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Agenda Item 11a

Appeal Number: A-3-MCO-15-0068
Applicant: California Department of Fish and Wildlife
Appellant: Nina Beety
Hearing Date: April 13, 2016

This is a copy of documentation that has been submitted to Coastal Commission staff.

Please request testimony on the substantial issues for this project, and please vote "No" on the staff motion.

Nina Beety
Monterey, CA

Appeal Number: A-3-MCO-15-0068
Applicant: California Department of Fish and Wildlife
Appellant: Nina Beety
Appeal Hearing: April 13, 2016, Agenda Item 11a

There are many substantial issues with the California Department of Fish and Wildlife proposal for Elkhorn Slough in Monterey County. I ask you to request testimony at the April 13 hearing, and I ask you to vote "No" on the Motion so that a De Novo hearing can take place.

The North Monterey County Land Use Plan calls repeatedly for the protection of the Slough environment and visual resources. The protection of the land and all its wildlife as it navigates climate change and human disruption is critical.

CDFW justification for project

CDFW's premise for this project is restoration: restoration of "native" coast live oak and other vegetation.

However, coast live oak are a fairly recent phenomenon in California, and even more recent in this region – 10,000 years ago or less. Their spread was aided by human efforts – California's First Nation tribes – because of the food source they represented. Oaks in California have only thrived for short periods of geologic time. Coniferous forests have predominated in the state and in the Coastal range. During ice ages, those coniferous forests took over. So, the statement that coast live oaks are "native" is very questionable. The Monterey Bay was called the Bay of Pines by the first Europeans. Coast live oaks were certainly here in the 1700s and 1800s when Europeans invaded, but it is a stretch to call these trees "native". [i]

By contrast, the oldest eucalyptus tree fossils are in Argentina, 21 million years before Australia. [ii] Did they exist in North America? That is unknown. The ice ages would have certainly killed them, as happened to other trees and vegetation. So, the eucalyptus is an ancient native of the Americas. Perhaps American eucalyptus populated Australia.

State officials plucked a time period from history,

> "...Historically dominated by coastal prairie, coastal scrub, freshwater meadows and coast live oak woodlands..."[iii]

which is factually incorrect, and they are attempting to re-establish this at the Slough and in the state, despite all the environmental changes since that time. CDFW might have selected a time when there were no coast live oaks and set up poisoning and pulling up those trees. Both approaches are equally horrific as well as absurd.

Mark Davis, a professor of biology at Macalester College:

> "It's the same perspective as ISIS wanting to re-create the seventh-century caliphate," he remarked. "It's ecological fundamentalism, the notion that the purity of the past has been polluted by outsiders"... Far from crowding out native species, he argued,

> invasives tend to move into areas that have been ravaged, or at least disturbed, by human activity."[iv]

The tragedy for the coast live oak is it will be gone from the Central Coast in a few short years according to US Forest Service modeling.[v] Between 2030 and 2090 – as early as 14 years from now – these trees will have died due to climate change, and there isn't any prospect, due to human actions and inaction, that this will change. In addition, sea level rise, which will result in inundation to most if not all of the Slough, could begin before the end of the century. Destroying eucalyptus trees will only accelerate that process by the loss of their CO2 mitigation, the loss of their oxygen and the loss of other indirect benefits.

CDFW re-writes the Land Use Plan

CDFW says, "The LUP does not identify eucalyptus trees as significant scenic resources."[vi] That's true; the Land Use Plan, Section 2.2 Visual Resources, does not name any tree or shrub as a significant scenic resource, including coast live oak.

In the LUP Introduction (Section 2.1), the LUP states that "[t]he 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. 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." It's not referring to the Slough, as CDFW implies[vii] but regardless, it does not state that oak and chaparral are the only species to be protected or to be considered a resource.

The LUP specifies scenic resource. Another term for scenic resource is "beauty." But, CDFW has rewritten the LUP.

> The Elkhorn Slough Reserve includes several unique central California habitats – including estuarine habitat dominated by pickleweed; coast live oak woodlands; coastal scrub; coastal prairie - all of which create a distinct visual character not found anywhere else in the world. On the other hand, eucalyptus are exotic trees widely planted throughout the state and in many other parts of the world; they are not a unique visual resource in our region. In fact, eucalyptus help create a more homogenous view that can be found in many other parts of the world. -- p. 121
>
> Eucalyptus trees, which are native to Australia, are among the most commonly and widely cultivated exotic trees in the world - almost 20 million ha of eucalyptus plantations exist in tropical, subtropical and temperate countries, and in many countries they are the most common and conspicuous nonnative trees (Rejmanek and Richardson 2011). They are not a unique or natural part of the Elkhorn Slough watershed, and they do, instead, sometimes screen or overwhelm the natural and unique California habitats on the Elkhorn Slough Reserve. -- p. 118

The Land Use Plan does not require uniqueness, but that is what CDFW requires. Under their reasoning, the thousands of miles of coastline on the East and West Coasts of America would

not be a scenic resource because it is fairly common and not at all unique. But who would deny the coast is beautiful, or do everything possible to preserve it? Artists and photographers come to the Slough. The eucalyptus have been extensively painted and photographed since at least the beginning of the 1900s, so much so that they are considered iconic of California. CDFW's photographs show what a scenic resource they are. That has economic value to this community and beyond. Compare that to the view of CDFW's 1990s restoration project.

Here is the crux of the matter: "California state natural resource managers do not generally regard non-native eucalyptus as a 'natural' resource." -- p. 117, CDFW response. As previously shown, eucalyptus are native to the Americas. And this attitude by state employees is ironic, since many of them are of European descent and therefore, immigrants to this land very recently. Yet, the eucalyptus tree is demonized for being an immigrant, and not even from so far away. This is a type of racism. Eucalyptus, in addition to having medical and health benefits, provide habitat, food, shade, moisture, oxygen, and CO2 mitigation. How many humans give as much?

The honeybees, wasps, bats, butterflies, hummingbirds and other birds, and other pollinators clearly view the eucalyptus as a natural resource. Why is CDFW so out of sync with nature? Who are the real experts?

Despite being reviled by CDFW and others, eucalyptus trees are not mentioned at all in the North Monterey County Land Use Plan except in the chart of bareground exposure. Ironically, coast live oak covers the ground the most, more completely than eucalyptus, which means vegetation understory has the most difficulty developing under oaks.[viii]

CDFW plans to remove over 1200 trees which are a year-round home -- an active and long-established home -- to a myriad of birds and other creatures. Where do the birds, bats, and insects live and hunt from? CDFW protests they aren't disturbing nesting areas, but nesting only occurs at certain times of the year. And a few years ago, many of the Monterey pines at the Slough, where cormorants, great blue Herons and great egrets nest, died. If the hardy eucalyptus trees are destroyed, could we soon be left with a desert in the Slough?

<u>Proposed herbicides:</u>
Rodeo is an herbicide containing Glyphosate. San Francisco Department of the Environment characterized it as similar to Aquamaster. San Francisco lists that as a Tier I "Most Hazardous" substance. Yet, Coastal Commission staff calls Rodeo "a practically nontoxic formulation of glyphosate."

Rodeo contains 53.8% Glyphosate – a chemical the World Health Organization classified as a probable carcinogen last year. 5.8% is Isopropylamine. The rest of the ingredients are so-called inactive ingredients -- 40.45% -- and they are proprietary secrets. No one can say what effect those ingredients will have on soil, water, plants, trees, insects, frogs, fish, birds, or mammals, alone or synergistically with the other chemicals. That's a very big unknown. Rodeo's safety data sheet says:

Environmental precautions [include]: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
Precautions for safe handling [include]: Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur... Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing.
Conditions for safe storage [include]: Do not store near food, foodstuffs, drugs or potable water supplies.

The Rodeo label also says

Treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants. The oxygen loss can cause fish suffocation.

In fish, it causes genetic damage and immune system damage. In frogs, it causes genetic damage and abnormal development.[ix] Research is continually exposing more problems with this substance including interference with voltage-gated calcium channels, which causes neurological damage.

In comments to CalEPA Office of Environmental Health Hazard Assessment,[x] Dr. Larry Rose, former Chief of CalOSHA agreed that Glyphosate should be listed as a carcinogen.

The published scientific peer reviewed literature well supports the fact that glyphosate is indeed a carcinogen. In addition glyphosate is a potent endocrine disruptor and therefore a reproductive hazard and should be listed as such. Under the requirements of Prop. 65 the labeling of glyphosate as a carcinogen and reproductive hazard is the legally required and the correct action by OEHHA.
Larry Rose M.D., M.P.H., Former Chief of the Cal/OSHA Medical Unit for 28 years.

Dr. Jed Fuhrman, Ph.D, McCulloch Crosby Chair of Marine Biology at USC.

As a professor of biology (since 1981), author of over 180 peer-reviewed articles cited more than 20,000 times, and Fellow of the American Academy of Arts and Sciences, **I urge you to list glyphosate to your list of chemicals known to the state to cause cancer or reproductive toxicity**. The evidence is clear, despite perpetual industry obfuscation (obviously driven by billions of dollars in profits, rising by the minute). The World Health Organization's cancer research division (IARC) has declared glyphosate a probable human carcinogen, and California should as well. In general, **I urge you to consider toxicity and carcinogenicity evidence that includes testing with complete formulations** including "EXTRA" (inappropriately called "inert") ingredients on the pesticides are they are actually sold and applied, not only the so-called "active" ingredient. It is absurd, poor oversight, that the effects without the adjuvants are allowed to be included. With these included in real-world exposures, but often not in tests, I think far more chemicals would need to be listed.

However, CDFW mischaracterized the World Health Organization IARC designation in its documents to the Monterey County Board of Supervisors, and it mischaracterized the research in the United States on RoundUp. That's very serious.

Further, despite correspondence stating that CDFW will use imazapyr, Rodeo is the only herbicide for which CDFW provided information to the Commission. And though CDFW said imazapyr was to be used on eucalyptus, the information in your agenda packet states Rodeo will be used, even though Glyphosate herbicides have been shown not to kill regrowth. Where is the documentation for Imazapyr?

Imazapyr is corrosive to the eyes and can cause irreversible damage. It is irritating to eyes and skin. It can persist in the soil for over a year and damage plants at levels not detectable by laboratory analysis. It also can move in the soil. Some weedy plants are already developing a resistance to it, and it can damage endangered plants. Applications at Mount Baldhead in Saugatuck, Michigan resulted in severe damage to many of the other trees at the park.[xi] Laboratory tests on animals have shown it increases adrenal gland tumors and cancers, and brain and thyroid cancers, as well as causes fluid accumulation in the lungs, kidney cysts and abnormal blood formation in the spleen. [xii]

Fire

Besides being ideologically driven, a waste of taxpayers money, dangerous to Slough wildlife, and short on science, CDFW scares with the fire issue. I've already addressed this. Attached is a letter from David Maloney,[xiii] former Chief of Fire Prevention at Oakland Army Base. He has lifetime certification as a fire investigator from the state and the Department of Defense, and served on the expert panel that investigated the 1991 Oakland Hills fire. In March, he published the report "The Next Major Fire in the East Bay Hills" in which he gives even greater detail about fire issues and the extreme danger of putting ideology before science and public safety.[xiv]

Public notification

CDFW/ESNERR claim this project has appeal and benefit. Yet, these agencies only did the absolute minimum notification that was legally required and held no public meetings.[xv] . At least one neighbor of Elkhorn Slough had no idea this project was in process. CDFW/ESNERR did not inform the Moss Landing Chamber of Commerce of this project. It also did its limited notification during a narrow window during and shortly after the Christmas holidays in 2012-2013. Community engagement requires the spirit of the law to be followed. I said last year,

> 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 [and CDFW] did not want the public to know about this project and only did what was strictly legally required.

Appeal to the Board of Supervisors

Conclusion

CDFW recently purchased agricultural land, but will not eliminate all the farming, though farming has been so destructive to habitat and the environment. CDFW's 'restoration' vision is

to preserve some of the land in organic farming. Economic considerations and impacts to the public and neighboring communities are also a priority.

Coastal Commission staff did not include my appeal to the Board of Supervisors and other documents as I requested. Excerpts are attached.

I ask you to request testimony of the substantial issues, and vote "No" on the staff motion.

Sincerely,

Nina Beety
Monterey, CA

Attached

- Appeal to the Monterey County Board of Supervisors -- excerpts
- CDFW photo: status of 1990's restoration project today
- David Maloney, Comments on East Bay Regional Park District's Wildfire Hazard Mitigation Plan, October 29, 2009

[i] http://www.fs.fed.us/psw/publications/documents/psw_gtr251/psw_gtr251_035.pdf
"The Paleohistory of California Oaks",Scott Mensing, University of Nevada, Reno
An abbreviated version of this paper was presented at the Seventh California Oak Symposium: Managing Oak Woodlands in a Dynamic World, November 3-6, 2014, Visalia, California.
p. 1
Oak woodlands characterize much of the California landscape, but widespread oak communities are of relatively recent origin in the state. During most of California's geologic history, oaks were absent or much more limited in their distribution. Fossil evidence shows that species conforming to modern California oaks were present in western North America by about 10 million years ago, but their range shifted into the state within the last few million years as the summer-dry Mediterranean climate developed and strengthened. During the last 100,000 years, oaks were only a minor element of the landscape, most likely persisting as isolated refugia.
At the end of the last ice age, about 10,000 years ago, oaks rapidly expanded creating the woodlands of today. Even during this time period, climate change has influenced the range and distribution patterns of oak woodlands, such that in some locations, woodlands have only been in place for the last few thousand years. Evidence of the first appearance of humans in California also dates to about 10,000 years ago, so that the expansion of oak woodlands after ice ages coincides with a period of human land use. Native Californians lived throughout the oak woodlands and evidence suggests that their practice of frequently burning the landscape influenced the development of the open oak savannas commonly described in the earliest European accounts. Within just the last 2 centuries, intensive resource use has extensively altered the distribution and abundance of oak woodlands throughout most of their range in California.
The pattern of nearly continuous expanses of oak woodlands in the Coast Ranges and around the Central Valley is a recent phenomenon. During ice ages low elevation California would have been characterized by coniferous forest. The characteristic Mediterranean climate of California with its oak covered rolling hills has only existed for brief periods during interglacial cycles like the one we enjoy today.

p. 8
Coastal sites show a steady increase in importance of oak following the end of the ice age, reaching maximum levels about 8,000 – 7,000 years ago, remaining high throughout the Holocene (Byrne and others 1991). While low elevation oak woodlands (blue oak, valley oak, coast live oak and interior live oak) became well established in the mid-Holocene, higher elevation oak populations (black oak and canyon live oak) became a minor component of the lower montane forests (fig. 5).

p. 9
The Influence of native Californians on oak woodlands
Although new studies are being made to quantify the role of Native Americans on forest structure, at this time their influence on oak woodlands must largely be inferred from observations made at the time of initial contact, oral histories of elders, and landscape changes that have been documented since the demise of the native populations. California Indians set fires for the purpose of clearing ground to gather acorns, promoting secondary growth used for basketry materials, clearing brush for hunting, and facilitating collection of seeds (Anderson 2005, Blackburn and Anderson 1993). **Acorns are the most abundant plant food found in archaeological sites throughout central California (Anderson 2005), confirming that oaks have been important to California Indians for a long time. Fires, set by California Indians, are believed to have been the major factor in determining the type**

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of vegetation found by Europeans when they arrived in California (Stewart 2002).

Pollen studies of Woski Pond in Yosemite National Park provide some of the clearest physical evidence that anthropogenic influences were important in maintaining oak woodlands in the Sierra Nevada (Anderson and Carpenter 1991). This record shows an increase in oaks and decrease in pine beginning about 650 clearest physical evidence that anthropogenic influences were important in maintaining oak woodlands in the Sierra Nevada (Anderson and Carpenter 1991). This record shows an increase in oaks and decrease in pine beginning about 650 years ago coinciding with a shift from the Tamarak complex to the Mariposa complex, characterized by a larger population and greater reliance on acorns. Forest clearance through burning would have favored expansion of oaks and improved conditions for gathering acorns. Open oak woodlands increased during a cool wet climate period (referred to as the Little Ice Age) when pines and firs would have typically been favored. Oak woodlands predominated in Yosemite Valley as a result of Indian-set fires rather than climate change (Reynolds 1959).

In the absence of periodic burning, ponderosa pine (*Pinus ponderosa*) is successional to black oak, and within the lower montane forest, the typical forest structure today is one of young, tall ponderosa pine and white fir (*Abies concolor*) overtopping old black oak. Young black oaks are uncommon. Large complexes of bedrock mortars at 2100 m elevation (Bennyoff 1956) near the upper treeline of black oak today suggest the montane forest included many more oaks in the past.

[ii] http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0021084
Oldest Known Eucalyptus Macrofossils Are from South America

[iii] ESNERR Negative Declaration, p. 5 http://tinyurl.com/esnerr-neg-dec

[iv] cited in "Weed-Whackers" by Andrew Cockburn, Harpers Magazine, http://harpers.org/archive/2015/09/weed-whackers/2/

[v] http://charcoal.cnre.vt.edu/climate/species/speciesDist/Coast-live-oak/

[vi] http://documents.coastal.ca.gov/reports/2016/4/w11a-4-2016.pdf, p. 121

[vii] "This project is designed specifically to manage and restore the native habitats immediately east of Elkhorn Slough, which have been historically degraded."

[viii] North Monterey County Land Use Plan, Coefficients of land disturbance, Bareground exposure, p. 132

[ix] http://tinyurl.com/glyphosate-fact-sheet

[x] http://oehha.ca.gov/prop65/CRNR_notices/admin_listing/intent_to_list/pdf_zip/LCSet27PersonalComments120115.pdf, p. 231, 352

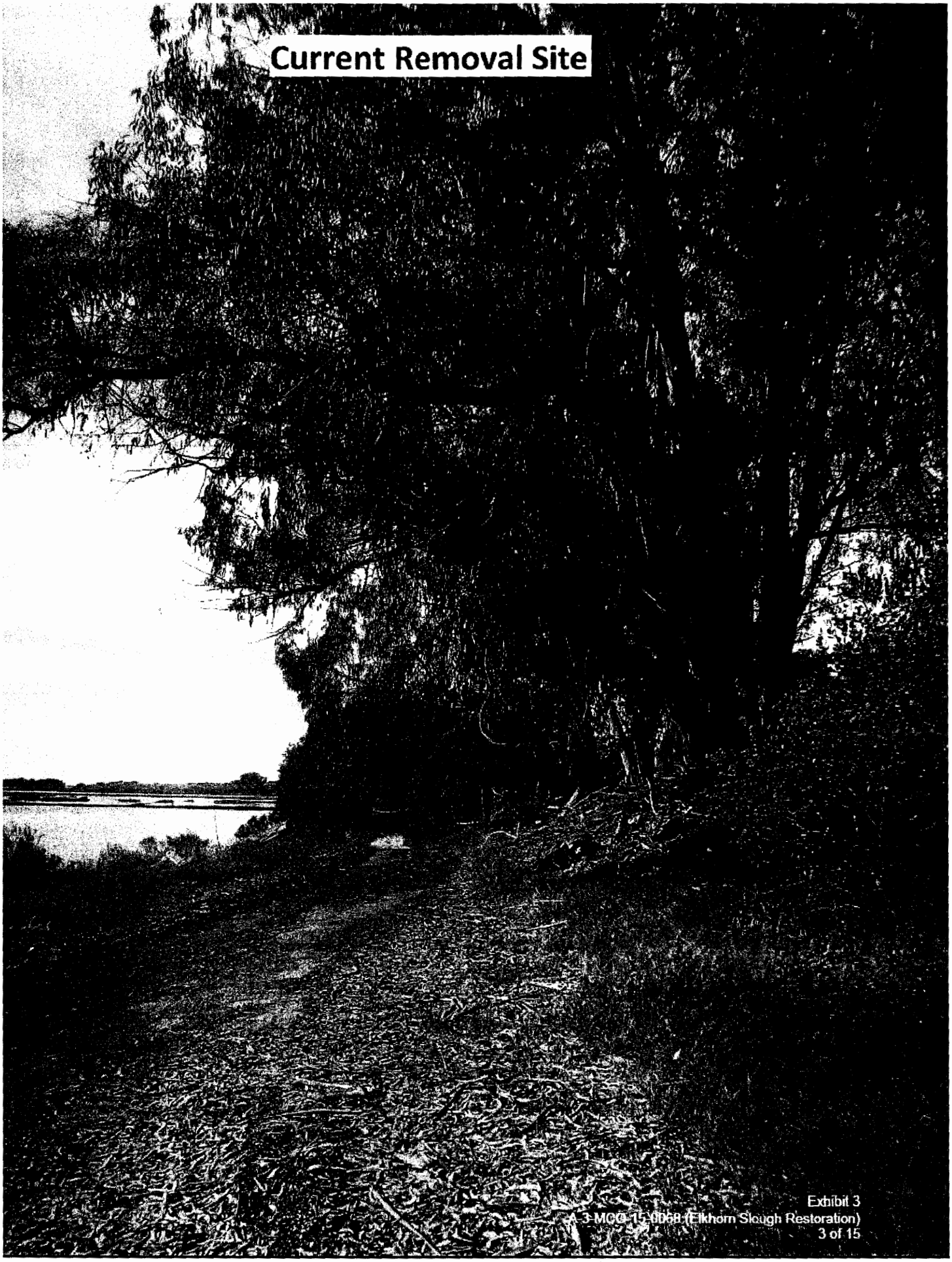
[xi] http://www.mlive.com/news/grand-rapids/index.ssf/2012/09/no_quick_fix_for_herbicide_dam.html

[xii] http://tinyurl.com/imazapyr-fact-sheet

[xiii] http://www.saveeastbayhills.org/uploads/4/7/8/8/47884333/maloney.pdf

[xiv] http://www.saveeastbayhills.org/uploads/4/7/8/8/47884333/maloneyreport2.pdf

[xv] see attached excerpts from appeal to Monterey County Board of Supervisors; source – correspondence from Dave Feliz, ESNERR, on July 23, 2015


Current Removal Site

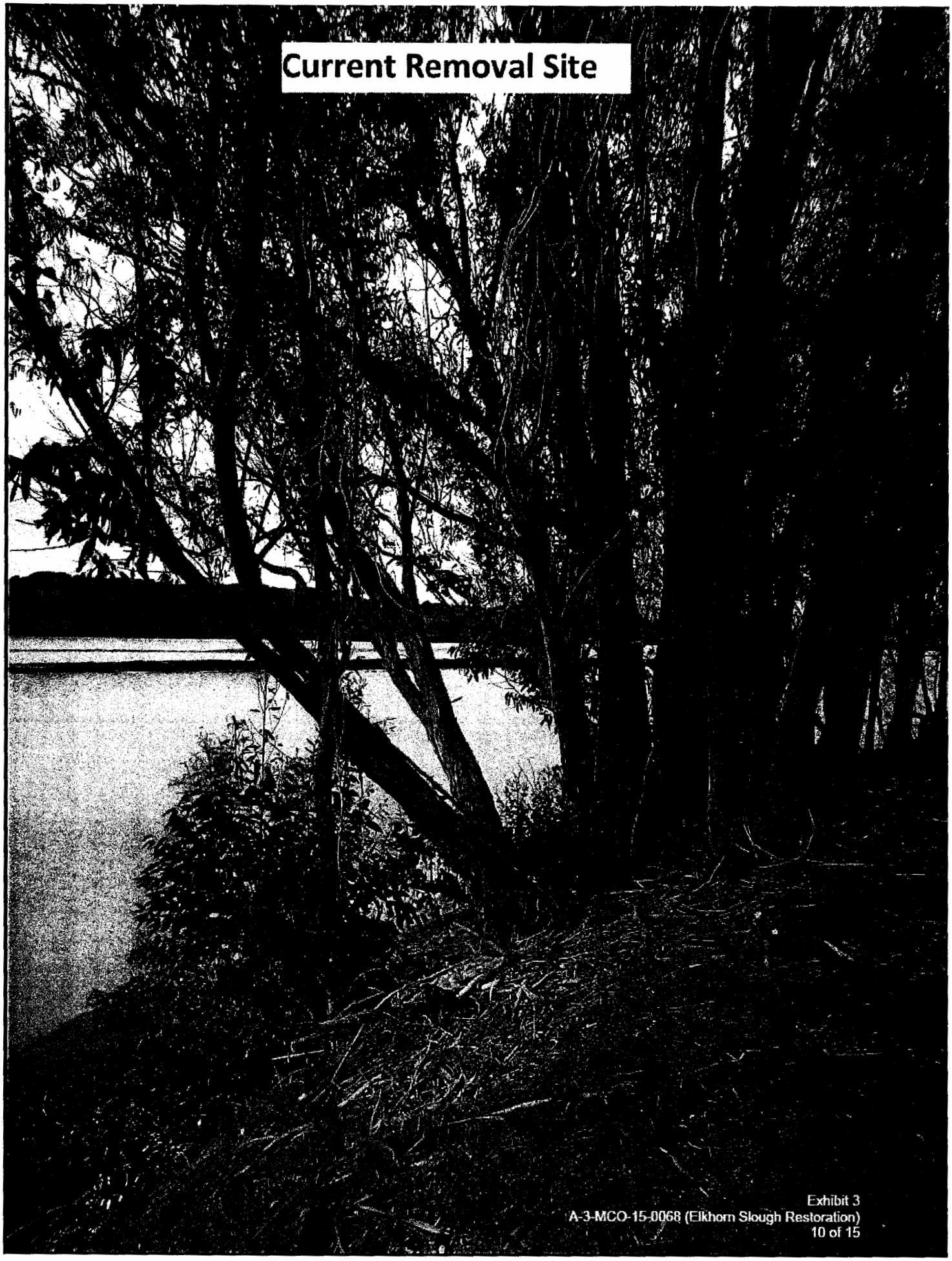


Exhibit 3
A-3-MCO-15-0068 (Elkhorn Slough Restoration)
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Exhibit 3
A-3-MCO-15-0068 (Elkhorn Slough Restoration)
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"This project will change views on the Elkhorn Slough Reserve, but these changes will reveal scenic views of the Elkhorn Slough estuary/coastal wetlands from public access points in some areas, and will highlight native plant communities in others. This will create a more natural environment on this State Ecological Reserve, whose mission 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). A similar project completed on the Reserve in the 1990s has resulted in a scenic mosaic of young native oak woodland, coastal scrub, and open grassland growing above estuarine waters, visible from public trails on the Reserve (shown below).

View of former 13 acre eucalyptus grove, on hillside above water, from Elkhorn Slough Reserve trails, 2015. Hillside is now a mosaic of open grassland, coastal scrub and developing coast live oak woodland. Game cameras in the restoration area document frequent use by birds and mammals."

Coastal Commission agenda packet, p. 120

October 29, 2009

FROM:
David Maloney
San Francisco CA

TO:
Brian Wiese
Chief, Planning and Stewardship
East Bay Regional Park District

Dear Mr. Wiese:

I retired from the Oakland Fire Department in 1988. In 1989 I was appointed by the United States Department of the Army to be Chief of Fire Prevention at the Oakland Army Base. In 1991, I was appointed to serve on the Task Force on Emergency Preparedness and Community Restoration. This task force was formed to investigate the causes of the most destructive wildland/urban interface fire in the history of the United States, the Oakland-Berkeley Fire of 1991, and make recommendations to prevent its recurrence.

Following are my comments about the East Bay Regional Park District's Wildfire Hazard Mitigation Plan (the Plan), and EIR.

An inordinate amount of the Plan is an attempt at land transformation disguised as a wildfire hazard mitigation plan. If it is implemented it will endanger firefighters and the general public; and it will be an outrageous waste of the taxpayer's money.

The objectives of a land transformation plan are different than the objectives of a wildfire mitigation plan. The only way a land transformation plan can succeed in masquerading as a wildfire mitigation plan is if it treats important data needed to compose a sound wildfire mitigation plan in a superficial manner, or ignores such data or circulates misinformation.

The Plan submitted to the East Bay Regional Park District (hereafter referred to as the Park, or EBRPD) does all three. It omits important Fire Science principles, disseminates misinformation about selected fuels, and ignores data that would be contrary to its aim of land transformation.

CLEAR CUTTING

Section IV: Fuel Treatment Methods; subsection A.2 of the Plan advocates clear cutting of trees. Not only does it advocate clear cutting with the phrase "...completely removing an overstory canopy;" it justifies this by standing fire science on its head by ignoring the

significant role that tree canopies play in facilitating moisture which dampens ground fuels, and ignoring that volatile grasses will grow on the ground below the canopy gaps.

Clear cutting is anathema to the Fire Service. Clear cutting to effect wildfire hazard mitigation violates every Fire Science principle relative to wildfire mitigation. Clear cutting dramatically increases the chance of a wildfire. It is a tool of land transformation. Therefore the Plan has a prominent self-contradiction.

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.

"The shade and protection afforded by timber stands influence fuel type ratings due to favorable fuel moisture conditions that are created. In a dense forest, ground fuels are protected from the sun and wind. Temperatures and wind velocities are lower so that moisture does not evaporate as readily from the dead fuels situated beneath dense timber canopies." The Fire Protection Handbook (20th edition, 2008), published by the National Fire Protection Association, Volume II, pg. 13-63.

"If too much wood was in the forests, it seemed intuitive, to some people, that cutting down tress must help the situation. Many pointed to the massive fires in the 1990's as evidence that not enough logging was going on. Yet, throughout the [20th] century large fires had followed logging." Burning Questions: America's Fight With Nature's Fire, pg. 253, by David Carle.

[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.

There is not one single fire science authority who supports clear cutting for the sake of wildfire hazard mitigation.

MOISTURE

"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." The Fire Protection Handbook, previously cited, pg. 13-63

The Plan ignores the relationship between specific tree moisture, amount of canopy protection afforded to ground fuels by copses of trees due to the shade and windbreak these trees provide, amount of ground moisture which is created and dependent on the tree canopy above the ground, and ground moisture created by the size and type of the leaves of trees. (One of the major contributions leaves make to wildfire hazard mitigation is collecting moisture and dripping it onto the ground.)

Even though moisture is a critical key element in evaluating wildfire hazard, there is no mention of use of a hygrometer to evaluate how much moisture, according to season, is present in the various sections of the EBRPD, especially those sections where clear cutting might be considered.

Additionally, there is no mention of the specific hygroscopocity, according to season, of the various species of trees within the Park, especially of those species of trees for which clear cutting is recommended.

There is no discussion, or even a mention, of the average daily, weekly, and monthly dew, dewfall and dew point in those sections of the EBRPD affected by the Plan.

The Plan confuses cloud cover and precipitation with moisture. Moisture is different than cloud cover and precipitation. Cloud cover and precipitation contribute to moisture levels, but they are not the sole determinants of moisture. The Plan barely mentions the moisture content of the lands and sections of the East Bay Regional Park District. Again, it cannot be over emphasized, moisture content is one of the most important factors in determining wildfire risk.

The EBRPD is located in a moisture rich environment. Its location is the envy of wildfire managers across our nation. Yet, there is not one chart or graph that shows the average weekly and monthly moisture content within the Park's boundaries or within specific sections of the Park, especially within those sections where it is proposed that clear cutting of trees take place. There is not one chart that compares the amount of moisture in the holdings of the EBRPD with the moisture content of other areas in California and the United States.

Are these omissions because showing the moisture content of the EBRPD, would lead to a downsize of the Plan, thereby negatively impacting land transformation?

[It was the moisture laden air coming from the Pacific Ocean through the Golden Gate, crossing San Francisco Bay and interfacing with the Oakland Hills Fire of 1991 that lowered the temperature of the fire sufficiently to halt its spread and allow firefighters to contain it. The fire began in grasses, spread to the rooftops of houses, where it attained sufficient heat to dry out the moisture in the trees of the East Bay Hills, and then caught the trees on fire.]

PRESCRIBED BURNING

The Plan recommends prescribed burning in a cavalier manner. Prescribed burning is a very serious and dangerous undertaking. It is only to be used narrowly and judiciously. It is only to be used to effect wildfire hazard mitigation by clearing underbrush and ground fuels, and even then it is used sparingly. It is never to be used to effect land transformation by preventing trees from sprouting.

Due to the fact that so many prescribed burns have "escaped" the boundaries to which it was thought they would be confined, there is more and more momentum in the Fire Service to use prescribed burns less and less. A moratorium was put on prescribed burns after the Bandelier National Monument Fire in the year 2000. That fire was a prescribed fire that got out of control and burned 47,650 acres and destroyed 235 homes. The moratorium was lifted after new, more stringent guidelines governing prescribed burns were promulgated.

Still, prescribed burns continue to get out of control with alarming frequency. In August of 2009 the Big Meadow Fire in Yosemite began as a prescribed fire that was planned to burn 91 acres. It got out of control and burned 7,425 acres. That same month a prescribed burn in Scofield, Utah, got out of control and almost burned down 50 homes.

The Plan states in Appendix G page 5, "The California Invasive Plant Council has published a manual on the use of fire as a tool for controlling invasive plants that should be referred to for further information than that provided here."

The California Invasive Plant Council is not a fire prevention or fire suppression organization. Its primary goal is land transformation. Why is an organization that is not a fire service organization, but primarily a land transformation organization, being used as a reference for the very dangerous undertaking of prescribed burning? Is it because the objective is not wildfire hazard mitigation, but land transformation?

Again, this Plan treats prescribed burning in a cavalier manner, which is inconsistent with safe wildfire hazard mitigation.

INVASIVE SPECIES

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 is putting idealogical or economic considerations ahead of the safety of firefighters and the public, and gives rise to propagandistic statements which are designed to scare the public, but which have no basis in fire science. Below are several examples of such statements from the Plan.

"Eucalyptus is well known for its long distance ember distribution, casting firebrands miles from the flaming front to ignite spot fires in grass, brush or roofs ahead of the main fires."

"The presence of volatile oils in the trees increases the speed of fire spread, total output and overall ignitability. Ignited leaves and bark are easily lofted into the air by heavy winds and increase the potential for starting new fires long distances from a fire."

"The size of leaves and bark from mature eucalyptus trees are typically large enough to ensure that the ember is still burning (versus small particles that could be extinguished in flight) when it lands. Heat output from mature eucalyptus fires is high when sufficient fuel has accumulated in the area."

To refute these statements it is worth quoting extensively from Vol. II, page 13-62 of the Fire Protection Handbook.

"Aerial Fuels: Tree Branches and Crowns. " The live needles of coniferous trees are a highly flammable fuel. Their arrangements on the tree branches allow free circulation of air. In addition, the upper branches of trees are more freely exposed to wind and sun than most ground fuels. These factors, plus the volatile oils and resins in coniferous needles, make tree branches and crowns important components in aerial fuels."

Nowhere in the twenty editions and tens of thousands of pages of the Fire Protection Handbook is there a mention of the leaves or bark of the Eucalyptus trees. The only aerial fuel singled out for mention because of its high flammability and volatility are the needles of coniferous trees. The oils and resins of Euclyptus leaves and barks are not mentioned because they are not as flammable as the oils and resins of the needles of coniferous trees.

If the leaves and bark of Eucalyptus trees were more of a fire hazard than the thousands of other species of trees that are in California it would be noted in the Fire Protection Handbook.

[Any tree, no matter what its species, that is close to ignition point or is on fire, is going to have its sap, resins, and oils boiling.]

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."

"Burning embers blown from shaggy-barked snags are prolific starters of spot fires."

There is no mention of any particular species of tree. The entire passage concerns dead fuels. Some people have it backwards. They want 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.

