panel investigating the Oakland-Berkeley panel cites the Fire Protection Handbook:

*"Two conditions of fuel moisture have major influence on the rating of fuel types. One concerns the greenness, or curing stage, of vegetation. The other relates to the shade and protection furnished by green timber.pg. 13-63... it cannot be over emphasized, moisture content is one of the most important factors in determining wildfire risk. [It was the logging of the trees on Angel Island in 1999 that caused the Angel Island Fire of 2008.]*

*"While fuel is a key ingredient for any blaze, and fuel accumulations can exacerbate fire intensity, most large blazes result from drought and wind – not fuels. Yet, because fuel treatments are emphasized in management prescriptions, the general public is led to believe that fuels are the driving force in large blazes and, by inference, that fuel reduction by tree thinning will prevent large fires." Wild Fire: A Century of Failed Forest Policy. Pg. xiii, part of the section entitled 'Myth: Big Fires Are the Result of Too Much Fuel.' Edited by George Wuerthner.*

*.. The [East Bay Hills FEMA project] wants to give a high fire hazard rating to green (living) trees and cut them down, because they did not originate in California, when it has been shown over and over again that green trees, regardless of where they originated, are a bulwark against wildfire because of the moisture they contribute to the ground fuels and because they act as windbreaks.*

**... The fuel hazard ratings relative to the Eucalyptus trees are ideologically driven and therefore cannot be trusted...**

*In fact one of the Eucalyptus species mentioned, the Blue Gum, is very fire resistant... The Blue Gum has a thick bark, branches that are high from the ground, and because it*

*evolved in the arid and fire rich climates of northern Australia and Tasmania, an astounding ability to retain moisture, which ability gives it a high bark water content."*

*"Sound wildfire hazard mitigation does not make a distinction between whether a species was here before or after Columbus landed in the Caribbean. Sound, effective, wildfire hazard mitigation does not determine that a plant or species is a fire hazard because of where it originated.*

*Such a determination..gives rise to propagandistic statements which are designed to scare the public, but which have no basis in fire science. "*

He goes on to mention that though there are references to coniferous trees as a fire hazard in the Fire Protection Handbook, there is not one reference to eucalyptus trees.

The 2010 Monterey County Community Wildlife Protection Plan states that the presence of significant stands of "eucalyptus trees . . . encourage fire growth in North [Monterey] County. "

Please refer to the letter from the North County Fire Protection District regarding local fire hazard and eucalyptus trees. In it, the Fire Chief explains "Locally, we have had many challenging fires in eucalyptus groves. We had a fire in a eucalyptus grove along Hwy 156 in March of this year on a day that dry grass would not readily ignite. The understory and canopy of eucalyptus burned and spread embers that ignited other trees as much as 1 1/4 mile away..."

21. CDFW wants to kill trees and leave them in place as snags.

From fire expert David Maloney:

Again, from Vol. II, page 13-62 of the Fire Protection Handbook,  
"Snags, or tree stumps, are one of the most important aerial fuels that influenced fire behavior. Although green trees greatly outnumber snags in most forests, more fires start in snags because they are drier and are arranged for easier ignition."<sup>ix</sup>

Internet ad from CalFire and PG&E: Remove

your dead trees.  
Reduce your wildfire risk.

So, by increasing grasslands and intentionally leaving dead trees in place, CDFW is actually increasing the fire risk at ESNERR.

Snags are an important component of a healthy forest system, providing foraging and nesting habitat for many birds and mammals. Increase in fire risk is minimal.

22. CDFW contradicts its assertion that eucalyptus trees eliminate "native" trees and plants by showing that **native species are co-mingling with eucalyptus.**

Pg. 17 "At Cattail Swale, the removal of eucalyptus is expected to reveal **small but mature oaks currently growing in the understory of tall eucalyptus trees (Figure 6).** "

Pg. 9 "The second [reference] site is the Cattail Swale eucalyptus grove. **Germination and re-colonization of an existing native seedbank** occurred after the removal of a thick cape ivy understory, opening up space and **producing a rich assemblage of coast live oak woodland habitat and several native herb species not previously recorded on the ESNERR plant list.**"



This is more evidence that this project springs from ideology and not from an objective reality-based perspective. David Theodoropoulos has extensively documented native species living alongside so-called non-native species including eucalyptus.

