The Efficacy of CEQA Mitigation: Orange County Case Studies to Determine What Works



Friends of Harbors, Beaches and Parks

Friends of Harbors, Beaches and Parks (FHBP) is a non-profit organization founded in 1997. FHBP's mission is "to promote, protect, and enhance the harbors, beaches, parks, trails, open spaces, natural preserves, and historic sites in Orange County."

Since 2000, FHBP has united conservation and community voices throughout Orange County through its Green Vision Project. Currently more than 80 organizations support the effort to increase the funding for parks, water quality, and open spaces in the region. One of the first tasks of the Coalition was to map conservation target lands. Known as the Green Vision Map, this map lays out the knowledge and efforts of the Coalition to preserve important landscapes.

The next major accomplishment of the Coalition was negotiating a comprehensive mitigation program. The Orange County Transportation Authority's Renewed Measure M includes approximately \$243.5 million (in 2005 dollars) or 5% of the freeway program to mitigate habitat impacts from freeway projects. The transportation sales tax measure was approved by a two-thirds majority of voters in 2006. The measure included funds to acquire, restore, and manage lands. This landscape level approach, with streamlined permitting, is a departure from the earlier piecemeal or project-by-project approach. With this funding, important acquisitions have begun to fill in the gaps in conservation in the County.

In 2011, FHBP published the General Plan Resource Directory to promote sustainable policies. The Healthy Communities Toolkit was later published in 2013 as a follow up to provide details on conservation and financing tools available to jurisdictions. Working with the Cities of Stanton, Garden Grove, and Westminster an analysis of parks in each city occurred and was captured in our Park Study in 2016. In 2019, the efficacy of mitigation measures was the focus for research through funding from The Henry W. and Ellen R. Warne Family Endowment Fund of the Orange County Community Foundation.

Thanks to the collaboration with numerous agencies, cities, and developers, details on 12 residential, mixed use, and infrastructure projects were evaluated for their ability to meet measures adopted through the California Environmental Quality Act (CEQA) process. This particular study evaluates projects, their impacts, the mitigation measures, rate of success and/or failure, and provides recommendations for future study.

To Get a Copy of This Toolkit

This CEQA Mitigation Study can be downloaded for free from Friends of Harbors, Beaches and Parks website at: *www.FHBP.org*.

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Abstract

Friends of Harbors, Beaches and Parks (FHBP) set out to determine if mitigation measures for biological impacts related to development, mixed use, and infrastructure projects throughout Orange County were successful or not. After an initial call for projects resulted in 38 submittals, Public Record Act Requests were submitted to Lead Agencies to obtain Environmental Impact Reports, permits, mitigation and monitoring reports, etc. Twelve projects were ultimately reviewed, site visits completed, with 10 projects being ranked for their restoration success or failure—especially as it related to state and federally listed threatened and endangered species. While some projects did an excellent job meeting the mitigation requirements, in other instances, the restoration sites completely failed. The average score was 3.2 on a scale from one (worst) to five (best). Since these projects have permanent impacts to the landscape, the restoration projects should be permanent as well. To assist solving issues found during the study, 15 recommendations were included.

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Acronyms

ACOE	Army Corps of Engineers (the Corps)
BO	Biological Opinion
CCED	California Conservation Easement Database
CC&R	Covenants, Conditions & Restrictions
CDFG	California Department of Fish and Game (now CDFW)
CDFW	California Department of Fish and Wildlife (the Department)
CESA	California Endangered Species Act (state version)
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CPAD	California Protected Areas Database
CRAM	California Rapid Assessment Method
CSS	Coastal Sage Scrub
CWA	Clean Water Act
DPR	Department of Parks and Recreation (State Parks)
EIR	Environmental Impact Report
ESA	Endangered Species Act (federal version)
ESHA	Environmentally Sensitive Habitat Area
FHBP	Friends of Harbors, Beaches and Parks
FOIA	Freedom of Information Act
F/ETCA	Foothill/Eastern Transportation Corridor Agency
GIS	Geographic Information System
НСР	Habitat Conservation Plan (the federal mechanism)
HMMP	Habitat Mitigation Monitoring Plan
HOA	Homeowners' Association
IP	In Progress
ITP	Incidental Take Permit
LBV	Least Bell's Vireo
LSAA	Lake and Streambed Alteration Agreement
MND	Mitigated Negative Declaration
MWD	Metropolitan Water District
NCCP	Natural Community Conservation Plan (the state mechanism)
ND	Negative Declaration
NEPA	National Environmental Policy Act
NOAA	National Ocean and Atmospheric Administration
NRI	No Record of Involvement
NWP	Nationwide Permit (Section 404 CWA)
OCTA	Orange County Transportation Authority
OPR	Office of Planning and Research
PC	Planned Community
PCL	Planning and Conservation League
PDF	Project Design Feature
PMP	Perpetual Management Plan
PRA	Public Record Act
RWQCB	Regional Water Quality Control Board
SCH	State Clearinghouse
SCS	Southern Cactus Scrub
SDMMP	San Diego Management and Monitoring Program
SIP	Standard Individual Permit (Section 404 CWA)
SJHTCA	San Joaquin Hills Transportation Corridor Agency
SOC	Statement of Overriding Consideration

UNK	Unknown
US	United States
USFWS	United States Fish and Wildlife Service (the Service)
USGS	United States Geological Survey

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Introduction

Chapter 1

"Places matter. Their rules, their scale, their design include or exclude civil society, pedestrianism, equality, diversity (economic and otherwise), understanding of where water comes from and garbage goes, consumption or conservation. They map our lives." — Rebecca Solnit

alifornia is very fortunate to have a moderate climate, beautiful landscapes, and a bustling economy. The United States Census Bureau puts California at 39.75 million¹ residents with the world's fifth largest economy.² From granite domes in Yosemite to the agricultural fields of the Central Valley, the colorful sands of Death Valley to the fog laden Redwoods on the North Coast and the coastal sage and chaparral slopes of Southern California—our state has an incredibly diverse landscape in every direction.

Beyond these well-known attributes is the fact that California is listed as one of the world's hotspots of biodiversity.³ This means that there are very few other places on the globe that have a considerable amount of species diversity (the types and kinds of species) that are threatened with extinction (usually due to development and land use conversion).

Since California was not glaciated, its flora and fauna have had a long time to evolve. The species here have adapted into a wide array of specialties that are not generally found elsewhere. Add in the mild Mediterranean climate, the topographic diversity due to earthquakes, and the coastal influence and it is understandable why California is at the heart of a biodiverse landscape.



A map of the State of California.



The Eastern Sierra has some of California's oldest rocks, while Iowa's landscape was recently glaciated leaving new soil.

The plants and animals here in California are part of the California Floristic Province. The amount of time (evolutionarily) speaking that these species have had to differentiate is much more extensive than places more recently glaciated like Wisconsin, Maine, and lowa. These areas were covered just 10,000 to 14,000 years ago during the Pleistocene (the Ice Age). Glaciers essentially wiped the slate (landscape) clean and all the species there had to start anew—but that isn't the case here in California.

California has over 2,200 endemic species—species found nowhere else. Whereas, Iowa—glaciated during the Pleistocene—has no endemic species. Thankfully there are both state and federal laws in place to help protect these endemics, and some migratory species that call the Golden State home.

California and the United States have laws in place to protect species that are both unique and failing to thrive in our ever-urbanizing and warming environment. These laws are meant to protect threatened and endangered species from collapse and furthermore, their habitats must be protected for them to survive as well.

One way those species are supposed to be protected is through the California Environmental Quality Act (CEQA). CEQA is known as the state's premier environmental law. This law requires that projects analyze the environmental impacts and disclose them to decision makers, while at the same time allowing the public to provide substantive comments on the project and its impacts. Projects should avoid impacting the environment, but when that isn't feasible, mitigation measures can be adopted to lessen the effects. When those mitigation measures don't meet the standards of protection, decision makers must decide that approving the project brings more benefit than harm to the community.

Now that CEQA is approaching its 50th anniversary in 2020, the question of "is it actually helping species or not?" should be addressed. This question is at the heart of this study by Friends of Harbors, Beaches and Parks (FHBP). The organization was founded in 1997 after the Orange County bankruptcy raided funds from the regional park system. More recently, the group has focused its efforts on uniting coalitions behind policy for improved environmental outcomes. Major successes were achieved with a non-traditional alliance with the Orange County Transportation Authority (OCTA), where \$243.5 million was set aside through a mitigation program designed to offset the impacts of 13 freeway projects.

FHBP was fortunate to receive grant funding to investigate the efficacy of CEQA—specifically as it relates to biological impacts of projects approved and constructed in Orange County, California. Between March and November 2019, FHBP consultants reviewed projects submitted for consideration. We then addressed how the state and federally threatened and endangered species (including some special status species) fared with approved mitigation measures.

At the heart of the study is the efficacy of the biological mitigation measures and specifically the questions we asked were:

- 1. Are the mitigation measures tracked?
- 2. Are they implemented?
- 3. Are they effective at protecting endangered species (or not)?

- 4. Are the mitigation measures (and results) monitored?
- 5. What solutions, if any, need to be formalized to improve the tracking, implementation, efficacy, and monitoring?

This report consists of background on CEQA; an overview of biological mitigation measures and permits; FHBP's study parameters; specifics on the projects reviewed; and conclusions and recommendations. Detailed information for every reviewed project is included in the appendices. This page was intentionally left blank.



"We must define a story which encourages us to make use of the place we live without killing it, and we must understand that the living world cannot be replicated. There will never be another setup like the one in which we have thrived. Ruin it and we will have lost ourselves, and that is craziness."

– William Kittredge

dopted in 1970 by the California Legislature and signed into law by then-Governor Ronald Reagan, the California Environmental Quality Act (CEQA) (pronounced *see-quah*) is the Golden State's premiere environmental law.

History

CEQA became a law because of a growing concern for the environment and impacts from projects. The federal version of the law, National Environmental Policy Act (NEPA), was passed in 1969. On the heels of this effort, the State Assembly studied the feasibility of a similar law in California in 1970.⁴ A statewide conservation group, the Planning and Conservation League (PCL), began working to advance this legislation by issuing a report called the Environmental Bill of Rights. PCL helped draft the legislation and advocated for its passage by the Legislature. Eventually, the bill was signed into law by Governor Reagan. Today, PCL continues to defend CEQA from legislative challenges that attempt to weaken the law or strip it of important requirements.⁵

As this report is being written, organizations, lawyers, advocates, planners, and developers are working on a comprehensive revision of the law. By bringing all sides together, priorities can be addressed and solutions reached. Included on the list is: "Ensure Enforcement of Mitigation Measures," which directly relates to this report and its findings.⁶ We hope to provide our information to the practitioners on this working group in order to help advance this priority with on-theground examples. The goal is to have the revised law ready for the 2020 legislative cycle—which will be the 50th anniversary of CEQA.

Purpose

CEQA seeks to:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- Identify ways that environmental damage can be avoided or significantly reduced through the use of alternatives or mitigation measures.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.⁷

Opportunities for public and agency comments, feedback, and review are a key part of CEQA.

Author's Note: This section offers a simplified version of the CEQA process. Other resources are available that provide detailed information about the CEQA process, Guidelines, and Statutes as well as case law. Recommendations for additional information and CEQA resources are listed in Appendix P of this Directory.

A Project a "project" triggers the need for ceqa review

The Public Resources Code states: A "project" means an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

- An activity directly undertaken by any public agency (including the adoption and updating of its General Plan).
- 2. An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies
- An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies."⁸

If the activity is deemed not to be a project, no further action is required through CEQA.

EXEMPTIONS

Some projects are considered exempt from CEQA's analysis. These include either "Statutorily Exempt" or "Categorically Exempt" projects.

Olympic games,⁹ family day care homes,¹⁰ projects located outside of California,¹¹ and street re-striping¹² are several of the Statutorily Exempt projects. For a more complete list of Statutorily Exempt projects see the CEQA Guidelines Article 18, §15260-15285.

Categorically Exempt projects are projects that generally have no possibility of causing significant harm to the environment. Information collection,¹³ loans,¹⁴ land acquisitions for preservation purposes,¹⁵ designation of wilderness areas,¹⁶ and infill developments are several of the Categorically Exempt projects. Agencies may file a Notice of Exemption for projects deemed exempt, but are not required to do so. Categorically Exempt projects can be found in the



This project in Brea underwent a CEQA analysis.

CEQA Guidelines Article 19, §15300-15333. Note that a project that is ordinarily exempt may not qualify for the exemption if special circumstances mean that it may have significant adverse environmental effects.

For example, while single-family homes are generally considered to be Categorically Exempt, the exemption has been found to not apply when the home is to be developed in sensitive habitat.¹⁸

Types of Environmental Analysis

Agencies follow a three step process to determine what, if any, environmental review is needed for a particular activity. CEQA has a three-step process, which includes:

- Determining if the activity is a project and therefore subject to CEQA. If not a project, the Lead Agency may file a Notice of Exemption.¹⁹
- Conducting an Initial Study to see if the project will have a significant effect on the environment. If there is no significant effect, the Lead Agency files a Negative Declaration (ND).
- 3. Preparing an Environmental Impact Report (EIR).²⁰

There are several types of environmental documents used to meet CEQA requirements. The first is a Negative Declaration, which is, as it sounds, a statement of no significant harm to the environment.²¹ In some cases where there is determined to be an adverse effect on the environment a Mitigated Negative Declaration (MND) may be filed as long as the project is changed to reduce or eliminate those significant impacts.²² Finally, the most extensive type of environmental documentation is known as an EIR. An EIR describes the project, its impacts, and its mitigation measures.

Requirements of an EIR The CEQA Guidelines (§15151) state, "An EIR should be

The CEQA Guidelines (§15151) state, "An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences." This is the fundamental purpose of CEQA: to inform.

To ensure consistency and full disclosure, a Draft EIR must include specific information within the document. Such information includes:

- A Table of Contents
- A Summary
- The Project Description
- The Environmental Setting
- The Environmental Impacts
- The Significant Environmental Impacts
- The Mitigation Measures
- Project Alternatives
- Limitations of Environmental Impacts
- Effects Not Found to Be Significant
- Persons or Organizations Consulted
- The Cumulative Impacts
- Economic and Social Effects²³

There are several specific types of EIRs that will not be discussed in this Resource Directory, but for informational purposes these include: program, master, tiered, recirculated, subsequent, and supplemental EIRs.

Roles and Responsibilities

CEQA has established a system of roles for the various interested agencies or jurisdictions to assist with completing or commenting on the environmental review process or documents. While one agency may be required to process the application and CEQA document, other agencies have varied roles including commenting, permitting, etc.



LEAD AGENCY

There is only one leading body, called a Lead Agency, that has the responsibility for carrying out the environmental review for and ultimately approving or denying the project. The Lead Agency is also responsible for determining the type of environmental review: EIR, MND, or ND.²⁴ The environmental document may be produced "in-house" or by a consultant hired by the Lead Agency. Either way, the document must meet the content requirements (document information, studies, etc.) and process requirements (public notices, comment periods, hearings, etc.).