From page 13-63 of the Fire Protection Handbook: *"As the amount of flammable materials in a given area increases. The amount of heat a fire produces also increases. The hottest fires, as well as those most difficult to control, occur in areas containing the greatest quantity of fuel."*

The statement from the Plan: "Heat output from mature Eucalyptus fires is high when sufficient fuel has accumulated in the area" is misleading and disingenuous. It strongly, and erroneously, implies that the heat from a Eucalyptus forest fire is greater than the heat from a forest fire involving other species of trees. In fact, the heat generated by a forest fire is not dependent on the species of tree involved in the fire, but on the quantity of fuel in the area of the fire.

The Fire Protection Handbook on page 13-63 of volume II addresses the issue of spot fires.

"The development of spot fires depends not only on topographic and weather factors but also on the character of the fuels in the main fire and fuels beyond the main fire. In the main fire, rotten, shaggy barked snags, such as broken-topped hemlock snags, and large quantities of ground fuels, such as heavy logging slash, are the fuels most likely to cause spot fires."

No species of living tree is singled out as being more likely to cause spot fires than ground fuels or dead fuels, because ground fuels and dead fuels are more likely to cause spot fires than living trees no matter what their species.

On page 13-64, Vol. II, of the Fire Protection Handbook is a section dealing with the characteristics of crown fires. None of the various species of Ecualyptus tree is mentioned in this section. Why not? Because any species of living tree that has had the moisture dried out of it by a fire, and then catches fire, can "throw burning embers far out ahead of the main fire."

Table 13.5.3 on page 13-63 vol. II of the Fire Protection Handbook gives the time lag relationship to fuel size for dead fuel moisture. This table should have been used as a reference point by the authors of the Plan, and coordinated with the moisture levels of the land holdings of the EBRPD.

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.

As S.T. Michaletz and E.A. Johnson showed in their article "Heat Transfer Processes Linking Fire Behavior and Tree Mortality," the three characteristics that determine a tree's ability to withstand fire are the thickness of its bark, the height of its branches from the ground and its bark water content.

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.

The Plan makes no mention of the ratio of surface area to volume of a wildfire fuel. This is an important ratio in contributing to determining the flammability of a wildfire fuel.

RECOMMENDATION ON HOW TO IMPROVE THE PLAN:

Prepare a grid map for EBRPD land holdings. Set up a rotational schedule so that every four or five years ground crews have gone into each section and removed ground fuels and ladder fuels. This is ecologically safe and will cost the taxpayer a fraction of what the other methods and schedules in the proposed Plan will cost.

Pay attention to the causes of wildfires as listed in the Fire Protection Handbook, Vol II. Page 13-56, table 13.5.2:

1) Arson: 25-39% of wildfires are caused by arsonists.
2) Trash Burning – 18-23%
3) Careless Smoking – 17-19%
4) Miscellaneous/unkown- 10-14%
5) Lightning- 9%
6) Machine use – 7-8%
7) Railroads- 5%
8) Campers- 3-6%

Develop programs that will specifically address and preclude fires due to the above reasons.

CONCLUSION:

The Plan has serious flaws that need to be addressed and rectified. Among these flaws are erroneous explanations of fire dynamics.

These erroneous explanations lead the public to believe statements such as, "The leaves of Eucalyptus trees are oily and so are highly flammable," which simplify and reduce fire science and fire dynamics to a highly inaccurate sound bite; and apparently are designed to mislead the public, and thereby enlist public support for a fundamentally flawed

wildfire hazard mitigation agenda, which, if implemented, will have major negative ecological and financial repercussions on the taxpayer.

There is nothing wrong with advocating for native plant restoration. There is nothing wrong with advocating for land transformation. There is everything wrong with trying to effect either one or both under the guise of wildfire hazard management. It injures the reputation of the fire service; endangers the firefighters, who will be called to fight the fires that will be caused by improper wildfire hazard management due to putting ideology ahead of fire science; and imperils the public.

David Maloney:

• 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

Appeal of CDFW Elkhorn Slough Ecological Reserve Eucalyptus Removal -- PLN 100351
To Monterey County Board of Supervisors, July 15, 2016

Excerpts:

1. Inadequate noticing – A LUAC [Land Use Advisory Committee] meeting was held three years ago [February 7, 2012]. Flyers were only posted at the Moss Landing Post Office at that time. There was no other notice of 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.

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

   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 [Elkhorn Slough Foundation] did not want the public to know about this project and only did what was strictly legally required.

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[i]). Plus the emissions generated by the project are estimated at **268.84 metric tons of CO2** equivalent (CO2e).[ii] The estimated total is **1,720 metric tons of CO2 released**.

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.

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.

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.***[iii]

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.[iv]

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*[v]

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".*

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

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.

> "...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[vi] 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.

O'Neill, Brian@Coastal

From: Gillian Greensite <gumtree@pacbell.net>
Sent: Friday, April 08, 2016 5:32 PM
To: O'Neill, Brian@Coastal
Cc: Moroney, Ryan@Coastal
Subject: Elkhorn Slough Restoration A-3-MCO-15-0068

Brian,

Sorry to submit comments so late in the process. I was only recently advised of this project.

Without doubt the removal of 1,225 trees in this context is a substantial issue. The degree of factual and legal support for the decision is lacking.

The issues are many. To name a few:
1. The LCP requires protection and preservation of ESAA. Current research supports that eucalyptus are a significant habitat for a variety of vertebrate and invertebrate species. What studies have been done to rule out these 13 acres of 4 separate groves of trees as a sensitive habitat?

2. This tree removal project is within 1.5 miles of a Monarch habitat. What studies have been done on the symbiosis between these groves and the impact of 1225 trees' removal?

3. The goal of restoration is not substantiated. The project states that, "restoration will rely on natural vegetation supplanted by new plantings if necessary." Natural vegetation is not necessarily native. Examples of similar projects show that grasses quickly revegetate such sites and pose greater fire hazards.

4. The removal of 1225 trees, including 75 landmark trees which are more than 3 feet diameter ignores the urgency of climate change. Large trees sequester the most carbon. At this time it is essential that we not waste resources on destroying our remaining carbon sinks.

5. The application of Round Up to so many trees to destroy the stumps after the trees are cut down deserves a significant scrutiny given that the project is within 100 feet of a wetland.

Appreciate hearing that you received this email. I have references for the above if needed.

Sincerely,

Gillian

ELKHORN SLOUGH FOUNDATION
Since 1982

March 28, 2016

Brian O'Neill
California Coastal Commission
725 Front St # 300, Santa Cruz, CA 95060

Dear Mr. O'Neill:

I am writing to express our strong support for the Elkhorn Slough Reserve Eucalyptus Removal and Habitat Restoration project that is being appealed to the California Coastal Commission on April 13, 2016.

The proposed project will result in the restoration of 13 acres of native oak woodland, California grassland, and freshwater habitat, through the removal of non-native invasive Eucalyptus trees. It will also prevent the spread of Eucalyptus into adjacent native habitat on the State Ecological Reserve, reduce the potential for catastrophic fires, eliminate the risk of large tree falls on Elkhorn Road and enhance breeding habitat for sensitive native amphibians, including the Santa Cruz long-toed salamander and California red-legged frog.

Elkhorn Slough is an ecological treasure at the center of the Monterey Bay coastline, providing habitat for hundreds of species of plants and animals and is a destination point for many residents and visitors to the area seeking educational and recreational opportunities. The environmental status of the slough is reflected in its public designations: It encompasses a National Estuarine Research Reserve, State Ecological Reserve, National Marine Sanctuary, California Marine Protected Area, Nature Conservancy Legacy Site, A Globally Important Bird Area and a Western Hemisphere Shorebird Reserve.

The Elkhorn Slough National Estuarine Research Reserve is at the forefront of conservation science, management, and education. They are uniquely poised to not only successfully complete a project such as this, they will distill the research behind it and contribute to our larger understanding of environmental management.

This is an important project that contributes broadly to our community's overall health and well-being and deserves approval by the Commission.

Sincerely,

Mark Silberstein

Mark Silberstein
Executive Director

Mailing Address
P.O. Box 267
Moss Landing
California 95039

Tel: (831) 728-5939
Fax: (831) 728-7031

www.elkhornslough.org

Friends, Artists & Neighbors of
Elkhorn Slough

OUR MISSION

Friends, Artists and Neighbors of Elkhorn Slough is an association of citizens committed to preserving and enhancing Elkhorn Slough through public education, citizen activism and advocacy. We are dedicated to establishing and maintaining a management plan that will protect the environmental, cultural and agricultural integrity of the slough and its surrounding watershed and will restore, protect, and preserve Elkhorn Slough as a legacy for future generations.

April 7, 2016

Brian O'Neill
California Coastal Commission
725 Front St # 300, Santa Cruz, CA 95060

Dear Mr. O'Neill:

I am writing in support of the Elkhorn Slough National Estuarine Research Reserve proposal "Eucalyptus Removal and Habitat Restoration". I write on behalf of our community organization, *Friends, Artists and Neighbors of Elkhorn Slough* (FANS) and I also am writing as a concerned neighbor, having resided in the watershed of the slough for the past 26 years.

We understand that the removal of the Eucalyptus will be followed by the restoration of native habitats and will benefit a number of species of concern. The removal of selected eucalyptus groves near ponds will enhance breeding habitat for threatened species of amphibians especially the Santa Cruz long-toed salamander and California red-legged frog. It will also prevent the spread of this non-native tree into existing native grassland and oak woodland. We believe this is an important and worthy goal.

As a neighbor, I am concerned about the potential for wildfire in Eucalyptus groves and the threat of the spread of fire into our community and residential properties. I also worry about the potential for these trees falling on Elkhorn Road and injuring drivers and property. In addition, we understand that these invasive plants are intensive water users – in an area where our aquifers, on which we all depend, are severely depleted.

While in general FANS does not support the use of herbicides, I realize that in some cases it is the only practical way to effectively eradicate invasive plants. I have over the past 16 years as the representative of FANS observed the staff at the Elkhorn Slough National Estuarine Research Reserve. They are thoughtful and very capable in all that they take on. They have an excellent track record as good stewards of the land. The ESNERR uses science-based efforts to determine and select their conservation efforts and if ESNERR has determined there is a need to use a carefully selected herbicide and the Coastal Commission staff has recommended approval of that herbicide, we trust those determinations.

Simply cutting down the eucalyptus does not result in tree removal. Unless the stumps are disabled, multiple stems quickly re-sprout, producing new trees. Two methods have been proven effective to stop re-sprouting. In small areas, particularly near sensitive water habitats, stumps will be covered with black tarp. But this method requires trenching around stumps and plastic must remain on the stumps for 1-2 years. Because this is disruptive to soils and labor and material intensive, herbicides can be used as well. This project will use herbicides that have been determined to be safest for the surrounding area, and will be hand-applied to cut stumps in small quantities by licensed professionals under strict controls. We are comfortable that the application of herbicides will be carefully and minimally used in this case.

We look forward to viewing the beautiful Oak groves that once graced these hills, as the Eucalyptus are replaced with live oak. FANS and I see this as a community benefit, from the points of view of public safety, aesthetics, wildlife habitat and water.

Thank you for considering our comments.

Sincerely,

Mari Kloeppel
Co-chair

W11a

To: California Coastal Commission
Re: Elkhorn Slough Restoration A-3-MCO-15-0068
From: Gillian Greensite: Certified California Naturalist

Thank you for considering the following comments. The removal of 1225 trees, whether exotic or native, in a sensitive habitat area, is surely a substantial issue. The degree of factual and legal support for the decision is lacking.

1. The LCP requires protection and preservation of ESAA. Eucalyptus are documented as supporting a rich palette of interconnected life, including over 120 species of birds. In the Monterey Bay region, 90 species of birds make regular use of eucalyptus and 59 species nest in them (1). Many vertebrate and invertebrate animals have adapted to life in eucalyptus groves including arboreal salamander; CA slender salamander; CA newt; rough skinned newt to name a few, plus snakes, lizards and Monarch butterflies. Studies have found "richness and diversity values nearly equivalent in native and exotic woodlands." (2). The first breeding pair of bald eagles in decades successfully nested in a eucalyptus grove in Santa Cruz south county. What studies have been done to rule out these 13 acres of 4 separate groves of trees as a sensitive habitat?

2. This tree removal project is within 1.5 miles of a Monarch habitat. Experts admit we do not fully understand the complexities of Monarch butterfly behavior. What studies have been done on the symbiosis between these groves and the impact on Monarchs of the nearby 1225 trees' removal?

3. The likely success for restoration is not substantiated. The project states that, "restoration will rely on natural vegetation supplanted by new plantings if necessary." Natural vegetation is not necessarily native. Examples of similar projects are rarely successful in their goals and non-native grasses and shrubs quickly re-vegetate such sites, posing greater fire hazards than the removed eucalyptus. (3) Where is the evidence for the success for such "habitat restoration"?

4. The removal of 1225 trees, including 75 landmark trees, which are more than 3 feet in diameter, ignores the urgency of climate change. Large trees sequester the most carbon, approximately 1-2 metric tons of carbon per tree annually. It is unwise to waste resources on

destroying any remaining carbon sinks.

5. The planned application of Round Up to so many trees to destroy the stumps after the trees are cut down is alarming, given that the project is within 100 feet of a wetland.

6. As a frequent visitor to Elkhorn Slough on birding trips, I attest that removal of these groves will affect the aesthetics of the area as well as the current habitat and that such destruction has regional significance given the numbers of visitors annually to the sensitive Elkhorn Slough.

References:

1. David Suddjian 2004: Birds and Eucalyptus on Central CA Coast. P. 1
2. Dov. F. Sax: Dept. of Integrative Biology. UCB. A comparison of native and exotic woodlands in CA. p. 54
3. Mayors 1992 Firestorm Task Force: David Maloney member. Letter to Oakland Tribune July 30, 2009

O'Neill, Brian@Coastal

From: Ed Penniman <edgypenn@gmail.com>
Sent: Monday, April 04, 2016 2:37 PM
To: O'Neill, Brian@Coastal; nbeety@netzero.net
Subject: Elkhorn Slough

Dear Brian,

Please advocate the protection of the slough by leaving trees as they are and not using dangerous pesticides that may harm critters.

Thanks,

Ed Penniman

Artist, designer, writer.

CC: Nina Beety

--

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MONTEREY COUNTY

Monterey County Board of Supervisors

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April 11, 2016

Brian O'Neill
California Coastal Commission
725 Front St # 300, Santa Cruz, CA 95060

Dear Mr. O'Neill,

I am writing regarding the appeal of the Elkhorn Slough Reserve Eucalyptus Removal and Habitat Restoration project that is coming before the California Coastal Commission on April 13, 2016.

The proposed project is located in the Monterey County Supervisorial District that I represent and I am very familiar with the area of Elkhorn Road flanked by the Eucalyptus. The proposed work will result in the restoration of 13 acres of valuable and important native habitat while removing invasive Eucalyptus trees. It will also prevent the spread of Eucalyptus into adjacent native habitat on the State Ecological Reserve.

Fire prevention experts have stated that removal of these invasive trees will reduce the potential for catastrophic fires and eliminate the risk of large tree falls onto Elkhorn Road. There is also evidence that Eucalyptus are unusually water-intensive and can contribute to reducing infiltration of water into aquifers. According to local biologists, this will enhance breeding habitat for sensitive native amphibians, including the Santa Cruz long-toed salamander and California red-legged frog.

My constituents value Elkhorn Slough as a community asset and are passionate about protecting and managing the slough for the long-term. I believe this project supports those long-term benefits.

I have confidence in the ability of the Elkhorn Slough National Estuarine Research Reserve to responsibly manage this work and to deliver the benefits to our district. I support this important project and urge the Commission to ensure its implementation.

Sincerely,

John Phillips
Supervisor, Monterey County

Include for 4/13/16 agenda

April 11, 2016
351 Redwood Hts. Rd.
Aptos, CA 95003

To Members Calif. Coastal Commission

Re: W11A Elkhorn Slough Restoration Issues Determination (i.e. appeal)

I support the appeal of Nina Beety to save the eucalyptuss trees and retain the existing habitat for the dependent wildlife.

Her points are well taken and I believe it is your mandate and responsibility to prevent the removal of well established eucalyptus trees. Removal would create a negative visual impact, disrupt the landscape, degrade public views, and destroy and POISON environmantally sensitive habitat.

On a personal note: When I taught elementary school in Pajaro Schools, I took classrooms of children for an enjoyable and educational field trip to Elkhorn Slough. We studied ecology. . and the dangers of pesticides, of which many children and their field worker parents were aware. . painfully so.

When I learned part of the eucalyptus removal utilizes Monsanto's Roundup or Rodeo to kill the tree roots, evidence demonstrates more dies than the target. Itrust you have all read Rachel Carson's 1962 Silent Spring, Poison pesticides kill birds, bees, wildlife, us.

There is no safe amount, No "judidious" use, no way to contain toxins, which inevitably work their way into the environment and the food chain. I know. Iwas tested in 1969 when all of us nursing mothers were found to have DDT (the carcinogenic pesticide of which Rachel Carson wrote) in our breast milk. Wewere part of a lawsuitto ban DDT brought by EDF & CRLA. The scientist was Dr. Risebrough (sp?). Inever sprayed with DDT.

Monsanto's history of poisoning and environmental devastation is well documented. Though perhaps well intentioned, this project sounds like a Monsanto public relations/ propraganda project in disguise - like "safe" nuclear power (Fukushima, Chernobyl, etc.)

Is this a "restoration" or "devastation" project? Please uphold Nina's Beety's well substantiated appeal.

Thank you,

Marilyn Garrett

Marilyn Garrett

FYI According to my health professional, my essential tremor is pesticide related from years of teaching in Pajaro Schools in Watsonville adjacent topesticide drift from ag. fields.

CALIFORNIA COASTAL COMMISSION
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W11a

Appeal Filed:	12/15/2015
49th Day:	Waived
Staff:	Brian O'Neill - SC
Staff Report:	3/25/2016
Hearing Date:	4/13/2016

APPEAL STAFF REPORT
SUBSTANTIAL ISSUE DETERMINATION

Appeal Number:	**A-3-MCO-15-0068**
Applicant:	**California Department of Fish and Wildlife**
Appellant:	Nina Beety
Local Decision:	Approved by the Monterey County Planning Commission on July 8, 2015, and upheld by the Board of Supervisors on September 29, 2015 (County application number PLN100351).
Project Location:	At the Elkhorn Slough National Estuarine Research Reserve, 1700 Elkhorn Slough Road, County of Monterey (APNs 131-051-001-000, 131-051-023-000, 131-051-067-000).
Project Description:	Removal of approximately 1,225 Eucalyptus trees and restoration of oak woodland and freshwater habitat.
Staff Recommendation:	No Substantial Issue

Important Hearing Procedure Note: This is a substantial issue only hearing. Testimony will be taken only on the question of whether the appeal raises a substantial issue. (*See generally* 14 CCR Section 13115.) Generally and at the discretion of the Chair, testimony is limited to three minutes total per side. Please plan your testimony accordingly. Only the Applicant, persons who opposed the application before the local government (or their representatives), and the local government shall be qualified to testify. (*Id.* Section 13117.) Others may submit comments in writing. (*Id.*) If the Commission determines that the appeal does raise a substantial issue, the de

novo phase of the hearing will occur at a future Commission meeting, during which the Commission will take public testimony. (*Id.* Section 13115(b).)

SUMMARY OF STAFF RECOMMENDATION

Monterey County approved a coastal development permit (CDP) to remove approximately 1,225 Eucalyptus trees over 13.6 acres within the Elkhorn Slough National Estuarine Research Reserve and restore the sites to native oak woodland. The project site is on the southeast side of Elkhorn Slough, approximately three miles inland of Moss Landing.

The Appellant contends the approved project is inconsistent with Monterey County Local Coastal Program (LCP) policies that are applicable within North Monterey County and related to environmentally sensitive habitat area (ESHA), visual resources and water resources. After reviewing the local record, Commission staff concludes that the approved project does not raise a substantial issue with respect to the project's conformance with the Monterey County LCP.

Specifically, in terms of ESHA, the project is a resource-dependent use that is allowed within the project site. The restoration project will remove a nonnative species which, in this case, does not qualify as ESHA (Eucalyptus) and will improve ESHA habitat values in the long term. Additionally, the project incorporates many mitigation measures to minimize temporary disruptions to habitat including the use of biological monitors, education requirements for workers, seasonal restrictions on removal activities, buffers from sensitive species, and other measures. The project will not increase fire risks as the Appellant contends, but rather will reduce fuel and potential for wildfire by returning the area to its natural state and removing a highly flammable tree species from the environment. Additionally, the project includes various restrictions and limits on the use of herbicides that adequately protect habitat, including buffers from water, limits on the type and amount of herbicides that can be used, and a prohibition on the use of herbicides on when rain is forecast. The mitigation measures ensure that the project will not significantly disrupt habitat values and the County-approved project is therefore consistent with the LCP with regard to ESHA.

In terms of visual resources, the project does not include construction of any manmade structures that would impair public views. The removal of nonnative trees and restoration of native oak woodland will enhance visual resources in the area. Temporary impacts to public views resulting from tree removal will be limited and a prior Eucalyptus removal project implemented in the 1990's demonstrates that views will be enhanced in the long term. The project is therefore consistent with the LCP with regard to visual resources.

In terms of water resources, the project does not propose to withdraw water from any natural feature. Additionally, scientific studies undertaken at the Reserve indicate that Eucalyptus trees use significantly more water than oak trees; therefore, removal of Eucalyptus and replacement with oak woodland will likely improve local groundwater supply and benefit adjacent freshwater ponds. The project is therefore consistent with the LCP with regard to water resources.

Considering the above, staff recommends that the Commission determine that the appeal contentions do not raise a substantial LCP conformance issue, and that the Commission decline to take jurisdiction over the CDP for this project. The single motion necessary to implement this recommendation is on page 4 below.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

Staff recommends a **YES** vote on the following motion. Passage of this motion would result in a finding of No Substantial Issue and adoption of the following resolution and findings. If the Commission finds No Substantial Issue, the Commission would not hear the application de novo and the local action would become final and effective. The motion passes only by an affirmative vote by a majority of the Commissioners present.

Motion: *I move that the Commission determine that Appeal Number A-3-MCO-15-0068 raises* ***no substantial issue*** *with respect to the grounds on which the appeal has been filed under Section 30603. I recommend a* ***yes*** *vote.*

Resolution: *The Commission finds that Appeal Number A-3-MCO-15-0068 does not present a substantial issue with respect to the grounds on which the appeal has been filed under Section 30603 of the Coastal Act regarding consistency with the Certified Local Coastal Program and/or the public access and recreation policies of the Coastal Act.*

II. FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

A. PROJECT LOCATION AND DESCRIPTION

The project site is located within the Elkhorn Slough National Estuarine Research Reserve (Reserve), located at 1700 Elkhorn Slough Road in Monterey County. The Reserve is a designated Ecological Reserve managed by the California Department of Fish and Wildlife (CDFW) for the conservation and protection of rare plants, animals, and habitats, and to provide for education and scientific research. The 1,700-acre Reserve includes a variety of habitats including oak woodland, coastal prairie, freshwater wetlands, maritime chaparral, saltwater marsh, and approximately 50 acres of nonnative Eucalyptus woodland. The Reserve includes five miles of trails, a nature center, and a parking lot, which are all available for public use five days a week for a small fee. The project site is located on three parcels within the Reserve (APNs 131-051-001-000, 131-051-023-000, 131-051-067-000) on the southeast side of Elkhorn Slough, approximately three miles inland of Moss Landing. These three parcels are zoned RC (CZ) (Resource Conservation (Coastal Zone)), which allows as principally-permitted uses "resource dependent educational and scientific research facilities uses" and "restoration and management programs for fish, wildlife, or other physical resources." (Implementation (IP) Sections 20.36.040.A-B.) See **Exhibit 1** for the project location map and **Exhibit 3** for site photos.

The Monterey County-approved project authorizes removal of approximately 1,225 Eucalyptus trees over a period of ten years and also includes restoration of oak woodland and freshwater habitat within the Reserve. See **Exhibit 2** for approved project plans. The Eucalyptus trees[1] approved for removal are located in four separate groves covering approximately 13.6 acres. Most of the trees range in size from six to 36 inches in diameter, with 75 of the trees considered

[1] The trees approved for removal consist mostly of *Eucalyptus globlulus* and one acre of *Eucalyptus camaldulensis*. Neither type of Eucalyptus is native to the project site.

landmark[2] trees because they have a diameter of over 36 inches. All cut stumps would be left in the ground for erosion control and existing Eucalyptus snags (i.e. dead or dying standing trees) would be retained to provide habitat for certain bird species. The trees identified for removal would be cut and felled in place, with large logs removed from the site. Smaller branches may be chipped and used onsite as mulch to a depth no greater than six inches. To prevent tree regrowth, stumps would either be light deprived using tarps or treated with an herbicide (imazapyr and/or glyphosate) applied manually to the stump with a paintbrush. Existing native vegetation would be retained as much as feasible and invasive nonnative understory plants would be removed manually whenever possible or with the use of imazapyr and/or glyphosate. The Eucalyptus groves are all accessible by existing dirt roads, which may need to be reinforced with gravel to prevent tree removal equipment from getting stuck in mud during periods of rain. Restoration efforts will rely on natural revegetation supplemented by new plantings, if necessary, using local native plants propagated at the Reserve's greenhouse and nursery.

B. MONTEREY COUNTY CDP APPROVAL

On July 8, 2015, the Monterey County Planning Commission approved CDP PLN100351 for the proposed project on a vote of 9-1. The Planning Commission's approval was appealed to the Monterey County Board of Supervisors (Board). On September 29, 2015, the Board unanimously denied the appeal and upheld the Planning Commission's CDP approval. The County's final local action notice was received in the Coastal Commission's Central Coast District office on December 1, 2015 (**Exhibit 4**). The Coastal Commission's ten-working-day appeal period for this action began on December 2, 2015 and concluded at 5pm on December 15, 2015. One valid appeal of the County's CDP decision was received during the appeal period (see below and **Exhibit 5**).

C. APPEAL PROCEDURES

Coastal Act Section 30603 provides for the appeal to the Coastal Commission of certain CDP decisions in jurisdictions with certified LCPs. The following categories of local CDP decisions are appealable: (a) approval of CDPs for development that is located (1) between the sea and the first public road paralleling the sea or within 300 feet of the inland extent of any beach or of the mean high tide line of the sea where there is no beach, whichever is the greater distance, (2) on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, or stream, or within 300 feet of the top of the seaward face of any coastal bluff, and (3) in a sensitive coastal resource area; or (b) for counties, approval of CDPs for development that is not designated as the principal permitted use under the LCP. In addition, any local action (approval or denial) on a CDP for a major public works project (including a publicly financed recreational facility and/or a special district development) or an energy facility is appealable to the Commission. This project is appealable because it is located within 100 feet of a wetland, estuary, or stream.

[2] A landmark tree is defined in the North County IP Section 20.144.050.C.1 as "a eucalyptus or Monterey pine which is 36 inches or more in diameter measured at breast height." This IP Section allows for landmark trees to be removed if there are no alternatives to the project that could avoid removal. Here, successful restoration of the site requires removal of all nonnative Eucalyptus in order to prevent regrowth and allow for native oak woodland to return. Therefore, there are no alternatives available that would avoid landmark tree removal for this project. In other words, removal of all nonnative Eucalyptus, including designated landmark trees, ***is*** the project.

The grounds for appeal under Section 30603 are limited to allegations that the development does not conform to the certified LCP or to the public access policies of the Coastal Act. Section 30625(b) of the Coastal Act requires the Commission to conduct a de novo CDP hearing on an appealed project unless a majority of the Commission finds that "no substantial issue" is raised by such allegations.[3] Under Section 30604(b), if the Commission conducts a de novo hearing and ultimately approves a CDP for a project, the Commission must find that the proposed development is in conformity with the certified LCP. If a CDP is approved for a project that is located between the nearest public road and the sea or the shoreline of any body of water located within the coastal zone, Section 30604(c) also requires an additional specific finding that the development is in conformity with the public access and recreation policies of Chapter 3 of the Coastal Act. This project does not include components that are located between the nearest public road and the sea, and thus this additional finding would not need to be made if the Commission were to approve the project following a de novo hearing.

The only persons qualified to testify before the Commission on the substantial issue question are the Applicant, persons opposed to the project who made their views known before the local government (or their representatives), and the local government. (14 CCR Section 13117.) Testimony from other persons regarding the substantial issue question must be submitted in writing. (*Id.*) Any person may testify during the de novo CDP determination stage of an appeal (if applicable).

D. SUMMARY OF APPEAL CONTENTIONS

The Appellant contends that the approved project is inconsistent with Monterey County LCP policies regarding the protection and preservation of Environmentally Sensitive Habitat Areas (ESHA). Specifically, the Appellant claims that LCP Policy 2.3.2 prohibits the proposed type of development in ESHA and that the project will degrade habitat values due to: workers and heavy equipment accessing the site to remove trees; increased fire risk; and the use of herbicides. Additionally, the Appellant contends the approved project is inconsistent LCP Policies 2.2.1, 2.2.2, and 2.2.4 that protect visual resources. Specifically, the Appellant contends that removing the Eucalyptus trees will alter the natural setting that has existed for over a century and will degrade the scenic qualities of the Reserve. Finally, the Appellant claims that LUP Policy 2.5.2 requires CDFW to supply freshwater ponds with new water rather than removing trees to increase water levels at the ponds. See **Exhibit 5** for the full appeal document.

[3] The term "substantial issue" is not defined in the Coastal Act or in its implementing regulations. In previous decisions on appeals, the Commission has generally been guided by the following factors in making substantial issue determinations: the degree of factual and legal support for the local government's decision; the extent and scope of the development as approved or denied by the local government; the significance of the coastal resources affected by the decision; the precedential value of the local government's decision for future interpretations of its LCP; and, whether the appeal raises only local issues as opposed to those of regional or statewide significance. Even when the Commission chooses not to hear an appeal (by finding no substantial issue), appellants nevertheless may obtain judicial review of a local government's CDP decision by filing a petition for a writ of mandate pursuant to the Code of Civil Procedure, Section 1094.5. In this case, for the reasons discussed further below, the Commission exercises its discretion and determines that the development approved by the County does not raise a substantial issue with regard to the Appellants' contentions.

E. SUBSTANTIAL ISSUE DETERMINATION

1. ESHA

Applicable LCP Policies and Standards

The Reserve includes a variety of habitat areas that the LCP defines as ESHA, including maritime chaparral, freshwater wetlands, saltwater marsh, and estuarine waters. The LCP includes various policies regarding the allowed uses within ESHA, which are designed to achieve an overarching goal that sensitive and unique habitats within Monterey County are "protected, maintained, and, where possible, enhanced and restored" (LCP Policy 2.3.1, IP Section 20.144.040). The LCP prohibits all development, including vegetation removal, except for resource dependent development that "will not cause significant disruption of habitat values" and is "compatible with the long term maintenance of the resource" (LCP Policies 2.3.2.1, 2.3.2.2, and 2.3.2.3).

The LCP restricts the amount of indigenous vegetation and land disturbance that is allowed within ESHA, only allowing for removal and disturbance that is necessary to accomplish an approved resource-dependent development project (LCP Policy 2.3.2.8). Within riparian and wetland corridors, development is limited to projects that are necessary for flood control, water supply, or improvement of fish and wildlife habitat (LCP Policy 2.3.3.B.2). The LCP also requires that the County "encourage the restoration of sensitive plant habitats on public and private land" in conjunction with other agencies, including CDFW, who is the Applicant for the project (LCP Policy 2.3.4.5). The LCP also limits public access within ESHA, stating that access should be limited to low intensity recreational, scientific, or educational uses that do not result in significant disruptions to habitat (LCP Policy 2.3.2.7). Finally, the LCP requires setbacks from riparian plant communities sufficient to prevent significant degradation of the habitat area. (LCP Policy 2.3.3.B.1.) See **Exhibit 6** for the applicable LCP policies and standards.

Appellant's Contentions

The Appellant contends that the approved restoration activities are not an allowed use within ESHA because all development, including vegetation removal, is prohibited. Further, the Appellant states that the approved activities associated with the project, including access to the project sites by work crews and the use of mechanized equipment within the project area, will cause significant disruptions to existing habitat. The Appellant also contends that removal of Eucalyptus trees will impact winter foraging opportunities for monarch butterflies and bees. See **Exhibit 5** for the full appeal text.

Analysis

The project area is zoned RC (CZ) (Resource Conservation (Coastal Zone)), which provides for the protection, preservation, enhancement, and restoration of sensitive resources (IP Section 20.36.010). Principally permitted uses within this zone include restoration and management programs for fish, wildlife, and other physical resources (IP Section 20.36.040.B). Consistent with the zoning of this project site, per LCP Policies 2.3.1 and 2.3.2.1, development within ESHA is limited to resource-dependent uses, which include habitat restoration. Moreover, LCP Policy 2.3.3.B.2 allows for projects within riparian and wetland corridors that improve fish and wildlife habitat, and LCP Policy 2.3.4.5 encourages restoration of sensitive plant habitats on public land. The removal of Eucalyptus trees qualifies as "vegetation removal," and therefore

constitutes development under LCP Policy 2.3.2.1. However, LCP Policy 2.3.2.1 does not prohibit all development and specifically allows for resource-dependent development within ESHA, which includes habitat restoration. The purpose of this project is to remove stands of nonnative Eucalyptus and to restore these areas to native oak woodland, including with appropriate native understory plants, which will enhance habitat for native wildlife. Such restoration activities are a principally-permitted use in the RC (CZ) zone and thus, consistent with the zoning of the project site, the approved project constitutes resource-dependent development (habitat restoration) that, per LCP Policies 2.3.1, 2.3.2.1, and 2.3.3.B.2, is allowed both as a general matter of policy within ESHA and specifically on this project site. Further, LCP Policy 2.3.4.5 specifically encourages the County to pursue restoration of sensitive habitats in conjunction with CDFW, who is the Applicant for this project. Thus the project is an allowed use within the project area under the LCP.

The LCP also limits resource-dependent development within ESHA to projects that "will not cause significant disruption of habitat values" and that are "compatible with the long-term maintenance of the resource" (LCP Policies 2.3.1.1, 2.3.2.2, and 2.3.2.3). Reserve research indicates that nonnative Eucalypt woodland has lower species abundance of native plants and amphibians, as well as lower species richness of arthropods, compared to native oak woodland. Additionally, species composition within Eucalypt woodland was found to be more variable, suggesting that oak woodland habitat provides a more stable environment in the long term. Reserve staff concluded (see **Appendix A**), and Commission Staff Ecologist Dr. Laurie Koteen confirmed (see **Exhibit 9**), that removal of Eucalyptus and restoration of oak woodland will benefit habitat values within the Reserve over the long term.

Moreover, the Mitigated Negative Declaration (MND) (see **Appendix A**) completed for the project identified various mitigation measures that have been incorporated into the project in order to limit any temporary disruptions to habitat and native species during Eucalyptus tree removal activities. For example, work crews will use existing dirt roads (which may be reinforced with gravel) to bring in the necessary mechanized equipment during tree removal activities and no new roads will be constructed in the Reserve. A United States Fish and Wildlife Service biological monitor will provide worker education to all personnel prior to tree removal and will remain onsite during all tree removal activities. Salt marsh habitat will be identified and demarcated prior to tree removal activities to ensure protection of this sensitive habitat. Tree and understory removal activities would only be allowed between August 1 and November 1 to avoid bird nesting and fledgling season. All trees would be surveyed for nesting birds and biological monitors will be present during all project activities. None of the trees are utilized by Monarch butterflies and the nearest Monarch roosting location is 1.5 miles away from the closest removal location. Honey bees, which are not recognized as a special status species, were not discussed in the project MND although they may utilize the Eucalyptus trees for forage. However, adjacent Eucalyptus stands at the Reserve, totaling approximately 36.4 acres, will be retained in order to provide suitable alternative habitat for bees, monarchs, raptors, and other nesting birds. All existing logs will remain undisturbed to protect amphibians, and existing snags will be retained to provide habitat for granivorous (i.e. grain and seed-eating) bird species. Due to the extensive mitigation measures in place, the project is unlikely to significantly disrupt habitat values, and in fact will enhance habitat values over the long term, and therefore this contention does not raise a substantial issue of conformance with the LCP.