[Native coast live oaks are struggling to survive in the monoculture of eucalyptus stands on the Reserve.](#)

23. From the MND:

“Historically dominated by coastal prairie, coastal scrub, freshwater meadows and coast live oak woodlands, ...Eucalyptus trees were planted on the property before the **1930s**,...” (p. 5) ...Beginning in the mid- to late-1800s, coast live oaks and shrubs were cleared in many parts of the eastern Elkhorn Slough watershed for firewood, timber and to open space for agricultural use. In **the late 1800s and early 1900s**, eucalyptus trees were popular due to their rapid growth.” (p. 30)

This document is not consistent in its time frames. When was the eucalyptus planted?

[There is no contradiction here. These dates are correct; some eucalyptus groves were planted in North Monterey county the mid-to-late 1800s, others in the early 1900s. The best records we have specifically for the Reserve are aerial photos, the first of which were flown in the 1930s. By then the eucalyptus evident in the photos are large, but their exact planting date is unknown, and it is irrelevant.](#)

At what point in time is the statement “historically dominated” true? What is historic? At which time period?

[It is obvious the document describes the pre-contact ecology.](#)

The present habitat has been in place for 100 years or more, and functioning despite the many severe changes and stresses to the entire region’s ecosystem. That is an enormous plus for all the creatures that rely on it.

This is no longer the world of the 1880’s, the 1900s, or 1930s. Earth’s climate is changing dramatically, and the region is not at all the ecosystem it was 100 years ago. To attempt to “go back” given current levels of environmental degradation and instability, and climate change is a folly. This is not scientific to any degree and is ungrounded wishful thinking.

[The Reserve is not recreating a past time. It is restoring natural habitat and native plants, as described in the CDFW Ecological Reserves' mission statement.](#)

[The staff of the Elkhorn Slough National Estuarine Research Reserve/Ecological Reserve has expertise in not only ecological function of coastal habitats, but also possible impacts of climate change.](#)

[Understanding and monitoring climate change has been incorporated into the existing nation-wide system of National Estuarine Research Reserve programs \(of which the Elkhorn Slough National Estuarine Research Reserve is one\) for almost 10 years. CDFW has an internal climate change task force, and Reserve staff were recently awarded grant funds to work with national experts from the EPA to establish additional climate research.](#)

24. Viewscape degradation and information in the MND is ideologically driven. Statements such as “The removal of eucalyptus would **increase the visibility** of grasslands and oaks from ESNERR’s South Marsh Trail (**Figure 8**)...At South Marsh (**Figure 5**), the removal of eucalyptus would **improve views** from ESNERR’s South Marsh trail of one freshwater pond and tidal wetlands currently hidden behind the Trees...**Historically dominated** [These groves have been in place for about 100 years] by coastal prairie, coastal scrub, freshwater meadows and coast live oak woodlands, ESNERR uplands now include almost 50 acres of the **invasive** non-native eucalyptus tree,

*Eucalyptus globulus* and approximately one acre of *Eucalyptus camaldulensis* spread out over 13 groves. “

Outside of those who believe in “good” trees and “bad” trees, most people see beautiful nature and scenery. When nature is disrupted or destroyed, most people see that as a bad thing and ugly. Trees are a beautiful part of scenery. Only ideology puts blinders on that.

The MND statements about what will be visible after the project is complete are factual, not ideological. The statements do not use the words "good," "bad," or "beautiful," or "ugly."

25. Some of these groves are at the water’s edge. The North County Land Use Plan established buffer zones for development because of the sensitive nature of the Slough. This project violates that. The LUP's setback requirement is established to "prevent degradation of the habitat area," and/or "maintained in open space use." This project is specifically designed to decrease habitat degradation due to exotic species, and to restore and enhance natural habitats, including the transition zones between land and water. It will be maintained in open space use. Reserve staff have published several peer-reviewed scientific articles on the ecology of Elkhorn Slough's wetland-to-uplands ecotones and have expertise working in these areas.

26. Herbicide use will be harmful to the Slough.

**RoundUp Pro** (active ingredient **glyphosate**), R-11, **Garlon 4** (active ingredient: **triclopyr ester**) with 70% Hasten.

As an example of impacts:

- Glyphosate has now been classified a Class 2A carcinogen (probable).
- It does not biodegrade, but bioaccumulates in the environment, impacting all species and their offspring.
- It causes genetic damage.
- RoundUp targets an enzyme which is also found in the bacteria in the intestines of humans. Presumably, this bacteria is in the intestines of other species as well.
- Plants become resistant to this herbicide, creating superweeds and more problems, with truly invasive weeds. Using the herbicides begins a downward process.
- Glyphosate is showing up in human breast milk and urine, even in those who eat only organic produce. What about otters, seals, and other animals in the slough?