Once all the process and content steps are completed, the governing body must make a determination to certify or deny the environmental document. When environmental impacts occur, the Lead Agency must make findings that the mitigation brings the impact to below a level of significance. If it can't get to this level, then it must make findings that the impact is "worth it" because of specific merits of the project. These findings are called a Statement of Overriding Consideration (SOC).²⁵

The Lead Agency must also coordinate with other agencies: Responsible and Trustee Agencies throughout the entire process. This includes notifications for specific steps in the environmental review process by the Lead Agency and similarly the other agencies must respond within specific time frames.²⁶

RESPONSIBLE AGENCY

Other interested public entities, called Responsible Agencies, rely on the Lead Agency to carry out the project, but they may be requested to provide feedback on the project. Responsible Agencies also have discretionary authority over the project. In other words, the Responsible Agency separately reviews the environmental document and provides an independent judgement as to whether the requirements of CEQA are being fulfilled.²⁷

TRUSTEE AGENCY

Finally, those charged with protecting our natural resources that are held in trust for the people of California are called Trustee Agencies. Trustee Agencies may also be Responsible Agencies if they have discretionary authority over the project.²⁸ CEQA identifies the following four agencies for this "trustee" role:

The Board of Supervisors is often a Lead Agency.





Residents from Yorba Linda participate in the planning process by attending meetings and testifying.

- California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game [CDFG]), which oversees impacts to fish and wildlife [including threatened and endangered species] of California, ecological reserves, and other property it administers.
- 2. State Lands Commission, which oversees State-owned lands such as navigable waters or State school lands.
- State Department of Parks and Recreation (DPR), which oversees the California State Park system.
- 4. University of California,²⁹ which oversees impacts to the Natural Land and Water Reserves System.

THE APPLICANT

The applicant is responsible for the project's concept and initial design. This helps sets the stage for the project proposal and these details are enough to establish what and where the project will be. There may be early meetings with the Lead, Responsible, and Trustee Agencies where the project, its goals, its impacts and known details are outlined. The Lead Agency requires specific documentation to be submitted prior to deeming the application complete. If an application is deemed incomplete, the agency must specify what is missing.³⁰

From this point, the type of environmental document is determined and the Lead Agency begins its in-house environmental review or hires an independent third party to analyze the project's impacts. The applicant is required to pay for the studies and environmental document, but the Lead Agency hires the consultants related to this environmental review.

THE PUBLIC

In addition to providing agencies with the opportunity to comment on EIRs, the public is given a chance to make meaningful comments on the documents as well. Normally the public is given 30 days. With large and complex projects, the review and comment period may be up to 90 days.³¹

Agencies make the documents and appendices accessible to the public in a variety of ways: posting copies online, at the Lead Agency's office, in public libraries, and sometimes on compact disc.³² As soon as the document is released for review, it would be available at the specified locations determined by the Lead Agency.

Lead Agencies also hold public hearings on the project and EIR before a decision is made. This is another opportunity to submit input on the document, the findings, and to offer alternatives for consideration.

Ultimately, CEQA is a tool by which decision makers, agencies, and the public are informed about potentially significant environmental impacts of a proposed activity. CEQA also suggests impact avoidance, necessitates mitigation, and requires public comments/testimony before making the decision to approve/deny a project.



"When we try to pick out anything by itself, we find it hitched to everything else in the universe." — John Muir

s part of the CEQA process, when it has been determined an environmental review is necessary, an initial checklist (Appendix G) is completed. Lead Agencies may come up with their own version of this checklist format, but all the questions must be incorporated and addressed in the review.

Appendix G includes the suite of topics an environmental analysis under CEQA is required to cover, including:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population & Housing
- Public Services
- Recreation
- Transportation/Traffic

- Utilities/Service Systems
- Mandatory Findings of Significance³³

Specific questions need to be answered for each topic as well as a review of the impacts. The answers to these questions determines the next step for environmental review and what type of documents may need to be completed: ND, MND, or EIR.

The review includes a determination of the levels of impact, including:

- Potentially Significant Impact
- Less Than Significant with Mitigation Incorporated Less Than Significant Impact No Impact

Every answer for the "No Impact" category must be supported with a brief explanation. For example, the explanation could note that this topic doesn't apply to the project. For any answer, the entire project (not phases) of a project must be considered. Additionally, sometimes there are off-site impacts that must be explained as well. When there are one or more "Potentially Significant Impacts," an EIR is required.

IDENTIFYING SIGNIFICANT IMPACTS

This study focused specifically on the biological

resource impacts. The types of questions asked for evaluating biological impacts may include:

Does the project:

"a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game* or US [United States] Fish and Wildlife Service?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?"³⁴



Coastal impacts are different than inland impacts.

*Note: California Department of Fish and Wildlife name became effective January 1, 2013. Prior to that it was California Department of Fish and Game. They are one in the same.

Depending on the project location there may be different species that need to be reviewed for impacts.

Species Protections

We cannot protect a species without also protecting its habitat. In some instances, those habitats are water based. Both the state and federal government have specific restrictions about activities you can and can't do as an individual and/or for a project without certain requirements being met.

CDFW's (the Department's) mission "is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public."³⁵

Similarly, the federal equivalent is the US Fish and Wildlife Service (USFWS, the Service). Its mission is to "[work] with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people."³⁶

ENDANGERED SPECIES ACT

In the same era that the environmental laws NEPA and CEQA were being written to protect the environment, other laws were also passed to protect our air and water. This report focuses on the Endangered Species Act (ESA) both state and federal acts, but also highlights water-related laws as well. Be advised, these are merely overviews and do not capture all of the requirements of the endangered species or waterrelated regulations.

State

Surprisingly, California's first endeavor (1909) to protect species focused on non-game birds. Violations resulted in a misdemeanor if a bird's nest or eggs were needlessly destroyed. The second effort in 1913 focused on protecting sea otters, which was followed in 1957 with full protection for birds and mammals. By 1970, California legislators enacted the California Species Preservation Act, which "directed the Department to inventory all threatened fish and wildlife, develop criteria for rare and endangered, and report to the Governor and Legislature every two years [on] the status of these animals, including recommended measures for their protection and enhancement."³⁷

The California Endangered Species Act (CESA) was passed in 1970. "The legislation expressed concern about California's threatened wildlife, defined rare and endangered wildlife, gave authority to the Fish and Game Commission to deem what animals in California were rare and endangered, and prohibited importation of these animals except by permit."³⁸ Forty-two animals were designated "rare or endangered" in 1971 by the Commission. In 1984, updates to the CESA were adopted, with a main edit being the inclusion of the species' habitat. In 1997, it was again amended to include "Incidental Take Permits" (ITP, described below).

Plants were added into the mix in 1977 through the Native Plant Preservation Act. This law allowed the Department to "preserve, protect, and enhance native plants."³⁹ Possible designations for plants included: endangered, threatened, or rare. Restrictions were placed on collecting, transporting, and selling these types of plants without a permit.

Even though CEQA was passed in 1970, it was revised in 1983 to define and protect the Department's threatened and endangered species list. California passed AB 3309 and AB 3270 to further memorialize the CESA protections in 1985. AB 3309 is the legislation that set up the version of CESA still used today, while AB 3270 established the actual list of endangered species.

"CESA prohibits the take of any species of wildlife designated by the California Fish and Game Commission as endangered, threatened, or candidate species. CDFW may authorize the take of any such species if certain conditions are met."⁴⁰ An ITP is the lawful "take" (loss) of a protected species by a nongovernmental entity (e.g., a private developer) with permission issued by the resource agency.⁴¹

One recent acknowledgment of our state's unique plants and animals is the celebration of Biodiversity Day—announced by California Natural Resources Secretary Wade Crowfoot.⁴² In addition, Governor Gavin Newsom allocated \$18 million of the California State Budget on protecting biodiversity through activities like seed banks.⁴³

Federal

A corresponding law on the national side is the federal Endangered Species Act (ESA), which was passed



White pelicans are a migratory species.

in 1973. The ESA included both international and domestic conservation. It "[provides] a framework to conserve and protect endangered and threatened species and their habitats."⁴⁴ Unlike the CESA, the federal version has two key agencies involved with the law's implementation: the USFWS and the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service. Included on the ESA list are birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees.⁴⁵

Unlike CESA, the federal law creates what is known as "critical habitat" for any listed endangered fish or wildlife. Because of its cross-jurisdictional and interstate nature, the federal law addresses import, export, interstate, and foreign commerce as well. The key goal is to "not jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species."⁴⁶

According to a recent article by the Natural Resources Defense Council, President Trump has reduced protections offered under the federal ESA—even after the United Nations report that stated if business as usual continues, we will lose one million species.47 However, the USFWS website and final ruling describes the modifications as: "revisions to the regulations clarify, interpret, and implement portions of the Act concerning the procedures and criteria used for listing or removing species from the Lists of Endangered and Threatened Wildlife and Plants and designating critical habitat."⁴⁸ The new regulations clarify the reasons for not designating critical habitat for some species. Simultaneously, the new regulations make it more difficult to designate critical habitat if it isn't occupied by the listed species.49

For this report, we've included projects with both state and federally listed species because the species and



The Santa Ana River starts in San Bernardino Mountains and ends at the Pacific Ocean.

their habitats are so intertwined. To see the current list of state and federally listed species we reviewed, go to Chapter 5.

Water Protections

Both the state and federal government have laws that focus on our water. The intent behind these laws is to ensure our water bodies and streams are protected from pollutants. As stated above, the goal of this summary is to provide an overview of the laws, but not focus on the details.

STATE

The Porter-Cologne Act, is California's version of the Clean Water Act (CWA). It was adopted in 1969 and governs the state's water quality. Waters, wetlands, and groundwater, as well as point and non-point source pollution, are all regulated under a comprehensive program that protects water quality and the beneficial uses of water.⁵⁰

The law established nine regions of the state to be managed by a Regional Water Quality Control Board (RWQCB). The regional boards have authority to manage the permitting, inspection, and enforcement actions of these waters. It links with the federal Clean Water Act (under Section 401) by "[giving] the State Water Board the authority to review any proposed federally permitted or federally licensed activity that may impact water quality and to certify, condition, or deny the activity if it does not comply with state water quality standards."⁵¹

California requires Regional Boards develop a water quality control plan for their jurisdiction. The aim is to

make sure individual projects are in compliance with that plan. For this report we've included known permits issued by the RWQCB.

FEDERAL

In 1972, the federal government passed the its version of the CWA, which regulated both the standards for our water quality and what pollutants (chemicals, dirt, etc.) were allowed to be discharged into "Waters of the US" and in what quantities. Earlier laws had been passed in 1948 (Federal Water Pollution Control Act), but it was revamped in 1972.⁵²

There are two specific sections of the federal CWA that most applicants pay attention to: Section 401 and 404. Section 401 of the CWA focuses on the activities that discharge into Waters of the US including wetlands, while Section 404 of the CWA focuses on discharge of dredged or fill material into the Waters of the US including special aquatic sites. Details on related water permits are below.⁵³

IDENTIFYING IMPACTS

A wetland delineation is completed to determine the extent of a wetland. It involves finding the "wetland soils and plants or hydrology present to create a wetland."⁵⁴ The soils are tested and the plants are identified (both in the wetland and the uplands). One of the more complicated steps is looking for the hydrologic features. Wetlands sometimes only exist on the ground for a week or two out of the year. During droughts they may be extremely difficult to find. Looking for water could include finding the depression left where the water was standing. The wetland comes together at the transition zone between the wetland itself and the upland habitat—this is the wetland

boundary. This wetland delineation report is sent to the permitting agencies (CDFW, USFWS, and ACOE [Army Corps of Engineers, the Corps]) for discussion about the impacts.⁵⁵ To identify the impacts, you would identify the direct, indirect, and cumulative impacts to resources both in physical space and temporally (across time).

Permitting 401 PERMIT

The 401 permit focuses on discharge into Waters of the US, with a special focus on wetlands. Any individual applying for a 401 permit "must obtain a state water quality certification that the activity complies with all applicable water quality standards, limitations, and restrictions."⁵⁶

Applicants must submit an application to the appropriate California Regional Water Quality Board. The Regional Board has 30 days to respond, if additional days are needed the ACOE is notified. Orange County is covered by two Regional Boards: Region 8 (north of San Diego Creek) and Region 9 (south of San Diego Creek).

The application must include specific items to be deemed complete:



This map shows the RWQCB regions across California.

- The completed application form;
- A technical description of the project/activity;
- A complete project description with jurisdictional wetland delineation, mitigation and monitoring plans, other documents relating to water quality and benefits, and grading plans/engineering drawings;
- Measures to be taken to reduce impacts to the water quality/beneficial uses;
- Identification of the federal license/permit;
- Agency correspondence;
- Final permits;
- CEQA documents; and
- Fee deposits.⁵⁷

404 PERMIT

Section 404 of the federal CWA is a federal law that regulates the amount of dredging and fill material that is allowed to enter Waters of the US. A 404 permit is required for these activities unless there is an exemption (i.e., farming activities). There are standard individual permits issued by the District Engineer on a project specific basis and there are general permits that can be issued at the regional level (regional general permits) or national level (nationwide permits for activities across the country). Similar to CEQA, the goal for impacting Waters of the US is to *avoid impacts first*. This includes impacts to wetlands, streams, and other aquatic resources.⁵⁸

Applicants submit a permit application for review by the Corps. The District Engineer's decision must comply with NEPA and other federal laws such as Section 7 of the ESA, 404(b)(1) Guidelines, and the decision is not contrary to the public interest. If an activity requires a standard individual permit, a public notice is issued by the Corps allowing for the public to comment and provide additional information. The length of time it takes to process an application depends on the complexity of impacts to the Waters of the US.⁵⁹ If the project impacts federally endangered species, the USFWS is involved as well.

The final design of the project must employ measures to avoid, minimize, and mitigate the unavoidable impacts (this is called compensatory mitigation).

Mitigation is determined by comparing the pre-project condition to the post-project condition and the preand post-mitigation conditions. The evaluation includes risk, temporal loss, delay of vegetation growth, etc. This analysis determines the mitigation ratio. Another tool used is the California Rapid Assessment Method (CRAM). This tool was "developed to rapidly assess the status of wetlands throughout California. It was designed to be a fast, cost-effective, standardized and repeatable way to monitor different wetland types across a number of spatial scales."⁶⁰ The CRAM coupled with standard plant surveys help determine how long the mitigation site must be monitored and reported.

One key goal for mitigation projects is to have a sustainable site without human interference. If the site fails to meet success criteria established in the permitting process, the Permittee would be out of compliance with the permit and the Corps could revoke the permit or administer penalty fees. If the Permittee fails to come into compliance, funds from Permittee's stewardship set aside could be used to continue mitigation work or replace the site elsewhere.

When a Section 7 consultation is completed with the USFWS, the Service can approve a Habitat Mitigation Monitoring Plan (HMMP) in conjunction with the work done with the Corps. This procedure is outlined later in the document. All mitigation sites must be protected with a site protection instrument such as a conservation easement protecting the mitigation site in perpetuity.

LAKE & STREAMBED ALTERATION PERMIT

Housed under the Lake and Streambed Alteration Program with CDFW, permits issued under this Fish and Wildlife Protection and Conservation Chapter are collectively known as "1600 permits" and require the Department to look at conserving the fish and wildlife resources and associated habitat lands. Permits issued can be called 1600, 1601, 1602, and 1603. The rules apply to: "any river, stream, or lake, including those that are dry for periods of time (ephemeral/episodic) as well as those that flow year round (perennial)."⁶¹

Notification must occur prior to any activity beginning. There are four activities that require notification to CDFW for this permit:

- "Divert or obstruct the natural flow of any river, stream, or lake
- Change the bed, channel, or bank of any river, stream, or lake
- Use material from any river, stream, or lake
- Deposit or dispose of material into any river, stream, or lake"62

If CDFW determines a 1600 permit is needed it comes in the form of a Lake and Streambed Alteration Agreement (LSAA). The goal of the LSAA is to list measures necessary to protect fish and wildlife resources. This process is separate from the CESA process. There are several steps to the LSAA process, including: notification of the activity by the applicant; notification by CDFW of a complete application; confirmation of an LSAA or not; and finally, creation/ approval of an LSAA for the activity.⁶³

CEQA must still be complied with regardless of an LSAA being issued or not.