Additionally, the LCP further limits development within wetlands to projects that will "improve fish and wildlife habitat" (LCP Policy 2.3.3.B.2). The removal sites for this project are adjacent to freshwater ponds that provide habitat to a range of species, including the federally threatened California red-legged frog, the state- and federally-endangered Santa Cruz long-toed salamander, and the Western pond turtle, a California species of special concern. Reserve research indicates that Eucalyptus trees use significantly more water that native oaks, which may negatively impact groundwater supplies. Reserve staff concluded (see **Appendix A**), and Commission Staff Ecologist Dr. Laurie Koteen confirmed (see **Exhibit 9**), that removal of the Eucalyptus trees adjacent to the ponds will likely increase groundwater supplies and improve adjacent pond habitat. Thus the project will improve fish and wildlife habitat and therefore the Appellant's contention does not raise a substantial issue of conformance with the LCP.

In terms of public access, LCP Policy 2.3.2.7 allows for low intensity public recreation within ESHA that does not significantly disrupt habitat. No new public access trails or roads would be created by the project. Additionally, restoration activities would not impede existing public access because removal activities would occur mostly on Mondays and Tuesday when the Reserve is closed to the public. In short, the approved project does not create, impede, or impact public access in any way.[4]

In conclusion, the approved restoration project is consistent with allowable uses in the RC (CZ) zoning district. The approved project is also an appropriate resource-dependent use (habitat restoration) within ESHA that will not cause significant disruption of habitat values and will instead contribute to the long-term maintenance of the resource, including by improving fish and wildlife habitat in the Reserve. Thus, the Appellant's contentions regarding ESHA do not raise a substantial issue of conformance with the LCP's ESHA protection policies and standards.

2. Use of Herbicides

Applicable LCP Policies and Standards

As mentioned above, the LCP recognizes that the wetlands and riparian zones are particularly sensitive. The LCP therefore prohibits toxic substances from entering the estuarine system and only allows for development adjacent to estuaries "where such development does not increase the hazard of oil spill or toxic discharge into the estuaries" (Policy 2.3.3.B.8). See **Exhibit 6** for this LCP policy.

Appellant's Contentions

The Appellant contends that the use of herbicides will damage the Reserve's habitats and associated wildlife. The Appellant states that the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment recently released a notice of intent to list glyphosate as a chemical known to cause cancer by the State of California, which demonstrates that the herbicide could impact wildlife. Additionally, the Appellant explains that Marin

[4] The Appellant contends that project is inconsistent with the LCP's public access ESHA policies because it allows work crews to access the site. However, the public access policies apply to access for the general public and therefore are not applicable to temporary access that is necessary for workers to carry out an approved restoration project. As discussed above, temporary construction impacts are adequately mitigated.

Municipal Water District's risk assessment of triclopyr found that this particular herbicide is significantly more toxic than other herbicides and has the potential to contaminate waterways. See **Exhibit 5** for the full appeal text.

Analysis

The project includes removal of Eucalyptus trees by mechanical means, with herbicides applied directly to the stumps using a paintbrush or sponge to prevent regrowth. Nonnative understory vegetation will be removed manually, but may also require the use of herbicides applied using a small backpack and sprayer. The County action provided for programmatic approval for the use of herbicides that included general mitigation measures such as spill prevention and good housekeeping measures, with more specific requirements to be approved by the Integrated Pest Management branch of CDFW. As part of this project, the Applicant has submitted CDFW Form 679 (See **Exhibit 10)**, which describes the type of herbicides proposed and provides additional mitigation measures required by CDFW. CDFW approved the use of two herbicides: imazapyr and glyphosate. Additional requirements detailed in Form 679 limit the amount of herbicide that can be used, provide a 15-foot setback from water features, and prohibit herbicide application if rain is in the forecast.

With regard to the use of triclopyr, the United States Environmental Protection Agency (EPA) classifies triclopyr butoxyethyl ester as highly toxic to estuarine and marine fish.[5] Further, EPA describes the major degradate of triclopyr (3, 5, 6-trichloro-2-pyridinol) as both mobile and persistent in the environment and recognizes that there is risk of toxic runoff to water bodies. Consequently, triclopyr butoxyethyl ester is not approved for aquatic use and requires users to respect all provincially mandated buffers from water. Due to the recognized potential for toxic runoff from the use of triclopyr and the LCP's prohibition on development that increases the risk of toxic discharge into estuaries, the Applicant has not sought approval for the use of triclopyr as originally proposed during the restoration efforts and does not have permission from the Integrated Pest Management branch of CDFW to use this specific herbicide during the restoration efforts. The Applicant has sought authorization to use the herbicide imazapyr to replace triclopyr. EPA has found that there are no risks of concern to mammals, birds, bees, or aquatic invertebrates and fish associated with the use of imazapyr.[6] Additionally, this herbicide has not been detected in adjacent waterways after use and therefore poses little risk of runoff.

With regard to the use of glyphosate, EPA classifies glyphosate as either moderately toxic or practically nontoxic (the lowest toxicity classification) to estuarine and marine fish depending on the commercial formulation.[7] Both EPA and the United States Forest Service have determined that inert ingredients found in some commercial glyphosate formulations called polyoxyethyleneamine (POEA) surfactants are more toxic than the glyphosate herbicide itself.[8][9]

[5] See *Reregistration Eligibility Decision Document: Triclopyr,* United States Environmental Protection Agency, 1992.
[6] See *Reregistration Eligibility Decision Document: Imazapyr,* United States Environmental Protection Agency, 2006.
[7] See *Reregistration Eligibility Decision Document: Glyphosate,* United States Environmental Protection Agency, 1993.
[8] *Id.*; *Glyphosate – Human Health and Ecological Risk Assessment,* Syracuse Environmental Research Associates 2011.

Due to the elevated risk associated with glyphosate formulations that contain a POEA surfactant, the Applicant has proposed to use Rodeo, a commercial formulation of glyphosate that does not include a POEA surfactant. Additionally, EPA found that glyphosate adsorbs strongly to soil and is not considered mobile in the environment, which limits the potential for discharge into adjacent water bodies.

Because the Applicant will not use the herbicide triclopyr and instead will use imazapyr, which does not pose a risk to the environment, and a "practically" nontoxic formulation of glyphosate with a low risk of mobility, the proposed use of herbicides for this project is unlikely to increase the risk of toxic discharge into the estuary and therefore does not raise a substantial issue of conformance with LCP Policy 2.3.3.B.8.

3. Fire Risks

Applicable LCP Policies and Standards

The LCP recognizes that uncontrolled wildfire poses a major hazard to life, property, and habitat values (LCP Policy 2.8.1). The LCP therefore encourages the County to develop a fuel reduction program for "North County's oak woodland and chaparral to reduce potential risk of wildfires, to maintain the vigor of plant communities, and to maintain the diversity and value of habitat areas" (LCP Policy 2.3.3.A.5). See **Exhibit 6** for these LCP policies.

Appellant's Contentions

As previously described, the County-approved project authorizes removal of 1,225 Eucalyptus trees and restoration of native oak woodland. Larger Eucalyptus branches and logs would be removed from the project site, smaller Eucalyptus branches may be shredded and used as mulch onsite, and invasive understory plants would be removed.

The Appellant contends that the project will increase fire risks by encouraging oak restoration because the LCP specifically lists oak woodland in the fuel reduction program, but does not mention Eucalyptus.

[9] The Appellant states that CalEPA intends to list glyphosate as a chemical known to cause cancer. At this time, CalEPA is accepting public comment on the Notice of Intent to list glyphosate as a carcinogen and has not moved forward with any recommendation. The Notice of Intent does not list the agency's reasoning for intending to list glyphosate nor does it discuss potential differentiations between formulations, but it does cite the International Agency for Research on Cancer's (IARC) classification of glyphosate as a probable carcinogen in its notice. IARC does not specifically differentiate its classification between glyphosate formulations with or without POEA surfactants. IARC's classification, however, was based on research that was conducted on "glyphosate-based formulations" rather than technical grade glyphosate. (See *IARC Monographs Volume 112: Evaluation of Five Organophosphate Insecticides and Herbicides*, IARC, 2015.) Different formulations can vary widely in ingredients and, consequently, in levels of toxicity. As the U.S. Forest Service found in its risk assessment of glyphosate, cited above, "[t]he toxicity of the original Roundup and similar formulations containing POEA surfactants is far greater than the toxicity of technical grade glyphosate, Rodeo, or other formulations that do not contain surfactants." Additionally, any potential future listing by CalEPA would not impact its legal status for use, but rather would only require additional labeling. As explained above, the Applicant's proposed use of a practically nontoxic formulation of glyphosate in addition to the required mitigation measures is unlikely to increase the risk of toxic discharge into adjacent waterbodies.

Analysis
The LCP encourages a fuel reduction program in oak woodland. The LCP does not state that oak trees are a fire hazard, does not state that Eucalyptus trees are *not* a fire hazard, nor does the LCP discourage habitat restoration projects. Rather, the LCP encourages a program to reduce fuel within oak woodland in order to maintain the diversity and value of this habitat. Fuel reduction programs typically include removal of dead trees, low lying branches, and thick understory litter that have accumulated due to human fire suppression. Fuel reduction programs therefore aim to return native forests to a more natural state. This project is designed to restore native oak woodland to a more natural state and therefore does not increase fire risks. Additionally, Eucalypt woodland is recognized as a fire hazard due to its high tree density, significant litter deposits, and oily foliage. Chris Orman, North County Fire Chief, submitted a letter in support of the project, noting the high fire potential of Eucalypt woodland (see **Exhibit 8**). Additionally, the Federal Emergency Management Agency also recognizes Eucalypt woodland as a high fire risk and actively encourages Eucalyptus removal projects through its Hazard Mitigation Grant Program. The approved Eucalyptus removal project therefore will likely decrease fire risks within the project area.

Because the project does not increase fire risks and likely reduces potential for fire, the approved project does not raise a substantial LCP conformance issue with respect to LCP fuel reduction Policy 2.3.3.A.5.

4. Visual Resources
Applicable LCP Policies and Standards
The LCP includes several policies designed to minimize the "[a]lteration of natural landforms and degradation of the special communities which serve as popular recreation areas." Although many of these policies are only applicable to visual degradation that is related to development of manmade structures, other policies discuss visual protection more generally. For example, LCP Policy 2.2.2.2 states that estuaries and wetlands should be "designated for recreation or environmental conservation land uses that are compatible with protection of scenic resources." Additionally, LCP Policy 2.2.2.1 states that views "to and along the shoreline of Elkhorn Slough from public vantage points shall be protected." Further, LCP Policy 2.2.1 states that development within estuary areas should be prohibited to the fullest extent possible and that "[o]nly low intensity development that can be sited, screened, or designed to minimize visual impacts, shall be allowed on scenic hills, slopes, and ridgelines." See **Exhibit 6** for these LCP policies.

Appellant's Contentions
As discussed above, the project includes removal of approximately 1,225 Eucalyptus trees and restoration of native oak woodland. Stumps will be left in the ground to prevent erosion. Some of the removal sites will be visible by recreational users of the slough, from the public trails through the Reserve, and from Elkhorn Road, a designated scenic road.

The Appellant contends that Eucalyptus trees are part of the natural landscape and removal will degrade existing views. The Appellant further claims that the LCP protects alteration of existing views and that Eucalyptus trees are an intrinsic part of the scenic character of the area.

Analysis

As stated above, the LCP includes visual policies that are designed to minimize degradation of scenic resources and protect public views. The project includes removal of over 1,225 trees within four separate groves, which will alter existing views. Seventy-five of these trees are considered landmark trees due to having a trunk diameter over 37 inches. However, the LCP does not specifically prohibit any alteration of views as they currently exist as the Appellant contends, nor does it specifically protect Eucalyptus trees. Rather, the LCP generally protects scenic resources, stating that development should be "visually compatible with the character of the surrounding areas" and that visually degraded areas should be "restored and enhanced." Contrary to the Appellant's contention that Eucalyptus trees are an intrinsic part of the scenic character of the area, Eucalyptus are a nonnative species that would not exist within the Reserve without human interference. Eucalyptus trees were planted for timber and as windbreaks in the early 1900's. Conversely, coast live oak woodland is a native habitat that is unique to this region and provides support for associated native plants and wildlife. Eucalypt woodland is therefore a relatively recent phenomenon that is not a part of the undisturbed natural landscape and could be viewed by some as detrimental to the natural scenic character of the area. Indeed, the Applicant provided visual simulations of the removal, which demonstrates that natural features such as grasslands, as well as the slough itself, will be more visible to the public once the Eucalyptus trees are removed (see **Exhibit 7**). Thus the project will restore the historic natural landscape and enhance visual resources in the long term, consistent with the LCP. Additionally, these particular groves were chosen due to their low impact on visual resources. Some Eucalyptus groves within the Reserve provide a visual screen of adjacent industrial and commercial development, such as the Moss Landing Power Plant. However, the groves currently proposed for removal do not provide visual screening of development and were selected specifically due to their low impact on visual resources from public vantage points.

The project will cause temporary disruptions of visual resources due to the tree removal. The groves will essentially be clear-cut, with stumps left in place, which will be visible from public vantage points. The presence of workers and mechanized equipment during active removal will also temporarily disrupt public views. Although these visual impacts are not negligible, these temporary disruptions are unavoidable to guarantee successful restoration of the native landscape and to enhance views in the long term. Complete removal of the groves is necessary due to Eucalyptus' tendency to spread aggressively in coastal regions. Retaining stumps in the ground is also necessary to prevent the negative environmental impacts of erosion that could occur due to removal of 1,225 stumps, which could negatively impact the success of revegetation efforts. The use of tarps to prevent regrowth will also temporarily impact visual resources. However, tarping is necessary in order to limit the use of herbicides in the most sensitive areas. Further, the visual impact of tarps can be mitigated by covering the tarps with earthen materials if necessary.

With regard to the visual impacts during tree removal activities, active removal will be limited mostly to Mondays and Tuesdays when the Reserve is closed to the public, therefore minimizing the visual impact of work crews on visitors to the Reserve. Additionally, the site of the prior Eucalyptus removal project that occurred in the 1990's now consists of open grassland, coastal scrub, and emerging oak woodland. Current photos of that site demonstrate that the stumps and disturbance are now barely visible (see pages 12-15 of **Exhibit 3**). That prior project demonstrates that the visual impacts of removal are only temporary and will lead to the

restoration and enhancement of the natural landscape, consistent with the LCP. Additionally, the temporary presence of the removal sites would offer an educational opportunity for the public to learn about history of Eucalyptus, including with respect to ongoing Reserve research on Eucalyptus' impacts on native habitat, and the various restoration efforts taking place within the Reserve. The opportunity for such nature education and research is specifically allowed within ESHA per LCP Policy 2.3.2.1.

Consistent with the aforementioned visual resource policies, IP section 20.36.010 states that the purpose of the RC (CZ) zoning district "is to provide a district to protect, preserve, enhance, and restore sensitive resource areas in the County of Monterey. Of specific concern are the highly sensitive resources inherent in such areas such as view shed … The purpose of this Chapter is to be carried out by allowing only such development that can be achieved without adverse effect and which will be subordinate to the resources of the particular site and area." As discussed, the proposed project will enhance and restore visual resources relating to ESHA onsite. Furthermore, the development approved by the County (habitat restoration) ***is*** subordinate to the resources of the project site as the entire purpose of the project is to protect and enhance the ESHA onsite.

Because the project will restore and enhance the natural landscape of the Reserve in the long term and any temporary visual impacts will be minimized and are necessary for the success of the restoration efforts, the approved project does not raise a substantial LCP conformance issue with respect to the LCP's visual protection policies.

5. Water Resources

Applicable LCP Policies and Standards

In order to protect aquatic habitats, LCP Policy 2.5.2.4 states that "[a]dequate quantities of water should be maintained instream or supplied to support natural aquatic and riparian vegetation and wildlife during the driest expected year." See **Exhibit 6** for this LCP policy.

Appellant's Contentions

One of the objectives of the project is to protect freshwater habitat for plants and wildlife. The project does not propose to withdraw any water from any riparian system, nor does it include a plan to supply new, additional water to existing ponds or create new ponds.

The Appellant contends that the project is inconsistent with the LCP because no new ponds are proposed and the Reserve will not supply new, additional water to existing ponds.

Analysis

The LCP does not require construction of new ponds in the Reserve, nor does it require development projects with no adverse impacts on water to supply new water to existing ponds. The LCP generally states that adequate water should be maintained instream to support vegetation and wildlife. The project does not propose to withdraw any water from any riparian system, consistent with LCP Policy 2.5.2.4. Additionally, Reserve research indicates that Eucalyptus trees consume approximately twice the amount of water than native oaks (see **Appendix A**). As an added benefit of the native habitat restoration project, Eucalyptus removal will therefore likely reduce stress on groundwater levels and benefit nearby existing freshwater ponds that provide habitat for native plants and wildlife. The approved project will therefore help

maintain adequate water supplies instream. Thus, this contention does not raise a substantial LCP conformance issue with respect to water resources and LCP Policy 2.5.2.4.

F. CONCLUSION

When considering a project that has been appealed to it, the Commission must first determine whether the project raises a substantial issue of LCP conformity, such that the Commission should assert jurisdiction over a de novo CDP for such development. As described above, the Commission has been guided in its decision of whether the issues raised in a given case are "substantial" by the following five factors: the degree of factual and legal support for the local government's decision; the extent and scope of the development as approved or denied by the local government; the significance of the coastal resources affected by the decision; the precedential value of the local government's decision for future interpretations of its LCP; and, whether the appeal raises only local issues as opposed to those of regional or statewide significance. In this case, these five factors, considered together, support a conclusion that this project does not raise a substantial issue of LCP conformance.

First, the County's conclusion that the approved project, along with the various mitigation measures explained above, would not have significant adverse habitat or visual impacts is well supported by the project MND, technical documents, and Reserve research; this factor weighs against finding a substantial issue. Second, the approved project is consistent with the purpose of the RC (CZ) zoning district and is strictly limited to habitat restoration as allowed by applicable LCP policies and standards for protection of ESHA. Thus, the extent and scope of this project weigh in favor of a finding of no substantial issue. Third, the development is designed to protect and enhance native oak and freshwater habitat, as well as enhance scenic resources in the long term. Thus, significant coastal resources are expected to be enhanced by this approval, and this factor also weighs against finding a substantial issue. The proposed project is consistent with all relevant LCP policies, so this project should not create any adverse precedent with respect to LCP interpretation, and thus this factor weighs against finding a substantial issue. Finally, the LCP recognizes that ESHA within North County is a resource of statewide significance. However, the decisions made for this project are site-specific and will benefit North County ESHA values in the long term, also weighing against a finding that a substantial issue exists.

Therefore, all five factors weigh against a finding that the County's approval raises a substantial issue with respect to the LCP. Given that the record supports the County's action and the County's analysis did not result in the approval of a project with significant coastal resource impacts, and given that the project complies with applicable LCP provisions and raises no statewide issues, the Commission finds the appeal does not raise a substantial issue of conformance with the LCP and thus the Commission declines to take jurisdiction over the CDP for this project.

APPENDIX A: SUBSTANTIVE FILE DOCUMENTS

1. *Initial Study of Environmental Impact and Mitigated Negative Declaration – Elkhorn Slough Ecological Reserve Eucalyptus Removal 2015-2025*, California Department of Fish and Wildlife, 2015.
2. *Biodiversity effects and rates of spread of nonnative eucalypt woodlands in central California*, Susanne Fork, et al., 2015.

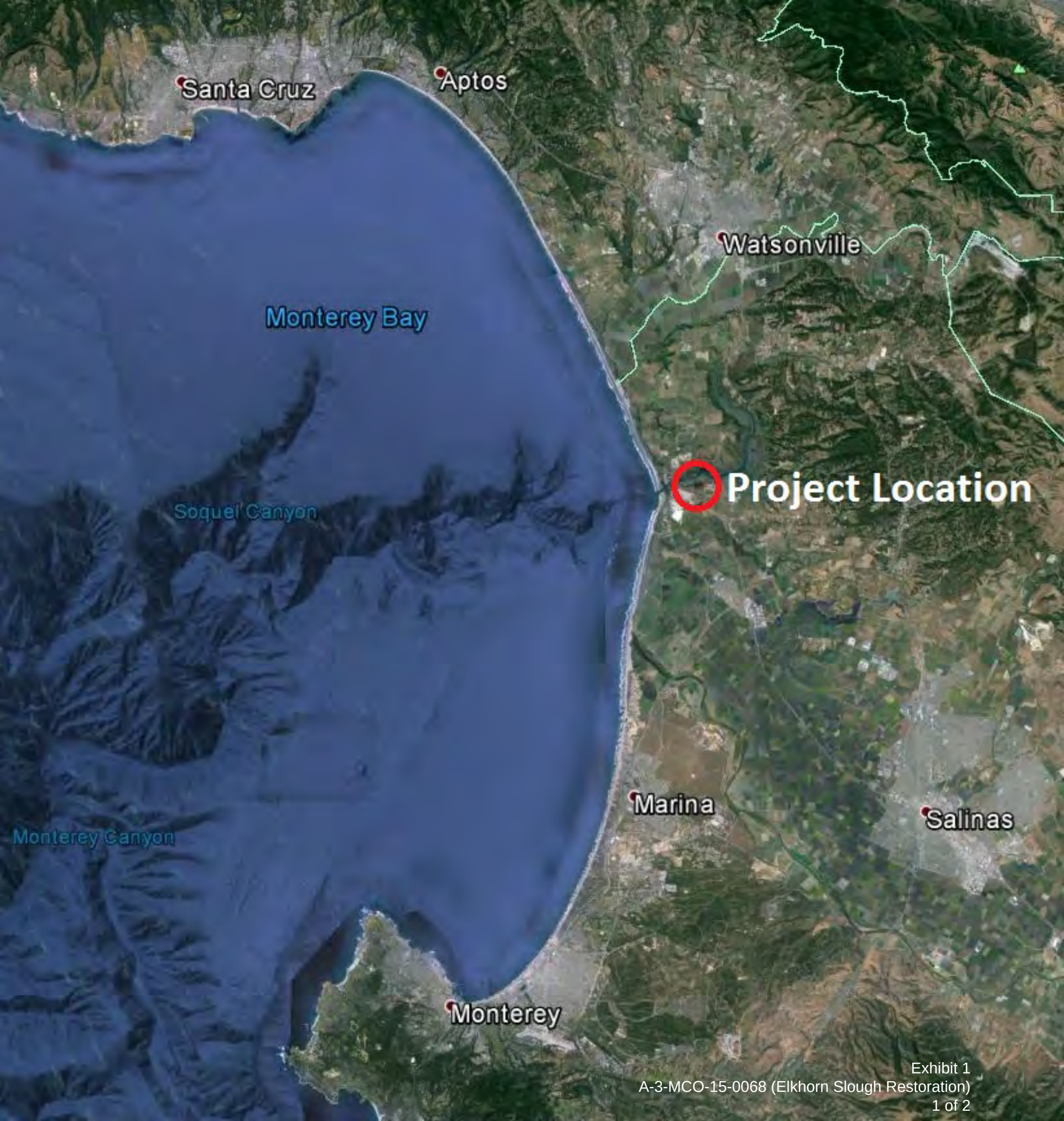


Exhibit 1
A-3-MCO-15-0068 (Elkhorn Slough Restoration)
1 of 2

Exhibit 1
A-3-MCO-15-0068 (Elkhorn Slough Restoration)
2 of 2

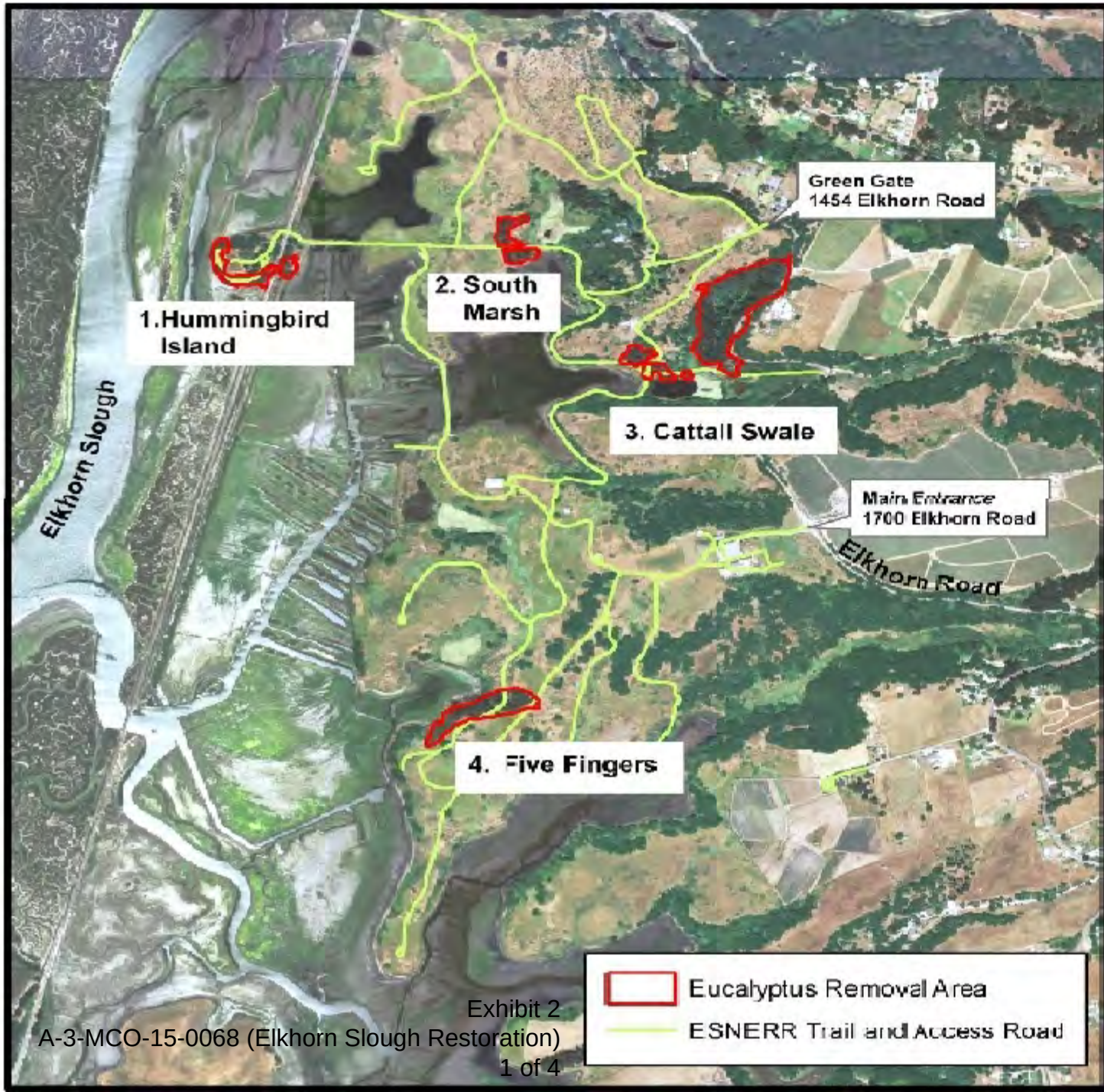


Exhibit 2
A-3-MCO-15-0068 (Elkhorn Slough Restoration)
1 of 4

Haul route from
South Marsh to
Elkhorn Road

Elkhorn Road

Hummingbird
Island

Existing Parking

South
Marsh

Green Gate
1454 Elkhorn Road

Proposed Parking
and
Stockpile Area

Eucalyptus Removal Area
Railroad
Street
Sensitive Area - No Disturbance
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Pond
Coast Live Oak

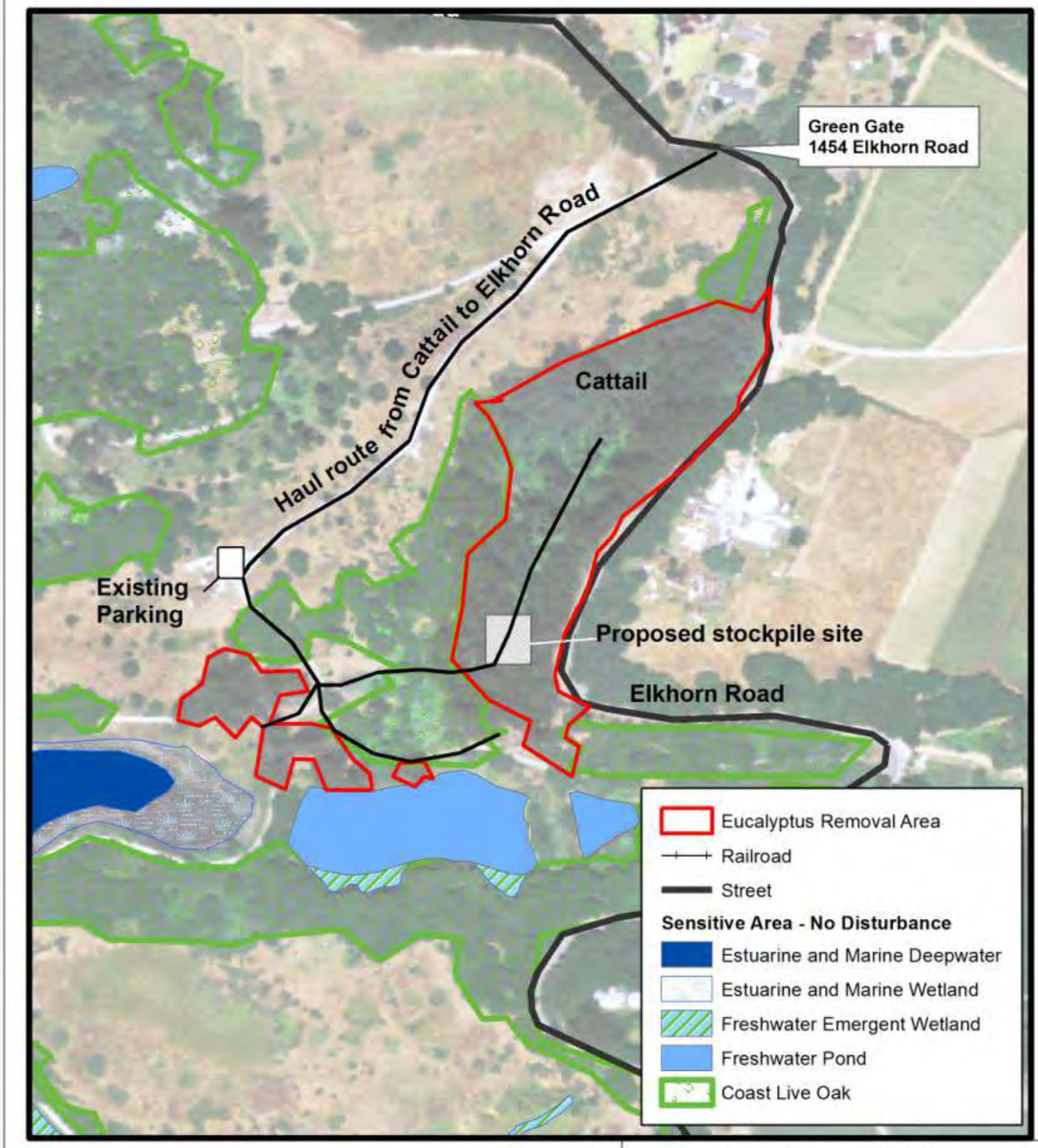
0 87.5 175 350 Meters

N
W E
S

Hummingbird Island and South Marsh Project Sites

Eucalyptus Removal Project
Monterey County, CA

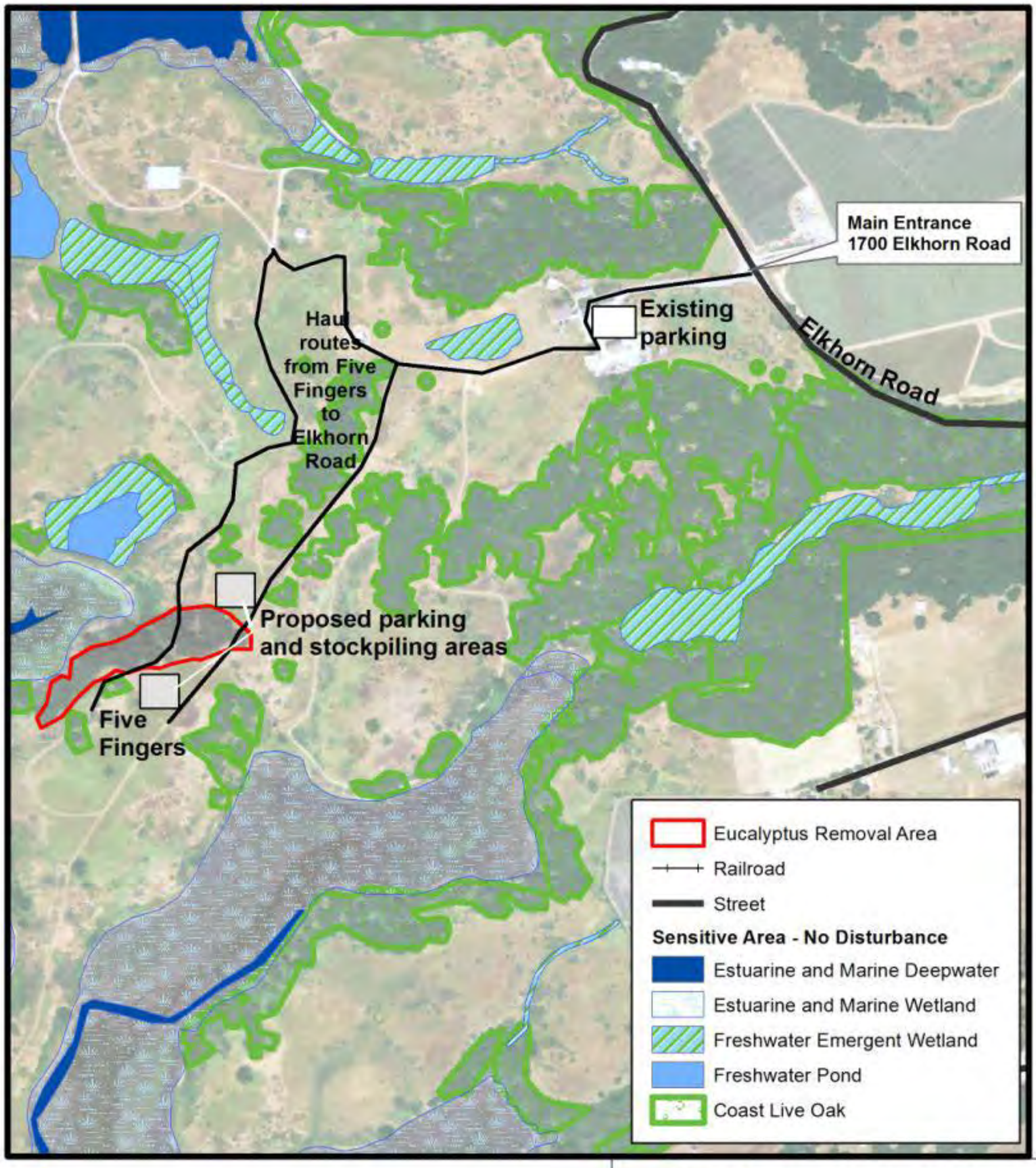
May 2011 Figure 3



Cattail Project Site

Eucalyptus Removal Project
Monterey County, CA

May 2011 Figure 4



Five Fingers Project Site

Eucalyptus Removal Project
Monterey County, CA

May 2011 Figure 5

Typical Existing Road


Current Removal Site

Current Removal Site

Current Removal Site

Current Removal Site

Current Removal Site

Current Removal Site

Current Removal Site


Current Removal Site


Current Removal Site

Current Removal Site

1990's Restoration Site

1990's Restoration Site

1990's Restoration Site

1990's Restoration Site

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

Carl P. Holm, AICP, Director
John Guertin, Acting Deputy Director

Daniel Dobrilovic, Acting Building Official
Michael Novo, AICP, Director of Planning
Robert K. Murdoch, P.E., Director of Public Works

168 W. Alisal Street, 2nd Floor
Salinas, CA 93901
http://www.co.monterey.ca.us/rma

FINAL LOCAL ACTION NOTICE

Date: November 16, 2015

To: California Coastal Commission, Central Coast District Office
Applicant/Representative: Dave Feliz, c/o Elkhorn Slough Ecological Reserve

From: Monterey County Resource Management Agency Planning Department

Subject: Final Local Action on Coastal Permit Application PLN100351

Please note the following **Final Monterey County Action** for the following coastal development permit type:

☒ CDP/CAP ☐ CDP Amendment ☐ Extension ☐ Emergency CDP
☐ Exemption ☐ Exclusion ☐ LCP Amendment ☐ Other: _____

☒ all local appeals processes have been exhausted for this matter

☐ The project includes an amendment to the LCP

Project Information

Resolution #: 15-286

Project Applicant: Dave Feliz, c/o Elkhorn Slough Ecological Reserve, 1700 Elkhorn Road, Royal Oaks, CA 95076

Applicant's Rep: N/A

Project Location: Located at and near 1700 Elkhorn Slough Road, Royal Oaks; Assessor's Parcel Numbers: 131-051-001-000, 131-051-023-000 & 131-051-067-000

Project Description: Combined Development Permit consisting of: 1) a Coastal Development Permit to allow Oak woodland and freshwater habitat restoration within 100 feet of an environmentally sensitive habitat; and 2) Coastal Development Permit to allow the removal of 1,225 existing Eucalyptus trees (ranging in size from 6 to over 37 inches in diameter).