Triclopyr/Garlon

“The [MSDS for Garlon 4 Ultra](#) states that it is a health hazard:

- “This product is a **“Hazardous Chemical”** as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.”
- “Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312: **Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard”**

Marin Municipal Water District (MMWD) hired a consulting firm to conduct a risk assessment of herbicides that MMWD was considering for possible use. The [risk assessment reports](#) the following risks of triclopyr, the active ingredient in Garlon:

- “Triclopyr poses the **highest risk to workers, the general public and most aquatic and terrestrial wildlife**. The primary factor contributing to high human risk is dermal exposure from handling the chemical during applications or from vegetation contact.”
- “Triclopyr...[is] **inherently more toxic to mammals. Triclopyr is particularly toxic to pregnant animals, causing severe birth defects** in the fetus if the mother is exposed during



pregnancy...Trioplyr...[is] an order of magnitude more **toxic to birds** than the other herbicides, and triclopyr is the **most toxic of the five herbicides to bees...**"

- "Although most of the field studies designed to measure triclopyr water contamination indicate that triclopyr will not run off in substantial amounts, actual monitoring data indicate that **triclopyr contamination of waterways is occurring**...In California, where triclopyr is used...11.5% of 227 samples contained detectable triclopyr." <sup>x</sup>

Herbicide use on the Elkhorn Slough Reserve follows all Department of Pesticide Regulation rules and is overseen by CDFW's Integrated Pest Management Unit. Both agencies are in place to protect human and environmental health while allowing for the control of damaging pests.

The recent International Agency for Research on Cancer (IARC) in Lyon, France classification of glyphosate as carcinogenic has been controversial. According to Scientific American, "the IARC review notes that there is limited evidence for a link to cancer in humans.. . [and] the report notes that a separate huge US study, the Agricultural Health Study, found no link to non-Hodgkin lymphomas. The New York Times notes that "The E.P.A. has maintained its classification of glyphosate as having "evidence of noncarcinogenicity for humans" since 1991, including through a review last year."

A simple formula can be used when assessing pesticide hazards: hazard = toxicity X exposure. In other words, hazard can be reduced by reducing exposure. The herbicides proposed for this project are both labeled with the word "caution", and LD<sub>50</sub> values put both in the practically non-toxic to slightly toxic categories. Low toxicity coupled with the use of required safety measures (personal protective equipment) and proper application means low risk to applicators and the environment.

27. CDFW ignores the research of Cleve Backster and others, demonstrating the intelligence, sentience, and communication abilities of plants and trees with other species.<sup>xi</sup> This further demonstrates the importance and interconnectedness of habitats, and the trauma done when habitats are disrupted.

Mr. Backster's theories describing extrasensory perception in plants have no relevance in developing habitat restoration projects.

28. Invasion biology is an ideology. It is very controversial in the scientific community because of the lack of science to support it and many failures of "restoration" projects. Unfortunately, this belief system has become a sacred cow in government circles, encouraged by the herbicide companies that benefit from its eradication methods.<sup>xii</sup>

From the California Invasive Plant Council:

Speaking of sponsors, the list of institutional supporters in the last issue of Cal-EPPC News accidentally left out **Mike Krebsbach of Monsanto**. He has been one of our most consistent supporters, and we want to be sure to give him credit here. His contributions not only helped keep conference costs low, but also helped print the 2003 Wildland Weeds of California calendar.<sup>xiii</sup>

State Ecological Reserves are dedicated to preserving and restoring the natural conditions present on these lands, and this project is designed to meet that objective. We have 35 years worth of experience with restoration projects on the Reserve, and hundreds of acres of improved habitat as a result of these efforts.

Invasive species as a whole have significant impacts on natural ecosystems, agricultural and other developed lands, water delivery and flood protection systems. The most widely referenced paper (Pimental et al. 2005) on this issue reports that invasive species cost the United States more than \$120 billion in damages every year. Invasive species control is not an ideology - it is a necessary endeavor to protect not only native habitats on nature reserves, but also to protect hydrological facilities (zebra and quagga mussels), preserve recreational fisheries and waterfront property

values, (Eurasian watermilfoil), and to protect commercially important grains (black and Norway rats) and other crops (invasive insects), as just a few examples.

29. It is surprising when a European immigrant-based society talks about invasiveness. Eucalyptus trees don't pave over streams, meadows, or woodlands – all important habitat – to build freeways, shopping centers, or housing developments. They don't build polluting factories or power plants, drive polluting cars, or contaminate aquifers.

[This is not relevant.](#)

30. CDFW claims habitat enhancement is the goal, yet this agency promotes hunting. These two activities are mutually exclusive. Hunting disrupts and harms wildlife populations, and inflicts trauma on ecosystems. Especially in view of the sharp declines in bird populations in recent years, this is not logical. Hunting is even allowed in the environs of the Slough.