INCIDENTAL TAKE PERMIT (ITP)

Covered under the Fish and Game Code is an ITP which allows an applicant to "take" a state listed species under certain circumstances. In short, if the activity happens to impact the species, then the take is incidental—instead of the purpose of the activity being to remove the species. As with most situations we've mentioned, there must be measures adopted that minimize or avoid the species' impacts before full mitigation is used.⁶⁴

The steps for ITPs are a bit longer than the 1600 permit, offered by the same agency. These include:

- 1. Application (and fee)
- 2. Species to be covered by the ITP
- 3. Description of the activity/project
- 4. Location of the activity/project
- 5. Biological analysis of the impact to the species and need for "take"
- 6. Analysis of ITP possibly jeopardizing the existence of the species
- 7. List of activities to minimize impacts and mitigate the take
- 8. Funding of these minimization and mitigation activities
- 9. Documented CEQA compliance⁶⁵

How are impacts minimized? A review of the project is necessary, but some typical minimization measures include: protective fencing around sensitive habitat within the project's construction zone; no/limited activity during breeding season; and training programs for on-site personnel regarding specific species.⁶⁶

The types of mitigation available as options to project applicants are described below.

SECTION 7 & 10 CONSULTATION

There are two regulatory processes for addressing impacts to threatened and endangered species under the ESA: consultation under Section 7 and permitting under Section 10.



All of Laguna Coast Wilderness Park is protected within a Conservation Plan.

Section 7(a)(2) of the ESA states that each federal agency shall, in consultation with the Secretary of the Interior, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat."67

Key to the decisions made in a Section 7 consultation is sound science. Without use of the best available science, decisions related to determinations of jeopardy, adverse impacts to both species and habitat would be hindered.

The key to a successful consultation is early notifications and discussions with the Service. With an informal consultation, if the Service determines there are no adverse effects to federally listed species or habitat, then the project consultation is considered complete and the project may proceed. If there is adverse impact(s) to a species, the Service begins a formal consultation, which according to the ESA is supposed to be completed within 135 days.

Consultation is completed when the Service issues a Biological Opinion (BO) that determines whether the proposed project will jeopardize the continued existence of a species or adversely modify its critical habitat. If the Service makes a "no jeopardy, no adverse modification" determination, the project may proceed as described in the BO. If the Service determines that the project will jeopardize federally listed species or adversely modify critical habitat, it must include reasonable and prudent alternatives that modify the project so that it could be implemented without jeopardizing federally listed species or adversely modifying critical habitat.

Section 10(a)(1)(B) of the ESA allows non-federal parties planning activities that have no federal nexus, but which could result in the incidental taking of listed animals, to apply for an ITP.68

The permitting process under section 10(a)(1)(B) of the ESA includes the preparation of an HCP to demonstrate that all of the requirements for issuance of an incidental take permit have been met. An HCP lists the proposed activities covered by the Plan, what the effect on the environment will be from those activities, and what measures will be used to minimize and/or mitigate the impacts. More details are included under "Conservation Plans" below.

Types of Mitigation There are three key types of mitigation commonly used in projects locally and regionally. These are briefly described below and their use is dependent on the agency.

ACQUISITION

When a project is proposed, sometimes the permitting agencies allow land to be permanently conserved as a way of mitigating the impacts to the species on the project site. More typical today than even 10 years ago, is the requirement for a permanent conservation tool (conservation easement and/or deed restriction) as well as a long-term management endowment. Keeping land managers funded to operate and properly steward the land is essential to the purpose for which it was acquired. Without funding, the land could get additional impacts (new trails, wildfires, nonnative plants, etc.).

With the increasing understanding of conservation biology, it is less acceptable to create "mini" preserves separated from larger protected lands. That's because species do better when they have more room to roam, more diverse habitat types, more types of species present, etc. Instead, the goal is to build on the existing reserve system to bolster its success.

RESTORATION

In other instances, project applicants are allowed to do on-site or off-site restoration work. Restoration is the manipulation of land with the goal of planting and successfully improving a site enough so that specific targeted species are able to use the habitat again promoting their success and recovery.

Restoration projects typically have a set time period where the habitat lands are prepped and planted. Sometimes there are water lines added to ensure proper growth. Usually agencies like to see the site for two years without the water lines to be sure the plants are successful under a natural rain cycle. Baselines are established as to what expectations might be for the restoration site, including but not limited to: percent native cover, species diversity, percent survival, and soil content.

Once the site has reached its required success criteria, the agencies usually sign-off on the site. As with acquisition sites, agencies are more frequently working with project proponents to ensure that restored sites will be maintained as suitable habitat in perpetuity by protecting the site with a conservation easement or deed restriction and ensuring that there is a plan and funding to maintain the restored habitat in perpetuity.

RE-ESTABLISHMENT, REHABILITATION, AND ENHANCEMENT

For the ACOE, project applicants are allowed to do onsite or off-site restoration work. There are three types: re-establishment, rehabilitation, and enhancement. Restoration is the manipulation of physical, chemical, or biological characteristics of a site with the goal of re-establishing former aquatic resources, rehabilitating multiple functions of a degraded aquatic resource, or enhancing an aquatic resource by improving a specific function. The goal of planting and successfully improving a site could be so that specific targeted species are able to use the habitat again—promoting their success and recovery.

Similar to restoration projects described above, there is a set time period and success criteria. Once the site

has reached its required success criteria, the Corps usually approves compliance on the site and allows the site to enter into the long term management phase where it must be maintained in perpetuity by a conservator or the property owner.

Conservation Plans

Both the federal and state government have a planning process to mitigate project impacts by setting up a comprehensive plan. On the state level, a comprehensive conservation plan that addresses compliance with CESA and achieves other biological goals is called a Natural Community Conservation Plan (NCCP). These are voluntary programs that landowners and developers participate in. On the federal level, HCPs can be developed for small scale projects, such as a single-family home, or they can be comprehensive plans that address conservation and impacts to listed species at large geographic scales. A conservation plan can be developed as an HCP, an NCCP, or as a combined document (HCP/NCCP).

The goal of these plans is to provide long term protection for wildlife and their habitats through a regulatory process. Specific activities (road projects, housing developments, water infrastructure, etc.) are included as "covered activities" and then mitigation is done at a comprehensive landscape level. This mitigation can come in the form of restoration of a site, land conservation, or both.

Orange County was the first place in the State of California to adopt an NCCP in 1996. It was mitigation for projects from several entities: The Irvine Company, Irvine Ranch Water District, County of Orange, City of Irvine, and others.⁶⁹ Essentially, these entities can move forward with their proposed (covered) activities, without doing additional mitigation since those



This hillside is being restored to native habitat.

mitigation efforts have already been established in the Conservation Plan. The Nature Conservancy is the third party beneficiary of the easements for the Irvine Ranch land dedication. The Central-Coastal Conservation Plan includes both an NCCP and HCP, while the Southern HCP excludes the NCCP component.^{70, 71}

The benefit of doing a Conservation Plan is that there are assurances that the activities an agency/ developer plan to undertake, are covered and what is implemented for mitigation is approved. There will be no further requests for mitigation—even when new information becomes available. This is known as the "No Surprises Clause."

The most recent local agency to use this tool is OCTA. This transportation agency opted to use the NCCP-HCP process as a way to gain assurances from the permitting agencies as to what the expectations were for the 13 approved freeway projects.

Because Conservation Plans establish a master conservation effort to mitigate impacts of specific "covered" projects and specific covered species, this holistic approach improves the species and habitat outcomes. It is a comprehensive (not project-byproject or species-by-species) approach. The mitigation for a suite of projects was formalized through these plans in the mid-1990s. Nineteen cities, infrastructure agencies, and developers participated by signing the implementing agreement.⁷² Therefore, projects covered in existing Conservation Plans were generally excluded from the study. However, if a project was outside of these two key planning areas and it created a new HCP, the project was retained in this study.





Mitigation Monitoring

Agencies would never know if acquisition and restoration projects were or were not successful, but for the reporting requirements and required site visits. Some of the tools used by the agencies include Habitat Mitigation Monitoring Plans (HMMP) and Annual Reports. At the end of the mitigation time frame—if the success criteria has been met—then the agencies do a final sign off on the permits for the project.

нммр

An HMMP is a tool used for compensatory mitigation for unavoidable impacts on jurisdictional Waters of the US and their associated habitats as well as the state and federal ESA. These are waters protected under the jurisdiction of ACOE and CDFW respectively. The purpose of an HMMP is to provide guidance on how habitat restoration or enhancement will occur for the mitigation of project impacts. HMMPs are submitted with 401 and 404 permits.⁷³

The plan must include the following components:

- Project Description
- Goal of the Mitigation
- Proposed Mitigation Site
- Implementation Plan
- Maintenance During Monitoring Period
- Monitoring Plan
- Completion of Mitigation
- Contingency Measures⁷⁴

ANNUAL REPORTS

Typically, there are five or more years required for reporting as it relates to mitigation reports. These annual reports walk through details such as: project description, project impacts, required mitigation, permitting, site goals, remedial actions taken, performance standards, and a summary of significant events.

Permitting agencies sign off on the completion of the permit requirements via these mitigation and monitoring reports and site visits. No additional steps are necessary, even if there is a change in circumstance such as a wildfire. Through the long-term management plan and its associated funding, these changes in circumstance (such as weeding and seeding post-fire) should be in the projected budget as a possible cost.

This is different for the ACOE mitigation, as changes in the site may require additional mitigation. For example, if the site was not successful or there was some catastrophic event that ruined the restoration project, more mitigation may be needed. This is determined by the protection instrument and long term management plan.



This is a sample Annual Mitigation Monitoring Report.



"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect." - Aldo Leopold

HBP applied for funding from The Henry W. and Ellen R. Warne Family Endowment Fund of the Orange County Community Foundation to conduct a study and to release a report outlining the efficacy of biological mitigation measures required under CEQA. The grant was awarded in December 2018. FHBP has historically focused on preservation of natural resources and supported local conservation groups fighting to stop poorly-planned and impactful developments.

By way of background, many of Orange County's unprotected natural lands are threatened with illconceived developments. The main tool residents and non-profits have used to fight these projects is CEQA. CEQA has a set list of required topics to analyze, such as: circulation, population and housing, public safety, air quality, water, and biology. Conservation groups try to sway votes and make policy or project changes to reduce impacts before a decision is made, but litigation is usually one of the last tools left to modify or stop a bad project after the decision is made.

Having been involved in the policy arena for 20 years, FHBP is keenly aware of the pitfalls and problems associated with CEQA. Several key questions on the effectiveness of the law as it relates to biological mitigation measures include:

- 1. Are the mitigation measures tracked?
- 2. Are they implemented?
- 3. Are they effective at protecting endangered species (or not)?
- 4. Are the mitigation measures (and results) monitored?
- 5. What solutions, if any, need to be formalized to improve the tracking, implementation, efficacy, and monitoring?

Throughout 2019, FHBP researched this topic to get answers to these very questions as they relate to the biological analysis. If CEQA is not actually protecting endangered species, then we need to know that and contribute to potential solutions—legislative and otherwise.

Call For Projects & Parameters

In 2000, FHBP created the first of its kind Greenprint for Orange County. This Greenprint became known as the Green Vision Map and documented the wish list of properties conservation groups sought to protect in perpetuity. This was developed in the context of what lands had been saved through the regional park system, California State Parks, and the National Forest. With the Green Vision Map gaining traction, and now available as a resource and tool, FHBP united the conservation community through the Green Vision Coalition. What we realized was that our voices were much stronger united than they were alone. By aligning our advocacy and our individual projects into one unified and cohesive effort, we have developed better leverage and opportunities for success. We also learn from each other.



The 2019 edition of the Green Vision Map captures conserved lands and those needing protection.

FHBP set about creating the Green Vision Coalition to "increase funding for parks, water quality, and open spaces." Now, a decade into the effort, there are more than 85 organizations at the local, regional, and statewide level behind this effort.

Since the Green Vision Coalition members were the "boots on the ground," playing a role in the outcome of local and regional development and infrastructure projects, we turned to their expertise to help us with our initial list for potential projects to review.

FHBP sent out its first email on February 11, 2019 to 106 individuals and organizations with a 39.6% open rate. We sent a reminder email February 20th with a 29.2% open rate. The email stated:

"Friends of Harbors, Beaches and Parks (FHBP) received a grant to evaluate mitigation measures for development projects. In short, the goal is to determine whether or not the biological mitigation measures for those approved and constructed projects were met and proved beneficial to the impacted species (or not—and why not). When we know that answer, we can effectively contribute to potential legislative solutions.

We need your help to identify projects that meet four criteria:

- 1. The project is in Orange County;
- The project included an Environmental Impact Report (EIR);
- 3. There were biological impacts; and,
- 4. The project is already approved and constructed.

If you can think of a project, please fill out our five question survey, which should take less than a minute to complete. The questions are very simple so no significant research is needed to finish the survey. Please complete the survey by Monday, February 25 at 5 PM. You can complete the survey as many times as needed to add projects for us to consider."

The survey collected information via a Google spreadsheet and asked the following questions:

- The project name
- What jurisdiction is the project located in? (For example: City of _____ or County of Orange)
- What agency approved the project? (For example: City of _____, County of Orange, Army Corps of Engineers)
- Approximately what year was this project approved?
- If we have questions about this project, who should we contact (please include full name, email address and/or phone number)?

To encourage responses, we did not ask who or what organization was submitting the project. Anonymity is sometimes important to people not wishing to draw attention to issues. Google added a date and time stamp to the spreadsheet as results were collected.

The survey ended February 25, 2019 with 38 projects submitted for review.



Figure 2. The CEQA Mitigation Study's 38 submitted projects.

Project Name	Reason for Deletion
1. (blank)	No content provided
2. Ladera Ranch	Duplicate
3. Rancho Mission Viejo	Project authorized via Southern HCP
4. Hawks Pointe	Duplicate project
5. City of Rancho Santa Margarita	Includes entire city-impractical to include
6. Robinson Ridge Project	Was never processed or built
7. Sports Park (Lake Forest)	Was part of the Capital Improvement Project list therefore no EIR was completed
8. Vista Del Campo	Project authorized via Central-Coastal NCCP/HCP
9. Shady Canyon	Project authorized via Central-Coastal NCCP/HCP
10. Turtle Rock	Project authorized via Central-Coastal NCCP/HCP
11. Hidden Canyon	Project authorized via Central-Coastal NCCP/HCP
12. The Vue (2300 Newport Blvd.)	Duplicate (different name for ETCO Marina)
13. Foothill Ranch Planned Community (Serrano Creek)	Difficult identifying the Project (even with City of Lake Forest assistance)

Figure 3. The study's first 13 eliminated projects.

Information Gathering

In order to collect documents needed to review the potential project list, we used the Public Records Act (PRA). This is a "government in sunshine" law that requires transparency of agencies when the public asks for detailed items such as: letters, plans, emails, etc. The law was enacted under then-Governor Ronald Reagan in 1968. It formalizes the requirements for accessing information and the agency has 10 days to respond to the request. If unable to meet the timeline, the agency is allowed to estimate when the materials might become available—but must do so in writing to the requestor. Its federal counter part is called the Freedom of Information Act (FOIA), which sets up similar parameters on responses.