Final Action Information

For Coastal Commission Use Only

MCO

Reference #:

FLAN received:

Appeal period:

Final Action Date: September 29, 2015 **Local Appeal Period Ends:** September 29, 2015

Final Action: ☒ Approved w/conditions ☐ Approved w/o conditions ☐ Denied

Final Action Body: ☐ Zoning Administrator ☐ Planning Commission ☒ Board of Supervisors ☐ Dir. of Planning

Final Local Action Notice Attachments Included

Required Materials Supporting the Final Action	Enclosed	Previously Sent (date)	Notes/Comments
Staff Report		09/17/2015	
Adopted Findings	X		
Adopted Conditions	X		
Site Plans	X		
Elevations	X		
Location/Vicinity Map		09/17/2015	
Additional Materials Supporting the Final Action	Enclosed	Previously Sent (date)	Notes/Comments
CEQA Document(s)			
Geotechnical Report(s)			
Biotic Report(s)			
Forest Management Plan(s)			

Coastal Commission Appeal Information

Monterey County has determined that this Final Local Action is:

☐ **NOT APPEALABLE** to the California Coastal Commission. The Final Monterey County Action is now effective.

☒ **APPEALABLE** to the California Coastal Commission. The Coastal Commission's 10-working day appeal period begins the first working day after the Coastal Commission receives adequate notice of this Final Monterey County Action. The Final Monterey County Action is not effective until after the Coastal Commission's appeal period has expired and no appeal has been filed. Any such appeal must be made directly to the California Coastal Commission Central Coast District Office in Santa Cruz; there is no fee for such an appeal. Should you have any questions regarding the Coastal Commission appeal period or process, please contact the Central Coast District Office at 725 Front Street, Suite 300, Santa Cruz, CA 95060, (831) 427-4863.

Submitted by

Signature:

Name: Dan Lister

Title: Assistant Planner

Phone/Fax: 831-759-6617/831-757-9516

email: listerdm@co.monterey.ca.us

Monterey County

168 West Alisal Street,
1st Floor
Salinas, CA 93901
831.755.5066

Board Order

Upon motion of Supervisor Parker, seconded by Supervisor Potter and carried by those members present, the Board of Supervisors hereby:

Adopted Resolution 15-286 to:

a. Deny the appeal by Nina Beety of the Monterey County Planning Commission's adoption of a Mitigated Negative Declaration and approval of a Combined Development Permit (Elkhorn Slough National Estuarine Research Reserve /PLN100351);
b. Certify that the County has considered the Mitigated Negative Declaration adopted by the California Department of Fish and Wildlife;
c. Approve the Combined Development Permit consisting of: 1) a Coastal Development Permit to allow oak woodland and freshwater habitat restoration within 100 feet of an environmentally sensitive habitat; and 2) a Coastal Development Permit to allow the removal of 1,225 existing Eucalyptus trees (ranging in size from 6 to over 37 inches in diameter), subject to Conditions of Approval; and
d. Adopt a Mitigation Monitoring and Reporting Plan.

PASSED AND ADOPTED on this 29th day of September 2015, by the following vote, to wit:

AYES: Supervisors Armenta, Phillips, Salinas, Parker and Potter
NOES: None
ABSENT: None

I, Gail T. Borkowski, Clerk of the Board of Supervisors of the County of Monterey, State of California, hereby certify that the foregoing is a true copy of an original order of said Board of Supervisors duly made and entered in the minutes thereof of Minute Book 78 for the meeting on September 29, 2015.

Dated: November 6, 2015
File ID: RES 15-093

Gail T. Borkowski, Clerk of the Board of Supervisors
County of Monterey, State of California

By Denise Hancock
Deputy

Before the Board of Supervisors in and for the County of Monterey, State of California

In the matter of the application of:
STATE OF CALIFORNIA/ELKHORN SLOUGH NATIONAL ESTURINE RESEARCH RESERVE (PLN100351)

RESOLUTION NO. 15 – 286
Resolution by the Monterey County Board of Supervisors:
a. Denying the appeal by Nina Beety of the Monterey County Planning Commission's adoption of a Mitigated Negative Declaration and approval of a Combined Development Permit (Elkhorn Slough National Estuarine Research Reserve /PLN100351);
b. Certifying that the County has considered the Mitigated Negative Declaration adopted by the California Department of Fish and Wildlife; and
c. Approving the Combined Development Permit consisting of: 1) a Coastal Development Permit to allow oak woodlandand freshwater habitat restoration within 100 feet of an environmentally sensitive habitat; and 2) a Coastal Development Permit to allow the removal of 1,225 existing Eucalyptus trees (ranging in size from 6 to over 37 inches in diameter); and
d. Adopting a Mitigation Monitoring and Reporting Plan

[PLN100351, State of California, 1700 Elkhorn Road, Royal Oaks, North County Land Use Plan (APN: 131-051-001-000, 131-051-023-000, & 131-051-067-000)].....

The Appeal by Nina Beety of the Monterey County Planning Commission's approval of an application for a Combined Development Permit (Elkhorn Slough National Estuarine Research Reserve - PLN100351) came on for public hearing before the Monterey County Board of Supervisors on September 29, 2015. Having considered all the written and documentary evidence, the administrative record, the staff report, oral testimony, and other evidence presented, the Board of Supervisors finds and decides as follows:

FINDINGS

1. **FINDING:** **PROJECT DESCRIPTION** – The proposed project is a Combined Development Permit consisting of: 1) a Coastal Development Permit to allow oak woodland and freshwater habitat restoration within 100 feet of an environmentally sensitive habitat; and 2) Coastal Development Permit to allow the removal of 1,225 existing Eucalyptus trees (ranging in size from 6 to over 37 inches in diameter).

   EVIDENCE: The application, project plans, and related support materials submitted by the project applicant to Monterey County RMA-Planning for the proposed development found in Project File PLN100351.

2. **FINDING:** **PROCESS** – The subject Combined Development Permit (PLN100351) ("project") has been processed consistent with all applicable procedural

requirements.

EVIDENCE: a) On December 21, 2011, Elkhorn Slough National Estuarine Research Reserve (ESNERR) (applicant) filed an application for a Combined Development Permit consisting of: 1) a Coastal Development Permit to allow oak woodland and freshwater habitat restoration within 100 feet of an environmentally sensitive habitat; and 2) a Coastal Development Permit to allow the removal of 1,225 existing Eucalyptus trees (ranging in size from 6 to over 37 inches in diameter).

b) Consistent with the Land Use Advisory Committee (LUAC) Procedures adopted by the Monterey County Board of Supervisors, the application was reviewed by the North County Coastal LUAC. On February 7, 2012, the LUAC unanimously recommended approval (4-0 vote).

c) The LUAC meeting on February 7, 2012 was noticed consistent with the LUAC Guidelines adopted by the Board of Supervisors. The meeting was posted in two locations: the Full Gospel Church (meeting location) and the Moss Landing Post Office. A notice was mailed to neighbors within 300 feet of the project location.
On May 2, 2012, the project was found complete by RMA- Planning, North County Fire Protection District, Parks, RMA-Public Works, RMA-Environmental Services, Environmental Health Bureau, and Water Resources Agency.

d) The Lead Agency, California Department of Fish and Wildlife (CDFW) prepared and circulated the Mitigated Negative Declaration to responsible agencies, trustee agencies, and interested parties, including the State Clearinghouse (SCH No. 2014121035). The public review and comment period for this document was from December 16, 2014 to January 23, 2015. CDFW adopted the Mitigated Negative Declaration on March 23, 2015.

e) On July 8, 2015, at a duly noticed public hearing, the Planning Commission considered the Mitigated Negative Declaration adopted by the California Department of Fish and Wildlife, and approved the Combined Development Permit with a vote of 9-1..

f) On July 31, 2015, the appellant, Nina Beety, timely filed an appeal of the Planning Commission decision. The hearing before the Board of Supervisors was duly noticed for September 29, 2015. A notice of public hearing was placed in the Monterey County Weekly on September 17, 2015 and mailed to interested persons and property owners within 300 feet on the same date.

g) The application, project plans, and related support materials submitted by the project applicant to Monterey County RMA-Planning for the proposed development found in Project File PLN100351; project-related materials on file with the Clerk of the Board of Supervisors.

3. **FINDING:** **CONSISTENCY/SUITABILITY** – The Project, as conditioned, is consistent with the applicable plans and policies of the area, and is physically suitable for the proposed development.

EVIDENCE: a) During the course of review of this application, the project has been reviewed for consistency with the text, policies, and regulations in:
- the 1982 Monterey County General Plan;
- North County Land Use Plan;

- Monterey County Coastal Implementation Plan - Part 2;
- Monterey County Zoning Ordinance (Title 20);

b) The project is accessed at 1700 Elkhorn Road, Royal Oaks (Assessor's Parcel Numbers 131-051-001-000, 131-051-023-000 and 131-051-067-000), North County Land Use Plan. The parcels, approximately 889 acres, are zoned "RC (CZ)" [Resource Conservation (Coastal Zone)], which allows the restoration and management programs for fish, wildlife, or other physical resources (Section 20.36.040.B of Title 20 (Coastal Zoning Ordinance)). The outcome of the subject project will restore four of the 13 remaining eucalyptus groves, approximately 13.6 acres, back to oak woodland which historically dominated the area and provides better habitat to bird and amphibian species found on the properties. Therefore, the project is an allowed development for this site.

c) The project has been reviewed for site suitability by the following departments and agencies: RMA- Planning, North County Fire Protection District, Parks, RMA-Public Works, RMA-Environmental Services, Environmental Health Bureau, and Water Resources Agency. There has been no indication from these departments/agencies that the site is unsuitable for the proposed development.

d) The restoration of oak woodlands is consistent with the California Fish and Game Code, Section 1360-1372 which defines the importance of oak woodlands and necessity to support and encourage restoration and protection efforts. California Public Resources Code Section 21083.4 provides criteria for the loss of oak woodland. The project proposes restoration of oak woodland on properties owned by the State of California within an ecological reserve managed by the Elkhorn Slough National Estuarine Research Reserve staff.

e) Pursuant to the Forest Resources Chapter of the North County Coastal Implementation Plan, 75 of the 1,225 eucalyptus trees to be removed are considered landmark (over 36 inches in diameter), and therefore, requires a Coastal Development Permit (Section 20.144.050.A.1.a, North County Coastal Implementation Plan (Title 20, Part 2). The rest of the eucalyptus trees to be removed are exempt because they are a non-native species and are less than 36 inches in diameter. Consistent with Section 20.144.050.C.1 of the North County Coastal Implementation Plan, the landmark eucalyptus trees to be removed are not historically significant and the removal of the trees will not impact rare, endangered or threatened species. The eucalyptus trees are an invasive species that were planted in the early 1900s for timber and use as a wind break which contributed to the loss of coast live oak woodlands that naturally occurred on the properties. The timing of tree removal will occur outside of the nesting and roosting season for birds, amphibians and reptiles, and monitoring by a qualified biologist will be provided before and during tree removal activities. See Finding 6 for more information regarding environmentally sensitive habitat areas.

f) The project planner conducted a site inspection on February 7, 2012 and verified that the project on the subject parcels conform to the plans, listed above.

g) The following reports have been prepared:
- "Elkhorn Slough Estuarine Sanctuary: Cultural Resource

Management" (LIB110488) prepared by John Michael King, dated 1982;
- "Preserving Upland Habitat and Restoring Ground Water at Elkhorn Slough National Estuarine Research Reserve – Assessment of Biological Impacts" (LIB110487) prepared by Antonia D'Amore, PhD, Royal Oaks, CA, dated April 2011.

The reports indicate that the project conforms to applicable plans, regulations and policies listed above; and therefore, would not make the site unsuitable for the habitat restoration plan.

h) The application, project plans, and related support materials submitted by the project applicant to Monterey County RMA-Planning for the proposed development found in Project File PLN100351.

4. FINDING: **CEQA (Mitigated Negative Declaration) -** On the basis of the whole record before the Monterey County Board of Supervisors, there is no substantial evidence that the proposed project as designed, conditioned and mitigated, will have a significant effect on the environment. The Board of Supervisors, as the decision-making body of a Responsible Agency, has reviewed and considered the information contained in the Lead Agency's Mitigated Negative Declaration prior to approving the Combined Development Permit.

EVIDENCE:

a) The Lead Agency, California Department of Fish and Wildlife (CDFW) prepared and circulated the draft Initial Study to responsible agencies, trustee agencies, and interested parties, including the State Clearinghouse (SCH No. 2014121035). The public review and comment period for this document was from December 16, 2014 to January 23, 2015.

b) The County, a Responsible Agency, reviewed the draft Initial Study during the review period and did not submit any substantive comments regarding the adequacy of the environmental document.

c) The environmental document analyzed biological resources, cultural resources, geology/soils, greenhouse gas emissions, hazards/hazardous materials, hydrology/water quality, and noise. Findings conclude that with the proposed mitigation measures (see Condition No. 5 for mitigation measures), all potential impacts will be reduced to a level of less than significant.

d) CDFW adopted the Mitigated Negative Declaration on March 23, 2015 and filed a Notice of Determination on March 25, 2015.

e) CDFW adopted a Mitigation Monitoring and Reporting Plan to ensure compliance during project implementation. The mitigation measures are summarized, as follows (full mitigation language is found in Condition No. 5 of the Condition Compliance and Mitigation Monitoring Reporting Plan):
- Bio-1: ESNERR staff will flag the single Pajaro Manzanita found in the Cattail Swale grove prior to tree removal and inform tree removal personnel of its location.
- Bio-2: All stumps shall be left in the ground to hold soil in place.
- Bio-3: Any existing vegetation, other than invasive vegetation species, shall not be removed. Monitoring by ESNERR staff will be required to ensure compliance.

- Bio-4: Any exposed soil shall be broadcast with a mixture of native and annual barley seed to prevent any potential erosion.
- Bio-5: At least 15 days prior to the onset of activities, ESNERR shall submit name and credentials of all biologists who will help conduct activities specified in the mitigation measures to the US Fish and Wildlife Service (USFWS). No work can occur until written approval is received from USFWS.
- Bio-6: Prior to any tree removal activities, all USFWS approved biological monitors shall conduct a worker education training program for all personnel involved with the tree removal activities.
- Bio-7: A USFWS approved biologist shall survey all trees before tree removal activities and conduct monitoring during tree removal activities. If a special status species is identified during the tree removal process, the monitor shall relocate the species to the nearest known habitat.
- Bio-8: All existing logs within the eucalyptus removal sites on the ground prior to tree removal activities shall not be removed due to possibility of harboring a special status species.
- Bio-9: Tree removal activities shall be completed between August 1 and November 1. If activities occur after the specific date, USFWS shall be contacted to obtain authorization.
- Bio-10: 2.7 acres of eucalyptus shall remain uncut at the South Marsh site to serve as alternative suitable habitat.
- Bio-11: ESNERR staff shall instruct tree removal personnel to use the California Oak Mortality Task Force's Best Management Practices Guidelines for Forestry before entering the Reserve, which includes disinfecting machinery, vehicles, equipment and shoes before being used in the Reserve.
- Bio-12: ESNERR staff shall flag the salt marsh habitat prior to tree removal activities and inform removal personnel of its location to ensure protection of the salt marsh.
- Bio-13: ESNERR staff shall remove all eucalyptus resprouts and saplings, as well as invasive weeds, within the project areas using manual and chemical methods for three years following initial tree removal.

CDFW, as Lead Agency, will be responsible to implement this plan. As a Responsible Agency for permitting, the County is adopting a Mitigation Monitoring and Reporting Program and conditioning the project to require CDFW to provide evidence that these measures are implemented and have the intended effect (Condition No. 5 of the Condition Compliance and Mitigation Monitoring Reporting Plan).

f) Evidence that has been received and considered includes: the application, technical studies/reports (see Finding 2/Site Suitability), staff reports that reflect the County's independent judgment, and information and testimony presented during public hearings. These documents are on file in RMA-Planning (PLN100351) and are hereby incorporated herein by reference.

5. FINDING: **PUBLIC ACCESS** – The project is in conformance with the public access and recreation policies of the Coastal Act (specifically Chapter 3

of the Coastal Act of 1976, commencing with Section 30200 of the Public Resources Code) and County's certified Local Coastal Program, and does not interfere with any form of historic public use or trust rights.

EVIDENCE:

a) Policy 6.3.2 (20) of the Public Access Chapter in the North County Land Use Plan identifies the parcels as an existing secondary public access, which allows limited public access due to natural resource or constraints on-site. The existing secondary access allows low intensity passive recreational trails to the Elkhorn Slough through the Elkhorn Slough Estuarine Sanctuary for nature observation, research and education purposes. Access is managed by the Elkhorn Slough National Estuarine Research Reserve. This restoration plan will not affect any of the trails through the reserve.

b) Pursuant to Chapter 20.144.150.A of the North County Coastal Implementation Plan, an Access Management Plan is not required because that project does not require or propose new or additional access points or trails, and will not conflict with existing secondary public access.

c) See preceding and following Findings and Evidence.

6. FINDING: **ESHA** – The subject project minimizes impact on environmentally sensitive habitat areas in accordance with the applicable goals and policies of the applicable area plan and zoning codes.

EVIDENCE:

a) Section 20.36.030, Resource Conservation Chapter of Title 20 requires a Coastal Development Permit for development within 100 feet of mapped or field identified environmentally sensitive habitats (EHSA). In accordance with the regulation, a Coastal Development Permit is required because the proposed restoration project is located within 100 feet of EHSA, the Elkhorn Slough.

b) Section 20.144.040.A.1.c of the North County Coastal Implementation Plan requires a Biological Survey for any development that is or may potentially be located within 100 feet of an environmentally sensitive habitat, and/or has potential to negatively impact the long-term maintenance of the habitat, as determined through staff's project review. A biological survey was submitted (as stated in Finding 1, Evidence g of this resolution), and additional survey information was provided in the Mitigated Negative Declaration (MND) prepared by the California Department of Fish and Wildlife (see Finding 4 of this resolution regarding the MND).

c) Section 20.144.040.B.2 of the North County Coastal Implementation Plan states, "development on parcels containing or within 100 feet of environmentally sensitive habitats…shall not be permitted to adversely impact the habitat's long-term maintenance, as determined through a biological survey." This project is consistent with this policy. (See evidence d and e below).

d) The biological survey identified the following special status species or habitats may be affected by the tree removal activities:
- Monarch butterfly (No Federal or State listing)
- Santa Cruz long-toed salamander (Federally listed as endangered, State listed as Endangered, fully protected by the State)

- California red-legged frog (Federally listed as threatened, California species of concern)
- Western pond turtle (California species of concern)
- White-tailed kite (nesting) (Fully protected by the State)
- Double-crested cormorant (rookery site) (CDFW Watch List)
- Salinas harvest mouse (no Federal or State listing)

Southern sea otter (Federally listed as threatened, protected under the Marine Mammal Protection Act, fully protected by the State)

e) This is a Habitat restoration project which seeks to enhance the native habitat, and not introduce development inconsistent with the natural setting. Mitigation measures, have been incorporated into the project to provide avoidance and minimization techniques that will protect ESHA. With the implementation of all mitigation measures (Condition No. 5), restoration is considered a less-than-significant impact to ESHA and will not negatively impact the long-term maintenance of identified habitats.

f) The biological survey and MND concludes that eucalyptus tree removal required to restore oak woodland and freshwater habitat will have a less-than-significant impact on ESHA, provided the mitigation measures are implemented. The eucalyptus trees are an invasive species that were planted in the early 1900s which contributed to the loss of coast live oak woodlands that naturally occurred on the properties. The eucalyptus tress currently threaten to displace freshwater ponds known to serve as habitat for listed special status species, including the Santa Cruz long-ted salamander and California red-legged frog. Therefore, the long-term effect of the four groves being restored back to oak woodland habitat is anticipated to have a beneficial of existing freshwater habitats that occur on the properties.

g) See preceding and following Findings and Evidence.

7. **FINDING:** **APPEAL** – Upon consideration of the appeal, documentary evidence, the staff report, the oral and written testimony, and all other evidence in the record as a whole, the Board makes the following findings in regard to the Appellant's contentions:

a) *Appellants' Contention No. 1– 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.*

Response to Appellants' Contention: The County analysis has consistently used 1225 as the number for removal of eucalyptus trees. The background information prepared for the permitting identifies that this is an approximation. The important fact here is that approximately 1225 eucalyptus trees will be removed. Not all of these are protected trees. Only 75 of them require a permit for removal due to their landmark status. The permits are related to impact on ESHA in close proximity to the removal of the non-native eucalyptus trees, and to the removal of certain large (landmark eucalyptus trees.) Based upon this there is no discrepancy related to the project description.

EVIDENCE: b) *Appellants' Contention No. 2– It is in violation of the North County*

Land Use Plan. The project is not compatible with the North County Land Use Plan. The North County Land Use Plan focuses on protecting habitat and environmentally sensitive habitat areas and does not distinguish between native and non-native species. This project does not protect and preserve, but seeks to impose a specific template and to disrupt an existing working and healthy ecosystem, with no guarantee of success or profit.

Response to Appellants' Contention:
The project is consistent with the North County Land Use (LUP) and related Coastal Implementation Plan (CIP). Policy 2.3.4.5 of the LUP states, "*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.*" The project is located on the ESNSRR on land owned by the State of California. The outcome of the project will restore four of the 13 remaining eucalyptus groves back to oak woodland which historically dominated the area. By removing non-native eucalyptus trees and replacing them with oak woodland the project seeks to accomplish the objective of this policy which is to remove invasive non-native vegetation in favor of re-establishment of native vegetation. Oak Woodlands are a sensitive habitat.

Chapter 20.144.050 (Forest Resources Development Standards) of the CIP does not protect non-native or planted trees, such as the eucalyptus trees except when they are ridgeline trees or landmarks trees as defined in Section 20.144.050.D.1. However, the 75 landmark eucalyptus trees proposed for removal are not considered historic. Between 1900s-1930s, eucalyptus trees were planted on the property for timber and used as wind breaks in association with agricultural uses. Consistent with the requirements to remove landmark trees, biological resources were evaluated and mitigation measures will be applied to ensure the removal would not impact nesting or roosting of rare, endangered, or threatened species. This project will only remove a portion of the existing eucalyptus groves (4 of 13). Most of the existing eucalyptus groves will remain in place so that the existing habitat will not be adversely affected.

See preceding and following Findings and Evidence for more information.

c) *Appellants' Contention No. 3: It is ideologically driven and flawed with a lack of science demonstrating benefits.*
   1. *The California Invasive Plant Council (Cal-IPC) re-classified Eucalyptus globules from "widespread" to "limited invasiveness", yet the Mitigated Negative Declaration calls eucalyptus "invasive". The expansiveness of the eucalyptus trees is not supported by historic photos.*
   2. *Cutting down the trees will impact air quality and increase greenhouse gas emissions. Emissions analysis is not consistent with Monterey County Air District or Climate Action Plan.*

3. *Research done by ESNERR during the preparation of the MND lacks peer-review. Data is presumed. CDFW contradicts the elimination of eucalyptus trees, by stating that native trees are currently co-mingling with eucalyptus.*
4. *Water saving by removing eucalyptus trees is misplaced.*
5. *Dead trees left as snags create fire hazards.*

Response to Appellants' Contention:
The project was designed by the ESNERR in consultation with the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, North County Fire Protection District and the County of Monterey. The analysis in the Mitigated Negative Declaration (MND) prepared by the California Department of Fish and Wildlife (CDWF) was circulated and reviewed by applicable States and local agencies, such as the California Coastal Commission, State Water Regional Control Board, Department of Pesticide Regulation and the Monterey Bay Unified Air Pollution Control District. All agencies that reviewed the project and MND concur with the analysis in the MND and the mitigation measures and conditions applied. Therefore, the project and MND was adequately peer-reviewed consistent with State and local regulations.

In regards to the invasiveness and expansiveness of eucalyptus trees, the North County Land Use Plan identifies that eucalyptus trees are non-native and are not protected unless they are landmark or impact ridgelines. As stated in the response by ESNERR staff, Cal-IPC did recently revise its *E. globulus* (eucalyptus) state-wide ranking, after the MND was complete, changing it from "Moderate" to "Limited." Limited is defined as "invasive, but their ecological impacts are minor on a state-wide 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. Although not all *E. globulus* stands are expanding, those in moist coastal habitats often expand at a significant rate." An aerial photo analysis tracking six eucalyptus stands in the Elkhorn Slough watershed between 1931 and 2001 showed a 50-400% increase in eucalyptus stand size, and is supported by observations in the field of spread of groves via seedlings.

In regards to air quality and greenhouse gas emissions, the construction and operation emissions were modeled by California Emissions Estimator Model (CalEEMod) to estimate the potential impacts of implementation of the project. The analysis was reviewed and found consistent with emissions thresholds in the 2008 Air Quality Management Plan. Air quality was addressed in the MND as no impact. Greenhouse gas emissions were determined to have a less-than-significant impact. As stated in the MND, compared to the current annual inventory of 427,000,000 metric tons in California, the restoration project represents 0.00006 percent of that inventory, which is negligible. (See Findings and Evidence No. 4 for CEQA review consistency)

In regards to water, the restoration improves existing freshwater habitat which is currently being impacted by the eucalyptus groves. Eucalyptus trees require a substantial amount of water to survive which has impacted freshwater ponds known to serve as habitat for listed special status species, including the Santa Cruz long-toed salamander and California red-legged frog. Although the restoration project may have water saving benefits, ESNERR is not attempting to mitigate overdraft of the aquifer with this project.

In regards to fire hazards, the North County Fire Protection District identifies eucalyptus as a fire hazard. Pursuant to a letter to the Board of Supervisors, dated August 4, 2015, the removal of the eucalyptus trees are encouraged and meets the District's requirements for fuel management.

See preceding and following Findings and Evidence for more information.

d) *Appellants' Contention No. 4: It affects four groves of over 1,200 trees of great environmental value and the wildlife that rely on them*

1. *Provides habitat for protected and on-protected communities.*
2. *Tree removal will displace colonies of birds and add stress to bird communities.*
3. *Eucalyptus trees create moisture zones and stay green during drought conditions.*

Response to Appellants' Contention No. 4:

The Mitigated Negative Declaration, prepared and adopted by CDFW, adequately addresses the environmental value at the Reserve and has applied mitigation measures to minimize or avoid impacts to habitats at the Reserve. Reserve staff is proposing to remove only a portion of the site's eucalyptus, restoring the area 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. Eucalyptus groves used as rookeries or nesting sites will not be removed. Active nesting areas will not be removed. Regarding moisture zones, data from Reserve monitoring detected very little soil moisture in Reserve eucalyptus groves. More moisture was detected under oaks.

See preceding and following Findings and Evidence for more information.

e) *Appellants' Contention No. 5: It affects four groves of over 1,200 trees of great environmental value and the wildlife that rely on them*

1. *Eucalyptus trees provide winter forage for species.*
2. *Converting the groves into grassland habitat makes the area more fire-prone. Eucalyptus trees lower the risk of fire hazards.*
3. *The removal degrades the current viewshed of the grove.*
4. *Herbicides used will be harmful to the Slough.*

Response to Appellants' Contention No. 5:
Regarding herbicides, the project proposes herbicide uses consistent with the Department of Pesticide Regulation, as well as U.S. Fish and Wildlife Service and California Department Fish and Wildlife for use of herbicides within or near sensitive habitat areas. The Mitigated Negative Declaration, prepared by CDFW, provides mitigation measures regarding the use and safety of herbicides and therefore, the impact is considered less-than-significant.

See preceding and following Findings and Evidence for more information.

f) *Appellants' Contention No. 6: There has been inadequate noticing and public hearings*

1. *The Land Use Advisory Committee meeting was posted in one place, limiting attendance.*
2. *Notices for the Mitigated Negative Declaration were posted between December 15, 2014 to January 22, 2015 during the holiday season; typically busy month.*
3. *The Planning Commission meeting was noticed in the June 25-July 1, 2015 Monterey County Weekly. The notice and agenda do not provide adequate public outreach.*

Response to Appellants' Contention No. 6:
The public has received notice of hearings on the project and has had the opportunity to be heard. The LUAC was noticed in accordance with the LUAC Procedures. The Initial Study/Mitigated Negative Declaration circulated for more than the 30 days required by CEQA and well into January, beyond the holiday season. The Planning Commission considered the Mitigated Negative Declaration adopted by the California Department of Fish and Wildlife, and approved the Combined Development Permit with a vote of 9-1. Appellant appeared at the Planning Commission hearing and had the opportunity to be heard. Appellant also had and exercised the right of appeal of the Planning Commission decision to the Board of Supervisors. For the September 29, 2015 Board of Supervisors' hearing on the project a notice of public hearing was placed in the Monterey County Weekly on September 17, 2015 and mailed to interested persons and property owners within 300 feet on the same date. (See also Finding No. 2.)

The Land Use Advisory Committee (LUAC) meeting on February 7, 2012 was noticed consistent with the LUAC Guidelines adopted by the Board of Supervisors. The meeting was posted in two locations: the Full Gospel Church (meeting location) and the Moss Landing Post Office. A notice was mailed to neighbors within 300 feet of the project location.

According to ESNERR, the noticing of the MND was completed consistent with the CEQA Guidelines. During this time approximately 1,600 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. The ESNERR maintains a website related to the project which informs

any visitors of the restoration project and provides contact information: http://www.elkhornslough.org/habitat-restoration/eucalyptus/.

The notice for the project at the July 8, 2015 Planning Commission was completed consistent with Section 20.84.040, Public Notice Required, Monterey County Zoning Ordinance. A notice was sent 10 days prior to the public hearing to the owner, applicant, all local and reviewing agencies and to neighbors within 300 feet of the project location. The item was posted in the Monterey County Weekly 10 days prior to the public hearing. An Affidavit of Posting was received on June 29, 2015 showing that the notices were posted 10 days before the public hearing and in three public locations.

8. **FINDING:** **APPEALABILITY** - The decision on this project is subject to appeal to the California Coastal Commission.

EVIDENCE: a Appeal to California Coastal Commission: Pursuant to Section 20.86.080.A of Title 20, the project is subject to appeal by/to the California Coastal Commission (CCC) because the required entitlement consists of two Coastal Development Permits and the project is located within 100 feet of a wetland, Elkhorn Slough.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Board of Supervisors does hereby:

a. Deny the appeal by Nina Beety of the Monterey County Planning Commission's adoption of a Mitigated Negative Declaration and approval of a Combined Development Permit (Elkhorn Slough National Estuarine Research Reserve /PLN100351);
b. Certify that the Board of Supervisors considered the Mitigated Negative Declaration adopted by the California Department of Fish and Wildlife;
c. Approve the Combined Development Permit consisting of: 1) a Coastal Development Permit to allow oak woodland and freshwater habitat restoration within 100 feet of an environmentally sensitive habitat; and 2) a Coastal Development Permit to allow the removal of 1,225 existing Eucalyptus trees (ranging in size from 6 to over 37 inches in diameter), subject to the Conditions of Approval, attached hereto as Exhibit 1 and incorporated herein by reference; and
d. Adopt the Mitigation Monitoring and Reporting Plan (Exhibit 1).

PASSED AND ADOPTED upon motion of Supervisor Parker, seconded by Supervisor Potter carried this 29th day of September 2015, by the following vote, to wit:

AYES: Supervisors Armenta, Phillips, Salinas, Parker and Potter
NOES: None
ABSENT: None

I, Gail T. Borkowski, Clerk of the Board of Supervisors of the County of Monterey, State of California, hereby certify that the foregoing is a true copy of an original order of said Board of Supervisors duly made and entered in the minutes thereof of Minute Book 78 for the meeting on September 29, 2015.

Dated: November 6, 2015
File Number: RES 15-093

Gail T. Borkowski, Clerk of the Board of Supervisors
County of Monterey, State of California

By Denise Hancock
Deputy

Monterey County RMA Planning

Conditions of Approval/Implementation Plan/Mitigation Monitoring and Reporting Plan

PLN100351

1. PD001 - SPECIFIC USES ONLY

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: This Combined Development Permit (PLN100351) consisting of: 1) a Coastal Development Permit to allow oak woodland and freshwater habitat restoration within 100 feet of an environmentally sensitive habitat; and 2) Coastal Development Permit to allow the removal of 1,225 existing Eucalyptus trees (ranging in size from 6 to over 37 inches in diameter). The property is located at 1700 Elkhorn Slough Road, Royal Oaks (Assessor's Parcel Number 131-051-001-000, 131-051-023-000 and 131-051-067-000), North County Land Use Plan. This permit was approved in accordance with County ordinances and land use regulations subject to the terms and conditions described in the project file. Neither the uses nor the construction allowed by this permit shall commence unless and until all of the conditions of this permit are met to the satisfaction of the Director of RMA - Planning. Any use or construction not in substantial conformance with the terms and conditions of this permit is a violation of County regulations and may result in modification or revocation of this permit and subsequent legal action. No use or construction other than that specified by this permit is allowed unless additional permits are approved by the appropriate authorities. To the extent that the County has delegated any condition compliance or mitigation monitoring to the Monterey County Water Resources Agency, the Water Resources Agency shall provide all information requested by the County and the County shall bear ultimate responsibility to ensure that conditions and mitigation measures are properly fulfilled. (RMA - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to conditions and uses specified in the permit on an ongoing basis unless otherwise stated.