[Hunting funds the vast majority of habitat restoration projects in our country. This activity is not relevant to this particular project.](#)

31. As stated in #17, if habitat degradation is a focus, it would be far more productive for CDFW to buy adjacent land degraded by agriculture in order to restore the soil vitality and replant the stripped land with coast live oak and habitat.

That would cause a reduction of silt, pesticides, fungicides, fertilizers, loss of habitat, erosion, soil compaction, perhaps overgrazing, aquifer depletion, heavy equipment, and pollution. Why isn't that on the table? That would be a win-win for everyone.

[Indeed changing the land use of degraded agricultural land is a valid conservation strategy and the Reserve and its partners are actively participating in this conversion.](#)

These are some of the main issues. Time does not permit a more extensive critique.

These trees are mature, this habitat is well-established. Benefits to maintaining these trees and plants in place are moisture retention, protection of many species, oxygen creation, sequestering and reduction of CO<sub>2</sub>, the elimination of hazardous herbicides, and lack of disturbance of this sensitive ecosystem.



Conclusion:

The project creates unacceptable impacts which cannot be mitigated. It is in an area which Monterey County has specifically singled out for protection due to its sensitivity and high value. This project is also proposed during a time of major environmental changes, already taking a huge toll on ecosystems and species.

Protecting these healthy and adapted habitat environments should be the highest priority of CDFW and this county.

Please overturn the Planning Commission's approval and deny this project.

Nina Beety  
Monterey, CA  
nbeety@netzero.net

Documents:

Email from Dave Feliz, Reserve Manager, Elkhorn Slough Ecological Reserve  
Elkhorn Slough National Estuarine Research Reserve; July 23, 2015

Another Kind of Genocide -- Review of Invasion Biology: Critique of a Pseudoscience  
Toby Hemenway  
<http://www.patternliteracy.com/201-another-kind-of-genocide>

CDFW News, March 2014  
<https://cdfgnews.wordpress.com/2014/03/page/2/>

Assessment of Tasmanian blue gum (*Eucalyptus globulus*)  
California Invasive Plant Council (Cal-IPC), March 2015  
[https://savesutro.files.wordpress.com/2015/04/eucalyptus\\_globulus-final-reassessment-by-cal-ipc.pdf](https://savesutro.files.wordpress.com/2015/04/eucalyptus_globulus-final-reassessment-by-cal-ipc.pdf)

Letter, David Maloney, expert on Task Force on Emergency Preparedness and Community  
Restoration, to East Bay Regional Park District, October 29, 2009  
<http://www.saveeastbayhills.org/uploads/4/7/8/8/47884333/maloney.pdf>

North County Land Use Plan  
[http://www.co.monterey.ca.us/planning/docs/plans/NC\\_LUP\\_complete.PDF](http://www.co.monterey.ca.us/planning/docs/plans/NC_LUP_complete.PDF)

Unincorporated Monterey County (DRAFT) Greenhouse Gas Emissions Inventory  
2005 Baseline Report  
[http://www.co.monterey.ca.us/planning/major/Pebble%20Beach%20Company/Pebble\\_Beach\\_DEIR\\_Nov\\_2011/Pebble\\_Beach\\_DEIR\\_Admin\\_Records\\_Nov\\_2011/AMBAG/AMBAG\\_2010\\_Monterey\\_County\\_GHG\\_Inventory\\_2005.pdf](http://www.co.monterey.ca.us/planning/major/Pebble%20Beach%20Company/Pebble_Beach_DEIR_Nov_2011/Pebble_Beach_DEIR_Admin_Records_Nov_2011/AMBAG/AMBAG_2010_Monterey_County_GHG_Inventory_2005.pdf)

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<sup>i</sup> MND, p. 163, 165

<sup>ii</sup> MND, p. 163, 165

<sup>iii</sup> Unincorporated Monterey County (DRAFT) Greenhouse Gas Emissions Inventory 2005 Baseline Report, p. 50

<sup>iv</sup> <http://www.arb.ca.gov/cc/ab32/ab32.htm>

<sup>v</sup> Unincorporated Monterey County (DRAFT) Greenhouse Gas Emissions Inventory 2005 Baseline Report, p. 8

<sup>vi</sup> Private email

<sup>vii</sup> MND, p. 10

<sup>viii</sup> Served on the 1991 *Task Force on Emergency Preparedness & Community Restoration* created to investigate causes of the 1991 Oakland-Berkeley Hills Fire to prevent recurrence