PRA and FOIA Requests

Our initial document request involved 32 PRA requests emailed/submitted to a variety of public agencies asking for the documents needing to conduct the study on the remaining 25 projects. We heard back on 30 of the 32 requests. The City of Laguna Niguel didn't acknowledge receipt of the two requests nor respond with documents. This eliminated two additional projects. Further, two projects had no responsive records on our PRA request. All four were eliminated from further consideration.

they,			e. Conditions of Approval
1 squad for		March 4	2019 Government Code section 6257 requires release of all reasonably segregable portions of the requested records which are not themselves exempt from mandatory disclosure. Pursuant to
Via Email t	to: cityele	rk@newportbeachca.gov	the Public Records Act, you are required to respond to this request within ten (10) days. Gov't Code § 6256.
City of New 100 Civic (Newport B	wport Bea Center Dri each, CA	ch ve 92660	The preferred method of delivery is by email (electronic) to <u>GreenVision@FHBP.org</u> . 1 this is not feasible, please reach out to determine the next best option. I can be reached at 714- 996-1572.
	Pa	Public Records Act Baquest (PRAP)	Thank you for your attention to this request.
	Re.	ETCO Newport Bay Marina Project	Very truly yours,
Dear City a	Neuro	t Beach	Last reach
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Dozens of PRA and FOIA requests were sent to local jurisdictions, the wildlife agencies, and permitting agencies.

Project Name		Reason for Deletion	
14. Coronado Point		No response to PRA (City of Laguna Niguel)	
15. Highlands & Nigu	el Area	No response to PRA (City of Laguna Niguel)	
16. Dove Canyon		No responsive records (County of Orange)	
17. Ladera Ranch/An	tonio Parkway	No responsive records (County of Orange)	

Figure 4. Four additional projects eliminated from the study.

As the materials were compiled and reviewed, additional projects were eliminated. Many were eliminated because the project was permitted through an existing Conservation Plan. Broadly, this means conservation impacts for lands within the plan territory were covered if the agency involved was a signatory to the document—essentially the conservation had already occurred for the planned project impact. Additionally, several projects either had no biological mitigation (and therefore no impact to endangered species on the site) and/or no sufficient map for detail on where to look for the mitigation. Nine more projects were eliminated during this round of the study, including:

	Project Name	Reason for Deletion
18.	Westridge Golf Course	Second Project EIR in progress*
19.	The Strand (Headlands)	Project authorized via Central-Coastal NCCP/HCP
20.	Serrano Summit (+ Civic Center)	Project authorized via Central-Coastal NCCP/HCP
21.	ETCO Project	No mitigation or mitigation location information and limited impact area
22. Com	Foothill Ranch (Baldwin pany)	No mitigation or mitigation location information
23.	Olinda Heights (Olinda Ranch)	Two species impacted, no mitigation location information
24. Wet	ACHWEP (Aliso Canyon Habitat land Environmental Plan)	No mitigation location information
25.	The Bluffs	No EIR included
26.	Coto de Caza	Project authorized via Southern HCP

* See page 33 for details on the second EIR.

Figure 5. The final nine projects to be removed from the study.
While mapping technologies and software are much better now, we did encounter a few instances where

the maps were so terrible we couldn't tell where the mitigation would take place.



The only depiction of biological resources in the EIR was this wildlife corridor map for the Olinda (Heights) Ranch project. Researchers were unable to determine where actual mitigation occurred on the ground.

We were left with 12 projects throughout the county. These included:

- 1. Brightwater
- 2. Community Center Park
- 3. Foothill/Eastern Transportation Corridor
- 4. Hawks Pointe (aka Emery Ranch)
- 5. Las Flores Planned Community
- 6. North Yorba Linda Estates (aka Shapell A&B)
- 7. Robert B. Diemer Treatment Plant North Access Road (aka Diemer Access Road)
- 8. Rolling Hills (aka Talega Valley)

- San Diego Creek Flood Control Channel (F05) Upper Newport Bay to Interstate 405, Programmatic Operations and Maintenance Project Draft Environmental Impact Report (aka San Diego Creek)
- 10. San Joaquin Hills Transportation Corridor
- 11. Shell Master Planned Community (aka Vista Del Verde)
- 12. Tonner Hills Planned Community

Interviews and Meetings Sometimes additional information was needed on a

Sometimes additional information was needed on a project and we turned to agencies and developers to conduct personal interviews. In one instance, we relied on an interview with Resource Ecologist Ken Keitzer with Chino Hills State Park to describe the mitigation from the Shapell A&B, Vista del Verde, and Diemer Road. We were able to obtain confirmed GIS mapped mitigation sites, but not how successful the mitigation was for the Park. Additionally, there was limited information on the Vista Del Verde project and study author Melanie Schlotterbeck had personal connections to the development entity, Shell-Aera Energy. She arranged several meetings and site tours. When documents were not available she relied on this connection to aid in the research. But these connections were not always available.

As part of this review, Ms. Schlotterbeck and study biologist, Robb Hamilton met with the USFWS and CDFW to review the preliminary findings and walk through early study recommendations on September 3, 2019. In this meeting, five projects were featured and site visits discussed, as well as the mitigation monitoring by the agencies. This led to requests for confirmation of the status of permits and what type of permit was required per project. And, based on some of the photographs, the resource agencies would be following up on at least one project due to the planting of non-natives at the edge of the restoration area (Hawks Pointe/Emery Ranch). Further, it appeared that Tonner Hills was greatly impacted by the 2008 Freeway Complex Fire, which significantly changed the habitat's appearance since the permit sign-off from USFWS.



Margot Griswold and Robb Hamilton during a site visit.



The Vista Del Verde mitigation site post Freeway Fire.

Project Evaluation & Mitigation Review

Each project was reviewed in the same manner. First, the list of species was compiled in a Google spreadsheet with a focus on species "**observed onsite.**" The second most important ranking was a "**high probability**" of the species on site, followed by "**moderate probability.**" Second, the mitigation measures were pulled from the DEIR or FEIR (Final EIR) and typed into the Google Spreadsheet.

Based on the information listed in the mitigation measures, a second round of 21 different PRA/ FOIA requests were submitted to different agencies requesting mitigation monitoring reports, annual reports, and permit information. Third, site visits were completed by Mr. Hamilton in the spring, summer, and fall of 2019 to confirm/deny the project's mitigation was completed as indicated in the EIR. Finally, site notes were typed up and individual project summaries were included for reference as appendices at the end of this report.

Overview

Ultimately 12 projects were retained for the study and evaluated for their mitigation effectiveness. The size of the projects, type of development, number of species impacted, number of permits required, duration and type of mitigation all varied. Through our PRA documents, we were able to assemble the status.

PROJECT TYPES

The study reviewed a variety of project types including housing developments (three), mixed use projects (five), and infrastructure projects (four). These are categorized as follows⁷⁵:

	Project Type								
Project Name	Residential	Mixed Use	Infrastructure						
Brightwater	x								
Diemer Access Road			x						
Foothill/Eastern Transportation Corridor			x						
Hawks Pointe	x								
Laguna Hills Community Center		x							
Las Flores PC		x							
North Yorba Linda Estates PC	x	¢							
Rolling Hills		x							
San Diego Creek			x						
San Joaquin Hills Transportation Corridor			x						
Tonner Hills PC		x							
Vista Del Verde		x							

Figure 6. The three types of projects included in the study.

Additionally, the size and location of each project varied as well. Infrastructure projects tended to be

long and linear while other projects were polygons. The projects included the following basic statistics:

		Project Details	·
Project Name Brightwater Diemer Access Road Foothill/Eastern Transportation Corridor Hawks Pointe Laguna Hills Community Center Las Flores PC North Yorba Linda Estates PC Rolling Hills	Time Frame	Lead Agency	Size
Brightwater	1993	County of Orange	105 acres
Diemer Access Road	2006	MWD	1.25 miles
Foothill/Eastern Transportation Corridor	1990	F/ETCA	24 miles
Hawks Pointe	1999	City of Fullerton	92 acres
Laguna Hills Community Center	1996	City of Laguna Hills	18 acre
Las Flores PC	1989	County of Orange	1,005 acres
North Yorba Linda Estates PC	2001	City of Yorba Linda	1,586 acres
Rolling Hills	1987	County of Orange	1,906 acres
San Diego Creek	2007	County of Orange	15,000 lin. Ft.
San Joaquin Hills Transportation Corridor	1990	SJHTCA	17.5 miles
Tonner Hills PC	2001	County of Orange	789.8 acres
Vista Del Verde	1993	City of Yorba Linda	875 acres

F/ETCA = Foothill/Eastern Transportation Corridor Agency SJHTCA = San Joaquin Hills Transportation Corridor Agency

Figure 7. Time frame, Lead Agency, and project size of the 13 studied projects.



Figure 8. The CEQA Mitigation Study's 12 reviewed projects.

Site Visits

Mr. Hamilton visited each project site/mitigation area at least once, to observe the general condition of the mitigation habitats and the physical setting (e.g., fences, irrigation piping, surrounding land uses). Prior to the survey, Mr. Hamilton mapped the mitigation sites—usually habitat restoration areas, but in some cases set-asides of land that had not been disturbed starting from such project materials as CEQA documents, permits, and mitigation monitoring plans.

Especially for the older projects, the limits of the mitigation site(s) could be difficult to discern from the project materials. For example, some projects simply called for restoring the graded slopes, without specifically mapping each area to be restored. In other cases, the CEQA document called for later permitting, and the extent of mitigation had to be pieced together by examining multiple permits. In many cases, mitigation areas were mapped on old topographic maps of varying quality, and these were often difficult to line up with the post-project topography.

Typically, Mr. Hamilton mapped the limits of the mitigation sites using Google Earth. In many cases, he made use of Google Earth's archive of historical imagery, dating back 10 or more years. He used this to find aerials taken shortly after a given site was graded, and after PVC irrigation lines and fencing were installed, from which the limits of restoration could be mapped and their acreage determined using Google Earth's area-measurement tool. Once the boundaries of the mitigation sites were mapped in Google Earth, he used the aerial images to conduct the site visit(s). For each visit, Mr. Hamilton noted the date and the starting and stopping times. At each site, documentary photos of the mitigation habitats were taken. Any special status species heard and/or observed within a mitigation site were recorded and the location(s) mapped. In most cases, notes were taken on the dominant native plant species that had become established at a given mitigation site, and on any non-native weeds or landscape plants that may have become established.

It was beyond the scope of this study to determine whether specific success criteria that may have been included in habitat restoration plans (e.g., measuring percent cover of certain native species or the height of trees planted) had been met. Rather, the purpose of the field visit was to evaluate whether the restoration/ mitigation had been more or less successful in achieving the goal of providing the desired habitat type(s).

For example:

- Was the site mostly vegetated with appropriate native plants or was it overrun with exotic weeds or landscape plants?
- Was a narrow goal of mitigation met—for example, restoring an area to coastal sage scrub habitat—without meeting some larger goal, such as restoring a certain type of coastal sage scrub required by a target species of the mitigation?
- Did the landowner and/or restoration specialist remove the irrigation pipes, hoses, and fencing after restoration was complete, or were they left in place indefinitely?



Hawks Pointe, as an example of how Google Earth imagery was used for project evaluation, from 1994 (left) to 2018 (right).

Essential Missing Information

In some instances, we were unable to confirm that a mitigation measure has been fulfilled and that mitigation measure was specifically needed to ensure the continued function of the mitigation site. For example, for the Brightwater project in Huntington Beach, one key missing detail as required by mitigation measure 9.1 was the creation of a trust fund to help with ongoing raptor predation on sensitive target species or management after the residential development was built. The County of Orange and City of Huntington Beach had no record of this trust fund being established. Consequently, we have no proof this mitigation measure was met.

This was also the case for the Rolling Hills project processed by the County of Orange. Mitigation Measure 32 states that 1,200 acres will be permanently protected with a resource conservation easement—and yet no details or documentation were available no the easement. Further, in Mitigation Measure 34 a resource management plan was to be established for this 1,200 preservation site prior to the approval of the tentative tract map, but there was no record of a plan from the County archives either. Certainly, land was set aside. It is not known if it has a conservation easement or resource management plan associated with the site as this information was unable to be provided by the County from our PRA.

Unexpected Issue Areas

This section provides a recap of a few of the projects where issues were noted in the files or from the site

visits. There was a unique confluence of two projects that provided some unexpected issues and two projects that were later folded into a Conservation Plan. Those stories are told here:

DIEMER PLANT ACCESS ROAD

For the Metropolitan Water District (MWD), its Diemer Plant, built in 1963, included one roadway in and out. However, the facility had the Shell Master Planned Community built around it in the 1990s. The facility never planned on a secondary access road—until residential neighbors complained about all of the truck traffic. Further compounding the issues was September 11, 2001. Now, infrastructure facilities took a hard look at what issues might exist on-site—emergency access roads might be necessary for ingress/egress redundancy. MWD proposed its secondary/emergency access into Telegraph Canyon within Chino Hills State Park.

However, because the Shell Master Planned Community was included in our study as well, records were traceable for the Shell project's mitigation requirements and how those overlapped with MWD's requirements. The Planned Community's HCP was created in conjunction with MWD. This Conservation Plan was approved and adopted in 1993—long before the need for a secondary access road for MWD's hilltop facility. The area protected below MWD's facility on the slopes leading to the State Park had a walnut woodland conservation easement. The new MWD road was designed to go through the existing conservation easement area.



The Diemer Road is within a walnut woodland conservation easement and HCP (left). An aerial view of the road. (right)

Upset by this betrayal, the non-profit Hills For Everyone—founders of Chino Hills State Park—litigated both DPR and MWD. The parties reached a settlement agreement, which included funding for an acquisition of additional walnut woodlands. Hills For Everyone continues to try to find parcels and willing sellers where this funding can be used. Unfortunately, State Parks has stopped acquiring land and therefore is not in compliance with the settlement agreement.

Consequently, the three key issues are: permitting a new activity in an existing Conservation Plan, adding a road through a conservation easement, and lack of fulfillment of a signed settlement agreement.

EASTERN & SAN JOAQUIN HILLS TRANSPORTATION CORRIDORS

Both the Eastern Transportation Corridor and the San Joaquin Hills Transportation Corridor were proposed in 1990. The EIRs and mitigation measures were signed off by the resource and permitting agencies, but the idea of a regional Conservation Plan was being rolled out nearly at the same time. Even though the Toll Road EIRs were approved prior to the existence of the Conservation Plan area, the Corridor Agencies signed on to the Central-Coastal NCCP/HCP in 1992. This voluntary addition in to the Conservation Plans made the future projects for the Toll Road Agencies "covered."

Ultimately, the permit for the Central-Coastal NCCP/ HCP was issued in 1996. In short, this means that even though the Conservation Plan was completed six years *after* the environmental documents came out for the two toll roads, the roads were still incorporated into the Conservation Plan. We had originally excluded projects in the Conservation Plan areas, but because this one received approvals through the usual EIR process and *then* joined the Central-Coastal Conservation Plan, we opted to keep these two projects in the study.⁷⁶ This is an atypical situation for both the resource agencies, the toll road operators, and how Conservation Plans usually work.^{77, 78}

HAWKS POINTE (EMERY RANCH)

Based on the site visits and later conversations with the resource agencies, issues with mitigation measures were found. For example, on the Hawks Pointe project, Mitigation Measure 4.3-14 states: "Peruvian pepper trees, Brazilian pepper trees, eucalyptus, castor bean, tree tobacco, black mustard, fennel, and pampas grass are all highly invasive, weedy species which must be removed to the maximum extent possible. Pepper trees and eucalyptus, in particular, are highly damaging to native flora because of toxins which leech out of dropped leaves. These toxins inhibit native plant species growth."⁷⁹

Based on the site visit we know there were nonnative invasive species planted within the restoration area and adjacent to a roadway. This was reported to USFWS and CDFW at the September 2019 meeting. Apparently, this has been an ongoing issue at this restoration site and the City of Fullerton had been noticed before for violating this mitigation measure by planting non-native species. USFWS will be following up.