2. PD002 - NOTICE PERMIT APPROVAL

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The applicant shall record a Permit Approval Notice. This notice shall state:
"A Combined Development (Resolution Number 15-039) was approved by the Planning Commission for Assessor's Parcel Numbers 131-051-001-000, 131-051-023-000 and 131-051-067-000 on July 8, 2015. The permit was granted subject to 8 conditions of approval which run with the land. A copy of the permit is on file with Monterey County RMA - Planning."

Proof of recordation of this notice shall be furnished to the Director of RMA - Planning prior to issuance of grading and building permits, Certificates of Compliance, or commencement of use, whichever occurs first and as applicable. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Prior to the issuance of grading and building permits, certificates of compliance, or commencement of use, whichever occurs first and as applicable, the Owner/Applicant shall provide proof of recordation of this notice to the RMA - Planning.

3. PD004 - INDEMNIFICATION AGREEMENT

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The property owner agrees as a condition and in consideration of approval of this discretionary development permit that it will, pursuant to agreement and/or statutory provisions as applicable, including but not limited to Government Code Section 66474.9, defend, indemnify and hold harmless the County of Monterey or its agents, officers and employees from any claim, action or proceeding against the County or its agents, officers or employees to attack, set aside, void or annul this approval, which action is brought within the time period provided for under law, including but not limited to, Government Code Section 66499.37, as applicable. The property owner will reimburse the County for any court costs and attorney's fees which the County may be required by a court to pay as a result of such action. The County may, at its sole discretion, participate in the defense of such action; but such participation shall not relieve applicant of his obligations under this condition. An agreement to this effect shall be recorded upon demand of County Counsel or concurrent with the issuance of building permits, use of property, filing of the final map, whichever occurs first and as applicable. The County shall promptly notify the property owner of any such claim, action or proceeding and the County shall cooperate fully in the defense thereof. If the County fails to promptly notify the property owner of any such claim, action or proceeding or fails to cooperate fully in the defense thereof, the property owner shall not thereafter be responsible to defend, indemnify or hold the County harmless. The state's obligation to defend, indemnify and hold the County harmless may be modified by mutual agreement of the State of California and County Counsel.
(RMA - Planning Department)

Compliance or Monitoring Action to be Performed: Upon demand of County Counsel or concurrent with the issuance of building permits, use of the property, recording of the final/parcel map, whichever occurs first and as applicable, the Owner/Applicant shall submit a signed and notarized Indemnification Agreement to the Director of RMA-Planning Department for review and signature by the County.

Proof of recordation of the Indemnification Agreement, as outlined, shall be submitted to the RMA-Planning Department.

4. PD006 - CONDITION OF APPROVAL / MITIGATION MONITORING PLAN

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The applicant shall enter into an agreement with the County to implement a Condition of Approval/Mitigation Monitoring and/or Reporting Plan (Agreement) in accordance with Section 21081.6 of the California Public Resources Code and Section 15097 of Title 14, Chapter 3 of the California Code of Regulations. Compliance with the fee schedule adopted by the Board of Supervisors for mitigation monitoring shall be required and payment made to the County of Monterey at the time the property owner submits the signed Agreement. The agreement shall be recorded. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Within sixty (60) days after project approval or prior to the issuance of building and grading permits, whichever occurs first, the Owner/Applicant shall:

1) Enter into an agreement with the County to implement a Condition of Approval/Mitigation Monitoring Plan.

2) Fees shall be submitted at the time the property owner submits the signed Agreement.

3) Proof of recordation of the Agreement shall be submitted to RMA-Planning.

5. PDSP001 - MITIGATION MONITORING (CDFW)

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: Mitigation Measures:

- Bio-1: ESNERR staff will flag the single Pajaro Manzanita prior to tree removal activities and ensure the flagging remains throughout the duration of the project. ESNERR staff shall inform the tree removal personnel of the location of the Pajaro Manzanita.
- Bio-2/ Geo-1/Haz-1/WQ-1: All stumps shall be left in the ground with the roots, though dead, holding soil in place.
- Bio-3/ Geo-2/Haz-2/WQ-2: Any existing vegetation (except cape ivy, periwinkle, eucalyptus seedlings, and other non-native invasive species) shall not be removed, although some may by unavoidably damaged or destroyed in the tree removal process. The roots of this vegetation shall serve as a binder to hold the soil in place. All sites have existing native vegetation in the understory. ESNERR staff shall be on-site to ensure the only eucalyptus trees will be felled and removed.
- Bio-4/Geo-3/Haz-3/WQ-3: Any exposed soil in the project areas shall be broadcast with a mixture of native and annual barley seed at a rate of 50 pounds per acre and covered with a layer of rice straw. ESNERR staff with the help of volunteers shall scatter the seed and straw upon completion of the tree removal activities ad before the first rain of the season.
- Bio-5: At least 15 days prior to the onset of activities, ESNERR shall submit name(s) and credentials of biologists who would conduct activities specified in the following mitigation measures to the US Fish and Wildlife Service (USFWS). No project activities shall begin until ESNERR staff receive written approval from USFWS that the biologist is qualified to conduct the work. This is a requirement of the USFWS permit.
- Bio-6: Prior to any tree removal activities, the USFWS approved biological monitor shall conduct a worker education training program for all personnel involved in tree removal activities. The education training shall include: 1) the project boundaries; 2) the special status species that may be present, their habitat, and proper identification; 3) required avoidance measures that shall be incorporated into the project; and 4) proper procedures if a special-status is encountered in an area that would be impacted. Brochures, books and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
- Bio-7: A USFWS approved biologist monitor shall remain onsite during tree removal activities. Prior to tree removal activities each day, the USFWS approved biological monitor shall survey all work areas for special status species. if a Santa Cruz long-toed salamander, California red-legged frog or Western pond turtle is observed during these surveys or any time during tree removal activities, the biological monitor shall relocate them to the nearest appropriate habitat.
- Bio-8: All logs in all proposed eucalyptus tree removal sites in contact with the ground prior to initial tree removal activities shall not be removed from the sites due to the possibility of harboring a special status species.
- Bio-9: In order to protect special-status species, tree removal activities shall be completed between August 1 and November 1. Should ESNERR staff demonstrate a need to conduct activities outside this period, the USFWS shall be contacted tom obtain authorization for such activities.
- Bio-10: 2.7 acres of eucalyptus shall remain uncut at the South Marsh sit to serve as alternative suitable habitat. Furthermore, the 21 acre eucalyptus grove, a known heron, egret, and cormorant rookery site at ESNERR's Seal Bend property, shall be left uncut as habitat.

(continued)

Compliance or Monitoring Action to be Performed:

5. PDSP001 - MITIGATION MONITORING (CDFW) (CONTINUED)

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: PDSP001 - MITIGATION MONITORING (CDFW) CONTINUED:

- Bio-11: ESNERR staff shall instruct tree removal personnel to use the California Oak Mortality Task Force's Best Management Practices Guidelines for Forestry before entering the Ecological Reserve. this shall include cleaning debris from machinery, vehicles, and shoes; disinfecting machinery, vehicles, and shoes with Lysol before entering ESNERR if travelling from known SOD infestation site; conducting operations during the dry season; and utilizing paved and rocked roads and landings to the extent possible.
- Bio-12: ESNERR staff shall flag the salt marsh habitat prior to tree removal activities and ensure the flagging remains throughout the duration of tree removal. ESNERR staff shall inform the tree removal personnel of the location of the salt marsh habitat.
- Bio-13: ESNERR staff shall remove all eucalyptus resprouts and saplings within the project areas using manual and chemical methods for three years following initial eucalyptus tree removal. The California Invasive Plant Council's high rated invasive weeds shall be removed from the project areas using manual or chemical methods for three years following initial eucalyptus tree removal.
- Cul-1: Should any potential artifact be found, all work shall stop until an expert can be called into determine significance and provide appropriate protection measures.
- Haz-4/WQ-4: Herbicide shall not be located or stored where it could spill into water bodies or storm drains, or where it could cover aquatic or riparian vegetation. large quantities of herbicide shall not be at the project location sites (see pg. 48 of MND prepared by CDFW for Spill Prevention and Response Plan).
- Haz-5: Construction crews shall not be allowed to smoke on ESNERR property. ESNERR staff shall instruct crews of this rule and enforce it during construction.
- Haz-6: ESNERR shall hire crews whose construction equipment meets legal fire-safe specifications.
- Haz-7: For fire safety, chainsaw operators shall have a fire extinguisher or shovel available. A 5-gallon backpack water sprayer and 10 gallons of water shall be available on-site.
- Haz-8: A fire plan shall be printed and kept on-site with the herbicide spill response plan. The plan shall include proper protocol to contain a small fire until firefighting personnel arrive from the nearest fire station, 4.7 miles from the Reserve located at 301 Elkhorn Road, Royal Oaks, CA.
-Haz-9: Vehicles and equipment shall not be re-fueled or repaired in the project areas.
- Noise-1: All machinery operators shall wear protective devices against noise. ESNERR staff shall inspect construction crews to ensure the proper protection is being worn. ESNERR staff shall have earplugs on-site.
- Noise-2: Contractors shall limit the use of noisy machinery to the hours between 8am and 6pm. Noisy machine work shall occur mainly when ESNERR is closed to the public, but may occur on any day of the week.

Compliance or Monitoring Action to be Performed:

5. PDSP001 - MITIGATION MONITORING (CDFW)

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: Pursuant to the Mitigated Negative Declaration (SCH No. 2014121035) adopted by the California Department of Fish and Wildlife (CDFW) the following mitigation measures were applied to the approval of the project: (see continued language of this condition for mitigation measures)

CDFW, as Lead Agency, will be responsible to implement this plan. As a Responsible Agency for permitting, the County requires that CDFW, with assistance from the Elkhorn Slough National Estuarine Research Reserve (ESNERR), shall provide annual evidence that the measures, above, are implemented and have the intended effect. (RMA-Planning)

Compliance or Monitoring Action to be Performed: Annually, until restoration is fully implemented, CDFW, with assistance from the Elkhorn Slough National Estuarine Research Reserve, shall provide annual evidence that the mitigation measures adopted (SCH No. 2014121035) are implemented and have the intended effect.

6. PWSP001 - CONSTRUCTION MANAGEMENT PLAN

Responsible Department: RMA-Public Works

Condition/Mitigation Monitoring Measure: The applicant shall submit a Construction Management Plan (CMP) to the Department of Public Works for review and approval. The CMP shall include measures to minimize traffic impacts during the construction/grading phase of the project and shall provide the following information:
- Duration of the construction, hours of operation, an estimate of the number of truck trips that will be generated,
- Truck routes, number of construction workers, parking areas for both equipment and workers, and locations of truck staging areas.
Approved measures included in the CMP shall be implemented by the applicant during the Construction/Grading phase of the project.

Compliance or Monitoring Action to be Performed: Prior to the commencement of tree removal, Owner/Applicant/ Contractor shall prepare a CMP and shall submit the CMP to the Department of Public Works for review and approval.

On-going through construction phases Owner/Applicant/Contractor shall implement the
approved measures during the construction/grading phase of the project.

7. WRSP1 - FLOODPLAIN NOTICE (NON-STANDARD CONDITION)

Responsible Department: Water Resources Agency

Condition/Mitigation Monitoring Measure: The applicant shall provide a recorded floodplain notice for APN 131-051-023-000 and APN 131-051-067-000, stating: "The property is located within or partially within a Special Flood Hazard Area and may be subject to building and/or land use restrictions." (Water Resources Agency)

Compliance or Monitoring Action to be Performed: 1. Prior to the commencement of tree removal, the owner/applicant shall submit a signed and notarized floodplain notice to the Water Resources Agency for review and approval. When approved, the applicant shall record the notice.

2. A copy of the standard notice can be obtained at the Water Resources Agency or online at: www.mcwra.co.monterey.ca.us.

8. PD006 - CONDITION OF APPROVAL / MITIGATION MONITORING PLAN

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The applicant shall enter into an agreement with the County to implement a Condition of Approval/Mitigation Monitoring and/or Reporting Plan (Agreement) in accordance with Section 21081.6 of the California Public Resources Code and Section 15097 of Title 14, Chapter 3 of the California Code of Regulations. Compliance with the fee schedule adopted by the Board of Supervisors for mitigation monitoring shall be required and payment made to the County of Monterey at the time the property owner submits the signed Agreement. The agreement shall be recorded. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Within sixty (60) days after project approval or prior to the issuance of building and grading permits, whichever occurs first, the Owner/Applicant shall:

1) Enter into an agreement with the County to implement a Condition of Approval/Mitigation Monitoring Plan.

2) Fees shall be submitted at the time the property owner submits the signed Agreement.

3) Proof of recordation of the Agreement shall be submitted to RMA-Planning.

STATE OF CALIFORNIA – THE RESOURCES AGENCY

EDMUND G. BROWN JR., *Governor*

CALIFORNIA COASTAL COMMISSION

CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060-4508
VOICE (831) 427-4863 FAX (831) 427-4877

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT

Please Review Attached Appeal Information Sheet Prior To Completing This Form.

SECTION I. Appellant(s)

Name: Nina J. Beety

Mailing Address: 277 Mar Vista Dr.

City: Monterey Zip Code: 93940 Phone: 831-655-9902

SECTION II. Decision Being Appealed

1. Name of local/port government:
   Monterey County
2. Brief description of development being appealed:
   Elkhorn Slough National Estuarine Research Reserve development permits "to allow oak woodland and freshwater habitat restoration" and "to allow the removal of 1,225 existing Eucalyptus trees".
3. Development's location (street address, assessor's parcel no., cross street, etc.):
   1700 Elkhorn Road, Royal Oaks, CA
   APNs: 131-051-001-000, 131-051-023-000, 131-051-067-000
4. Description of decision being appealed (check one.):

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CALIFORNIA
COASTAL COMMISSION

- ☐ Approval; no special conditions
- ☒ Approval with special conditions:
- ☐ Denial

Note: For jurisdictions with a total LCP, denial decisions by a local government cannot be appealed unless the development is a major energy or public works project. Denial decisions by port governments are not appealable.

TO BE COMPLETED BY COMMISSION:

APPEAL NO: A-3-MCO-15-0068

DATE FILED: _____

DISTRICT: _____

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 2)

5. Decision being appealed was made by (check one):

- ☐ Planning Director/Zoning Administrator
- ☒ City Council/Board of Supervisors
- ☐ Planning Commission
- ☐ Other

6. Date of local government's decision: September 29, 2015

7. Local government's file number (if any): PLN 100351

SECTION III. Identification of Other Interested Persons

Give the names and addresses of the following parties. (Use additional paper as necessary.)

a. Name and mailing address of permit applicant:

Elkhorn Slough National Estuarine Research Reserve
1700 Elkhorn Rd.
Watsonville, CA 95076

b. Names and mailing addresses as available of those who testified (either verbally or in writing) at the city/county/port hearing(s). Include other parties which you know to be interested and should receive notice of this appeal.

(1) Mark Silverstein

(2) Chris Orman

(3) Hans Jongens

(4) Andrea Woolfolk
ESNERR
1700 Elkhorn Rd.
Watsonville, CA 95076

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 3)

SECTION IV. Reasons Supporting This Appeal

PLEASE NOTE:

- Appeals of local government coastal permit decisions are limited by a variety of factors and requirements of the Coastal Act. Please review the appeal information sheet for assistance in completing this section.
- State briefly **your reasons for this appeal.** Include a summary description of Local Coastal Program, Land Use Plan, or Port Master Plan policies and requirements in which you believe the project is inconsistent and the reasons the decision warrants a new hearing. (Use additional paper as necessary.)
- This need not be a complete or exhaustive statement of your reasons of appeal; however, there must be sufficient discussion for staff to determine that the appeal is allowed by law. The appellant, subsequent to filing the appeal, may submit additional information to the staff and/or Commission to support the appeal request.

This project does not conform to the standards set forth in the Local Coastal Plan which is the North County Land Use Plan.

Substantial issues include:

- Preservation and protection of visual/scenic resources
- Recognition and protection of visual character
- Prohibition of this project by the LUP
- Protecting and preserving environmentally sensitive habitat areas
- Oak woodland as high fire potential
- Ponds must be supplied with water under LUP
- Highly toxic herbicides proposed
- Alternative pond-building not proposed
- Restricted access to environmentally sensitive habitat areas

See attached.

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 4)

SECTION V. Certification

The information and facts stated above are correct to the best of my/our knowledge.

Nina J Beaty
Signature of Appellant(s) or Authorized Agent

Date: 12/15/15

Note: If signed by agent, appellant(s) must also sign below.

Section VI. Agent Authorization

I/We hereby authorize _____
to act as my/our representative and to bind me/us in all matters concerning this appeal.

_____
Signature of Appellant(s)

Date: _____

Appeal, Elkhorn Slough National Estuarine Research Reserve
PLN 100351

This project does not conform to the standards set forth in the Local Coastal Plan which is the North County Land Use Plan (LUP). Substantial issues include:

- Preservation and protection of visual/scenic resources
- Recognition and protection of visual character
- Prohibition of this project by LUP
- Protecting and preserving environmentally sensitive habitat areas
- Restricted access to environmentally sensitive habitat areas
- Oak woodland as high fire potential
- Ponds must be supplied with water under LUP
- Highly toxic herbicides proposed
- Alternative pond-building not proposed

1. **Preservation and protection of visual/scenic resources and viewsheds**
   This is emphasized in the LUP, including in Section 2.2 "Visual Resources" as well as Monterey County Zoning Coastal Implementation Plan, 20.36.010.

   CDFW says the first aerial survey in 1930 showed eucalyptus to be well-established (Response to appeal, #23). That means this project would destroy visual and scenic resources that have existed for at least 100 years and are part of the character of North County and the Elkhorn Slough.

   CDFW Negative Declaration:
   - p. 16 "[Elkhorn Slough National Estuarine Research Reserve] trails are open to the public and are extensively used. All four sites proposed for eucalyptus removal are easily viewed from the ESNERR public trail system... Kayaks accessing the main channel of the Slough either from Moss Landing Harbor or Kirby Park off Elkhorn Road have a clear vista of the Reserve east of the main channel."
   - p. 17 Long-term Impacts
     Once the eucalyptus trees are removed from the project sites, local vistas would change...Though eucalyptus removal will change the view and could be considered negative by those who enjoy looking at eucalyptus trees, the overall visual effect at the proposed sites will be of a scenic nature, revealing views of Elkhorn Slough and its wetlands, native trees, and other natural resources. Therefore the long-term visual impacts are considered less than significant.

   The before and after photographs in the Negative Declaration show the dramatic impact to viewshed and scenic resources from tree removal.

   North County Land Use Plan: 2.2 VISUAL RESOURCES – p. 30
   "Requirements of the Coastal Act of 1976 focus on the protection of scenic resources, particularly those along the coastline. It stresses that any development permitted in

scenic areas should be sited and designed to be visually compatible and subordinate to the natural setting."

The eucalyptus groves are part of the natural setting.

p. 31
"Particularly susceptible to visual damages due to inappropriate development are the beaches, the dunes, the low areas adjacent to the sloughs, and the ridgelines. All of these areas are highly visible from long distances and from several points; they rely on unbroken horizontal lines for continuity; and they generally are composites of scenic ingredients such as landform, water, and varieties of vegetation.
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."

"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."

"2.2.2 General Policy
1. Views to and along the ocean shoreline from Highway One, Molera Road, Struve Road and public beaches, and to and along the shoreline of Elkhorn Slough from public vantage points shall be protected.
2. The coastal dunes and beaches, estuaries, and wetlands, should be designated for recreation or environmental conservation land uses that are compatible with protection of scenic resources."

CDFW's opinions and project are in conflict with the LUP policies about existing scenic resources. CDFW seeks to remove those scenic resources and radically alter viewsheds. Their project is in direct conflict with the LUP priority on preserving scenic resources.

2. **Recognition and protection of North County's distinctive visual character**
The LUP states:
2.2.4 Recommended Actions
"1. ...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...No uses or structures should be allowed that are unnecessarily visible or that significantly detract from the scenic character of these visual resources. "

The eucalyptus trees are an intrinsic part of North County. The LUP does not state "the scenic oak-covered hills, ridges, and slopes..." This paragraph demonstrates the LUP's

commitment to the existing landscape's scenic character and accords it great value, considering it essential and that it should be preserved.

3. **This project is prohibited by the LUP**
"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."
Development includes "...the removal or harvesting of major vegetation other than for agricultural purposes, (p. 135, Glossary: #16 Development)

2.3.2 General Policies
1. With the exception of resource dependent uses, all development, including vegetation removal, excavation, grading, filling, and the construction of roads and structures, shall be prohibited in the following environmentally sensitive habitat areas: riparian corridors, wetlands, dunes, sites of known rare and endangered species of plants and animals, rookeries, major roosting and haulout sites, and other wildlife breeding or nursery areas identified as environmentally sensitive.

4. **Protecting and preserving environmentally sensitive habitat areas and natural resources**
"Environmentally Sensitive Habitat Area: Any area in which plant or animal life or their habitats are either 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. (Coastal Act)" (p. 135, Definitions #22).
"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." (p. 27)

This emphasis on environmentally sensitive habitats and their fragility is stressed throughout the LUP as well as the priority of protection. The proposed activities are serious disturbances over 10 years time with work crews, chain saws and chippers, involving extreme noise disturbance, destruction of vegetation, herbicides applied to each site for 3 years, manual removal over each site for 3 years, and herbicides located on site – see #5 and #8. There is no mitigation listed or possible for these impacts to habitat areas and wildlife.

5. **Restricted access to environmentally sensitive habitat areas**
Access is restricted by the LUP to avoid damaging "environmentally sensitive habitats and other sensitive coastal resource areas." – (#6 Public Access p. 111-118)

However, this project involves access for work crews and heavy machinery for 10 years. The machinery includes "cranes and other equipment (brush chippers, small tractor,

chip truck, bucket truck, grapple loader truck)" (CDFW Neg Dec, p. 17). This project actually intends to create damage. This is in violation of the LUP.

6. **Oak woodland as high fire potential**
   The LUP states that oak woodlands have a high fire potential and need a fuel reduction program. Eucalyptus trees, on the other hand, are not mentioned in the LUP as a special fire hazard or high fire hazard. CDFW says CalFire designates eucalyptus trees as a high fire hazard, but does not mention the designation of oak woodlands. David Maloney, retired firefighter and expert on the Oakland-Berkeley fire investigation panel, has lengthy information about the fire resistance of eucalyptus.

7. **Freshwater ponds must be supplied with water**
   "2.5.2 General Policies
   4. Adequate quantities of water should be maintained instream or supplied to support natural aquatic and riparian vegetation and wildlife during the driest expected year."

   CDFW is planning an inappropriate and damaging work-around. It should be seeking compliance with the LUP. Water must be supplied to these ponds. It is the responsibility of humans to maintain them, not to remove trees.

8. **Highly toxic herbicides proposed**
   The LUP discusses negative impacts to the slough from pollution and hazardous run-off in 2.5 Water Resources: Water Quality. It encourages restoration of degraded and damaged areas to protect against these impacts. 2.3.3.B8 prohibits "toxic substances" from entering the estuarine system. Hazardous herbicides will increase pollution and damage to the Slough's fragile environment and wildlife, with rain further carrying them into the system.

   CDFW plans to use RoundUp Pro (active ingredient glyphosate), R-11, Garlon 4 (active ingredient: triclopyr ester) with 70% Hasten.
   Glyphosate:
   - Glyphosate has now been classified a Class 2A carcinogen (probable).
   - CalEPA plans to list Roundup which contains Glyphosate as a carcinogen.
   - Glyphosate 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, becoming superweeds, which creates greater problems. Using herbicides begins a downward process, requiring more removal and disruption, not less.

- Glyphosate is showing up in human breast milk and urine, even in those who eat only organic produce. Otters, seals, and other animals in the slough could be similarly impacted.

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...Triplopyr...[is] an order of magnitude *[10 times]* 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."

9. **Alternative pond-building not proposed**
   An alternative to the project is constructing new ponds in areas without eucalyptus trees to provide additional habitat for salamanders and frogs.

December 15, 2015

APPLICABLE LUP POLICIES AND IP STANDARDS

VISUAL POLICIES:

LUP Policy 2.2.1 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. Only low intensity development that can be sited, screened, or designed to minimize visual impacts, shall be allowed on scenic hills, slopes, and ridgelines.

LUP Policy 2.2.2.1. Views to and along the ocean shoreline from Highway One, Molera Road, Struve Road and public beaches, and to and along the shoreline of Elkhorn Slough from public vantage points shall be protected.

LUP Policy 2.2.2.2. The coastal dunes and beaches, estuaries, and wetlands, should be designated for recreation or environmental conservation land uses that are compatible with protection of scenic resources. Facilities that are provided to accompany such uses shall be designed and sited to be unobtrusive and compatible with the visual character of the area.

IP Section 20.36.010. The purpose of this Chapter is to provide a district to protect, preserve, enhance, and restore sensitive resource areas in the County of Monterey. Of specific concern are the highly sensitive resources inherent in such areas such as viewshed, watershed, plant and wildlife habitat, streams, beaches, dunes, tidal areas, estuaries, sloughs, forests, public open space areas and riparian corridors. The purpose of this Chapter is to be carried out by allowing only such development that can be achieved without adverse effect and which will be subordinate to the resources of the particular site and area.

ESHA POLICIES:

LUP Policy 2.3.1. The environmentally sensitive habitats of North County are unique, limited, and fragile resources of statewide significance, important to the enrichment of present and future generations of county residents and visitors; accordingly, they shall be protected, maintained, and, where possible, enhanced and restored.

LUP Policy 2.3.2.1. With the exception of resource dependent uses, all development, including vegetation removal, excavation, grading, filling, and the construction of roads and structures, shall be prohibited in the following environmentally sensitive habitat areas: riparian corridors, wetlands, dunes, sites of known rare and endangered species of plants and animals, rookeries, major roosting and haulout sites, and other wildlife breeding or nursery areas identified as environmentally sensitive. Resource dependent uses, including nature education and research hunting, fishing and aquaculture, where allowed by the plan, shall be allowed within environmentally sensitive habitats only if such uses will not cause significant disruption of habitat values.

LUP Policy 2.3.2.2. Land uses adjacent to locations of environmentally sensitive habitats shall be compatible with the long-term maintenance of the resource. New land uses shall be considered compatible only where they incorporate all site planning and design features needed

to prevent habitat impacts, upon habitat values and where they do not establish a precedent for continued land development which, on a cumulative basis, could degrade the resource.

LUP Policy 2.3.2.3. New development adjacent to locations of environmentally sensitive habitats shall be compatible with the long-term maintenance of the resource.

LUP Policy 2.3.2.7. Where public access exists or is permitted in areas of environmentally sensitive habitats, it shall be limited to low intensity recreation, scientific or education uses such as nature study and observation, education programs in which collecting is restricted, photography, and hiking. Access in such locations shall be confined to appropriate areas on designated trails and paths. No access shall be approved which results in significant disruption of habitat.

LUP Policy 2.3.2.8. Where development is permitted in or adjacent to environmentally sensitive habitat areas (consistent with all other resource protection policies), the County, through the development review process, shall restrict the removal of indigenous vegetation and land disturbance (grading, excavation, paving, etc.) to the minimum amount necessary for structural improvements.

LUP Policy 2.3.3.B.1. Riparian plant communities shall be protected by establishing setback requirements consisting of 150 feet on each side of the bank of perennial streams, and 50 feet on each side of the bank of intermittent streams, or the extent of riparian vegetation, whichever is greater. In all cases, the setback must be sufficient to prevent significant degradation of the habitat area. The setback requirement may be modified if it can be conclusively demonstrated by a qualified biologist that a narrower corridor is sufficient or a wider corridor is necessary to protect existing riparian vegetation from the impacts of adjacent use.

LUP Policy 2.3.3.B.2. All development, including dredging, filling, and grading within stream corridors, shall be limited to activities necessary for flood control purposes, water supply projects, improvement of fish and wildlife habitat, or laying of pipelines when no alternative route is feasible, and continued and future use of utility lines and appurtenant facilities. These activities shall be carried out in such a manner as to minimize impacts from increased runoff, sedimentation, biochemical degradation, or thermal pollution. When such activities require removal of riparian plant species, re-vegetation with native plants shall be required.

LUP Policy 2.3.3.B.8. Oil and other toxic substances shall not be allowed to enter or drain into the estuarine system. Oil spill and toxic substance discharge contingency plans shall be developed by the appropriate agencies of Monterey County to coordinate emergency procedures for clean-up operations of all foreseeable conditions. New development shall be permitted adjacent to estuarine areas only where such development does not increase the hazard of oil spill or toxic discharge into the estuaries.

LUP Policy 2.3.4.5. 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.

IP Section 20.36.040. Principal Uses Allowed.

A. Resource dependent educational and scientific research facilities uses, and low intensity day use recreation uses such as trails, picnic areas and boardwalks;

B. Restoration and management programs for fish, wildlife, or other physical resources;

IP Section 20.144.040. The intent of this Section is to provide development standards which will allow for the protection, maintenance, and, where possible, enhancement and restoration of North County environmentally sensitive habitats. The environmentally sensitive habitats of North County are unique, limited, and fragile resources of Statewide significance, important to the enrichment of present and future generations of County residents and visitors.

IP Section 20.144.050.C.1. Landmark trees of all native and non-native species shall not be permitted to be removed. A landmark tree is a eucalyptus or Monterey pine which is 36" or more in diameter measured at breast height, or any other type of tree which is 24" or more in diameter when measured at breast height, or a tree which is visually significant, historically significant, exemplary of its species, or significant as part of a wildlife habitat. Where a tree proposed for removal may potentially act as a nesting or roosting location for a rare, endangered, or threatened species, a biological survey report shall be required in order to assess the trees role and significance to the species habitat.

An exception may be granted by the decision-making body for removal of a tree that is 24 inches or greater in diameter (measured at breast height) and not also visually or historically significant, exemplary of its species or more than 1000 years old. To grant the exception, the decision-making body must find that no alternatives to development (such as resiting, relocation, or reduction in development area) exists whereby the tree removal can be avoided or that the tree removal is for the purpose of maintaining existing agricultural operations where not resulting in the enlargement of those operations.

An exception may be granted by the decision-making body for removal of a landmark tree within the public right-of-way or area to be purchased for the public right-of-way where no feasible and prudent alternatives to such removal are available, subject to obtaining a coastal development permit.

FIRE POLICY:

LUP Policy 2.3.3.A.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.

LUP Policy 2.8.1. Land uses and development in areas of high geologic, flood, tsunami, and fire hazard shall be carefully regulated through the best available planning practices in order to minimize risks to life and property and damage to the natural environment.

WATER RESOURCES POLICY*:*

LUP Policy 2.5.2.4. Adequate quantities of water should be maintained instream or supplied to support natural aquatic and riparian vegetation and wildlife during the driest expected year.

BEFORE

AFTER

BEFORE

AFTER

BEFORE

AFTER

BEFORE

AFTER

BEFORE

AFTER

NORTH COUNTY FIRE PROTECTION DISTRICT

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.

11200 Speegle Street, Castroville CA 95012-2546 ● (831) 633-2578 or 722-7833 Fax (831) 633-2572

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 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

CALIFORNIA COASTAL COMMISSION
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
VOICE (415) 904- 5200
FAX (415) 904- 5400
TDD (415) 597-5885

M E M O R A N D U M

TO: Brian O'Neill, Coastal Analyst

FROM: Laurie Koteen, Ph.D., Ecologist

RE: Elkhorn Slough Habitat Restoration (A-3-MCO-15-0068

DATE: February 1, 2016

I write this memorandum in support of the planned Eucalyptus removal project in Elkhorn Slough, and the plans to replace the trees at this location with native habitat dominated by coast live oaks. The rationale for Eucalyptus removal is sound and the documents provided by the appellant to the project do not provide a convincing counter-rationale. Whereas the applicant hopes to restore native habitat and ecosystem functions, the appellant's concerns focus on habitat quality, flammability of Eucalyptus chips left in place post-removal, and the choice of herbicides. Further, the applicant and appellant disagree about the invasiveness of *Eucalyptus globulus,* with the applicant citing invasiveness as a primary rationale for removal. I shall address the benefits of the project first, and then discuss the concerns raised in the appeal.

In addition to a preference for native ecosystems in Elkhorn Slough, the primary stated impetus in the project's Mitigated Negative Declaration for removing *Eucalyptus globulus* stands is to reduce transpiration of water from nearby ponds[1]. These ponds provide breeding and foraging habitat for the federally threatened California red-legged frog, the state and federally-endangered Santa Cruz long-toed salamander, and the Western pond turtle, a California species of special concern. Here, the assumption is that high rates of groundwater transpiration by Eucalyptus trees reduces pond area, thus restricting the habitat available for aquatic-dependent species. The lore is that Eucalyptus species transpire huge volumes of water. The literature addresses this issue as well, and many studies have measured transpiration rates in species of Eucalyptus worldwide (David et al., 1997; Leuning et al., 2005; Stape et al., 2004; Whitehead and Beadle, 2004; Wullschleger et al., 1998)[2]. As a whole, this research documents high variability in transpiration rates that is

[1] Transpiration is the component of water that is transferred from the soil to the atmosphere through the plant. Water migrates through plant roots, through the xylem of the tree's sapwood, and is released to the atmosphere through the tiny pores, or stomata, that line the backs of plant leaves.

[2] These studies measure transpiration in Eucalyptus either directly, through a number of proxy methods, or by recording more readily measured bioclimatic metrics and estimating transpiration via analytic models, such as the Penman-Monteith equation.

attributable to a wide range of factors[3]. Among the most important are water supply, nutrient availability and climate. Each of these is likely to be favorable to Eucalyptus growth in the stands at Elkhorn Slough, with transpiration rates closely-tied to growth. Of the four stands where Eucalyptus removal is planned, three of the four are low-lying and close to water sources, indicating likely access to groundwater year-round. The fourth stand also abuts a pond, but is located on a steep slope. The favorable climate of this region, along with adjacent areas of widespread fertilized agriculture and the associated agricultural runoff into the Elkhorn Slough watershed, provide an ample nutrient supply, and also likely support high growth and transpiration rates. In addition to these deductive factors, the Mitigated Negative Declaration prepared for the project references unpublished data for Elkhorn Slough that documents higher relative transpiration rates in Eucalyptus trees located near ponds compared to oaks located near ponds[4].

Elkhorn Slough managers also hope to remove Eucalyptus trees from their watershed due to their invasiveness, and the concern that Eucalyptus will continue to displace native habitat. Despite the appellant's contention that this claim is overblown, recently-published research by the Elkhorn Slough Reserve strongly supports it. Fork *et al.* directly measured Eucalyptus invasiveness in six stands through examining aerial photographs spanning the period from 1931 to 2001 (Fork et al., 2015). They found the stands had increased in area by 271% on average over this interval, with evidence of continuing invasive growth in five of the six stands during each of the four time periods examined.