- **Chief of Fire Prevention** at **Oakland Army Base**, appointed by U.S. Dept. of the Army (1989)
- Firefighter, Oakland Fire Dept., retired 1988

Link to letter -- <http://www.saveeastbayhills.org/uploads/4/7/8/8/47884333/maloney.pdf>

<sup>ix</sup> <http://www.saveeastbayhills.org/uploads/4/7/8/8/47884333/maloney.pdf>

<sup>x</sup> <http://milliontrees.me/herbicides/>

<sup>xi</sup> The Secret Life of Plants, Tompkins and Bird, Harper & Row, 1973

<sup>xii</sup> The New Wild by Fred Pearce  
Rambunctious Garden by Emma Marris  
Where do camels belong? by Ken Thompson  
[Invasion Biology: Critique of a Pseudoscience](#) by David Theodoropoulos

<sup>xiii</sup> [http://www.cal-ipc.org/resources/news/pdf/caleppc\\_news2368.pdf](http://www.cal-ipc.org/resources/news/pdf/caleppc_news2368.pdf)



# NORTH COUNTY FIRE PROTECTION DISTRICT

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## of Monterey County

August 4, 2015

To: Monterey County Board of Supervisors,

RE: Eucalyptus Tree Removal Project at the Elkhorn Slough

I am writing to register the strong support of North County Fire for the removal of eucalyptus trees along the Elkhorn Slough. This project will decrease the risk to the public and enhance the safety of firefighters in North County from the spread of wildfire and the danger of falling trees and branches during a fire in such a eucalyptus grove.

I understand that a person filed an appeal to the Planning Commission. The comments provided at that meeting were grossly misleading and represent a dangerous lack of understanding of basic fire science and the nature of eucalyptus trees.

The fact is that there is ample, easily retrievable data regarding the role eucalyptus plays in the fire environment. Eucalyptus is cited as a major source of fire brands in the Basic and Intermediate Fire Behavior textbooks of the National Wildland Fire Coordinating Group and various other wildland fire texts and agency reports.

One need only look on-line and search the term Eucalyptus & Fire to find study after study produced from Australia, South Africa and the U.S. detailing how eucalyptus contributes to the spread of wildfire.

Eucalyptus was cited as a major contributor of fire spread in the Tunnel Fire (Oakland Hills) in 1989 (despite the appellants claim to the contrary), the Cedar Fire in San Diego County in 2003, the Talmapais Fire in 2004 in Marin County, the Shekel Fire in 2006, and the Trabing Fire in Watsonville in 2008.

Locally, we have had many challenging fires in eucalyptus groves. We had a fire in a eucalyptus grove along Hwy 156 in March of this year on a day that dry grass would not readily ignite. The understory and canopy of eucalyptus burned and spread embers that ignited other trees as much as a ¼ mile away. In July of this year, another fire on Frisch Road burned along the back side of a eucalyptus grove and falling branches increased the danger to firefighters.

The misconception about eucalyptus is based on the fact that the green leaves and trunk do not easily burn. But what this really means is that fire cannot kill a eucalyptus. It does not mean that they provide any benefit in suppressing fire.

The problem is that they constantly shed dead leaves and dry bark that accumulate deeply upon the ground, in the crotch of branches or just hang on the side of the trees. Once a fire is established in the deep, oily detritus, it easily spreads upward. Convection from the heat or wind will cast the

# NORTH COUNTY FIRE PROTECTION DISTRICT of Monterey County

burning leaves, bark and embers long distances. The canopy of eucalyptus shields the understory from routine drizzle and dampness so we see fires under eucalyptus in any season and even on cold, damp, days. The depth of the fuel bed beneath a eucalyptus is such that no other plant life can grow.

It must also be acknowledged that eucalyptus, being a very fast growing and prolific hardwood species, needs a lot of water to grow. They use so much water so quickly that eucalyptus groves were planted in Australia and the Mediterranean to drain swamplands in the fight against malaria. Studies have shown that eucalyptus can reduce a low-flow stream by 100% in nine years. Last fall, we responded to several eucalyptus trees and branches that collapsed under their own weight after it rained. In 2006, a woman and her child were killed when a eucalyptus branch crashed into their car as they drove on Hwy 1 in Moss Landing.

North County Fire is constantly working to maintain and improve a healthy environment to enhance the quality of life in our community. There are many species of native trees that will grow and thrive in our region, but eucalyptus poses an undue hazard because of the down-dead fuel loading, the hanging fuel, and then the risk of branches and trees falling while firefighters are engaged in suppression efforts.

I strongly urge you to approve this project to remove the eucalyptus trees from the Elkhorn Slough property.

Sincerely,

Chris W. Orman, Fire Chief