Invasive plants line the roadway of the restoration area.

NORTH YORBA LINDA ESTATES (SHAPELL A&B)

As part of the mitigation for the North Yorba Linda Estates project, a 20 acre coastal sage scrub restoration project was to occur (and was claimed in restoration reports) on hillsides in the Yorba Linda portion of Chino Hills State Park.

Through the use of Google Earth it appears that the 20 acre site is more accurately described at 15.1 acres. The discrepancy between the anticipated amount of mitigation and the actual amount of mitigation is less 25%. Conversations with State Parks confirmed the "fifth lobe" was NOT included in the restoration site based on their GIS data. Additional conversations with USFWS about the acreage confirmed the Service pays close attention to what is required and what is mitigated.

Consequently, this raises an issue of actual acreage claimed for restoration sites. We were unable to



Based on the description in the EIR the restored lands in Chino Hills State Park were mapped as including more acreage (left, green), than what State Parks had a record of as being restored (right, orange).

determine where the discrepancy was that ultimately accounted for (or didn't) the 20 total acres. But this raises a good point that the agencies should be aware of for meeting mitigation measure requirements what is designated in the mitigation requirements should be accounted for on the ground.⁸⁰

A Project Outside the Scope of This Study

One substantial item to note, a project called Rancho La Habra – Westridge Golf Course.⁸¹ This project was eliminated from our study because of an unusual situation—a new EIR was being circulated.

The project was originally approved as part of the La Habra Hills Specific Plan within the City of La Habra. The Specific Plan was approved in 1992, and covered 380 acres. The proposal included the golf course, which opened in 1999, and surrounding 700 residences, which were completed sometime before 2003. At the time the applicant was Pacific Coast Homes.⁸²

Fast forward to 2018, a new proposal has been drawn up for the *same* Specific Plan area requesting modifications to the original plan. This time the project is initiated by CalAtlantic. Under normal conditions, this may not raise a flag, but local residents have been up in arms fighting the proposed change. Why the angst?

One hundred fifty acres would be "repurposed" from the golf course and converted into seven different residential planning areas totaling 448 new single and multi-family housing units. In other words, what was promised in the original specific plan—the benefit of recreational resources in this development as a golf course—would now be converted to housing.⁸³ Upon further investigation it appears specific biological mitigation measures were adopted at the time of the City of La Habra's approval of the project. The 2018 proposal also involves removing those mitigation measures and continuing with development.

As part of the 2018 DEIR, it states:

"In addition, the applicant is requesting the California Department of Fish and Wildlife to release and relocate existing deed restrictions that were previously established on the project site. These deed restrictions were established as mitigation for impacts related to previous construction of the existing golf course and adjacent residential areas to the south pursuant to the La Habra Hills Specific Plan. Release and relocation of these deed restrictions would be required in order for development of the proposed project to proceed."⁸⁴ (emphasis added)

The Executive Summary goes on to state:

"[T]he conservation area established by the deed restriction "provides mitigation in perpetuity for certain impacts associated with the development of a 300-acre abandoned oil field including pre-development activities and subsequent construction of 540 homes and an 18-hole golf course, and associated infrastructure that impacts 18 acres of highly disturbed coastal sage scrub."" "The deed restriction prohibits residential, commercial, retail, industrial, institutional, recreational or other purpose that is "inconsistent with the conservation of regional wildlife using the conservation area (including sensitive species)."⁸⁵

In other words, CalAtlantic is asking CDFW to "undo" its previous mitigation requirements for this new project. If this doesn't hit the heart of the issue for mitigation tracking and enforcement, nothing does.

This is a solid reminder that development interests can attempt to undo previous mitigation for future projects. It is only because of the involvement of the public, agencies, and hopefully decision makers that stops these types of egregious acts. What is the point of doing "in perpetuity" mitigation... if it only lasts 27 years? Interestingly, the DEIR does not—according to the City's website—include a significant unavoidable impact for this mitigation issue.⁸⁶ Undoing previous mitigation requirements that included deed restrictions is significant, and it is unavoidable because where the deed restriction is located is where the new housing development is proposed. It is unclear if the proposed mitigation to replace this deed restricted mitigation is adequate and/or meaningful for the biological resources.

Based on an email from the City Planner, Andrew Ho, the project will go before the La Habra Planning Commission soon and then the City Council for the final decision.⁸⁷ A partially recirculated DEIR was released in November 2019 and none of the requested deed restriction removals have been lifted.⁸⁸ Residents have hired legal help to comment on the EIR and, through that legal work, Mr. Hamilton provided an extensive comment letter on these mitigation issues.



"The nation behaves well if it treats its natural resources as as sets which it must turn over to the next generation increased, and not impaired, in value." — Theodore Roosevelt

A s noted in the previous chapter, 12 projects were included in this study. There were three types of projects: residential, mixed use, and infrastructure. The projects are described as follows based on these categories.

Project Details

Residential projects were classified based on the majority of the project containing a residential use. The inclusion of infrastructure (a road or water reservoir) or open space was seen as secondary to the project's primary purpose.



The graded hillsides of the Vista del Verde project as it is constructed, with Chino Hills State Park in the background.



The denuded hillsides of the Shapell project being graded for home construction.

Statistics for residential projects are as follows:

Project Name	Details
Brightwater ⁸⁹	 387 single family residences 0.8 acre for an underground water reservoir 5 acres of conservation / open space 23 acres of recreation / open Space
Hawks Pointe ⁹⁰	 210 single family detached residential units in seven planning areas Hiking trail and park Arterial roadway across the property
North Yorba Linda Estates ⁹¹	 688 single family dwelling units 383-unit senior residential facility Dedicated open space Creation of an equestrian/pedestrian trail system Relocation of existing above ground 66 kV powerlines (Site A) The extension of Bastanchury Road Construction of a water reservoir (Site C)

Figure 9. The three residential projects reviewed.

Mixed use projects were classified based on the mix of land uses (residential, industrial, commercial, retail, etc.) within the project itself.

Project Name	Details
Laguna Hills Community Center ⁹²	 Indoor and outdoor athletic fields including two baseball fields, soccer fields, and associated field Gathering places like a 15,400 square foot multi- purpose community building and 15,100 sqft A 10,000 sqft library Two playground areas Skating amenities—specifically a roller hockey rink 12,800 sqft and 5,000 sqft skate park Parking for 203 cars
Las Flores Planned Community ⁹³	 2,500 residential units A school site (25 acres) Local parks (16 acres) Neighborhood commercial (20 acres) Recreational space (34 acres) 503 acres of open space
Rolling Hills ⁹⁴	 3,000 residential units 50.8 acres of business park uses 13.6 acres of commercial uses A 7.2-acre health care facility 1,470 acres of open space and recreational uses
Tonner Hills ⁹⁵	 914 residential units (795 were actually built) in eight distinct neighborhoods covering 193.9 acres 32.7 acres will be available for public use 15 acres for continued oil operations (in the open space and residential areas) 7.7 acres for neighborhood commercial use
Vista Del Verde ⁹⁶	 Phase out of oil field productions (removal of facilities and remediation) A maximum of 2,338 dwelling units An 18-hole golf course 14.1 acres of neighborhood park Two equestrian/multi-purpose trails Two habitat preservation areas (294 acres) An elementary school The creation of a Habitat Conservation Plan with the purchase of additional land added into Chino Hills State Park

Figure 10. The five mixed use projects reviewed.

Infrastructure projects were classified based on public facilities created by various agencies and cities. These projects included roads and stream channelization.

Project Name	Details
Diemer Access Road ⁹⁷	 1.25-mile-long 30-40-foot-wide roadway in Telegraph Canyon
Foothill/Eastern Transportation Corridor ⁹⁸	 Amendment of the Master Plan of Arterial Highways for inclusion of the Foothill alignment Construction of the Foothill Transportation Corridor
San Diego Creek ⁹⁹	• Emergency and interim maintenance actions, permits, and mitigation status summary
San Joaquin Hills Transportation Corridor ¹⁰⁰	Construction of a roadway between Jamboree to Interstate 5

Figure 11. The four infrastructure projects reviewed.

The projects represent a smattering of locations, as well: inland/coastal, hillside/floodplain, north/ south/ east/west, with varying sizes, project scopes, and biological impacts. Scattered throughout Orange County, they are representative of the types of projects, impact analyses, resource agency permits, mitigation requirements, and mitigation follow through observed locally in recent decades.



The 241 Toll Road cuts through the historic Irvine Ranch Lands, now owned by OC Parks.

This is a map of all of the projects included in the study.



Figure 12. The 12 projects included in the study.

This is a map of all of the mitigation sites included in the study.



Figure 13. All of the mitigation sites for the 12 projects included in the study.

Biological Impacts

Depending on the location of the project and the impacted habitats and species—the mitigation and permit needs varied.

SPECIES LIST

The study involved consideration of eight plants, eight invertebrates, one amphibian, 13 birds, and 11 mammals, totaling 41 state-listed as threatened or endangered or that have special status designations from the CDFW (e.g., California Species of Special Concern). Because federally listed species were so closely linked in these habitat types, those species and permits were also reviewed in the study. The most commonly observed and/ or probable species on a project site was the California Gnatcatcher with 11 projects observing the bird.



Santa Ana River Woollystar.

Plant Species ¹⁰¹	Warne	St	ate	Fed	Other	
	Grant	Threatened	Endangered	Threatened	Endangered	
Braunton's Milk-Vetch	X				x	
Gambel's Water Cress	X	X			X	
Salt Marsh Bird's Beak	X		Х		x	_
San Diego Button-Celery	X		Х		X	
San Fernando Valley Spineflower	X		X			
Santa Ana River Woollystar	X		X		x	
Thread-Leaved Brodiaea	X		Х	X		
Ventura Marsh Milk-Vetch	X		Х		х	

Figure 14. State and federally listed threatened and endangered plant species.

Invertebrate Species ¹⁰¹	Warne	St	ate	Fed	Other	
	Grant	Threatened	Endangered	Threatened	Endangered	
Black Abalone					x	
Carson Wandering Skipper					X	
Quino Checkerspot Butterfly	X				x	-
Riverside Fairy Shrimp					X	
San Diego Fairy Shrimp					Х	
Steelhead (SoCal Segment)	X				Х	
Tidewater Goby	X				Х	
White Abalone					Х	

Figure 15. State and federally listed threatened and endangered invertebrate species.

Amphibian Species ¹⁰¹	Warne	St	ate	Fed	leral	Other
	Grant	Threatened	Endangered	Threatened	Endangered	
Arroyo Toad					Х	

Figure 16. State and federally listed threatened and endangered amphibian species.

Bird Species ¹⁰¹	Warne	St	ate	Fed	Other	
	Grant	Threatened	Endangered	Threatened	Endangered	
Belding Savannah Sparrow	X		Х			
Burrowing Owl						CA Species of Special Concern
California Condor	1.1.1		X		x	
California Least Tern	X		X		X	
Coastal Cactus Wren						CA Species of Special Concern
Coastal California Gnatcatcher	1				X	
Least Bell's Vireo	11 1 1 1 1		X		X	
Light-Footed Ridgway's Rail	X		х		х	
Marbled Murrelet	11.000		X	Х		
Southwestern Willow Flycatcher			X*		X	
Tricolored Blackbird		X				
White-tailed Kite						CA Fully Protected
Yellow-billed Cuckoo			X	Х		1

Figure 17. State and federally listed threatened and endangered bird species.

Mammal Species ¹⁰¹	Warne	St	ate	Fec	Other	
	Grant	Threatened	Endangered	Threatened	Endangered	
Blue Whale	-				X	
Fin Whale			3	1	x	
Humpback Whale				4	Х	1
Leatherback Sea Turtle	X				X)
Loggerhead Sea Turtle (North Pacific)	x				x	
North Pacific Right Whale			1			
Pacific Green Sea Turtle	10114			X	· · · · · · · · · · · · · · · · · · ·	
Pacific Pocket Mouse	X		4	1	X	
San Bernardino Kangaroo Rat	-0	X	0 = 0	11	X	1,
Sei Whale					X	
Sperm Whale				1	X	

Figure 18. State and federally listed threatened and endangered mammal species.



California Least Tern.



Leatherback Sea Turtle.

The per species ledger compared against each project's impacted species list.

ABBREVIATION KEY

O = Observed HP = High Probability N = Not Observed MP = Moderate Probability LP = Low Probability U = Unlikely

Plant Species	Brightwater ¹⁰³	Diemer Access Road ¹⁰⁴	Foothill/Eastern Transportation Corridor ¹⁰⁵	Hawks Pointe ¹⁰⁶	Laguna Hills Community Center ¹⁰⁷	Las Flores PC ¹⁰⁸	North Yorba Linda Estates PC ¹⁰⁹	Rolling Hills ¹¹⁰	San Diego Creek ¹¹¹	San Joaquin Hills Transportation Corridor ¹¹²	Tonner Hills PC ¹¹³	Vista del Verde ¹¹⁴
Braunton's Milk-Vetch			1.1.1	U			U				LP	MP
Gambel's Water Cress												
Salt Marsh Bird's Beak							1 T		LP		1	
San Diego Button-Celery) I								
San Fernando Valley Spineflower			0						LP			
Santa Ana River Woollystar		LP					LP					
Thread-Leaved Brodiaea												1
Ventura Marsh Milk-Vetch				04								

Figure 19. The occurrence or likelihood of plant species by project.



Braunton's Milk-vetch.



San Fernando Valley Spineflower.



Salt Marsh Bird's Beak.

Invertebrate Species	Brightwater ¹⁰³	Diemer Access Road ¹⁰⁴	Foothill/Eastern Transportation Corridor ¹⁰⁵	Hawks Pointe ¹⁰⁶	Laguna Hills Community Center ¹⁰⁷	Las Flores PC ¹⁰⁸	North Yorba Linda Estates PC ¹⁰⁹	Rolling Hills ¹¹⁰	San Diego Creek ¹¹¹	San Joaquin Hills Transportation Corridor ¹¹²	Tonner Hills PC ¹¹³	Vista del Verde ¹¹⁴
Black Abalone												
Carson Wandering Skipper	1						-					
Quino Checkerspot Butterfly				LP		-		1	1.2.4		LP	
Riverside Fairy Shrimp					1				U			
San Diego Fairy Shrimp									U			
Steelhead (SoCal Segment)												
Tidewater Goby			U	100	LP			1	U	U	-	
White Abalone												

Figure 20. The occurrence or likelihood of invertebrate species by project.



Quino Checkerspot Butterfly.



Tidewater Goby.

Amphibian Species	Brightwater ¹⁰³	Diemer Access Road ¹⁰⁴	Foothill/Eastern Transportation Corridor ¹⁰⁵	Hawks Pointe ¹⁰⁶	Laguna Hills Community Center ¹⁰⁷	Las Flores PC ¹⁰⁸	North Yorba Linda Estates PC ¹⁰³	Rolling Hills ¹¹⁰	San Diego Creek ¹¹¹	San Joaquin Hills Transportation Corridor ¹¹²	Tonner Hills PC ¹¹³	Vista del Verde ¹¹⁴
Arroyo Toad			U		MP	HP			U	LP		

Figure 21. The occurrence or likelihood of amphibian species by project.



Belding's Savannah Sparrow.



Least Bell's Vireo.