The issue of relative flammability between an extant Eucalyptus forest and a layer of Eucalyptus wood chips is addressed both in the literature and by reasoning from first principles. To produce a fire, a heat source must be applied to fuel in the presence of oxygen. In proposing to shift from a forested landscape to one with a wood chip understory layer, this project will change the structure and chemistry of the Eucalyptus fuels and the availability of oxygen to any potential heat source. Oxygen is much more available in the open structure of an erect forest than in a dense understory layer where wood chips will pack over time and seal in soil moisture. Moreover, the litter layer of a live Eucalyptus forest is composed mainly of relatively porous leaves and slash, capable of sustaining a fire, once ignited, and the Eucalyptus' peeling bark provides a fuel ladder to transfer fire from the litter layer to the forest canopy (Boyd et al., 2006b). In addition to these structural changes, a layer of wood chips is less flammable than a living Eucalyptus forest by virtue of differences in fuel chemistry. The live leaves and leaf litter of *Eucalyptus globulus* have a high oil content that is extremely flammable (Agee et al., 1973). In contrast, an understory layer composed predominantly of wood, which is progressively leached of flammable oils and phenolic substances, is less flammable. Over time, this landscape will progress to an oak woodland, which maintains lower fuel loads, and exhibits greater fire resistance than does a Eucalyptus forest (Boyd et al., 2006a).

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[3] These factors include variation in vapor pressure deficit, or the atmospheric demand for water (how dry the air is relative to saturation), soil moisture content, soil nutrient availability, the size and density of Eucalyptus trees in a stand, seasonal availability of light and heat, management practices (e.g. fertilization and irrigation) and species differences.

[4] Mitigated Negative Declaration, Elkhorn Slough Ecological Reserve Eucalyptus Removal, 2015-2025, pg. 6.

Lastly, the appellant raised the issue of difference in species diversity between oak and Eucalyptus stands as a proxy for equating the overall habitat quality of the two ecosystem types. Two papers were presented in which diversity metrics between Eucalyptus and Oak woodlands were compared, and came to an overall similar conclusion (Fork et al., 2015; Sax, 2002). In both cases the studies' authors found that Eucalyptus and Oak woodlands are similar in overall species diversity. However, the more detailed findings provide additional insights. Both studies notably examined several taxa, (*e.g.* amphibians, insects, birds, etc.), however, only the Fork *et al.* study examined species abundance, and this study was conducted among stands within the Elkhorn Slough Preserve. The oak woodlands were found to have a greater abundance of native species, arthropods, species endemic to western North America and perennial species. The higher proportion of perennial species found in oak woodlands indicates a more structurally stable landscape, whereas the higher abundance of annual species in the Eucalyptus forest suggests a more mutable landscape, with species identity and number more variable from year to year. In contrast, Eucalyptus stands were found to support more granivorous bird species. On balance, these studies, particularly the Fork *et al.* study, support the rationale for restoring sites to native woodlands. It must be mentioned, however, that species diversity is but one measure of habitat quality. Many other ecosystem functions will shift with the restoration of the current eucalyptus sites. These functions include nutrient cycling, soil fertility, impacts to adjacent ecosystems (e.g ponds), aesthetics, fire regime, erosion control, and many others.

In all, the scientific rationale supports the project objectives. The initial choice of herbicides did present concerns. However, I understand that a revised plan has been drawn up based on conversations between the applicant and coastal commission staff, and that these changes in the choice of herbicide and in its application have been agreed upon. The Monterey County LCP encourages habitat restoration and discourages of toxic chemicals in areas adjacent to open waters. Therefore, with these project improvements, I recommend that the Commission find that the County-approved project raises no substantial issue with respect to the certified LCP.

Sincerely,

Laurie Koteen

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State of California – Department of Fish and Wildlife
PESTICIDE USE RECOMMENDATION
DFW 679 (REV. 08/05/14) Previously FG-880 Page 1

Recommendation # 16-246

Instructions: Complete this form for each proposed pesticide use and submit to the CDFW Integrated Pest Management Program, 1812 Ninth Street, Sacramento, CA 95811, (916) 445-8544.

General Information

Region/Division 4 Land Ownership: CDFW County: Monterey

Facility or Project Name: Elkhorn Slough Ecological Reserve Field # or Other Site I.D.

Specific Target Pest: Eucalyptus globulus Application Dates: 8/01/16 – 10/31/16

Applicator: ☑ CDFW; ☑ Other: (please specify) Andrea Woolfolk, Corey Hamza, or contractor TBD

County Ag. Commissioner Operator ID #: 27-15-2700076

Pesticides:

Pesticide: Rodeo EPA #: 62719-324 Rate: 50%

Pesticide: Hasten modified vegetable oil EPA #: 2935-50160 Rate: 50%

Pesticide: EPA #: Rate:

**or other similar surfactant at the appropriate tank-mix concentration

Application Method:

☐ aquatic, surface	☐ basal bark	☐ drill	☐ hack & squirt
☐ aquatic, subsurface	☑ cut stump	☐ foliar	☐ soil (pre-emergent)

Other (please indicate):

Application Equipment:

☐ aircraft	☐ boom sprayer	☑ paintbrush
☐ backpack	☐ handgun	☐ small hand sprayer (2-3 gal)

Other (please indicate):

Site Description:

☐ canal or ditch	☐ grassland habitat	☐ riparian	☐ wetland, permanent
☐ canal or ditch (dry)	☐ parking or yard	☐ road or right-of-way	☐ wetland, seasonal
☐ ditchbanks	☐ pond/lake	☑ upland habitat	☐ other, non-habitat site

Other (including specific crop indicated above):

Total Treated Area: 1-10 acres Number of Applications: 1-2

Prepared By: Andrea Woolfolk Date: 3/3/16

Title: Stewardship Coordinator Phone: 831-728-2822

Special Restrictions (IPM use only)

☐ Aquatic NPDES Permit	☐ T/E Species Bulletin Conditions
☑ Red-legged Frog Restrictions	☐ Other _____

Comments:

Applications of glyphosate within designated habitat of the CA red-legged frog shall be limited to localized spot treatments using hand held devices, no closer than 15 feet of aquatic features. Applications may not be made when rain is occurring or is forecast to occur within 24 hours.

Comments or Required Conditions (Lands Program Use only)

Rodeo® (cut stump and hack & squirt)

1. Glyphosate herbicides affect both grass and broadleaf species. They act systemically within the plant. They are postemergent herbicides with no soil activity.

2. For cut stump applications, Apply 50- 100% herbicide solution to the cut surface with a paint brush or small sprayer immediately after cutting. A marker dye may be use to aid the application.

3. For hack & squirt applications, apply a 50-100% herbicide solution immediately after cutting to cuts made with an axe or hatchet. The cuts should be evenly spaced around the trunk circumference. Cuts should be made in the bark, at an oblique angle to provide a "cupping effect" for the applied herbicide.

4. Do not apply more than 8 quarts of Rodeo® per acre per year.

5. For best results, applications should be made during periods of active growth and full leaf expansion.

6. Applicators must record each pesticide use on the DFW Pesticide Use Record form (DFW 680). Copies of these reports must be submitted to the DFW IPM Program. Additionally, the local county agricultural commissioner may request that you submit a pesticide use report (CA Dept of Pesticide Regulation Form 39-060) by the 10th day of the month following the month of pesticide application.

CDFW: Review and Approval

The Pest Control Adviser and the CDFW Lands Program are not responsible or liable for damages resulting from the failure of applicators to follow pesticide labeling requirements and the conditions listed above.

I certify that alternative methods and mitigation measures have been considered and, when feasible, have been adopted.

Joel Trumbo	073713	March 7, 2016
Pest Control Adviser, Lands Program	PCA License No.	Date

SAVE PRINT CLEAR

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☐ aquatic, subsurface	☑ cut stump	☐ foliar	☐ soil (pre-emergent)

Other (please indicate):

Application Equipment:

☐ aircraft	☐ boom sprayer	☑ paintbrush
☐ backpack	☐ handgun	☐ small hand sprayer (2-3 gal)

Other (please indicate):

Site Description:

☐ canal or ditch	☐ grassland habitat	☐ riparian	☐ wetland, permanent
☐ canal or ditch (dry)	☐ parking or yard	☐ road or right-of-way	☐ wetland, seasonal
☐ ditchbanks	☐ pond/lake	☑ upland habitat	☐ other, non-habitat site

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Joel Trumbo	073713	March 7, 2016
Pest Control Adviser, Lands Program	PCA License No.	Date

STATE OF CALIFORNIA – NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *GOVERNOR*

CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WWW.COASTAL.CA.GOV

January 20, 2015

David Feliz, Reserve Manager
California Department of Fish and Wildlife
1700 Elkhorn Road
Watsonville, CA 95076

Subject: Mitigated Negative Declaration (MND) for the Elkhorn Slough Ecological Reserve Eucalyptus Removal Project, SCH #2014121035

Dear Mr. Feliz:

Thank you for forwarding the MND for the Elkhorn Slough Ecological Reserve Eucalyptus Removal project. The proposed project would remove 1,150 small Eucalyptus trees and 75 large Eucalyptus trees from four groves over ten years and would treat the remaining stumps with Glyphosate and Triclopyr Ester herbicides to prevent regrowth. We appreciate the mitigation measures that the California Department of Fish and Wildlife (CDFW) has incorporated to reduce project impacts to water quality and biological resources. However, the MND does not adequately address the potential risks involved with the proposed use of RoundUp Pro, a commercial formulation of the Glyphosate herbicide. Specifically, the MND does not discuss potential risks to mammals, birds, or terrestrial invertebrates through either direct contact with the herbicide or ingestion of herbicide-treated vegetation. We urge you to investigate these risks and to consider using a less toxic formulation of the Glyphosate herbicide.

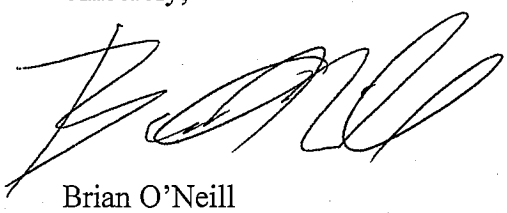
The risk assessment report cited in the MND does not support the use of RoundUp Pro over less toxic formulations of the Glyphosate herbicide. The MND relies exclusively on a 2011 report prepared for the Forest Service (Patrick R. Durkin, *Glyphosate – Human Health and Ecological Risk Assessment*, Syracuse Environmental Research Associates (2011)) to support the MND's conclusion that using Glyphosate does not pose a risk to biological resources. However, this report makes a clear distinction between Glyphosate formulations that contain a polyoxyethyleneamine (POEA) surfactant and those that do not. The report states that "some surfactant-containing formulations may be substantially more toxic than others" (*id.* at 81) and notes that "it would be prudent to classify any formulation that contains a POEA surfactant as more toxic" (*id.* at 178). Although identifying the type of surfactants used in various Glyphosate formulations is difficult due to protection under trade-secret rules, the report categorizes RoundUp Pro as a "High Toxicity/High Confidence" formulation (*id.* at 287), and explains that most RoundUp formulations contain some form of a POEA surfactant (*id.* at 8).

The report clearly states that the "toxicity of the original RoundUp and similar formulations containing POEA surfactants is far greater than the toxicity of technical grade glyphosate, Rodeo, or other formulations that do not contain surfactants" (*id.* at 114-15). The various scientific studies detailed in the report conclude that RoundUp formulations pose greater ecological risks than less toxic formulations; particularly to amphibians (*id.* at 145), terrestrial

invertebrates (*id.* at 121), and aquatic invertebrates (*id.* at 131). Although the risks associated with various Glyphosate formulations may be poorly understood and studies remain inconclusive (*id.* at xix), the Forest Service itself does not use any of the highly toxic formulations in any of its programs due to potential toxicity risks (*id.* at 32). Without a compelling reason to use RoundUp Pro over another Glyphosate formulation, we urge CDFW to use a less toxic formulation that does not contain a surfactant. If a surfactant must be added to the chosen formulation prior to application to increase the herbicide's efficacy, the report also lists several surfactants that are virtually nontoxic (*id.* at 132, 158).

Thank you for considering our comments. If you have any questions or would like to discuss this issue further, please contact me at (831) 427-4863 or Brian.O'Neill@coastal.ca.gov.

Sincerely,



Brian O'Neill
Coastal Planner

Additional Grounds of Appeal
Submitted January 22, 2016
By Nina Beety

[Page numbers refer to PDF page numbers for documents]

CDFW project destroys winter forage
Eucalyptus trees provide valuable winter food for monarch butterflies and bees. CDFW states it is not cutting down all the eucalyptus trees. However, saving "some" food sources is beside the point. Reducing availability and choice puts populations of insects, birds, and particularly pollinators at risk, especially if existing forage dies. In this increasingly challenged and contaminated environment, all vegetation is at risk and, therefore, all species which depend on it are at risk. Removal and poisoning, though never a sound land management practice, is not only ludicrous, but irrational now.

CDFW does not prioritize protection of bees at the Slough
The state of California cannot claim ignorance on the rapid and catastrophic decline of bees. Yet, CDFW states that saving honeybees is not a priority at the Reserve.

> "Honeybees are not a conservation target on the Reserve."
> (Response to Appeal to Monterey County Board of Supervisors, p. 3, Item 2.d.e)

CDFW prioritizes removal of eucalyptus trees and plants, and uses herbicides known to harm bees and other creatures, over protecting bees. This is not a scientific campaign; this is a campaign with a very narrow ideological focus. It puts wildlife in danger. This ideology has corporate backing, with Monsanto as a major cheerleader and, not so coincidentally, the producer of a primary product used – RoundUp.

CDFW inaction on freshwater ponds contaminated with fallout endangers wildlife
When Fukushima's reactors blew up in March 2011, the level of fallout in the US at federal monitors was 450,000 times normal background levels, equal to a one megaton atmospheric atomic blast.[i] Yellow clouds of fallout were reported by coastal towns, including Marina. It rained during this time, and rainwater at UC Berkeley tested at 181 X the federal drinking water limit for Iodine-131.[ii] USGS monitors in Southern Monterey County/San Benito County detected significant amounts of cesium and iodine.[iii] These were the only radionuclides USGS measured. It is unknown the levels of plutonium, strontium, or other radionuclides, many of which last hundreds to millions of years. This was the initial fallout. There is also the ongoing fallout. Those radioactive elements contaminate the Slough. CDFW has access to data that the public does not get.

CDFW wants to save freshwater ponds to protect amphibians. However, all original ponds have been grossly and maybe permanently contaminated with rising levels of fallout. It was essential to dig new ponds after the initial heavy fall-out passed in order to save these amphibians but CDFW apparently did not do that. Why not?

Now the coast is getting increased radioactive fallout in the winter rains, with measured spikes over 3 X background radiation levels in Monterey. This is in addition to mercury content in fog, recently reported.[iv] It is increasingly doubtful that sensitive amphibians can survive in this grossly contaminated

environment. What measures has CDFW taken to even assess or shelter existing freshwater ponds from the affects of ongoing fallout and contamination?

CDFW fails to enforce LUP prohibition on contaminant discharge into coastal waters
Fukushima's impacts, by airborne fallout and ocean discharge, and the discharge into Monterey County coastal waters, are a matter of public record. However, it appears that CDFW is not conducting testing, publicly at least, and is not monitoring contaminants as its management role requires.

The LUP has specific rules on the discharge of contaminants in coastal waters (LUP, Section D. Marine Resources, p. 5, p. 37-38). CDFW is tasked with monitoring known contaminants into the Slough and its ponds, per its management role. CDFW is not enforcing the LUP.

> CDFW does not conduct testing or monitoring related to the safety of consuming sport- or commercial-caught finfish and shellfish.
> https://www.wildlife.ca.gov/Fishing/Ocean/Health-Advisories/Fukushima

It has also taken no action as the management agency of the Elkhorn Slough to either reassure the public or request legal remedies for existing and ongoing pollution of the slough – airborne and waterborne.

Monterey County is also in violation of its LUP due to allowing discharge into coastal waters without a permit, required studies, and information.

Fire hazard characteristic of oak vs. blue gum eucalyptus is not mentioned

> The characteristics that determine the fire resistance of any tree are how high from the ground its branches begin and the thickness of the tree's bark. The blue gum has a very thick bark, enabling it to withstand fire, and its branches begin about 25 feet from the ground, — a ground fire will blow past it without catching its leaves on fire. An example of the blue gum is the copse of trees on the University of California campus close to Oxford Avenue.
>
> The dwarf blue gum has a thick bark but its branches are low to the ground. A ground fire will transmit relatively easily to its leaves, thereby causing the tree to burn. Many native California trees, such as oak, also have branches low to the ground.
> http://www.contracostatimes.com/montclarion/ci_12946185
> Task force report confirms trees are not primary fire hazard
>
> Fire hazard severity has been determined to be low for the most intensely developed urban areas in Prunedale, Castroville, Moss Landing, Pajaro, Las Lomas, and Aromas; a moderate fire hazard exists for areas of North County with grassland or scrub vegetation; areas of oak woodland are high in fire potential.
> LUP, 2.8 Hazards, p. 58

CDFW proposes converting eucalyptus woodland to grassland (a high fire hazard) to oak woodland (a high fire hazard). This is a net loss in fire protection, given expert advice from a member of the fire investigation panel on the Oakland Hills fire.

I spoke at length at the Monterey County Board of Supervisors appeal hearing about the politicizing of fire policy. This is a dangerous situation for the public when political agendas are promoted by state or local fire officials.

CDFW ignores priorities of LUP
The North County Land Use Plan gives the priorities of the Coastal Act.

> (a) Protect, maintain and, where feasible, enhance and restore the overall quality of the Coastal Zone environment and its natural and man-made resources.
> LUP, 1.1 The Coastal Act, p. 27

The first priority under the Coastal Act is to protect and maintain.

Taking out these trees, some of which are 100+ year old and well-established by 1930, is not protecting and maintaining. Removing old, inter-connected habitats is not protecting and maintaining. Destroying viewscapes that are specifically protected in the plan goes against the LUP.

According to the LUP and the Coastal Act, restoration is 1) a secondary effort, and 2) it must meet the "feasibility" test.

CDFW's project is not in the best interest of the Slough, an area that is under assault by sea level rise due to climate change, atmospheric and sea pollution, agriculture, and development. It is a very poor expenditure of taxpayer dollars.

Monterey County staff report is inaccurate on LUP priorities
The Monterey County report to the Board of Supervisors, p. 2, states:

> "The project is consistent with the North County Land Use Plan which encourages the preservation, enhancement and restoration of native habitat."

"Encourages" is a gross overstatement. There is one mention I found in the NCLUP to restoring "sensitive plant habitats". However, it doesn't use the word "native," and there is no mention of removing non-native species.

> 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. LUP, p. 39

This paragraph uses the word "control," not "remove."

The LUP repeatedly uses the word "restoration" to refer to reducing erosion, re-vegetating bare ground areas, reducing sedimentation, and improving water flows to decrease salinity.

CDFW ignores habitat definitions in LUP
Definitions from the Wildland Planning Glossary:

> 19. Ecosystem: A system formed by the interactions of a community of organisms with their environment. (U.S. Forest Service), p. 135
>
> 13. Community (Biotic): An aggregate of organisms which forms a distinct ecological unit; it may be described in terms of flora or fauna, or both. (U.S. Forest Service),p. 134

Interacting species, especially over the long term, create relationships not easily changed or removed. CDFW ignores basic science in its removal plans.

CDFW ignores movement of herbicides into water via precipitation
Chemical company laboratory conditions don't include real world conditions and migration of chemicals into the soil and water. Herbicides will be applied for at least three years at each location, for a total of 13 years or more for this project. Rain can saturate stumps and vegetation, re-wet these non-biodegradeable, highly toxic chemicals and wash them into the soil, onto surrounding vegetation, and into the water.

CDFW ignores contact of wildlife with herbicides used continuously for 13 years
Amphibians, insects, birds, and other species will be in contact with the stumps and bare areas where herbicides are sprayed, brushed, or placed. These highly toxic substances don't disappear nor are they neatly contained.

Dose and averaging are used to cover toxicity. What is the safe dose for Glyphosate or triclopyr? For many substances, there is no safe dose or level of exposure. Harmful effects are found at very low doses. Chronic exposure is often the worst exposure, such as in this environment.

CDFW does not include the costs of their program
In 2014, the federal government spent more than $2 billion to kill non-natives, reports Alexander Cockburn in Harpers.[v] $1 billion of that was spent on Glyphosate and other toxins. This is big business for Monsanto and herbicide companies.

What is the price tag for CDFW's project, for the heavy machinery, work crews, special consultants, permits and application fees, chemicals, and staff time for over 10 years? Eucalyptus and other species at ESNERR, by comparison, are not costing the county any money.

The costs for this project also include creating resistant weeds – true aliens,[vi] the loss of carbon sequestration and the loss of oxygen creation, and hotspots of permanent contamination.

CDFW misrepresents IARC carcinogen debate on Glyphosate

> 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..." The New York Times notes the "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." Response to appeal, p. 23, #26

The only controversy at the IARC was whether to designate glyphosate as a definite or probable carcinogen. One study tipped the balance, but that study, which CDFW uses as evidence of "no harm", has flaws (see next point). Regarding the IARC investigation,

> The animal studies, [IARC investigation head and epidemiologist Aaron] Blair said, "found excesses of rare tumors." Absent glyphosate exposure, the tumors "are really rare. They almost never just occur." The studies on human beings, conducted in the United States, Canada, and Sweden, pointed to an equally grim conclusion. "They showed a link between people who used or were around glyphosate and an increased risk of non-Hodgkin's lymphoma. Different studies, in different places, suggested that they might go together."
>
> According to Blair, there were good grounds to declare that glyphosate definitely causes cancer. This did not happen, he said, because "the epidemiologic data was a little noisy." In other words, while several studies suggested a link, another study, of farmers in Iowa and North Carolina, did not. Blair pointed out that there had been a similar inconsistency in human studies of benzene, now universally acknowledged as a carcinogen. In any case, this solitary glitch in the data caused the group to list glyphosate as a probable (instead of a definite) cause of cancer.

CDFW (and the New York Times) cites EPA as a indicator of safety, but the EPA is a politically-driven, scandal-riddled federal agency.[vii] It is no guarantor of safety and its "safety" rules and/or lack of action have put the public at risk for decades. Monsanto and its products are protected and promoted by the federal government.[viii]

CDFW cites flawed research on Glyphosate

> 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.
> CDFW Response to appeal, p. 23, #26
>
> Blair of the IARC mentions the Agricultural Health Study in Iowa and North Carolina as a study which, in Cockburn's paraphrasis, did not find a link between glyphosate and cancer. In reality, though, the study is not reassuring and doesn't contradict other studies that did find a link, for two reasons.
> 1. The study did find "a suggested association" between glyphosate exposure and multiple myeloma, a type of blood cancer. A rebuttal study commissioned by Monsanto and published in 2015 ahead of the re-evaluations of glyphosate by the US and the EU used a different dataset and concluded "no convincing evidence" of a link. Whether the Monsanto re-analysis is more reliable than the findings of the publicly funded Agricultural Health Study is debatable.
> 2. In a separate study also conducted in Iowa, detectable levels of glyphosate were found in urine samples from farm families and non-farm families. The researchers put this down to the fact that

> glyphosate herbicides are used in home gardens as well as in agriculture. Thus in the Agricultural Health Study the control population is as likely to be exposed to glyphosate as the "exposed" population, so the differences between the groups may be small or non-existent. The implication of the urine study is that the real link between glyphosate and cancer could be far stronger than was found in the Agricultural Health Study.
> New revelation about Glyphosate-cancer link, Claire Robinson[ix]
> August 13, 2015

CDFW ignores other toxicity data on Glyphosate

An article, just published on Glyphosate's effect on mitochondria in cells,[x] is one example of the powerful effects of these herbicides, despite industry and agency claims.

Air impacts and quality are averaged across the entire state - scientific sleight of hand?

If a company wants to site a factory or nuclear power plant, under CDFW's approach, the emissions would be averaged to the entire state. How big an area does it take to make it of no impact? It's perfectly legal, but it's irresponsible science and a politically-driven approach. It is critical to know the local impact from a local project.

Where is your home located? Technically, in California, but where is your physical address? That's where impact must be measured.

There is local impact from the local destruction of trees which sequester carbon and produce oxygen locally, and provide other local benefits.

CDFW disregards other scientific findings

> Mr. Backster's theories describing extrasensory perception in plants have no relevance in developing habitat restoration projects.
> Response to appeal, p. 23, #27

Contrary to CDFW's idea of what constitutes science, the research of Clive Backster, an internationally known polygraph expert, is highly relevant to this project. His research and that of others shows that plants, and by extension, trees, are intelligent, relational, communicating beings, which care about other species and about humans.[xi] Other researchers have found this is true of other species as well -- something indigenous people and most children have always known.

If CDFW researchers are squeamish about those findings and their implications, that is irrelevant and does not dismiss their validity and importance. Those findings can be summarized as follows:

> Plants have profound awareness, they feel pain, they have a range of emotions, they go into shock when overwhelmed with events or emotions, they exhibit compassion and love, they communicate with each other instantaneously across distance without regard to distance, they telegraph threats to each other, they care about the people who care for them, and they connect with those people across distances.

In view of that information, CDFW proposes killing over 1200 people. Not humans, but people nonetheless. This is not new age crap, it is not belief, and it is not wishful thinking. It is scientific fact. Therefore, given the commensurate aliveness of plant and tree species, it behooves everyone to take a breath and step back from this action, while contemplating the implications.

When beliefs are questioned by research, such as by the work of Galileo, it is common for societies to demean, abuse, and sometimes kill the proponents, especially if powerful economic interests are at stake. The results of Backster and others contradict centuries of belief in Western society. However, cherry-picking science is not an option, especially if creating harmonious communities is our goal.

Intelligence goes both ways. It would be a pity if plants and trees were the only species in the room with intelligence, compassion, and a commitment to relationship.

CDFW omits the higher bareground rating of oak woodlands

The one mention of eucalyptus in the entire LUP document is in "Coefficients of bareground exposure" where it ranks near oak woodlands (p. 132). Oak woodlands actually have the lowest bare ground exposure, more than eucalyptus, which means there is less light getting to the ground to germinate the seeds of other plants under oak trees.

Oak trees are also known for suppressing growth due to the acid content of their leaves. Yet, CDFW omits this well-known fact. How oak woodlands are going to encourage greater understory is a mystery.

CDFW contradicts itself over understory or no understory beneath eucalyptus

> "Native coast live oaks are struggling to survive in the monoculture of eucalyptus stands on the Reserve." Response by CDFW to appeal, p. 21, #22
>
> b, c) "Substantial soil erosion and/or unstable soil conditions resulting from the eucalyptus removal project is unlikely at all sites. Eucalyptus stumps and existing vegetative understory that currently stabilize soils would be left in place."
> "GEO 2 ...All sites have existing native vegetation in the understory."
> CDFW Negative Declaration, p. 42, 43

So either eucalyptus groves are a monoculture or they have an understory of native vegetation, but they cannot be both.

CDFW and California have very narrow and contradictory "native" policies

California vilifies and takes aggressive action against plants because they are not native.

California takes no action to legally recognize California tribes or return their lands to them. It takes no action to investigate and publicly recognize past crimes against native people. It does, however, honor non-native Spanish padres and explorers, who were responsible for horrible crimes and almost wiped out native peoples. And California celebrates the missions, the sites of this human trafficking.

Regarding native peoples' historical and sacred sites:

> [Ohlone Costanoan Esselen Nation Tribal Chair Louise] Ramirez says that when work was being done to remove ice plant from the nearby beach [in Pacific Grove], State Parks officials called her and gave her a choice: Would she rather have the ice plant pulled, or sprayed with poison? She frames it differently.
>
> "Do I want my ancestor pulled up with ice plant, or do I want them covered with poison?" she says. "It's hard, it's terrible and my heart hurts. Because my job is to protect my ancestors. "[The system is] not meant for us."
> Pacific Grove project shows challenge in keeping native sites undisturbed[xii], December 10, 2015

Interestingly, ice plant, for instance, protects the eroding coastline and discourages foot traffic.

This schizophrenic state policy about "natives" is lacking in morality and truth.

> "I was told that my job was to restore things," [Andrea Woolfolk] says. "You stand out in a field of weeds and wonder 'What do I restore it to?'"... She started gathering historical maps, photos, journals and newspaper articles to get an idea of what the land looked like in the past. That gave her clues as to what plants or habitats might do well in the future.
> To Restore Elkhorn Slough, Ecologists Look to 19th Century,[xiii] April 16, 2014

Andrea Woolfolk and CDFW want to "restore things." Then they should restore the native people to their land.

The nativist movement has its roots in racial purity movements

> "Everywhere we encounter seeds which represent the beginnings of parasitic growths which must sooner or later be the ruin of our culture...(O)ne of the most potent principles of Nature's rule: the inner segregation of the species of all living beings on this earth." -- Adolph Hitler, 1943[xiv]

This is ideology. What is "our" culture? What is native? This is not science.

Is CDFW engaged in restoration or "obsession"?

> "It could have been a small project," [Andrea] Woolfolk says. "But it's become a bit of an obsession, you might say."
> To Restore Elkhorn Slough, Ecologists Look to 19th Century[xv]

In view of these very serious problems, I request that the Coastal Commission reject the CDFW project and approve my appeal.

Very sincerely,

Nina Beety
Monterey, CA
nbeety@netzero.net

Nina Beety

Documentation previously submitted with my appeal to the Monterey County Board of Supervisors is also considered submitted with this appeal to the California Coastal Commission.

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[i] http://enenews.com/govt-experts-astounding-radiation-levels-measured-fukushima-almost-500000-times-normal-weve-never-anything-close-amazing-7000-km-away-matter-life-death-videos
http://video-archive.ctbto.org/p/100/sp/10000/serveFlavor/flavorId/0_u1s0q1ch/0_ktplaceq.mp4
The original video has been removed; the current one does not have Dr. Ted Bowyer's presentation.

[ii] http://www.nuc.berkeley.edu/RainWaterSampling
Cited in http://enenews.com/radioactive-iodine-131-in-rainwater-sample-near-san-francisco-is-18100-above-federal-drinking-water-standard
Rainwater was apparently not tested for other radioactive elements. The total amount of contamination is unknown.

[iii] http://nadp.sws.uiuc.edu/fukushima/
http://pubs.usgs.gov/of/2011/1277/report/OF11-1277.pdf -- p. 17 Local site is CA66.

[iv] http://www.mercurynews.com/california/ci_29342043/marins-heavy-coastal-fog-could-be-carrying-mercury

[v] http://harpers.org/archive/2015/09/weed-whackers/

[vi] "Although Monsanto scientists had deemed such a development nearly impossible for weeds targeted by the Roundup Ready system, species subjected to prolonged exposure began to adapt and survive even as farmers were harvesting their first bioengineered crops. "It's a disaster," said Benbrook. "As resistant weeds spread and become more of an economic issue for more farmers, the only way they know how to react — the only way that they feel they can react — is by spraying more." It has now become common for farmers to spray three times a season instead of once, and Benbrook estimates that the extra doses of herbicide will add up to 75,000 tons in 2015.
All of which brings us to horseweed, or mare's tail, a plant native to North America and once highly prized for its medicinal qualities. It has hairy stems, and grows about four feet tall. A nuisance in corn and soybean fields, it has naturally been a glyphosate target. But in recent years, farmers have been encountering a new kind of mare's tail: a superweed produced by years of glyphosate treatment. Not only does it refuse to die when drenched with four times the recommended dose but it appears to gain strength from the experience, growing up to eight feet tall, with stems thick enough, according to one farmer, to "stop a combine in its tracks."
In other words, a very alien invasive, made right here in America."
http://harpers.org/archive/2015/09/weed-whackers/

[vii] Here are a few examples. When agency researchers wanted to release a report on EMF carcinogenicity in 1986, citing its probable carcinogenicity, EPA was called to the White House to stop its release. The EPA director fiddled with the report, and many rewrites and delays ensued. http://www.microwavenews.com/news/backissues/m-a01issue.pdf

In response to initial Fukushima fallout, EPA refused to deploy mobile radiation counters to coastal California. UC Berkeley rainwater was 181X federal drinking water limits for Iodine-131 – see above. Yet, the EPA released a statement that there were no levels of concern.
http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/a765bae82e458d3485257857007373a5!OpenDocument. It also discontinued extra testing of water and milk. https://www.baycitizen.org/news/environmental-health/feds-abandon-radiation-monitoring-milk/
In 2013, EPA raised drinking water Iodine-131 limits 27,000% -- to 81,000 piC/liter. As a result, the UC Berkeley results are now far below federal limits.
http://www.forbes.com/sites/jeffmcmahon/2013/04/10/epa-draft-stirs-fears-of-radically-relaxed-radiation-guidelines/
Also, http://enenews.com/watchdog-inexplicable-epa-shut-down-fukushima-radiation-monitoring-after-finding-high-levels-radiation-drinking-water

Recently, an EPA manager contaminated the entire floor of his office building with still unknown chemicals. The EPA refuses to disclose the chemicals and did not allow testing until many months after the event, and employees are still having health

impacts. The manager was subsequently promoted to Office Director in EPA's Office of Emergency Management. http://www.peer.org/news/news-releases/mystery-evacuation-highlights-inept-epa-crisis-management.html

[viii] http://harpers.org/archive/2015/09/weed-whackers/
http://www.globalresearch.ca/hillary-clinton-pushes-gmo-agenda-hires-monsanto-lobbyist-takes-huge-dollars-from-monsanto/5450985
http://www.counterpunch.org/2015/12/31/a-secret-history-of-the-monarch-how-the-biotech-industry-conspired-to-knock-off-one-of-the-worlds-rarest-butterflies/
http://sustainablepulse.com/2013/07/13/us-military-tracks-gmo-campaigners-and-independent-scientists-english-excluusive/

[ix] http://www.gmwatch.org/news/latest-news/87-news/archive/2015/16347-new-revelation-about-glyphosate-cancer-link

[x] http://www.globalresearch.ca/how-monsantos-glyphosate-attacks-our-core-cellular-functions/5502566
Also, http://articles.mercola.com/sites/articles/archive/2013/06/09/monsanto-roundup-herbicide.aspx

[xi] These discoveries, as well as those by other researchers, are detailed in The Secret Life of Plants by Peter Tompkins and Christopher Bird.

[xii] http://www.montereycountyweekly.com/news/local_news/pacific-grove-project-shows-challenge-in-keeping-native-sites-undisturbed/article_e4fa03ae-9ec0-11e5-97d6-5766d9a638ee.html

[xiii] http://blogs.kusp.org/features/2014/04/16/slough-landscaping/

[xiv] Cited in http://ezinearticles.com/?Attack-of-the-Killer-Environmentalists&id=961957
[xv] Ibid.

WEED WHACKERS

Monsanto, glyphosate, and the war on invasive species

By Andrew Cockburn

On a Friday evening in January, a thousand people at the annual California Native Plant Society conference in San Jose settled down to a banquet and a keynote speech delivered by an environmental historian named Jared Farmer. His chosen topic was the eucalyptus tree and its role in California's ecology and history. The address did not go well. Eucalyptus is not a native plant but a Victorian import from Australia. In the eyes of those gathered at the San Jose DoubleTree, it qualified as "invasive," "exotic," "alien"—all dirty words to this crowd, who were therefore convinced that the tree was dangerously combustible, unfriendly to birds, and excessively greedy in competing for water with honest native species.

In his speech, Farmer dutifully highlighted these ugly attributes, but also quoted a few more positive

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Photographs of eucalyptus trees in California by Chad Ress

remarks made by others over the years. This was a reckless move. A reference to the tree as "indigenously Californian" elicited an abusive roar, as did an observation that without the aromatic import, the state would be like a "home without its mother." Thereafter, the mild-mannered speaker was continually interrupted by boos, groans, and exasperated gasps. Only when he mentioned the longhorn beetle, a species imported (illegally) from Australia during the 1990s with the specific aim of killing the eucalyptus, did he earn a resounding cheer.

California native-plant partisans are a committed lot, and not only in their dislike of eucalyptus trees. Many of them are influential in local government, and they yearn to restore the treeless "native" grassland that greeted the first European settlers of the Bay Area in 1769. (For centuries, Native Americans had cleared the trees to facilitate hunting.) Thus the romantic Monterey cypress is a frequent target for the chain saws of the San Francisco Recreation and Parks Department—even though two small stands in Monterey, just fifty miles south, are cherished and protected as natives. The cypress is not the only item on the nativist hit list. Over the next few years, more than 450,000 trees in Oakland, Berkeley, and neighboring areas are due to be destroyed in the name of "wildfire-risk reduction."

Defining "native" and "invasive" in an ever-shifting natural world poses some problems. The camel, after all, is native to North America, though it went extinct here 8,000 years ago, while the sacrosanct redwood tree is invasive, having snuck in at some point in the past 65 million years. The National Invasive Species Council defines the enemy as "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health." But the late, great evolutionary biologist Stephen Jay Gould dismissed such notions as "romantic drivel." Natives, he wrote, are simply "those organisms that first happened to gain and keep a footing," and he ridiculed the suggestion that early arrivals "learn to live in ecological harmony with [their] surroundings, while later interlopers tend to be exploiters."

Even so, anti-invasive ideology is prevalent across the country, from university biology departments to wildlife bureaucracies to garden clubs. In Virginia, where I spend part of my time, a nice lady from the Virginia Native Plant Society told me that her idea of a truly natural landscape was the one viewed by the Jamestown settlers in 1607. To that end, she sternly urged me to uproot my yellow-blossomed forsythia (of Balkan origin) and replace it with a "good native shrub." In Texas, George W. Bush used to devote much of his presidential vacation time to destroying the tamarisk trees—reviled Eurasian imports—that grew on his ranch. Many states maintain invasive-plant councils (and sometimes exotic-pest-plant councils) to monitor and eradicate alien invaders. Last year, the North Carolina Invasive Plant Council gave its annual Certificate of Excellence to two forest rangers who had detected a small patch of cogongrass—an invasive unwittingly imported from Asia in packing crates, which the Vietnamese call "American weed," because it spread on land defoliated by Agent Orange.

As it happens, an erstwhile supplier of Agent Orange, the Monsanto Company, also manufactures America's most popular remedy for cogongrass: glyphosate. The active ingredient in Monsanto's Roundup and many other weed killers, glyphosate is the weapon of choice for battling all sorts of invaders. A 2014 study by the California Invasive Plant Council found that more than 90 percent of the state's land managers used the compound, which is particularly recommended as a slayer of eucalyptus trees. Discussing *Phragmites australis*, the reed found in wetlands throughout the country, Massachusetts conservation officials similarly tout this "effective" weed killer. Pennsylvania urges glyphosate's deployment against purple loosestrife, while Illinois recommends it for Japanese knotweed. The Louisiana Department of Wildlife and Fisheries prescribes it for cogongrass but warns that "multiple applications for full control" may be required.

This anti-invasive mania is not merely a local phenomenon. It is the official position of the federal government, as expressed by the State Department, that "invasive alien species pose one of the most serious threats to our environment, affecting all regions of the United States and every nation in the world." In February, National Invasive Species Awareness Week was celebrated in Washington, complete with a reception on Capitol Hill. Last year, the federal government spent more than $2 billion to

fight the alien invasion, up to half of which was budgeted for glyphosate and other poisons.

That's small change, nativists argue, when measured against the damage such interlopers inflict on the national economy. The Department of the Interior claims that the annual tab is $120 billion. But this number comes from a 2005 report by David Pimentel, an ecologist and scholar at Cornell, whose dislike of aliens apparently extends to the human variety, as evidenced by his public opposition to both legal and illegal immigration. Pimentel extrapolated at least some of his findings from such dubious assumptions as the dollar value of grain consumed by each rat in the United States. In an earlier paper, he concluded that cats were costing us $17 billion every year, after calculating that our furry (and, in his view, non-native) friends kill an annual 568 million birds, and arbitrarily valuing each bird at $30.

On close examination, other examples of the damage said to be caused by exotic invaders look no less questionable. The supposedly supercombustible eucalyptus, for example, survives fires that consume surrounding plant life—and rather than unfairly appropriating water, the tree actually irrigates soil by absorbing moisture from the coastal fogs through its leaves and funneling it out through its roots. (Though still cited as the prime culprit in the devastating 1991 Oakland firestorm, the eucalyptus was in fact cleared of responsibility in a FEMA report.) Monarch butterflies belie its reputation for repelling wildlife, the eucalyptus being their favored wintering abode in California.

As for the tamarisk, it consumes no more water than the beloved cottonwood, native to the Southwest. Nor, contrary to rumor, is it inhospitable to other species, as certified by the endangered southwestern willow flycatcher, which delights in roosting amid the tamarisk's foliage. According to Matthew Chew, a historian of biology at Arizona State University, the tree's sorry reputation dates to a ploy during the 1940s by a local mining corporation, whose operations required enormous quantities of river water—which had already been allocated to local farmers and other businesses. The solution was to generate studies demonstrating the heinous quantities consumed by the thirsty tamarisk. The destruction of the trees would theoretically free up huge quantities of "new" water in the rivers, which could then be used by the selfsame mining corporation.

Then there is the zebra mussel. This immigrant from the Caspian Sea is a perennial target of the nativists, thanks to its tendency to reproduce in vast numbers, encrust jetties, clog water-intake pipes, and crowd out God-fearing American mussels. But zebra mussels have successfully filtered pollution in the notoriously filthy Lake Erie and other waterways, thus promoting the revival of aquatic plants. The mussel also feeds a growing population of smallmouth bass and lake sturgeon.

THE DREAM OF ERADICATING THE INTERLOPER IS INTERTWINED WITH A FANTASY OF RESTORING THE "ORIGINAL" LANDSCAPE

It is the common reed, however, that has inspired one of the most determined and dubious campaigns of extermination. Phragmites is accused of robbing other plants, fish, and wildlife of essential nutrients and living space. Delaware has responded by spraying and respraying on an annual basis a 6,700-acre expanse of the Delaware River estuary with thousands of gallons of glyphosate-based weed killer. In 2013, locals in the Hudson River community of Piermont, New York, discovered a plan to destroy a 200-acre reed marsh fronting the town. Outraged, they fought back. "We love the marsh," an indignant Marthe Schulwolf, who is active in opposing the scheme, told me. "It's beautiful, a living environment, with lots of wildlife, and it protected us from the Hurricane Sandy storm surge." The townspeople were especially alarmed to learn that the state's "toolbox" for eradication included heavy spraying of herbicides—glyphosate being the customary choice—right next to two playgrounds.

As usual, the nativist dream of eradicating the interloper is intertwined with a fantasy of restoring the landscape to its "original" condition. The common reed has also covered vast stretches of the New Jersey Meadowlands, to the irritation of nativists who yearn for the return of the original cordgrass. Peter Del Tredici, formerly a senior research scientist at Harvard's Arnold Arboretum, points out that the New Jersey Turnpike bears much of the blame: by blocking tidal flows, inimical to phragmites, it has allowed the reed to flourish. Ripping out the highway would bring back the cordgrass soon enough. "Meanwhile," he adds, "there are over five hundred landfills in this area that are leaking nitrogen and phosphorus, and phragmites is actually cleaning the site up." In any case, he said, the very idea of "re-creating a lost landscape is an impossibility, because the conditions under which these landscapes evolved no longer exist. The world is a totally different place as a result of human activity. There's no going back in time."

Mark Davis, a professor of biology at Macalester College and a frequent critic of anti-invasive hysteria, put it more pungently. "It's the same perspective as ISIS wanting to re-create the seventh-century caliphate," he remarked. "It's ecological fundamentalism, the notion that the purity of the past has been polluted by outsiders." Far from crowding out native species, he argued, invasives tend to move into areas that have been ravaged, or at least disturbed, by human activity. They are, in other words, a symptom, not a cause. Cogongrass is one striking example, but the same pattern recurs with many vilified species. Ailanthus, a salt-friendly seaside tree from China, spread inland from the East Coast along the fringes of America's interstates, tracking the salt religiously spread by highway departments during winter snowstorms.

If the anti-invasive movement rests on such debatable foundations, why has it flourished in this country, winning endorsement from activists, local, state, and federal bureaucracies,

and respected academics? It's not as though hostility to newly arrived plant species has been a great American tradition.[1] In California, the eucalyptus was once universally cherished for its graceful and colorful appearance in a land often devoid of trees—indeed, during the 1870s, it was planted by the hundreds of thousands. A century ago, the tamarisk was promoted by the U.S. Army Corps of Engineers as an ideal means to prevent soil erosion in the Southwest. Even kudzu was once hailed as the "Lord's indulgent gift to Georgians": government nurseries grew millions of seedlings and distributed them to farmers as a restorative for depleted soil.

Nowadays, the notion that plants and animals have a "natural" habitat, from which outsiders must be expelled, has taken firm hold in the United States—first among a cadre of biologists, then in the media, and ultimately at the highest levels of the federal government. What happened? David Theodoropoulos, a California naturalist and seed merchant and the author of *Invasion Biology: Critique of a Pseudoscience*, is blunt about what he sees as a deadly inversion of environmental priorities. "Thirty years ago," he told me, "the greatest threats to nature were chain saws, bulldozers, and poisons. Now the greatest threats are wild plants and animals. And what do we use to fight them? Chain saws, bulldozers, and poisons. Who does this serve?"

Retracing some recent history may help to answer his question. During the Reagan era, when environmentalists were still imbued with the spirit of Earth Day, nobody worried about invasive species. Instead, well-organized, militant groups were busy fighting chemical pollution, nuclear power, shale-oil drilling, logging devastation, and other corporate onslaughts. According to Jeffrey St. Clair, a historian of environmentalism, "People like [Reagan's interior secretary] James Watt definitely mobilized the movement, and so the corporations weren't really able to get all that they wanted."

By 1992, the movement had a self-appointed standard-bearer in the political arena: Senator Al Gore of Tennessee. That year he published his best-selling *Earth in the Balance*, in which he manfully vowed to bear the political costs of his environmental crusading:

> Every time I pause to consider whether I have gone too far out on a limb, I look at the new facts that continue to pour in from around the world and conclude that I have not gone far enough.... The time has long since come to take more political risks—and endure more political criticism—by proposing tougher, more effective solutions and fighting hard for their enactments.

These uplifting sentiments were not always matched by actions. Critics noted Gore's championship while in Congress of the $8 billion Clinch River breeder-reactor project, riddled with fraud and bribery. They also pointed out his legislative maneuvers on behalf of the Tellico Dam, on the Little Tennessee River, a $100 million boondoggle denounced by David Brower, the founder of Friends of the Earth, as "the beginning of the end of the Endangered Species Act." Following the 1992 election, former Gore staffers moved into key environmental posts at the EPA and elsewhere. There they would benefit would-be polluters such as Disney (which had just been fined for dumping sewage in the Florida wetlands) and food processors (irked by a 1958 ban on carcinogens, soon to be repealed under the 1996 Food Quality Protection Act).

Nevertheless, as far as the public was concerned, nature had no more stalwart defender than Gore. So when Senator Bob Graham of Florida wrote to him in June 1997 about "the growing environmental threat posed by alien (non-indigenous) invasive species," he received an enthusiastic response. In fact, the issue was already on Gore's mind. A few weeks earlier, he had received a letter signed by a large group of biology professors, including the eminent scholar and ant expert E. O. Wilson, warning that "a rapidly spreading invasion of exotic plants and animals not only is destroying our nation's biological diversity but is costing the U.S. economy hundreds of millions of dollars annually." Among the ominous examples cited were the zebra mussel and the invasion of San Francisco Bay by a new exotic species "on the average of once every twelve weeks."

Gore sprang into action. He reassured Graham that Clinton's circle of scientific advisers had already established a Biodiversity and Ecosystems Panel, which would "be considering the issue of invasive species and will report their recommendations at the end of the year." The panel's chair, he noted parenthetically, was Peter Raven.

The official White House biography of Peter Raven listed him as the director of the Missouri Botanical Garden, and noted that he held a professorship at Washington University in St. Louis. That description failed to convey the full reach of his power and prestige as America's leading botanist. Wade Davis, an ethnobotanist at the University of British Columbia, describes Raven as a "total force of nature. He took a staid Midwest botanical garden and put it on steroids, turning it into the greatest institution of its kind on earth." A former president of the American Association for the Advancement of Science, *Time* magazine Hero for the Planet, chairman of the National Geographic Society's Committee for Research and Exploration, Raven was (and is) a hugely influential figure, with a network that extends through academic, government, and corporate bureaucracies.

He originally made his name in scientific circles with a 1964 paper, "Butterflies and Plants: A Study in Coevolution," written with Paul Ehrlich, a biologist later famous for the dire (and largely unfulfilled) predictions sketched out in his 1968 bestseller, *The Population Bomb*. Like Ehrlich, Raven tended

[1] *Overseas, it was another matter, notably in Hitler's Germany. Nazism's view of non-native plants was consistent with its view of non-native humans. "As with the fight against Bolshevism, in which our entire Occidental culture is at stake, so with the fight against this Mongolian invader, in which the beauty of our home forest is at stake," wrote a team of German biologists in 1942 regarding* Impatiens parviflora, *a small plant native to Asia. "In advocating native plants along the Reichsautobahnen," wrote Stephen Jay Gould, "Nazi architects of the Reich's motor highways explicitly compared their proposed restriction to Aryan purification of the people."*

to express a gloomy view of the planet's prospects. He regularly lamented the wholesale loss of our biodiversity, brought about by the accelerating extinction of plant and animal species. "We're over the mark anyway in preserving the world's sustainability," he told me in a recent conversation. "We've passed the point at which we can really do that effectively."

Raven's panel set to work and released its report, *Teaming with Life: Investing in Science to Understand and Use America's Living Capital*, in March 1998. The report took a bearish view of the ecological future, sounding an apocalyptic note on the first page:

> Collectively, all human beings, including Americans, are playing a crucial role in the sixth major extinction event to occur in the course of more than three billion years of life on Earth.... During the history of the United States, more than 500 of its known species have been eliminated (half of these since 1980) by various causes, including destruction of habitat by human activities or invasive species.

Although the document repeatedly stressed the virtues of biodiversity, it showed little sympathy for "invasive species such as killer bees, zebra mussels, fire ants, and the Mediterranean fruit fly," which were supposedly devastating the natural environment and posing "threats to the health of our human population." The zebra mussel, receiving no thanks for its heroic pollution-control efforts, was singled out for obloquy, having "cost more than $5 billion just to clean out pipes clogged by extremely densely clustered populations." (A decade later, a careful study by a team of Cornell scientists assessed zebra-mussel damage at one twentieth of that amount over fifteen years.)

Amid the gloom, however, the report identified a ray of hope: genetically modified organisms (GMOs). "It is anticipated that the U.S. market for seeds of genetically modified crops will grow to $6.5 billion during the next ten years," it noted, "and the annual production value of the plants derived from those seeds will be many times that amount."

The Monsanto Company could not have put it better. This was not surprising, since Raven (who retired in 2010) and Monsanto were close, both geographically and financially. The Missouri Botanical Garden was located just a few miles from Monsanto headquarters in St. Louis, and it owed much of its explosive growth to the beneficence of the corporation, which was in the process of changing its public identity from a chemical manufacturer and purveyor of Agent Orange to a "life sciences company"—one heavily invested in GMOs. In April 1996, Monsanto CEO Robert Shapiro joined Raven to break ground for the Monsanto Center, a four-story structure designed to house the garden's unique collection of botanical books and dried plants. Monsanto had contributed $2 million toward the center's construction, and had also donated the land and $50 million for the Danforth Plant Science Center, another GMO-intensive research facility.

"Monsanto loved Raven," a former senior executive at the company told me. "They were always showing off the Missouri Botanical Garden, bringing important visitors down to meet him, having him give tours, talks. He was definitely our showpiece."

For his part, Raven spoke publicly about the virtues of GMOs. The company's grand scheme was to genetically modify crops—particularly corn, soybeans, and cotton—to render them immune to the glyphosate in Roundup. This would allow farmers to spray weeds without killing the crops. *Teaming with Life* featured a Monsanto photograph of a flourishing bioengineered plant next to a pathetic nonengineered plant obviously about to expire. "Major companies will be, *are*, a major factor if we are going to win world sustainability," Raven told an interviewer in 1999. "There is *nothing* I'm condemning Monsanto for." (In his conversation with me, Raven defended his former patron even more stoutly, noting Monsanto's many civic philanthropies and absolving the company of any ill intent: "They obviously have no interest in poisoning everybody or doing something bad.")

I asked Raven whether his efforts to protect the natural world didn't clash in some way with his support for something very unnatural: GMO technology. "What's natural anymore?" he

replied. "If we're going to play God, we might as well be good at it."

While Monsanto played God during the 1990s, the Clinton Administration had its back—a policy consistent with its corporate-friendly approach to environmental issues. When, for example, the French balked at allowing GMO corn into their country, the president, the secretary of state, the national-security adviser, and assorted U.S. senators pleaded Monsanto's cause. (The French finally caved when Gore himself phoned the prime minister to lobby on the corporation's behalf.)[2] In addition, Washington's revolving door whirled many Clinton Administration officials onto the Monsanto payroll, while the president's committee of science and technology advisers included Virginia Weldon, the corporation's senior vice president for public policy.

The Raven panel's recommendation to join battle with invasives got rapid traction. "The invasion of noxious weeds has created a level of destruction to America's environment and economy that is matched only by the damage caused by floods, earthquakes, wildfire, hurricanes, and mudslides," cried Interior Secretary Bruce Babbitt when the report was released. Within a year, Clinton signed Executive Order 13112, creating the National Invasive Species Council "to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause." Among the founding members of the council's advisory committee was Nelroy E. Jackson, a product-development manager and weed scientist for Monsanto who had helped to develop Roundup formulations specifically for "habitat-restoration markets"—that is, for eradicating invasives.

For all Monsanto's talk of "life sciences," the company's profits, especially in those days, rode on glyphosate. According to Tao Orion's book, *Beyond the War on Invasive Species*, the compound was originally invented to clean dishwashers and other appliances. Then someone noticed that it destroyed any plant it touched. By the late 1990s, Monsanto's Roundup revenues were growing at 20 percent a year, and the compound was duly revered inside the corporation. As the former company executive put it to me: "Roundup was God at Monsanto."

Such divine status was assured by its symbiotic relationship with Monsanto's bioengineered corn and soybeans. The strategy worked. Farmers were planting GMO crops in ever-increasing amounts—from just over 4 million acres worldwide in 1996 to 430 million in 2013.

The results of this exotic intervention were not so positive, however, for Raven's treasured biodiversity. The larva of the monarch butterfly, for example, feeds exclusively on milkweed, a plant that glyphosate is tremendously effective at killing: unlike other herbicides, it attacks the milkweed's roots. As the rain of glyphosate increased, surpassing 141,000 tons on U.S. crops in 2012, the butterfly's food supply dwindled to the vanishing point. In 1995, at the dawn of the Roundup Ready era, a billion monarchs fluttered over America's fields; by 2014, the number had fallen to 35 million, and there was talk of declaring the butterfly an endangered species.

Raven remains optimistic about the monarch, citing Monsanto's "very exciting" plan to foster milkweed growth in noncultivated areas. Such natural oases, however, are few and far between in the Corn Belt. Those that remain are likely to host other invasive plants, such as garlic mustard, denounced as a "serious invader from the east" by Iowa State University, which inevitably recommends "spot applications" of glyphosate as a remedy.

Meanwhile, the growth curve in glyphosate use has steepened, thanks to a practice that began in 2004. Late in the season, many farmers are now spraying the compound on crops that are *not* bioengineered to resist it, in order to kill them off and produce artificially early harvests.

"You can imagine the residue levels on the damn wheat," said Charles Benbrook, an agricultural economist at Washington State University. "If you buy whole-wheat bread, the glyphosate will be ground up with the whole-wheat kernel and it will be part of the flour. It's a very high exposure. When they make white flour, the bran gets separated out and is used in the food supply in other places. That bran will have three or four times the concentration of glyphosate, because that's where the residues are lodged. It's insanity."

Over the years, there have been repeated allegations that glyphosate is dangerous for humans—charges vehemently denied by Monsanto and its friends in high places. "Table salt and baby shampoo are more toxic, or as toxic, as glyphosate," Rand Beers told *60 Minutes* in 2001. Beers, George W. Bush's assistant secretary of state for international narcotics, was defending the U.S.-funded spraying of a glyphosate-based compound on millions of acres in Colombia as part of an effort to wipe out coca plantations. Despite Beers's dutiful denials, however, the mixture turned out to be a lot more dangerous than baby shampoo, afflicting the population with painful rashes and other ailments. It also did a fine job of wiping out the vegetables and poultry that made up the local food supply, while often failing to kill the coca plant, its intended target.

This disaster made no difference. Nor did a 1985 EPA study suggesting that glyphosate might give humans cancer, a finding that the EPA reversed in another study six years later. In 2013, a French report on the compound's carcinogenic effect on rats was withdrawn in the face of an intense lobbying effort by the company. Through thick and thin, Monsanto stuck to its mantra: in the words of a company spokesperson, "All labeled uses of glyphosate are safe for human health and supported by one of the most extensive worldwide human health databases ever compiled on an agricultural product."

Then came a massive speed bump. This past March, seventeen scientists met in Lyon, France, under the auspices of the International Agency for Research on Cancer, an arm of the World

[2] *For years, Monsanto's MON810 corn was the only GMO crop cleared for cultivation within the European Union. In May 2014, however, the French parliament reversed its earlier policy and banned the crop as a threat to the environment.*

Health Organization, to assess the carcinogenic potential of several chemicals. The group was led by Aaron Blair, an internationally renowned epidemiologist and the author of more than 450 scientific papers, who spent thirty years at the National Cancer Institute. Among the chemicals they evaluated was glyphosate.

As Blair explained to me, the group reviewed three kinds of data: lab tests on animals, epidemiological studies on humans who had been repeatedly exposed to glyphosate, and "mechanistic" analyses of the ways in which the compound could cause cancer.

The animal studies, Blair said, "found excesses of rare tumors." Absent glyphosate exposure, the tumors "are *really* rare. They almost never just occur." The studies on human beings, conducted in the United States, Canada, and Sweden, pointed to an equally grim conclusion. "They showed a link between people who used or were around glyphosate and an increased risk of non-Hodgkin's lymphoma. Different studies, in different places, suggested that they might go together."

According to Blair, there were good grounds to declare that glyphosate definitely causes cancer. This did not happen, he said, because "the epidemiologic data was a little noisy." In other words, while several studies suggested a link, another study, of farmers in Iowa and North Carolina, did not. Blair pointed out that there had been a similar inconsistency in human studies of benzene, now universally acknowledged as a carcinogen. In any case, this solitary glitch in the data caused the group to list glyphosate as a probable (instead of a definite) cause of cancer.[3]

The reaction from Monsanto was predictably irate. GMO Answers, a P.R. website put together by the biotech-food industry, featured a host of derisive posts about the study. Sympathetic journalists went to bat on behalf of the lucrative toxin. Hugh Grant, Monsanto's chairman and CEO, was curtly dismissive: "It's unfortunate that junk science and this kind of mischief can create so much confusion for consumers."

As it had on previous occasions, the company demanded a retraction of the report. When we talked, it didn't sound as if Blair was likely to do any such thing. "Historically, the same thing happened with tobacco, the same thing happened with asbestos, the same thing happened with arsenic," he said. "It's *not* junk science."

The French government agreed, promptly banning the sale of Roundup by garden stores in response to Blair's report. The Colombian authorities meanwhile halted the coca-spraying program, over U.S. government protests. The program had not been a huge success, of course, given the target plant's remarkable ability to survive the spray.

But unintentional glyphosate resistance is not confined to coca. Although Monsanto scientists had deemed such a development nearly impossible for weeds targeted by the Roundup Ready system, species subjected to prolonged exposure began to adapt and survive even as farmers were harvesting their first bioengineered crops. "It's a disaster," said Benbrook. "As resistant weeds spread and become more of an economic issue for more farmers, the only way they know how to react—the only way that they feel they *can* react—is by spraying more." It has now become common for farmers to spray three times a season instead of once, and Benbrook estimates that the extra doses of herbicide will add up to 75,000 tons in 2015.

All of which brings us to horseweed, or mare's tail, a plant native to North America and once highly prized for its medicinal qualities. It has hairy stems, and grows about four feet tall. A nuisance in corn and soybean fields, it has naturally been a glyphosate target. But in recent years, farmers have been encountering a new kind of mare's tail: a superweed produced by years of glyphosate treatment. Not only does it refuse to die when drenched with four times the recommended dose but it appears to gain strength from the experience, growing up to eight feet tall, with stems thick enough, according to one farmer, to "stop a combine in its tracks."

In other words, a very alien invasive, made right here in America. ■

[3] *When asked about Blair's report, the Monsanto spokesman reiterated that "glyphosate is not a carcinogen" and cited a 2013 EPA study that concluded, "Glyphosate does not pose a cancer risk to humans." He also noted that the I.A.R.C., in its own words, identifies cancer hazards "even when risks are very low with known patterns of use or exposure."*

Elkhorn Slough Ecological Reserve Eucalyptus Removal
Monterey County Coastal Development Permit #PLN100351
Response to appeal. ESNERR staff text appears in blue font

Questions from Brian O'Neill, Coastal Program Analyst, California Coastal Commission

1. The IP has a provision in the Runoff Control Section, which states that "[n]o earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water." Two of the removal sites appear to be directly adjacent to water, the Five Fingers and Hummingbird Island sites. Do you know approximately how far from water the removal sites are?

Following are the distances between estuarine waters and the closest eucalyptus proposed for removal:
Hummingbird Island - approximately 10 meters
South Marsh - approximately 30 meters
Cattail Swale - approximately 40 meters
Five Fingers - approximately 35 meters

2. Our water quality expert believes that the mulching could be a runoff issue. Composting the plant debris next to the slough will invite leaching of the debris during rainfall, which could runoff into the slough. The runoff will tend to be dark in color, and will be high in organic content. We would expect an increase in biological/chemical oxygen demand, leaving less dissolved oxygen in the slough water for native plants and animals.

How intense this effect would be is hard to say. The potential for BOD resulting from the leaching of the chipped plant material may not be an issue in a highly productive system like the Elkhorn Slough, but it depends a lot on circulation of the slough water and how much mixing there is. So it could be ok in one area of the slough and not ok in another. Has your team researched this issue at all or believe that this isn't a cause for concern? Any insight you could provide would be helpful.

Placement of mulched eucalyptus debris where there is no native plant understory is designed to prevent erosion, providing a buffer between rainfall and exposed soil. In our recently published paper on the effects of eucalyptus on biodiversity (Fork et al 2015; attached) we measured the existing eucalyptus litter depth in six local eucalyptus groves. The average extant litter depth was 5 inches, and we found a maximum eucalyptus litter depth of 7.2 inches and a minimum of 3 inches. Given the existing conditions, the proposed mulching to a depth of six inches may not result in a change to runoff.

The Elkhorn Slough Reserve employs a team of scientist who have a strong record of long-term water quality monitoring and publishing water quality research in peer-reviewed journals. Information about the Reserve's long-term water quality monitoring, particularly the effects of nutrients on dissolved oxygen can be found at http://elkhornslough.org/research/eutrophication.htm.
John Haskins, the Reserve's Water Quality Monitoring Scientist, hypothesizes that any nutrient inputs from mulched eucalyptus debris in the Slough would be minimal relative to the much larger inputs from regional agricultural sources, algal growth and resulting biochemical oxygen demand. He suggests that mulching would not "cause any measurable difference relative to [existing conditions] in the slough."

In addition, Kerstin Wasson, the Reserve's Research Coordinator notes that residence time is short (circa a week) and tidal currents/flushing is very strong in the estuarine waters adjacent to the project, so we are not concerned about buildup of organics from the mulch.

Appeal filed by Nina Beety

Summary comment: This project does not conform to the standards set forth in the Local Coastal Plan which is the North County Land Use Plan (LUP).

> This project is consistent with the North County Land Use Plan, which states on 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." This project, overseen by the State Department of Fish and Wildlife (formerly Fish and Game) is designed to removal locally invasive non-native eucalyptus trees in order to restore sensitive plant and wetland habitat on public lands.
>
> The Monterey County Coastal Implementation Plan (Part 2, North County LUP) states that a coastal development permit is not required for "the removal of non-native or planted trees, except where this would be ridgeline tree removal. . .or where the trees are considered to be of significant or landmark status; or [for] the removal of trees planted as part of an orchard or a commercial tree-growing and harvesting operation." Furthermore the LUP allows for the removal of landmark trees, per 2.2.3.6 (Visual Resources, Specific Policies): this section explicitly allows for the removal of landmark trees if done in accordance with LUP sections on Environmental Sensitive Habitats and Agriculture.

Numbered comments:

1. Preservation and protection of visual/scenic resources and viewsheds

> This is emphasized in the LUP, including in Section 2.2 "Visual Resources" as well as Monterey County Zoning Coastal Implementation Plan, 20.36.010.
>
> In its introduction to the "Resource Management" chapter, which includes the "Visual Resources" section, the North County Land Use Plan states "*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. 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.*"
>
> This project is designed specifically to manage and restore the native habitats immediately east of Elkhorn Slough, which have been historically degraded. California state natural resource managers do not generally regard non-native eucalyptus as a "natural" resource. For example, in the newly revised State Wildlife Action Plan (2015, www.wildlife.ca.gov/SWAP/Final), eucalyptus is cited as a key pressure on conservation targets, particularly native grassland, on the central California coast. This project will help to restore and protect the region's native plant communities on local hills and in valleys.

CDFW says the first aerial survey in 1930 showed eucalyptus to be well-established (Response to appeal, #23). That means this project would destroy visual and scenic resources that have existed for at least 100 years and are part of the character of North County and the Elkhorn Slough.

Eucalyptus were planted on today's Reserve lands around the turn of the 20th century primarily as a timber product, not as a visual resource, and groves' ages are highly variable based on logging history. According to the late Bob Bowen, who oversaw Elkhorn Ranch operations for several decades beginning in the 1920s, the eucalyptus groves on the property (site of today's Reserve) were started "during the eucalyptus boom in the early part of the century. They were growing eucalyptus trees all over the country, of the state. They were going to make lumber out of them and everything else. . . ". Mr. Bowen personally found the trees to be "useless, a weed" and the ranch would periodically harvest the trees, supplying wood chips for market in San Francisco (unpublished interviews). Cut trees would resprout, and eucalyptus groves would reestablish themselves after timber harvests. Mr. Bowen's daughter reported that in the largest grove, the eucalyptus "were all cut out about 1970." Based on aerial photos, they appear to have resprouted soon after.

CDFW Negative Declaration:

- p. 16 "[Elkhorn Slough National Estuarine Research Reserve] trails are open to the public and are extensively used. All four sites proposed for eucalyptus removal are easily viewed from the ESNERR public trail system ... Kayaks accessing the main channel of the Slough either from Moss Landing Harbor or Kirby Park off Elkhorn Road have a clear vista of the Reserve east of the main channel."
- p. 17 Long-term Impacts. Once the eucalyptus trees are removed from the project sites, local vistas would change ... Though eucalyptus removal will change the view and could be considered negative by those who enjoy looking at eucalyptus trees, the overall visual effect at the proposed sites will be of a scenic nature, revealing views of Elkhorn Slough and its wetlands, native trees, and other natural resources. Therefore the long-term visual impacts are considered less than significant.

The before and after photographs in the Negative Declaration show the dramatic impact to viewshed and scenic resources from tree removal.

The IS/MND images are designed to accurately depict the views before and after the proposed management actions. Removal of eucalyptus trees is not in conflict with the Coastal Act or LUP. The Coastal Act call for projects to "*protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.*"

Eucalyptus trees, which are native to Australia, are among the most commonly and widely cultivated exotic trees in the world - almost 20 million ha of eucalyptus plantations exist in tropical, subtropical and temperate countries, and in many countries they are the most common and conspicuous nonnative trees (Rejmanek and Richardson 2011). They are not a unique or natural part of the Elkhorn Slough watershed, and they do, instead, sometimes screen or overwhelm the natural and unique California habitats on the Elkhorn Slough Reserve.

This project removes some, but not all, non-native eucalyptus from the Elkhorn Slough Reserve. In some cases, the proposed removal of eucalyptus will reveal scenic views of Elkhorn Slough's coastal wetlands; in other cases, the proposed removal will highlight otherwise obstructed views of native trees and/or shrubs. The LUP specifically calls for "unbroken horizontal lines for continuity" near "low areas adjacent to the sloughs." This project is consistent with that requirement.

North County Land Use Plan: 2.2 VISUAL RESOURCES- p. 30
"Requirements of the Coastal Act of 1976 focus on the protection of scenic resources, particularly those along the coastline. It stresses that any development permitted in scenic areas should be sited and designed to be visually compatible and subordinate to the natural setting."

The eucalyptus groves are part of the natural setting.

Eucalyptus trees were introduced from Australia as timber on the Elkhorn Slough Reserve and are, therefore, arguably not "natural" on the Elkhorn Slough Ecological Reserve. We have prioritized removal of eucalyptus groves where staff biologists have determined restoration will best benefit native understory plants and animals, and will result in views of natural settings on public land, including enhanced views of the slough and its shoreline. We have not proposed removal of trees near the power plant, where eucalyptus trees screen views of industrial infrastructure and large transmission towers, and provide habitat for monarchs and nesting egrets, herons, and cormorants.

p.31
"Particularly susceptible to visual damages due to inappropriate development are the beaches, the dunes, the low areas adjacent to the sloughs, and the ridgelines. All of these areas are highly visible from long distances and from several points; they rely on unbroken horizontal lines for continuity; and they generally are composites of scenic ingredients such as landform, water, and varieties of vegetation. 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."

"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."

"2.2.2 General Policy
1. Views to and along the ocean shoreline from Highway One, Molera Road, Struve Road and public beaches, and to and along the shoreline of Elkhorn Slough from public vantage points shall be protected.
2. The coastal dunes and beaches, estuaries, and wetlands, should be designated for recreation or environmental conservation land uses that are compatible with protection of scenic resources."

CDFW's opinions and project are in conflict with the LUP policies about existing scenic resources. CDFW seeks to remove those scenic resources and radically alter viewsheds. Their project is in direct conflict with the LUP priority on preserving scenic resources.

This project will change views on the Elkhorn Slough Reserve, but these changes will reveal scenic views of the Elkhorn Slough estuary/coastal wetlands from public access points in some areas, and will highlight native plant communities in others. This will create a more natural environment on this State Ecological Reserve, whose mission 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). A similar project completed on the Reserve in the 1990s has resulted in a scenic mosaic of young native oak woodland, coastal scrub, and open grassland growing above estuarine waters, visible from public trails on the Reserve (shown below).

View of former 13 acre eucalyptus grove, on hillside above water, from Elkhorn Slough Reserve trails, 2015. Hillside is now a mosaic of open grassland, coastal scrub and developing coast live oak woodland. Game cameras in the restoration area document frequent use by birds and mammals.

2 . Recognition and protection of North County's distinctive visual character

The LUP states:

2.2.4 Recommended Actions

"1. ... 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 ... No uses or structures should be allowed that are unnecessarily visible or that significantly detract from the scenic character of these visual resources. "

The eucalyptus trees are an intrinsic part of North County. The LUP does not state "the scenic oak-covered hills, ridges, and slopes ... " This paragraph demonstrates the LUP's commitment to the existing landscape's scenic character and accords it great value, considering it essential and that it should be preserved.