Bird Species	Brightwater ¹⁰³	Diemer Access Road ¹⁰⁴	Foothill/Eastern Transportation Corridor ¹⁰⁵	Hawks Pointe ¹⁰⁶	Laguna Hills Community Center ¹⁰⁷	Las Flores PC ¹⁰⁸	North Yorba Linda Estates PC ¹⁰⁹	Rolling Hills ¹¹⁰	San Diego Creek ¹¹¹	San Joaquin Hills Transportation Corridor ¹¹²	Tonner Hills PC ¹¹³	Vista del Verde ¹¹⁴
Belding Savannah Sparrow									HP			
Burrowing Owl	0	LP		U			Ų		LP			
California Condor	III EI											
California Least Tern	0		U				-		0			
Coastal Cactus Wren	LP	0	0	0		0	0	0	U		0	0
Coastal California Gnatcatcher	0	0	0	0	LP	0	0	0	0	0	0	0
Least Bell's Vireo		HP	U	U	MP	LP	LP		0	LP	0	LP
Light-Footed Ridgway's Rail	1					•			-			
Marbled Murrelet			LP									
Southwestern Willow Flycatcher	0	LP	0	U		U	LP		0	-		LP
Tricolored Blackbird	0		U	0	LP	11			MP	LP		
White-Tailed Kite	0	MP	0	0	MP	0	0	0	0	HP	MP	0
Yellow-Billed Cuckoo			LP			U	LP	14	U	LP	1	U

Figure 22. The occurrence or likelihood of bird species by project.

Mammal Species	Brightwater ¹⁰³	Diemer Access Road ¹⁰⁴	Foothill/Eastern Transportation Corridor ¹⁰⁵	Hawks Pointe ¹⁰⁶	Laguna Hills Community Center ¹⁰⁷	Las Flores PC ¹⁰⁸	North Yorba Linda Estates PC ¹⁰⁹	Rolling Hills ¹¹⁰	San Diego Creek ¹¹¹	San Joaquin Hills Transportation Corridor ¹¹²	Tonner Hills PC ¹¹³	Vista del Verde ¹¹⁴
Blue Whale	1.7				1.							
Fin Whale												
Humpback Whale												
Leatherback Sea Turtle			1									
Loggerhead Sea Turtle (North Pacific)			-						1 - 1			
North Pacific Right Whale												
Pacific Green Sea Turtle	1				*							
Pacific Pocket Mouse			U		MP				U			U
San Bernardino Kangaroo Rat			0									
Sei Whale												
Sperm Whale												

Figure 23. The occurrence or likelihood of mammal species by project.



Pacific Pocket Mouse.

Mitigation Requirements These projects included permits from the ACOE,

These projects included permits from the ACOE, CDFW, USFWS, and RWQCB. Permits from the Coastal Commission are noted, but were not reviewed for this study. Any other permits and permissions needed from other agencies, based on the project's location, are noted under the column "other."

The SIP is a Standard Individual Permit offered under the Section 404 of the Clean Water Act, where as a NWP is a National Wide Permit also housed under Section 404. No Record of Involvement (NRI) means the agency had no record of being involved or requiring mitigation or permits for the project. Unknown means the project's environmental documents didn't specify if this type of permit was required or not.

The tally of project permits are as follows:

Designed Manage	Permits Required									
Project Name	ACOE ¹¹⁵	CDFW ¹¹⁶	USFWS ¹¹⁷	RWQCB	Coastal	Other				
Brightwater	NRI	NRI	NONE	UNK	CDP	НВ				
Diemer Access Road	404 (NWP)	1600 / 1603	Surveys*	401	-	DPR				
Foothill/Eastern Transportation Corridor	404 (SIP)	CP** (1601)	CP**	UNK	÷	÷				
Hawks Pointe	404 (NWP)	1600	7	401	-	-				
Laguna Hills Community Center	404 (SIP)	1600	NRI	UNK	*	~				
Las Flores PC	404 (SIP)	1603	NRI	UNK	+	*				
North Yorba Linda Estates PC	404 (SIP)	1603 (NRI)	7	401	l e	*				
Rolling Hills	NRI	NRI	NRI	UNK	-	-				
San Diego Creek	404 (multiple)	1602	7	401	CDP	4				
San Joaquin Hills Transportation Corridor	404 (SIP)	CP* (1601)	CP**	UNK	CDP	*				
Tonner Hills PC	404 (SIP)	1600	7	401	7	+				
Vista Del Verde	NRI***	1603 (NRI)	10	UNK	-	UNK				

PC = Planned Community

CP = NCCP or HCP

DPR = Department of Parks & Recreation

HB = City of Huntington Beach

NRI = No Record of Involvement

SIP = Standard Individual Permit

NWP = Nationwide Permit

UNK = Unknown

* Activity covered in existing Section 10

** Conservation Plan was developed later

*** Pre-app indicated permit was required

Figure 24. The required permits for each of the 12 reviewed projects.

Per conversations with CDFW, North Yorba Linda Estates, had no record of involvement in the project. However, we obtained through the City of Yorba Linda permit fees paid and paperwork filed regarding the project and its CEQA requirements. It is unclear if any permit was actually issued because the only records pointing to the permit requirements are the CEQA documents, a preliminary fee receipt, and the notice of publication—not an actual permit. But, all of this points to involvement and a permit.

As it relates to Vista Del Verde, again per conversations with CDFW, this project had no record of involvement. Again, through our PRA from the City of Yorba Linda,

we were able to obtain a copy of the LSAA permit #5-578-95. We have proof of the permit (from October 1997) and sign-off (from August 2015). There was a permit from CDFW on this project.

Mitigation Status

Although the projects considered in the study date back as early as the 1990s, in some cases the mitigation is not yet complete. This table summarizes the information received from the resource/permitting agencies for each of the 12 projects.

Dusingt Name	Permits Status							
Project Name	ACOE ¹¹⁸	CDFW ¹¹⁹	USFWS ¹²⁰	RWQCB				
Brightwater	NRI	NRI	NRI	UNK				
Diemer Access Road	Complete	Complete*	NRI	401				
Foothill/Eastern Transportation Corridor	Complete	Complete*	IP	UNK				
Hawks Pointe	Complete	IP	Complete	401				
Laguna Hills Community Center	Complete	IP	NRI	UNK				
Las Flores PC	Complete	Complete	NRI	UNK				
North Yorba Linda Estates PC	Complete	UNK/NRI	Complete	401				
Rolling Hills	NRI	NRI	NRI	UNK				
San Diego Creek	IP	IP	IP	401				
San Joaquin Hills Transportation Corridor	Complete	Complete*	IP	UNK				
Tonner Hills PC	Complete	IP	IP/PS	401				
Vista Del Verde	NRI	Complete	Complete	UNK				
PC = Planned Community NRI = No Record of Involvement IP = In Progress	UNK = Ur documer * Activity	nknown, no red nts v covered in exi	cord in enviro	nmental 10				

Complete = Mitigation Requirements Signed Off

PS = Partial Sign-Off

** Conservation Plan was developed later

 Mitigation Appears to be complete, but no official record by agency

Figure 25. The status of required permits for each of the 12 reviewed projects.

In some instances, the biological mitigation measures were a step by step account of what was to be done on-site. In other situations, these common practices (fencing off habitat areas, working during nonbreeding season, and having an on-site biologist, etc.) were not included as individual mitigation measures, but instead lumped together in one big mitigation measure.

Project Name	Number of Mitigation Measures & Project Design Features
Brightwater	9
Diemer Access Road	16
Foothill/Eastern Transportation Corridor	65
Hawks Pointe	30
Laguna Hills Community Center	2
Las Flores PC	6
North Yorba Linda Estates PC	12
Rolling Hills	8
San Diego Creek	8
San Joaquin Hills Transportation Corridor	53
Tonner Hills PC	5
Vista Del Verde	9

Figure 26. The number of mitigation measures per project.

Over the course of this nine-month study, biologist Robert Hamilton reviewed 12 projects with biological impacts and evaluated the efficacy of habitat restoration performed as required mitigation. In the case of the Rolling Hills/Talega Valley project, the primary biological mitigation measure consisted of a large set-aside of land (with no habitat restoration to evaluate). For the Eastern Transportation Corridor project, the site visit was limited to a drive-by inspection that was inadequate to reach a conclusion about the efficacy of restoration efforts. Restoration efforts undertaken as mitigation for the remaining projects were ranked by Mr. Hamilton, on a scale he created of 1 (least effective) to 5 (most effective). The ranking system is described as follows: 5: Habitat restoration/enhancement resulting in uniformly successful establishment of the intended natural communities. Restored habitats contain only minimal levels of non-native plant species (generally less than approximately 10% non-native cover). In general, non-native, invasive plants have not been planted within or along the margins of any restoration area. For restoration projects in areas where the coastal sage scrub naturally includes substantial amounts of cactus, restoration generally includes substantial amounts of cactus. It is preferable to include larger specimens that provide usable habitat for Cactus Wrens without requiring decades of maturation. This is a current standard not applicable to restoration efforts initiated more than 10 years ago,



Restoration for projects impacting cactus scrub tend to include inadequate cactus to compensate for the lost habitat values.

before the importance of cactus scrub restoration became widely understood. Fencing, irrigation piping and hoses, erosion-control wattles, and other restoration-related materials were generally removed if the relevant agencies have signed off on the adequacy of the mitigation effort. Relevant agencies may or may not have signed off on the adequacy of the mitigation effort (applies to cases where the restoration effort is ongoing).

4: Habitat restoration/enhancement resulting in mostly successful establishment of the intended natural communities (limited areas may have failed or not clearly succeeded). Restored habitats contain limited levels of non-native plant species (generally less than approximately 20% non-native cover). In general, non-native, invasive plants have not been planted within or along the margins of any restoration area. In areas where the coastal sage scrub naturally includes substantial amounts of cactus, restoration generally includes more than trace amounts of cactus. It is preferable to include larger specimens that provide usable habitat for Cactus Wrens without requiring decades of maturation. This is a current standard not applicable to restoration efforts initiated more than 10 years ago, before the importance of cactus scrub restoration became widely understood. Fencing, irrigation piping and hoses, erosion-control wattles, and other restoration-related materials were generally removed. Relevant agencies may or may not have signed off on the adequacy of the mitigation effort (generally applies to cases where the restoration effort is ongoing).

3: Habitat restoration/enhancement resulting in a mix of successfully and unsuccessfully established natural communities (some substantial areas may have failed

or not clearly succeeded). Non-native, invasive plants may or may not have not been planted within or along the margins of any restoration area. Restored habitats contain limited levels of non-native plant species (generally less than approximately 30% non-native cover). In areas where the coastal sage scrub naturally includes substantial amounts of cactus, restoration often includes only trace amounts of cactus. This is a current standard not applicable to restoration efforts initiated more than 10 years ago, before the importance of cactus scrub restoration became widely understood. Fencing, irrigation piping and hoses, erosion-control wattles, and other restorationrelated materials may or may not have been removed. Relevant agencies may or may not have signed off on the adequacy of the mitigation effort (wildfire and/or other natural processes may have greatly altered the plant species composition of some areas of restored habitat following agency sign-off).

2: Habitat restoration/enhancement resulting in generally unsuccessful establishment of the intended natural communities, but with some non-trivial areas of success. Non-native, invasive plants may or may not have not been planted within or along the margins of any restoration area. Restored habitats often contain substantial levels of non-native plant species (generally more than approximately 30% non-native cover). In areas where the coastal sage scrub naturally includes substantial amounts of cactus, restoration generally includes little or no cactus. This is a current standard not applicable to restoration efforts initiated more than 10 years ago, before the importance of cactus scrub restoration became widely understood. Fencing, irrigation piping and hoses, erosion-control wattles, and other restoration-related materials may or may not have been removed. Relevant agencies may or may not have signed off on the adequacy of the mitigation

effort (wildfire and/or other natural processes may have greatly altered the plant species composition of the restored habitat following agency sign-off).

1: Habitat restoration/enhancement resulting in generally unsuccessful establishment of the intended natural communities. Non-native, invasive plants may or may not have not been planted within or along the margins of any restoration area. Restored habitats contain substantial levels of non-native plant species (generally more than approximately 50% non-native cover). In areas where the coastal sage scrub naturally includes substantial amounts of cactus, restoration of coastal sage scrub generally includes little or no cactus. This is a current standard not applicable to restoration efforts initiated more than 10 years ago, before the importance of cactus scrub restoration became widely understood. Fencing, irrigation piping and hoses, erosion-control wattles, and other restorationrelated materials may or may not have been removed. Relevant agencies may or may not have signed off on

the adequacy of the mitigation effort (wildfire and/ or other natural processes may have greatly altered the plant species composition of the restored habitat following agency sign-off).



Locally, mustards are among the most common invasive exotic species.

Rank	Restoration Success	Amount of Non- Natives	Inclusion of Cactus	Project Materials Removed	Sign-off
5	Uniformly Successful	Less than 10% non-native cover	Substantial Amounts	All to Mostly	Occurred or Ongoing
4	Mostly Successful	Less than 20% non-native cover	Larger Specimens	Mostly	Occurred or Ongoing
3	Mixed Success	Less than 30% non-native cover	Trace amounts	Mostly to Somewhat	Occurred or Ongoing
2	Mostly Unsuccessful	More than 30% non-native cover	Little to No Cactus	Somewhat	Occurred or Ongoing
1	Unsuccessful	More than 50% non-native cover	Little to No Cactus	Somewhat to Not at All	Occurred or Ongoing

Figure 27. The ranking system (5-best, 1-worst) by category.

Deciset North	Site Visit Ranking					
Project Name	(1-worst, 5-best)					
Brightwater	5					
Diemer Access Road	4*					
Eastern Transportation Corridor	N/A (Site Visit Limited Field Survey)					
Hawks Pointe	4					
Laguna Hills Community Center	2					
Las Flores PC	4					
North Yorba Linda Estates PC	2					
Rolling Hills	N/A (Acquisition site not evaluated)					
San Diego Creek Channel	2					
San Joaquin Hills Toll Road	5					
Tonner Hills PC	1					
Vista Del Verde	3					

*Road built through a conservation easement.

Figure 28. The projects and their site visit ranking.

Overall Findings

Review of several restoration projects in Orange County demonstrates that the basic constituent elements of coastal sage scrub and riparian woodland can be successfully restored on graded slopes and in other disturbed areas, with beneficial outcomes for federally threatened Coastal California Gnatcatchers, Least Bell's Vireos, and other native plant and wildlife species.

Of the 10 projects with restoration efforts subject to adequate review, two were judged to warrant a score of "5/5": **San Joaquin Transportation Corridor** and **Brightwater**. The former project involved restoring dozens of acres of coastal sage scrub on the massive



A cactus stand post 2008 Freeway Complex Fire.

graded slopes of the San Joaquin Toll Road as well as restoring riparian woodland along Bonita Creek in Newport Beach. These efforts successfully established target natural communities that are now difficult to distinguish from undisturbed habitats in their vitality, general lack of weeds, diversity of native plant species, and wildlife use. The only apparent flaw in the coastal sage scrub restoration effort is that the restored habitat generally lacks the extensive cactus patches (*Opuntia littoralis, O. oricola, Cylindropuntia prolifera*) that flourished across the San Joaquin Hills prior to the 1991 Laguna Fire.* In recognition that the San Joaquin Toll Road restoration effort successfully established large areas of diverse natural communities that fully satisfied the designated success criteria, this project was scored "5/5."

Since the 1990s, a scourge of wildfires has decimated cactus stands across the region, contributing to precipitous declines in populations of the "coastal" Cactus Wren throughout its range. Conservation biologists and the resource agencies have sounded the alarm about these related problems, and for at least

*Because cactus plants are more difficult to propagate and handle compared with other coastal sage scrub plants, and because they tend to grow very slowly, coastal sage scrub restoration efforts initiated in the 1990s and early 2000s generally made only token efforts to restore cactus. the past decade legitimate restoration of coastal sage scrub has, in most areas, included the establishment of substantial cactus patches as a mandatory performance standard.