The LUP does not identify eucalyptus trees as significant scenic resources, and the Monterey County Zoning Ordinance on protected trees (21.64.260) does not mention eucalyptus. Furthermore, the Monterey County Coastal Implementation Plan does not require a coastal development permit for the removal of non-native trees, with exceptions for landmark or ridgeline trees.

The Elkhorn Slough Reserve includes several unique central California habitats - including estuarine habitat dominated by pickleweed; coast live oak woodlands; coastal scrub; coastal prairie - all of which create a distinct visual character not found anywhere else in the world. On the other hand, eucalyptus are exotic trees widely planted throughout the state and in many other parts of the world; they are not a unique visual resource in our region. In fact, eucalyptus help create a more homogenous view that can be found in many other parts of the world.

The Reserve seeks a Coastal Development Permit as allowed in the LUP under 2.2.3.6 (Visual Resources, Specific Policies), which explicitly allows the removal of landmark trees if done in accordance with LUP sections on Environmental Sensitive Habitats and Agriculture.

3. This project is prohibited by the LUP

"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." Development includes" ... the removal or harvesting of major vegetation other than for agricultural purposes, (p. 135, Glossary: #16 Development)

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.

The definition of development is included from the glossary stating that it includes *"the removal or harvesting of major vegetation other than for agricultural purposes."* However LUP section 2.3.4 Recommended Actions states, "*5. The County should encourage the restoration of sensitive plant habitats on public and private lands. A program to control invasive nonnative 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.*"

LUP Section 2.3.3 Specific Policies, A. Terrestrial Plants and Habitats, *4. Oak woodland on land exceeding 25% slope should be left in its native state to protect this plant community and animal habitat from the impacts of development and erosion. . .*

The removal of invasive non-native eucalyptus sp. to restore oak woodland is supported by the LUP.

2.3.2 General Policies

1. With the exception of resource dependent uses, all development, including vegetation removal, excavation, grading, filling, and the construction of roads and structures, shall be prohibited in the following environmentally sensitive habitat areas:

riparian corridors, wetlands, dunes, sites of known rare and endangered species of plants and animals, rookeries, major roosting and haulout sites, and other wildlife breeding or nursery areas identified as environmentally sensitive.

Left out of Ms. Beety's appeal is the next sentence, "*Resource dependent uses, including nature education and research hunting, fishing and aquaculture, where allowed by the plan, shall be allowed within environmentally sensitive habitats only if such uses will not cause significant disruption of habitat values.*" Monterey County Coastal Implementation Plan (page NC-23) goes further, stating adding "*activities for watershed restoration*" to the list of resource dependent uses to be allowed where appropriate.

The Elkhorn Slough Reserve as both a State Ecological Reserve and National Estuarine Research Reserve is set up primarily to preserve habitat value through stewardship, research, and education, directly in line with resource dependent uses in LUP.

Furthermore, the key policy, which this general policy is nested underneath states:

2.3.1 Key Policy

The environmentally sensitive habitats of North County are unique, limited, and fragile resources of statewide significance, important to the enrichment of present and future generations of county residents and visitors; accordingly, they shall be protected, maintained, and, where possible, enhanced and restored.

This project is specifically designed to enhance and restore unique, limited and fragile native habitats on the Reserve on public land set aside for present and future generation of visitors.

4. Protecting and preserving environmentally sensitive habitat areas and natural resources.

"Environmentally Sensitive Habitat Area: Any area in which plant or animal life or their habitats are either 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. (Coastal Act)" (p. 135, Definitions #22).
"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." (p. 27)

This emphasis on environmentally sensitive habitats and their fragility is stressed throughout the LUP as well as the priority of protection. The proposed activities are serious disturbances over 10 years time with work crews, chain saws and chippers, involving extreme noise disturbance, destruction of vegetation, herbicides applied to each site for 3 years, manual removal over each site for 3 years, and herbicides located on site - see #5 and #8. There is no mitigation listed or possible for these impacts to habitat areas and wildlife.

CEQA has been completed for the proposed project. The project received a Notice of Determination in March 2015. It was determined that the project will not have a significant effect on the environment, and mitigation measures were made a condition of approval where needed. All of the issues above are covered in the approved IS/MND.

5. Restricted access to environmentally sensitive habitat areas.

Access is restricted by the LUP to avoid damaging "environmentally sensitive habitats and other sensitive coastal resource areas." - (#6 Public Access p. 111-118)
However, this project involves access for work crews and heavy machinery for 10 years. The machinery includes "cranes and other equipment (brush chippers, small tractor, chip truck, bucket truck, grapple loader truck)" (CDFW Neg Dec, p. 17). This project actually intends to create damage. This is in violation of the LUP.

Access roads to all proposed removal sites are already in existence and used by work vehicles currently. Vehicles and machinery used in tree removal operations will be operated in accordance with all approved mitigation measures in the IS/MND to a less than significant impact.

6. Oak woodland as high fire potential.

The LUP states that oak woodlands have a high fire potential and need a fuel reduction program. Eucalyptus trees, on the other hand, are not mentioned in the LUP as a special fire hazard or high fire hazard. CDFW says CalFire designates eucalyptus trees as a high fire hazard, but does not mention the designation of oak woodlands. David Maloney, retired firefighter and expert on the Oakland-Berkeley fire investigation panel, has lengthy information about the fire resistance of eucalyptus.

This does not seem relevant to the CDP application. However, Chris Orman, Fire Chief of the North County Fire Protection District of Monterey County wrote a letter of support for the proposed eucalyptus removal project, attached. He cites fire challenges locally due specifically to eucalyptus trees and urges the removal of eucalyptus on the Elkhorn Slough Reserve. He writes, “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.”

7. Freshwater ponds must be supplied with water
"2.5.2 General Policies
4. Adequate quantities of water should be maintained instream or supplied to support natural aquatic and riparian vegetation and wildlife during the driest expected year."

CDFW is planning an inappropriate and damaging work-around. It should be seeking compliance with the LUP. Water must be supplied to these ponds. It is the responsibility of humans to maintain them, not to remove trees.

Natural water supplies to freshwater habitat in the Elkhorn Slough watershed have been highly modified by people in the last 150 years. Groundwater overdraft for agriculture and reclamation have had perhaps the largest impacts on local freshwater habitats, resulting in significant losses. Eucalyptus have undoubtedly played a smaller role, but on the Elkhorn Slough Reserve they have ongoing impacts. On the Reserve they grow uphill of one of only 22 known breeding ponds for the endangered Santa Cruz long-toed salamander (SCLTS).

Removing eucalyptus trees here is predicted to help with pond water levels and SCLTS upland habitat. According to the California Invasive Plant Council's 2015 eucalyptus assessment "the high water consumption of *E. globulus* is well known and eucalyptus species have been used by development agencies to drain swampy areas." In 2006, UC Santa Cruz researchers sampled gas

exchange in Elkhorn Slough Reserve oaks and eucalyptus (unpublished data). They found that the sampled eucalyptus transpired twice as much as the sampled oaks, suggesting that eucalyptus use significantly more water than native oaks in our watershed. Additionally, Reserve surveys found fewer native amphibians under eucalyptus than under coast live oaks (Fork et al 2015). Researchers in Santa Cruz (B. Sinervo, unpublished data) also found that SCLTS was significantly more abundant in willow and oak/pine woodlands than eucalyptus. This project is designed to help supply water to the Elkhorn Slough's SCLTS breeding pond and to restore adjacent upland habitat that would benefit native and endangered amphibians.

8. Highly toxic herbicides proposed

The LUP discusses negative impacts to the slough from pollution and hazardous run-off in 2.5 Water Resources: Water Quality. It encourages restoration of degraded and damaged areas to protect against these impacts. 2.3.3.B8 prohibits "toxic substances" from entering the estuarine system. Hazardous herbicides will increase pollution and damage to the Slough's fragile environment and wildlife, with rain further carrying them into the system.

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. Elkhorn Slough Reserve staff are required by law to follow directions on herbicide labels and conditions as prescribed by CDFW's IPM unit. For glyphosate and triclopyr ester, these include herbicide application setbacks from aquatic features, both fresh and tidal, a prohibition on applying herbicide if rain is forecast within the following 24 hours, and a prohibition on spraying if conditions would lead to aerial drift - these rules are in place to prevent run-off or offsite movement of herbicide. Our CDFW Pest Control Advisor is Joel Trumbo, who recently served as one of two an Expert Advisors on the newly released "Best Management Practices (BMPs) for Wildland Stewardship: Protecting Wildlife When Using Herbicides for Invasive Plant Management" (California Invasive Plant Council 2015: www.cal-ipc.org). The Elkhorn Slough Ecological Reserve, as both an Fish and Wildlife Ecological Reserve and part of the National Estuarine Research Reserve System, is dedicated to the protection and conservation of coastal waters and wildlife, and our herbicide use is designed with these goals in mind.

CDFW plans to us~ Roundup Pro (active ingredient glyphosate), R-11, Garlon 4 (active ingredient: triclopyr ester) with 70% Hasten. . . . ..
Glyphosate:

- Glyphosate has now been classified a Class 2A carcinogen (probable).CalEPA plans to list Roundup which contains Glyphosate as a carcinogen.
- Glyphosate does not biodegrade, but bioaccumulates in the environment, impacting all species and their offspring.
- It causes genetic damage.
- Round Up 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, becoming superweeds, which creates greater problems. Using herbicides begins a downward process, requiring more removal and disruption, not less.

Glyphosate is showing up in human breast milk and urine, even in those who eat only organic produce. Otters, seals, and other animals in the slough could be similarly impacted.

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 Ill (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 ... Triplopyr ... [is] an order of magnitude *[10 times[* 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 cont ained detectable triclopyr."

The use of glyphosate and triclopyr is legal in California, and Elkhorn Slough Reserve staff (largely myself in the case of herbicide application) comply with all personal protective equipment requirements, and follow best management practices for preventing run-off and off-target exposure. We work closely with CDFW's IPM unit to use a variety of weed control methods in a way that reduces the risk of the development of herbicide resistance.

A simple formula can be used when assessing pesticide hazards: hazard = toxicity X exposure. In other words, hazard can be reduced by reducing exposure. By following labels and procedures, Elkhorn Slough Reserve staff minimize exposure to people, animals, and non-target plants, thereby reducing hazards. The herbicides proposed for this project are both labeled with the word "caution", and LD_{50} values put both in the practically non-toxic to slightly toxic categories. In the case of eucalyptus control, herbicide will be applied by hand directly to cut stumps using a paintbrush or sponge during the dry season. This method results in a minimal amount of herbicide use, and the herbicide will be applied very directly to eucalyptus stumps.

9. Alternative pond-building not proposed

An alternative to the project is constructing new ponds in areas without eucalyptus trees to provide additional habitat for salamanders and frogs.

We do have long term freshwater habitat management and restoration plans as outlined in our draft ESNERR management plan, but this is irrelevant for this CDP permit request.

Works cited

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Cal-IPC. 2015. Best Management Practices for Wildland Stewardship: Protecting Wildlife When Using Herbicides for Invasive Plant Management. Cal-IPC Publication 2015-1. California Invasive Plant Council, Berkeley, CA. Available: www.cal-ipc.org

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From: O"Neill, Brian@Coastal
To: "Andrea Woolfolk"
Subject: RE: Elkhorn Slough Restoration Appeal
Date: Friday, January 22, 2016 10:05:00 AM

Hello Andrea,

Thank you very much for this information and willingness to consider our concerns. This is very helpful. Have you made a determination on which formulation of triclopyr you will utilize for the project?

~Brian

From: Andrea Woolfolk [mailto:amwoolfolk@gmail.com]
Sent: Thursday, January 21, 2016 5:14 PM
To: O'Neill, Brian@Coastal; Watson, Michael@Coastal
Cc: Feliz, Dave@Wildlife; 'Bree Candiloro'
Subject: RE: Elkhorn Slough Restoration Appeal

Dear Brian and Mike,

Attached please find the additional information that we promised:

- Information from our eucalyptus removal management plan, submitted to Monterey County in 2012. This includes information that you asked for, including more staging and scheduling information, and maps of proposed staging areas
- Data from the Reserve's early eucalyptus removal project

We hope that we can make it onto the February agenda. Thank you,

Andrea

From: Andrea Woolfolk [mailto:amwoolfolk@gmail.com]
Sent: Thursday, January 21, 2016 3:40 PM
To: 'O'Neill, Brian@Coastal'; Michael.Watson@coastal.ca.gov
Cc: 'Feliz, Dave@Wildlife'; 'Bree Candiloro'
Subject: RE: Elkhorn Slough Restoration Appeal

Dear Brian and Mike,

I am sending the information we discussed regarding Elkhorn Slough's eucalyptus removal project. While we do not believe that our original proposal raised "substantial issues," we hope that you agree that, by incorporating all of your suggested changes, your agency will allow this ecologically beneficial restoration project to proceed.

After talking to Dave Feliz, our Reserve Manager, and Joel Trumbo, CDFW's Senior Environmental Scientist and Pest Control Advisor, we are comfortable that we can make the following minor changes to the project to address concerns that have been raised by

Commission staff:

- We will not place mulched eucalyptus branches or leaves on the ground within 150 feet water. Mulched material will be placed above the 150 foot buffer, at no more that 6" depth, or it will be hauled offsite. We had originally planned to place mulched material in the project area where there would otherwise be bare ground, but will instead use a mix of native and annual barley seed, coupled with rice straw, as described by our mitigation measure Bio-4. Given that local eucalyptus groves generally have 3-7 inches of leaf litter in place, we did not anticipate that this would represent a change from current conditions; and because tree removal will end the ongoing dropping of eucalyptus leaves directly into Reserve freshwater from adjacent trees, we had anticipated a long term net benefit to water quality. But we can make the change to project plans to address immediate water quality concerns.

- As you have suggested, we will use a glyphosate formulation without POEA surfactant or imazapyr for cut stump treatments. We will experiment with tarping to deprive eucalyptus stumps of light, particularly on trees within 60 feet of freshwater, where CDFW prescriptions prohibit cut stump applications of glyphosate. We will share experiment results with the Coastal Commission, and on our website and/or at regional weed workshops. There is relatively little published information on using tarps for control of blue-gum eucalyptus at a large scale; Horowitz' acacia study and similar work with eucalyptus have involved small plots, and appear to have been short term. Scaling up, both in size and over many years may prove infeasible. Cal-IPC states that tarps should cover not just the stump but also the surrounding ground 3 feet out from the base of the trunk. In its book *Weed Control in Natural Areas in the Western United States*, UC Davis says that the black plastic edges should be sealed with soil, and our understanding is this generally includes trenching around the tree by hand. CDFW and ESNERR staff estimate that tarps would need to remain in place for 3 years or more. This suggests that this method might result in significant soil disturbance at our sites, and we would need more data before assessing its ecological effect and its feasibility on a large scale. In terms of the original herbicide recommendations (as well as for the non-POEA glyphosate mix or imazapyr that we now propose to use) we believe that by following the law and CDFW recommendations the exposure potential of any of these chemicals (herbicides or surfactants) to non-target, adjacent waterways when used in a cut stump treatment is insufficient to cause significant risk to fauna in the adjacent waterways.

I am attaching, as requested, a couple of jpegs of before/after images, from the project IS/MND. I will send more in a minute, without copying everyone, so I don't fill everyone's emails with large files. Bree Candiloro is working from the Reserve today, where the internet is temporarily down this afternoon. As soon as she has internet access we will also forward:

- A map of proposed staging areas
- Information from our eucalyptus removal management plan, submitted to Monterey County in 2012. This includes information that you asked for, including more staging and scheduling information
- Data from the Reserve's early eucalyptus removal project

Because we are proposing changes to the herbicide treatment and placement of mulching, I

have not included an experimental design for mulch treatment or a CDFW 679 form - Pesticide Use Recommendation for the cut stump treatment.

Andrea Woolfolk

From: O'Neill, Brian@Coastal [mailto:Brian.O'Neill@coastal.ca.gov]
Sent: Tuesday, January 19, 2016 11:50 AM
To: Andrea Woolfolk
Cc: Feliz, Dave@Wildlife; Bree Candiloro
Subject: Elkhorn Slough Restoration Appeal

Hello Andrea,

Thank you for meeting with Mike and I last week. Visiting the site was very helpful. I recently noticed that you did not receive an earlier e-mail, found below, that I sent last week. The e-mail bounced back because the files I attached were too large for your server. I believe that Dave did receive the files. If you still need that information and can't get it from Dave, I can send the PDFs individually or perhaps through a drobox or zip file.

Additionally, we received news this morning that a rather large and controversial item will be put on the February Commission agenda. We have been asked to finalize items that need to be heard for February as soon as possible. I requested some additional information during our meeting that we would need rather quickly to resolve our outstanding concerns and get the appeal on for February. If you could let me know how much time you will need to gather the requested information, that will help me gage whether a February date is possible.

I know that you expressed concern about travel and were hoping to get on the February agenda due to its location in Morro Bay. Another option would be the April hearing, which will be held in Santa Rosa. Both options are about a 2.5 hour drive from the slough. This would give us a little more time to gather info and discuss solutions. Please let me know what your preference would be.

Thanks,
Brian

From: O'Neill, Brian@Coastal
Sent: Tuesday, January 12, 2016 4:57 PM
To: 'Andrea Woolfolk'
Cc: Feliz, Dave@Wildlife
Subject: RE: Elkhorn Slough Restoration Appeal

Hello Andrea,

Thank you for the information that you provided regarding the appeal contentions. As I have stated previously, we agree with Reserve staff that Eucalyptus removal is an allowable use and will provide for long-term habitat benefits. We fully support the end goal of the project. However, we still have concerns regarding some of the methods proposed in order to reach that goal. Specifically, the information you have provided does not demonstrate that the proposed use of herbicides is consistent with the LCP. I have provided

a more detailed discussion below and attached numerous documents to help clarify the information that we are seeking.

The Slough is designated an Environmentally Sensitive Habitat Area (ESHA), which provides for the strictest protections available under the Coastal Act. The LCP states that Monterey County sloughs are the "most unique among all of these habitats" and "are also some of the most sensitive." To protect the slough, the LCP implements a general setback requirement of 150 feet from water and 50 feet from riparian vegetation. Additionally, the LCP not only prohibits toxic substances from entering or draining into the estuarine system, but also prohibits development that would *increase the risk* of toxic substances entering the slough. We understand that the selected herbicides are generally legal and that the project incorporates the minimum legal protections that are required for nonaquatic herbicide use, including utilization of a licensed applicator and a 15-foot setback from freshwater features. However, the information you have provided does not demonstrate that these legal minimums are adequate to protect ESHA or are LCP consistent.

Because the project has the potential to adversely impact vitally important ESHA and the LCP contains an outright prohibition of toxic substances entering the estuarine system, our analysis does not begin with whether the selected herbicides are unreasonably dangerous. Our analysis must first demonstrate that all less toxic alternatives are either more environmentally damaging or otherwise infeasible. Although manual removal of resprouts would be the best alternative, we understand that this method would be ineffective and infeasible. We also recognize that stump grinding would cause significant land disturbance and that there are no recognized biological controls for Eucalyptus.

However, the project has not explored the use of light deprivation as a nontoxic alternative to control regrowth. In a peer-reviewed study on removal of acacia, presented at the 9th International Symposium on Environmental Concerns in Rights of Way Management (ISBN:978-1-881956-49-5), found that light deprivation and Garlon 4 both had a 95% effective kill rate, with a cost of $10 per tree using tarps compared to $9.50 per tree using Garlon 4. The study states that this non-toxic method is particularly useful in sensitive riparian zones and within required setback areas. Tarping is also recognized by the California Invasive Plant Council as a feasible Eucalyptus control technique and one of the above-referenced study's authors, licensed arborist Matt Horowitz, has utilized light deprivation for Eucalyptus removal with the same effectiveness. We believe that light deprivation through tarping is a less damaging, feasible, and LCP-consistent alternative to use within the setback area to ensure that toxic substances do not enter the estuarine system as required by the LCP.

Additionally, even if the use of herbicides was necessary, the information provided does not demonstrate that the project utilizes the least toxic formulations available. Again, the LCP provides the highest protections possible against toxic discharge into ESHA. Our analysis is therefore focused first on whether less toxic alternatives are feasible, not whether the selected herbicides are unreasonably dangerous.

With respect to Glyphosate, as stated in our comment letter, the Forest Service study relied upon in the project MND makes a clear distinction between glyphosate formulations that include a POEA surfactant and those that do not. The study concluded that "RoundUp and similar formulations containing POEA surfactants is far greater than the toxicity of technical grade glyphosate, Rodeo, or other formulations that do not contain surfactants." POEA surfactants were found to be particularly more toxic to amphibians and invertebrates. The Forest Service itself, relying on the same study relied upon for this project, does not support the use of POEA surfactants near water. For example, a 2010 Environmental Impact Statement for an invasives removal project concluded that the

"SERA 2003 risk assessment strongly suggests that the use of the more toxic formulations near surface water is not prudent. Therefore, the proposed action has included a 100 ft. buffer for broadcast applications and a 50 foot buffer for spot and hand/select applications for the more toxic formulations of glyphosate." We do not believe that the information provided demonstrates that the glyphosate with POEA surfactants is acceptable within the LCP required setback. Without information demonstrating that Glyphosate with POEA surfactants is less toxic than other formulations, that a less toxic formulation is infeasible, or that a larger setback is infeasible; we will have difficulty supporting the use of the selected glyphosate herbicide within 150 feet of the ESHA.

With respect to triclopyr, the study provided states that there is a distinct difference in toxicity between triclopyr triethylamine salt (TEA or Garlon 3A) and triclopyr butoxyethyl ester (TBEE or Garlon 4). The Environmental Protection Agency in its Reevaluation Eligibility Decision on triclopyr classified TEA practically non-toxic to slightly toxic to birds and estuarine/marine invertebrates; while TBEE was classified as slightly toxic to birds, moderately toxic to highly toxic to freshwater fish and estuarine/marine invertebrates, slightly to moderately toxic to freshwater invertebrates, and *highly toxic to estuarine/marine fish*. Further, the document describes the major degradate of triclopyr, TCP, as both mobile and persistent in the environment and recognizes there is risk of toxic runoff to water bodies. Consequently, Dow Chemical labels Garlon 4 as toxic to fish and recommends that users maintain all provincially mandated buffers from water. Additionally, the Marin Municipal Water District's risk assessment of herbicides states that TBEE is "much more toxic in aquatic settings" than TEA and recommends a 100-foot buffer from streams and 500-foott from active reservoirs. Further, the Forest Service states that "Triclopyr BEE is much more toxic to aquatic organisms than triclopyr TEA" and has recommended a 50-foot buffer from streams. For streams that are considered habitat for threatened and endangered species (T&E Stream), a Department of Energy EIR for vegetation management concluded that "[n]o herbicide of any kind would be used within 100 feet of any T&E Stream. Only non-toxic to slightly toxic (to aquatic species) formulations of Garlon 3A would be used between 100 and 400 feet." Additionally, East Bay Regional Parks in its Berkeley Eucalyptus removal project prohibited all spray application within 60 feet of water and stated that "[w]ithin this 60-foot buffer, herbicides would only be applied directly to stumps, and use of herbicides would be restricted to Garlon 3A or another triclopyr formulation approved for use near water." In sum, multiple agencies have chosen to the less toxic TEA formulation and have utilized much larger setbacks in order to protect aquatic habitats. We therefore do not believe that the information provided thus far demonstrates that the use of TBEE is acceptable within the LCP required setback. Without information demonstrating that TBEE is less toxic than TEA formulations, that using a less toxic formulation is infeasible, or that a larger setback is infeasible; we will have difficulty supporting the use of the selected triclopyr herbicide within 150 feet of the slough.

I would like to reiterate that we do fully support limiting the spread of Eucalyptus and restoring native oak habitat. We may also be able to support the limited use of herbicides adjacent to the slough, if necessary. However, the information provided thus far does not demonstrate that the selected herbicides and 15-foot buffer from freshwater is consistent with the LCP.

Thank you very much for considering our concerns and I look forward to discussing these issues with you and your team.

~Brian

From: Andrea Woolfolk [mailto:amwoolfolk@gmail.com]
Sent: Monday, January 11, 2016 11:08 AM
To: O'Neill, Brian@Coastal
Cc: Feliz, Dave@Wildlife
Subject: RE: Elkhorn Slough Restoration Appeal

Yes, for the herbicide we're proposing, the CDFW Pesticide Use Recommendations specify:

"Applications within the habitat of the CA red-legged frog shall be limited to localized spot treatments using hand held devices, no closer than 15 feet of aquatic features including ponds, streams, seeps or springs, whether permanent or intermittent, natural or manmade. Applications may not be made when rain is occurring or is forecast to occur within 24 hours." – I use this for any freshwater features on the Reserve (I do most of the herbicide applications myself).

For non-aquatic formulations of these herbicides the labels prohibit applications in intertidal areas. Since I study marsh-to-upland ecotones as part of my work, I'm familiar with the maximum tidal height on the Reserve and am conservative along that boundary (tidal pickleweed is my first love, and what I studied for my Masters degree).

Andrea

From: O'Neill, Brian@Coastal [mailto:Brian.O'Neill@coastal.ca.gov]
Sent: Monday, January 11, 2016 10:57 AM
To: Andrea Woolfolk
Subject: RE: Elkhorn Slough Restoration Appeal

Thanks for the information, Andrea.

Just briefly looking at your responses, the document states that use of herbicides includes a mandatory setback from water. Can you provide more information on the required setback? Does this include a setback from wetlands?

~Brian

From: Andrea Woolfolk [mailto:amwoolfolk@gmail.com]
Sent: Monday, January 11, 2016 10:16 AM
To: O'Neill, Brian@Coastal; Feliz, Dave@Wildlife; 'Bree Candiloro'
Subject: RE: Elkhorn Slough Restoration Appeal

Hi Brian,

Here is information regarding the appeal of our CDP for eucalyptus removal at the Elkhorn Slough Reserve. I've included answers to your questions about water quality; and replies to Nina Beety's comments. I'm also attaching a research article on the effects of eucalyptus on Elkhorn Slough

biodiversity – our Reserve staff just published it a couple of weeks ago in Ecological Applications; and a letter from our local fire chief.

And as an overview, here is a summary of our proposed project, if you want to share it with other staff members:

The proposed Eucalyptus Removal Project would be implemented over the course of 10 years. It includes the removal of up to 1,150 small eucalyptus trees (< 36" dbh) and 75 large eucalyptus trees (≥ 36" dbh) from four groves: 1) Hummingbird Island, 2) South Marsh, 3) Cattail Swale, and 4) Five Fingers. The groves vary in size from 1.3 to 8.2 acres. Nine other eucalyptus groves on the Reserve are not proposed for removal under this project. Where eucalyptus are removed, native habitat – oak woodlands or coastal prairie – will be restored by Reserve staff and volunteers.

The four eucalyptus groves were selected for removal using science-based criteria. Elkhorn Slough Reserve biologists have been studying the ecology of non-native eucalyptus and native oak groves for over 10 years, and our results have been shared widely in workshops and have been recently published in Ecological Applications. A main goal for ecological reserves like Elkhorn Slough 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). Based on our long-term research, we have designed this project to 1) slow the spread of eucalyptus into natural habitats, 2) increase summer habitat for sensitive amphibians near Reserve freshwater ponds, and 3) increase the abundance of native plants on the Reserve. Where eucalyptus removal would not accomplish these goals or impact monarchs or nesting egrets, herons, raptors or cormorants, we will leave the trees in place. This is a sound ecological approach. The Reserve removed a similar eucalyptus grove in the early 1990s, followed by plant restoration done by staff and volunteers. Today that area is a maturing oak grove with a diverse set of native plants and ample evidence of use by native animals.

The project is demonstrably consistent with County and State plans and laws. This project has been through the CEQA process and it has been determined that the project will not have a significant effect on the environment because of mitigation measures put in place to avoid any potential effects.

Thanks, and we will see you Friday,

Andrea

From: O'Neill, Brian@Coastal [mailto:Brian.O'Neill@coastal.ca.gov]
Sent: Friday, January 8, 2016 4:10 PM
To: Andrea Woolfolk; Feliz, Dave@Wildlife; Bree Candiloro
Subject: RE: Elkhorn Slough Restoration Appeal

Great!

I think the sooner the visit the better if we want to get the item on for February. I can meet you at the reserve at noon next Friday. Please send along any information ahead of the meeting so I can have some time to review and share with our experts. I will send along any additional info or concerns as well. If we still have issues to discuss after next week and Dave would like to be involved, we could set up an additional meeting or conference call for the following week.

I look forward to meeting with you next week. Enjoy the weekend!

~Brian

From: Andrea Woolfolk [mailto:amwoolfolk@gmail.com]
Sent: Friday, January 08, 2016 3:06 PM
To: O'Neill, Brian@Coastal; Feliz, Dave@Wildlife; Bree Candiloro
Subject: RE: Elkhorn Slough Restoration Appeal

Hi Brian,

Yes, it would be great to have you visit the site. Bree Candiloro (who is playing a big role in this proposed project) and I are available on Friday, between noon and 2:00. Dave is away most of next week, but if you'd like to wait for his return, we could meet the following week. My schedule is pretty open for Jan 19, 20, 21 and 22.

We've compiled answers to your water quality questions and responses to Nina Beety's appeal points. Do you want me to send those to you, or would it be better to discuss those in person when we meet?

Thanks,

Andrea

From: O'Neill, Brian@Coastal [mailto:Brian.O'Neill@coastal.ca.gov]
Sent: Friday, January 8, 2016 11:30 AM
To: Feliz, Dave@Wildlife; amwoolfolk@gmail.com
Subject: Elkhorn Slough Restoration Appeal

Hello Dave and Andrea,

I am e-mailing to see if we could set-up a time next week for me to visit the removal sites and to discuss the appeal. I often find it helpful to see the project site first-hand and this would give us a chance to discuss the project details. We will need to resolve any outstanding questions quickly if we'd like to get this on the February

hearing agenda. I am available pretty much all week, whatever works for you. Other members of our staff may be able to join, but it will likely be just me.

Please let me know if there is a date and time that works best.

~Brian

Brian O'Neill, Coastal Program Analyst
Central Coast District Office
Coastal Commission
725 Front Street, Suite 300
Santa Cruz, CA 95060
(831) 427-4864

Subject: Elkhorn Slough, PLN 100351, herbicides

Dear Brian –

Here is more information on the herbicides the California Department of Fish and Wildlife plan to use in Elkhorn Slough (PLN100351.

In April 2015, San Francisco changed its designation of Glyphosate in its Integrated Pest Management program. It also requested a presentation by Susan Kegley of Pesticide Research Institute, which has done assessments for the California Invasive Plant Council. San Francisco previously listed Glyphosate as a Tier II "More Hazardous" pesticide. It is now listed as a Tier I "Most Hazardous" pesticide. Garlon has been listed by San Francisco as Tier I "Most Hazardous" since at least 2014, also stating

> "Most limited; must justify use; HIGH PRIORITY TO FIND ALTERNATIVE"

The CalEPA's OEHHA is still processing 9300 comments it received on Glyphosate and other chemicals' designation as a carcinogen. Attached is a collection of comments filed by health professionals, experts, and community organizations. They include Dr. Larry Rose, former chief of the Cal/OSHA Medical Unit, and Dr. Jed Fuhrman, Marine Biology Chairman at USC. Also attached are comment letters on toxicity from the Center for Biological Diversity, Center for Environmental Health, Center for Food Safety, and Beyond Pesticides.

In July 2015, the Marin Municipal Water District banned the use of herbicides in its watershed. Quote:

> At the July 7, 2015 meeting of the MMWD Board of Directors, and in alignment with an existing ban on the use of herbicides that has been in effect since 2005, the board voted to remove herbicides from the list of potential options under consideration for the management of vegetation on watershed lands.
> https://www.marinwater.org/182/Wildfire-Protection-Habitat-Improvement-

Specifically on triclopyr, that chapter from the report for MMWD is here http://www.marinwater.org/documentcenter/view/254.
A summary of research and toxicity published in the Journal of Pesticide Reform is also attached (https://d3n8a8pro7vhmx.cloudfront.net/ncap/pages/26/attachments/original/1428423464/triclopyr.pdf?1428423464).

The impact on mycorrhizal fungi is worrying.

> Triclopyr ranges from not acutely toxic to slightly acutely toxic to birds and honeybees. There is no information on non-honeybee insects. Trace amounts of triclopyr (<0.5% of application rate) can be toxic to non-target plants and possibly toxic to bryophytes (mosses). The maximum permissible application rate of Garlon 4 Ultra to brush and forests is 9 kg/ha, and 4.5 kg/ha for perennial weeds. There is some evidence that triclopyr is mildly toxic to mycorrhizal fungi at these application rates.
> Chapter 4, 4.3.2 Other Terrestrial Organisms, p. 28
>
> There is little information on the toxicity of triclopyr to terrestrial microorganisms. Garlon 4, at concentrations of 0.74 ppm in growth medium (agar) over 26–48 days, can inhibit growth in the mycorrhizal fungi Pisolithus tinctorius, and Hebeloma longicaudum.[93] Mycorrhizal fungi are symbionts with plants that provide water and mineral nutrients in exchange for plant

carbohydrates. .. 94 Soil concentrations of triclopyr are typically 4–18 ppm following application of 0.28-10 kg/ha.93 At realistic application rates, triclopyr could affect some fungal communities, A similar study found that triclopyr (formulation not reported) could inhibit growth in five mycorrhizal species: *Hebeloma crustuliniforme, Laccaria laccata, Thelophora americana, Thelophora terrestris*, and *Suillus tomentosus*.94Fungi were kept in liquid culture for 30 days and the reduction of biomass with increasing triclopyr concentrations was measured. A 90% reduction in biomass was observed for all species at concentrations of 720 ppm; greater than 50% reduction biomass was observed in four of the five species at 36 ppm. The most sensitive species, *Thelophora americana*, exhibited a 6% decrease in growth rates relative to controls at triclopyr concentrations of 0.072 ppm (this result was statistically significant). In other species, statistically significant decreases in growth were reported between 0.72 ppm and 7.2 ppm.[04] Soil concentrations of triclopyr are typically 4–18 ppm following application of 0.28-10 kg/ha.[93] At realistic application rates, triclopyr could affect some fungal communities…Some species showed inhibited growth at 740 ppm a.e., and similar effects were observed on other species with doses as low as 0.074 ppm a.e.
Chapter 4, 4.3.2.D Soil Microbes, p. 31

If soil microorganisms are poisoned by herbicides, then restoration projects will have major detrimental effects to the soil. The health of surrounding plants will be affected. The letter from the RN in the attached comments to OEHHA is an observation of this. There were also various gaps in knowledge leading to many unknowns cited in the Marin Water District assessment.

In addition to toxicity issues, triclopyr is not quickly breaking down to CO2 as proponents claim. It can persist in the environment for many weeks or months or over a year.

Given the very limited mention of native plants in the North Monterey County Land Use Plan and the downgrading of eucalyptus by IPC to limited invasiveness, as well as the serious toxicity issues of the herbicides in question and their persistence, it seems prudent that state agencies revisit this native plant debate and open an investigation seeking public input on whether the evidence exists to continue using taxpayer dollars and state employee time to promote this philosophy.

Sincerely,

Nina Beety
nbeety@netzero.net
Monterey, California

Attachments:
CalEPA OEHHA public comment compilation
This is from the group of letters linked here:
http://oehha.ca.gov/prop65/CRNR_notices/admin_listing/intent_to_list/pdf_zip/LCSet27PersonalComments120115.pdf
Center for Biological Diversity letter to OEHHA
Center for Environmental Health letter to OEHHA
Center for Food Safety letter to OEHHA
Beyond Pesticides letter to OEHHA
Journal of Pesticide Reform Fact Sheet on triclopyr