Among the reviewed projects, the best example of cactus scrub restoration is Brightwater in Huntington Beach, where the ongoing scrub restoration effort involves extensive plantings of mature prickly-pear and cholla. Although Cactus Wrens do not currently occur at this location, the use of substantial amounts of cactus allows for possible establishment of a population there in the future. The restored habitat was observed to support several pairs of California Gnatcatchers even before the project was completely implemented. The appropriate inclusion of large amounts of cactus, and the success of the ongoing restoration effort, account for its score of "5/5."

Three of the restoration projects—**Diemer Access Road, Hawks Pointe**, and **Las Flores Planned Community**—were scored "4/5." In the case of Diemer Access Road, most of the restoration was evaluated from a distance, which adds an element of uncertainty. Note, as well, that the road itself was built through a HCP area, and that authorization to build a new road in this area was a source of controversy in the CEQA review process for the project.** The restoration of the road edges and creek impacts appeared to be as successful as possible, but the incongruous nature of the project itself—involving construction of tall retaining walls and fencing in an area thought by many to have been set aside for conservation purposes reduced the score to "4/5."

Restoration of coastal sage scrub at Hawks Pointe was generally successful, and multiple California Gnatcatchers were detected using the restored scrub habitat. The EIR specified, however, that 5.2 acres of Southern Cactus Scrub would be restored. In fact, the restored scrub contains only trace amounts of cactus that remains low-growing. Much of the scrub in this area (the West Coyote Hills) is heavily dominated by Coastal Prickly-Pear (*Opuntia littoralis*), and for this reason the area supports a regionally important population of the "coastal" Cactus Wren. As such, failure to satisfy the requirement to establish 5.2

**A legal challenge to the EIR was resolved through a settlement, discussed in an Addendum to the EIR, certified in October 2008, in which the Applicant paid \$1,200,000 to the Petitioners, at least \$700,000 of which was designated for purchase of walnut woodlands in the project vicinity.



The Community Center restoration site still had PVC pipe.

acres of cactus-dominated scrub represents a flaw in the mitigation. This calls into question the EIR's conclusion that implementation of the project, as mitigated, would not entail significant impacts to the Cactus Wren. Failure to incorporate adequate cactus into the restoration effort reduced the score for this otherwise successful project to "4/5."

The Las Flores Planned Community project involved restoring 19.5 acres with coastal sage scrub, oaks, and riparian vegetation. In general, the restored natural habitats are well-developed, with very little cover of non-native weeds. The riparian habitat has matured well, as has the coastal sage scrub; the oaks are generally successful, as well, although some are spindly and may never mature properly. As with the Hawks Pointe restoration, this site contains only trace amounts of cactus whereas the surrounding natural cactus contains Coastal Prickly-Pear (Opuntia littoralis) as a dominant species. Also, small amounts of non-native Desert Carpet (Acacia redolens) were planted in the site, and some irrigation pipes and hoses were never removed. The main problem is that a permanent, six-foot-tall, chain-link fence, 2,640 feet in length, was erected around the basins in the middle part of the mitigation site. The fenced portion of the site can be accessed only through a 75-foot gap in the fence. This gap in the fence consists of rip-rap rocks at the base of a slope to a roadway that encircles the interior basins. This fence, and the rip-rap rocks, limit the capacity of terrestrial mammals to access the main part of the mitigation area. The 75-foot gap in the fence undercuts any human-safety function the fence might be thought to serve, so the continued existence of the fencing should be reconsidered. Without the fence, the site would receive "5/5," but with the fence in place the score is reduced to "4/5."

Only one of the 10 projects, Vista del Verde, scored received the middle score of "3/5." Restoration of approximately 42.4 acres of graded slopes around the perimeter of the golf course with coastal sage scrub was among the most successful efforts evaluated. Unlike most other projects this one included substantial areas of Coastal Prickly-Pear (Opuntia *littoralis*), although it is unclear how long the cactus will take to mature enough to provide habitat of use to the "coastal" Cactus Wren, a species that was very common in this area prior to project implementation, but which is now scarce or absent there. Some edges of the golf course were planted with exotics, such as Peruvian Pepper (Schinus molle), Fountain Grass (Pennisetum setaceum), and Pampas Grass (Cortaderia selloana). By contrast, however, four off-site restoration areas along Carbon Canyon Road, covering a total of approximately 15.4 acres, were observed to be in poor condition, being largely overrun with exotic weeds following the Freeway Complex Fire, which burned through that area in 2008. The juxtaposition of these two outcomes led to the scoring of the overall restoration effort as "3/5."

Three projects received a "2/5" ranking: North Yorba Linda Estates, San Diego Creek, and Laguna Hills Community Center. Mitigation for the North Yorba Linda Estates project included restoration of 20 acres of coastal sage scrub in the Puente Hills and another 20 acres of scrub in Chino Hills State Park. The restoration of scrub in the Puente Hills included

adequate levels of Coastal Prickly-Pear (Opuntia littoralis) and was very successfully established. During California Gnatcatcher protocol surveys performed by the Habitat Authority throughout the Puente Hills in 2017, and separate from this study, Hamilton detected California Gnatcatchers using the restored habitat. As was referenced earlier, there is a discrepancy in the actual acres restored on the Chino Hills State Park site. It was generally quite weedy. Although the habitat was expressly intended "to provide future supplemental habitat for the Cactus Wren," even the most successful patches of restored scrub were observed to include little or no cactus. In contrast to the successful restoration effort in the Puente Hills, the score was undercut by (1) an apparent shortfall of restored acreage and (2) and the general lack of cactus planted in Chino Hills State Park. Restoration at the latter site should have been geared specifically toward creating habitat for Cactus Wrens, yielding an overall score for the entire project of "2/5."

The EIR for the San Diego Creek maintenance project dates back to 2009. Mitigation for the impacts to willow-riparian habitat occupied by the Least Bell's Vireo involves several components:

 Talbert Regional Park: creation of 17.8 acres of willow-riparian habitat (near-total failure, with irrigation pipe and sprinkler heads left in place) and 1.5 acres of coastal sage scrub (successful, with observed use by California Gnatcatchers, although very little cactus content and the



The Talbert restoration site was deemed a failure.

estoration crew left behind their irrigation pipe and temporary fencing after completion of the project).

- Mason Regional Park: creation/enhancement of 1.4 acres of willow-riparian (mix of successful and not successful, with a Least Bell's Vireo seen near one of the sites); 4.3 acres of Mulefat and Mexican Elderberry (mix of successful and not successful); and 4.26 acres of Coastal Sage Scrub (mix of successful and not successful).
- Peters Canyon Regional Park: 15 acres of exotic plant removal from creek bed (most exotics removed, but many remain). The creek is in an area where large numbers of eucalyptus and other non-native trees have been left on the hillsides of natural coastal sage scrub, and along the margins of the creek, calling into question the basic premise of removing non-native trees from a narrow strip of riparian habitat running through a larger area characterized by its numerous non-native trees.
- Santa Ana River upstream of Gypsum Canyon Road: control of 13.5 acres of Giant Reed (Arundo donax). It appeared that Giant Reed was generally being controlled in this general area, but a large part of the river channel/ floodplain was, at the time of the visit, undergoing a major construction project and it was beyond the scope of the investigations to determine the nature of this work or how it was being mitigated.

aspects, it also has notable shortfalls. In particular, the inability to establish willow-riparian habitat within 17.8 acres of Talbert Regional Park (apparently due to high soil salinity) represents a massive failure to mitigate the project's significant impacts to willowriparian habitat and the Least Bell's Vireo. This central mitigation concept, as well as the efficacy of removing non-native plants from Peters Canyon Wash, should have been better thought out as part of the project's CEQA analysis. The overall score for the project is "2/5."

The Laguna Hills Community Center project, implemented in the late 1990s, entailed impacts to approximately 3.5 acres of impacts to riparian habitats and 0.3 acre of coastal sage scrub. Mitigation consisted of restoring 8.7 acres of a tributary to Aliso Creek. The habitats to be restored consisted of willow-riparian woodland and wet meadow, as well as eradication of various non-native plants in the mitigation site. Investigation of this site in 2019 revealed a mishmash of native and non-native plants enclosed within a sixfoot chain-link fence. Many exotic plants have been planted inside of the fence, including eucalyptus trees (Eucalyptus spp.), Mexican Fan Palms (Washingtonia robusta), Evergreen Ash (Fraxinus uhdei), Tree-ofheaven (Ailanthus altissima), Blue-leaf Wattle (Acacia saligna), Tamarisk (Tamarix ramosissima), Century Plan (Agave americana), Bottlebrush (Callistemon sp.), and Carrotwood (Cupaniopsis anacardioides). Native species are also present, including Black and Arroyo Willows (Salix gooddingii, S. lasiolepis), Fremont Cottonwood (Populus fremontii), Mugwort (Artemisia douglasiana), Spiny Rush (Juncus acutus), Salt Grass (Distichlis spicata), California Rose (Rosa californica), and California Blackberry (Rubus ursinus).

The site is too overgrown with tall trees-native and exotic-to provide habitat of high value to the Least Bell's Vireo, which is identified as a species that would benefit from the restoration. It seems likely that the habitat now present within the mitigation area would have been of similar type and value to native wildlife species with or without the restoration program. Aspects of the treatment of this site that are worse than doing nothing include the establishment of a permanent, six-foot chainlink fence that presumably limits movement of terrestrial wildlife into and out of the streambed areas, and the apparent planting of exotic landscaping inside the mitigation area. The overall score for the project is "2/5."





An aerial view of the Tonner Hills development.

The Tonner Hills Planned Community project impacted 194 acres and established a conservation easement over all preserved and/or restored areas (449 acres). Most of the impacts and mitigation involved coastal sage scrub, and this was the only type of restoration that could be evaluated for this study. The EIR and subsequent plans indicated different areas of coastal sage scrub restoration, with the 2002 DEIR (Table 4.10-7) specifying 123.8 acres of coastal sage scrub restoration and the 2004 restoration plan prepared by Chambers Group (2004) specifying restoration of 116.6 acres on restored slopes plus enhancement (weed removal) on an additional 19 acres. Examination of historical aerial imagery suggests that approximately 121 acres of natural communities were restored on graded slopes.

A requirement of the Biological Opinion issued for the project by the USFWS (FWS-OR-2347.5, December 31, 2002) is that the 449 acres preserved and restored on the site be placed under perpetual management by Nuevo Energy. Two endowments were created to fund perpetual management of the site:

- \$270,000 initial deposit.
- \$100,000 second deposit for interest to manage the property by a future entity.
- When the property is turned over to the land manager if the combined amount is less than \$650,000, Nuevo Energy will make it whole.

Page 1 of the Perpetual Management Plan (PMP) prepared to implement this requirement states:

"For the purposes of this PMP, the assumption is made that the success criteria established for each of the various habitat restoration areas have been met. The goal of the PMP is to provide enough information and guidance about the maintenance and monitoring of the Tonner Hills Conservation Easement area that the County of Orange and the resources agencies can be assured that the area will be effectively managed for the long-term. The time period for the PMP is assumed to start from the beginning of the sixth year after implementation of the habitat restoration projects (Implementation was completed in May of 2004), but no earlier than bond release following achievement of the necessary success criteria until the completion of oil extraction activities and the restoration of the oil extraction pads and access roads. At that time, the County of Orange or other

management entity will either adopt this management plan or coordinate with the Service to develop a new management plan that will ensure that the site is managed in perpetuity for the benefit of the native plant and animal life on-site, particularly coastal sage scrub and the coastal California gnatcatcher."¹²²

The materials received for use in this research project did not include the bi-annual memorandum verifying eradication of non-native plant species. No other annual or periodic reports identified in the PMP were included in the materials received for our review. Thus, it is not clear how or whether the perpetual management of the Tonner Hills mitigation areas have been maintained over the 15 years it has been in place.

A caveat at the bottom of the "Summary of Perpetual Management Plan Components Monitoring, Reporting, and Follow-up" table states:

> "Note: Upon transfer of the property and the \$650,000+ combined endowments to the approved management entity, no activity described above will be the financial responsibility of the applicant or the HOA unless specifically designated as such in this document. In the event that all endowment funding has been exhausted, no additional financial liability will rest with the landowner, applicant, or Tonner Hills Homeowner's Association."¹²³

The entity now responsible for "perpetual management" of the 449 acres of natural open space on the site is not clear from the materials provided as part of this review.

In a letter dated July 15, 2007, the USFWS signed off on the success of 20-acre and 14-acre coastal sage scrub restoration sites. The sites not only satisfied the standards for plant species composition and growth, but were also verified as being used by California Gnatcatchers. The letter did contain the following caveat:

> "The 14 and 20-acre restoration sites are somewhat unusual in that they were planted very densely, and have not been entirely removed from irrigation. Therefore, it will be important to continue monitoring these sites to ensure that they continue to perform

as anticipated. The long-term management plan will require ongoing monitoring and fund remedial measures, if necessary. However, because the long-term management plan has not yet been implemented, Shea Homes has agreed to continue monitoring these sites and perform any necessary management measures until the remainder of the restoration described in the Coastal Sage Scrub Mitigation and Monitoring Report has met its performance criteria and the long-term management plan is implemented."¹²⁴

The Service was justified in its wariness about the rapid apparent success of coastal sage scrub restoration at these sites. As of 2019, nearly all of the native scrub occupying restored portions of the Tonner Hills site was smothered underneath a dense carpet of non-native Shortpod Mustard (*Hirschfeldia incana*) and Black Mustard (*Brassica nigra*), with leftover PVC pipes remaining in many mitigation areas. Only very limited areas of restored coastal sage scrub remained intact, without substantial growth of non-native weeds. These areas were too small to be considered substantial, and so the score given to this restoration effort was the lowest possible, "1/5."

Near-total failure of the Tonner Hills restoration effort appears to have been caused by the 2008 Freeway Complex Fire, which burned nearly all of the site. Clearly, a massive seed bank of mustards and other weeds remained in the soil, such that when fire removed the overlying native shrubs the mustards rapidly re-asserted dominance. This was not the case for naturally growing coastal sage scrub observed northeast of the northern terminus of Wildcat Way, where native shrubs continued to dominate in 2019.

Failures such as this one demonstrate the importance of restoring natural communities starting with the seed bank. Especially in areas that have been subject to years of disturbance prior to implementation of a given project, the reserve of non-native weed seed in the soil must be grown out and killed, usually multiple times, prior to planting with native species, and the planting of natives should tend to be weighted more toward seeding than toward installation of container plants, so that the resulting habitat will be resilient toward the wildfires that are increasingly common in our region.¹²⁵

At Tonner Hills, the entity currently responsible for managing the \$650,000 perpetual management endowment should be identified, and an investigation should be undertaken to determine whether the endowment has been responsibly managed. If the periodic maintenance and monitoring reports specified in the PMP have been prepared, they should be reviewed for adequacy. The responsible entity should undertake the remedial actions required to reestablish the natural communities that were required as mitigation for the project's significant impacts. Once those communities have been properly established, all irrigation pipes and other temporary infrastructure should be removed. It is for these reasons Tonner Hills scored a "1/5."

When all is said and done the average score for the 10 projects ranked was 3.2.

In-depth Analysis

Each project had a summary table compiled from the DEIR and the regulatory documents. In addition, a project history, project description, land uses, habitat impacts, species impacts, mitigation measures, detailed site visit notes and photographs are included in the oppondices a beginning of Appendix C

NOTE: Due to the out-dated nature of the maps within the documents received for the study, the maps should not be used for accuracy, but instead are meant to depict an idea of the project and its mitigation locations. This page was intentionally left blank.



Conclusion & Recommendations

Chapter 6

"Our national conservation effort must include the complete spectrum of resources: air, water and land; fuels, energy and minerals; soils, forest and forage; fish and wildlife. Together they make up the world of nature which surrounds us - a vital part of the American heritage."

– John K. Kennedy

t the onset of this project, our goal was to answer the following questions:

- 1. Are the mitigation measures tracked?
- 2. Are they implemented?
- Are they effective at protecting endangered species (or not)?
- 4. Are the mitigation measures (and results) monitored?
- 5. What solutions, if any, need to be formalized to improve the tracking, implementation, efficacy, and monitoring?

After months of research, interviews, site visits, and document review, we are much better equipped to answer those questions. Here is the summary of what we've found.

Conclusion

The project included five key questions that prompted the review of 38 development projects. These projects were ultimately whittled down to a dozen included in this study.

QUESTION 1: TRACKING MITIGATION MEASURES

First, are the mitigation measures tracked? This answer is entirely dependent on the agency. The agencies included in our study were: ACOE, CDFW, USFWS and RWQCB. Other than including what we could find in terms of permits needed from RWQCB, less of a focus was paid to this agency, so they've been omitted from this part of the analysis.

The ACOE seemed to have the most comprehensive tracking system for projects and permits. The ACOE staff was able to provide the type of permit, month, and date of mitigation measure (permit), and completion (sign-off). This information is also generally available to the public through a website: ACOE Permit Finder (*https://permits.ops.usace.army.mil/orm-public#*) Unfortunately, we had some trouble finding permit information because the date of the studied projects were often outside the date range available on the website.

The CDFW does not have a public interface system available, nor does it have a tracking system that we were made aware of during our discussions. The Department was able to provide some information for



The ACOE permit page where detailed project information is publicly available on permits across the nation.

our research, but not to the same level of detail as the other agencies. Many of these documents were still in paper form and not electronic, so there were delays in getting that information to our research team. It seems that staff is responsible for developing their own 'personal' tracking systems rather than implementing a standardized, department-wide system.

There does not appear to be a system for maintaining records past the point when a project is deemed complete. This lack of record-keeping means there is no history, other than personal staff knowledge, about a given project, its impacts, and its mitigation. This limits transparency and hinders the ability of the public, or the agency itself, to evaluate the effectiveness of mitigation efforts, either for a given project or on a systematic basis.

The USFWS has an internal system for electronically filing and tracking projects and permits, but many of the projects we reviewed predated this system and so the Service relied on sifting through paper records for these projects. A goal of the Service is to get the internal system updated to include a notification to Lead Agencies and/or project applicants about due dates (e.g., notice that the annual report is due or that a site visit is needed). This would aid in project tracking, as staff leave it results in loss of institutional knowledge. In short, the ACOE seems to have the best tracking system, including a public interface that the other agencies lack.

QUESTION 2: IMPLEMENTATION OF MITIGATION MEASURES

The second question was whether or not project mitigation measures were implemented. Yes, it appears across the board that all project applicants at least initiated project mitigation measures. However, completion and success of those measures varied widely and depended on many factors.

QUESTION 3: PROTECTING ENDANGERED SPECIES THROUGH MITIGATION MEASURES

To address the third question, we evaluated mitigation efforts involving the restoration or enhancement of natural communities upon which state and federal threatened and endangered species, as well as other special status species, depend. The average for the 10 quantifiable projects (of the 12 reviewed and 10 scored) was a score of 3.2 out of 5. While, a "C" grade may be passing for school, it shouldn't be the target or acceptable level of success for our mitigation measures for species on the brink of extinction.

As was said at our meeting with the USFWS and CDFW, the impacts are permanent so the mitigation measures should be permanent, as well. However, this was not proven in our study. Our review of the sites demonstrates that restoring disturbed areas to natural communities capable of regenerating after future disturbances, such as wildfires, requires more careful planning and more intensive implementation efforts than are often required by CEQA lead agencies or regulatory agencies. We also observed that mitigation of impacts to cactus-dominated scrub often involves only limited plantings of cactus, resulting in scrub habitats that differ from the cactus scrub impacted by development.

While a few of the projects in this study used acquisition as the mitigation tool, those projects were not reviewed like restoration projects (i.e., in terms of meeting success criteria or not). Acquisition, at least, conserves habitat in a less disturbed (as nature intended) kind of way. Protecting intact habitat through acquisition better ensured that needs of endangered species were met in a sustainable way because the habitats were already functioning and generally added to the existing network of preserved areas. This means, the details of soil composition, habitat growth, rainfall, invasive species removal, and disturbance weren't an issue-or at least at the same level as for restoration projects. While restoration can be valuable (e.g., when a project involves creation of large, graded slopes), the habitat benefits of restoration are less certain than those of simply preserving intact land.

QUESTION 4: MITIGATION MEASURE MONITORING

The fourth question asks whether the mitigation measures (and results) are monitored by the agencies. Again, the level of tracking seemed to be dependent on the agency. The ACOE is quite involved and focused on the annual reports, and has an excellent system to track the status of the project mitigation and sign-off. In some instances, CDFW reported it had no record of involvement in a given project, yet we were able to obtain copies of those records from our PRA requests, including permit fees and permit sign-off letters from other agencies involved in project approval.

For example, the Department found no record of involvement on the North Yorba Linda Estates project. Yet, the City of Yorba Linda, in its PRA documents, provided a copy of a receipt from CDFW for permit fees. And, yet, none of the mitigation and monitoring reports for this project ever mention CDFW. Could this have been a processing fee for something else? We are unable to determine an answer conclusively. Additionally, CDFW reported no record of involvement on Vista Del Verde, but we were able to obtain, also from the City of Yorba Linda, the LSAA permit itself and



California Gnatcatcher.

the sign-off letter from CDFW. So, it appears there was involvement.

The USFWS appears to have better tracking and record-keeping than CDFW.

Many of the Lead Agencies were reasonably diligent about keeping records on mitigation monitoring as it related to biological impacts. We focused our PRA requests with the Lead Agencies instead of the resource/permitting agencies. The City of Yorba Linda actually had a notebook for the mitigation requirements for the Vista Del Verde project that

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The City of Yorba Linda's Mitigation Tracking Sheet for the Vista Del Verde project.
provided information on the completion of each mitigation measure as it was signed off. This proved valuable to our efforts.

QUESTION 5: DEPLOYING SOLUTIONS FOR MITIGATION ISSUES

Finally, what solutions need to be developed and formalized to improve the tracking, implementation, efficacy, and monitoring of mitigation efforts? Throughout this research, we've been compiling ideas for the Lead Agencies and resource/ permitting agencies, culminating in 15 separate recommendations. These are outlined below.

Recommendations

This study allowed us an opportunity to develop 15 tangible recommendations as it relates to biological resource mitigation measures. It is our hope that their implementation will increase agency transparency, improve conservation results for special status species, and enhance the public's ability to fulfill its critical oversight role in CEQA review. Further, since habitat is lost from these projects, we would expect the mitigation should provide a net environmental benefit.

PERMANENT MANAGEMENT FUND REQUIREMENT

In some cases, mitigation efforts received sign-off only to see restored natural communities become overrun with invasive weeds following disturbance, such as wildfire. If the proper site preparation is not done, then the invasive species seed bank still exists in the soil and after the first major disturbance, the natives will be outcompeted by the non-natives and the site returns to a mostly non-native form.

For example, Tonner Hills was reported by USFWS to look healthy at sign-off and then the Freeway Complex Fire ravaged the lands in 2008. It is clear from the overgrowth that the non-native plant seedbank was





Tonner Hills more than 10 years after the fire.

not properly removed from the soil—otherwise the outcome post-fire would have been growth of native plants. While there was a substantial management endowment, these funds cannot be expected to overcome the failures of the original restoration work concept.

Since the project impacts are permanent, and a permanent funding stream is needed to maintain, steward, and manage mitigation lands forever (not a specified number of years). This should be established as a non-wasting endowment (where the interest is relied upon and not the principle) and should apply to lands protected through acquisition and/or restoration as part of project mitigation. This endowment should also account for emergencies and contingencies such as wildfire, landslide, flood, drought, and pest infestations.

The Corps and Service seem to have implemented requirements for long-term funding and planning, but the issue is actual application of the plan and funding post-permit sign off when the developer is no longer in the picture. Who is actually responsible for the forever maintenance of these lands? This isn't always clear or delineated in the project paperwork.

PRE-DEVELOPMENT REQUIREMENTS

The applicant should be required to post a bond prior to commencing any project work (i.e., grading) so that if the project goes into default and never gets restarted there is a bond to mitigate the initial-and yet still permanent—impacts. The endowment must be pre-paid in full prior to the commencement of project impacts. The agencies need to have this tool to ensure species survival and be certain impacts are still mitigated regardless of the success of the development company.

Tonner Hills restoration site on fire. 62

While not included in this study, residents in Silverado Canyon know all too well what happens when a developer runs out of money. An historic parcel called Holtz Ranch was acquired by a church. The environmental analysis done for the development of the 124-acre site reviewed a monastery church and school, gym and athletic fields, convent, guest cottages, chapel, cemetery, and agricultural buildings. The DEIR concluded that several state and federally listed species were on-site or provided breeding/ foraging grounds (the Arroyo Toad, Burrowing Owl, Cactus Wren, etc.) The land, after being graded, sat denuded and mostly empty while the developer (in this case a local church) attempted to raise more money to complete the next phase. Meanwhile, locals must endure the constant dust storms and runoff from the project site, while the species homes had been destroyed. After a significant hiatus, the project developer was able to begin construction again.

This example emphasizes why having a bond in place is critical.

TIMING FOR IMPLEMENTATION

Everything in the mitigation plan that can be done in

CITY CLERK'S CERTIFICATE STATE OF CALIFORNIA) COUNTY OF ORANGE) I HEREBY CERTIFY THAT THIS MAP WAS PRESENTED FOR APPROVAL TO THE CITY COUNCIL OF THE CITY OF YORBA LINDA AT A RECULAR MEETING THEREOF HELD ON THE 20⁻²⁰ DAY OF 72 CALL . 1997, AND THAT THEREUPON SAID COUNCIL DID, BY AN ORDER DULY PASSED AND ENTRED, APPROVE SAID MAP AND DID ACCEPT ON BEHALF OF THE PUBLIC THE DEDICATION FOR STREET PURPOSES OF I MEATHERING A DAY OF YORBA LINDA 1.00 ALSO ACCEPT ON BEHALF OF THE CITY OF YORBA LINDA 1.00 ALSO APPROVE SUBJECT MAP PURSUANT TO THE PROVISIONS OF SECTION 66436 (a)(s) (A) OF THE SUBDIVISION MAP ACT. DATED THIS 7⁻²⁰ DAY OF MARK . 1977.

City of Yorba Linda

CITY CLERE OF

The City of Yorba Linda accepted the "Lot A" as dedicated open space, but the title never transferred, now a developer proposes to use it as an entrance to a new community.

advance of development work must be established prior to starting the project. For example, the Irrevocable Offer of Dedication, the acceptance, the transfer of title, etc., must occur before the project begins, as these steps are often stopped or missed, and caught only years later, if ever. The project must be bonded and the restoration plan must receive sign-off prior to commencement.

Again, this example is not included as part of this study, but is relevant to this point. Just over five acres of land was accepted by the City of Yorba Linda in the Vesting Tentative Map that states land was dedicated (and accepted) by the City of Yorba Linda for open space purposes as of June 17, 1987. The City Clerk of Yorba Linda signed it in May 1987 and yet the City does not have this property included in its asset list—at all, let alone as open space. Now a neighboring developer plans to use that dedicated open space as a place to build an entrance for a 340-unit project.

When the *i's* aren't dotted and the *t's* aren't crossed, the public and land ultimately suffer from that lack of follow through. In this case, land designated as open space may now become a roadway unless

> residents litigate over it. There are real consequences to not completing the necessary steps of a project's components—be it dedications, title transfers, or completion of mitigation measures.



A roadway up to 100' wide is proposed for the dedicated open space.

MITIGATION TRACKING / RECORD KEEPING

A database to track CEQA mitigation should be created that allows for inward and outward facing information on the project, the impacts, and the mitigation measures. The inward facing information allows agencies to track the project's progress, deadlines, plans, success criteria, compliance, and violations, and should automatically generate notifications to the applicant and Lead Agency about upcoming deadlines. This maintains institutional knowledge of each project's history regardless of staff turnover and allows anyone to take over a project without having to create a tracking mechanism for it or spend significant time getting up to speed. The outward facing information allows the public to track the progress of the mitigation for a particular project, providing relevant details on the restoration project's status and links to all regulatory documents (permits, communications between agencies, and the applicant or Lead Agency, annual reports, site photographs, etc.)

The tracking system should also establish a permanent electronic record for every project—everything from the environmental documents to the permit records

is kept in the system. This avoids the unacceptable situation in which, for example, CDFW throws out the project file and associated monitoring/performance information once a project receives sign-off—as was communicated to us by CDFW. This appears to have been done due to lack of storage space.

The ACOE has a mitigation tracking system that covers much of what we just outlined. This could be used as a template for a CDFW version.

The San Diego Association of Governments also has a habitat tracking system that could be used as a model. The San Diego Management and Monitoring Program (SDMMP) assists in coordinating conservation and species management activities throughout San Diego. While these activities often occur on or involve Conservation Plan lands, the database is not restricted to these areas. The easiest way to explore their site is through the "portal" drop-down menu where you can search for projects by species or through other specific topics. Learn more at: https://sdmmp.com/.



The San Diego website allows visitors to view maps, document information, and track mitigation progress.

MITIGATION MAPPING

A mapping component could be rolled into the tracking database above. Geographic Information Systems (GIS) and/or Google Earth project files (restoration perimeters, species data, project impact areas, etc.) would be retained for future knowledge/use. Online GIS portals, like the one used for the Desert Renewable Energy Conservation Program, *https://drecp.databasin.org/datasets/* provides helpful information and tools for entire regions including: projects, species information, special status areas, etc.

FOLLOW UP / SITE VISITS

Often times, final phase implementation requirements are ignored. For example, the removal of irrigation pipelines and/or fencing is ignored. These are left behind to rot in the newly established habitat. The public, through the database, can upload project information to notify agencies of issues on a site or compliance problems that require follow-up actions.

For example, it was seen at the Laguna Hills Community Center that PVC remained on the ground. These photographs have been included as part of our report. It is unacceptable to leave this debris behind to decay in the sun, be chipped away by the elements and animals, and enter the ecosystem. Restoration work must include cleaning up the materials used to improve the environment.

An app could be developed by the resource agencies to allow for reporting by citizen monitors. For example, OC Parks uses an app for smart phones to allow recreational users to upload issues (damaged bridge, vandalism, an injured individual, missing sign, etc.) This app is called "Park Watch Report" and allows reports to be sent from the field, notifies the correct individual at the involved park, and the confirmation of receipt. This streamlines the process for reporting issues, emails the incident to the right person immediately, and the incident reporter isn't required to sit down at a computer, find the park's contact information, and hope they are reporting an incident to the right person after they returned home from the park visit. All of this reporting happens in real time. Use of technologies like this could help notify agencies of issues on mitigation lands and restoration sites (missing waddles, lack of signage, a busted water pipe, vandalism, etc.).

PUBLIC REVIEW OF RESTORATION PROJECTS

A public review system for restoration projects could be established, along the lines of the "Yelp" review system for restaurants, services, etc. This would give the public an opportunity to evaluate the progress of a project, rate/rank particular mitigation sites, and easily provide photographs and other forms of relevant feedback directly to the resource and permitting public agencies.

Not only would this provide much greater levels of oversight and documentation of restoration efforts, but it would facilitate efforts to understand which restoration/management companies provide the best service with the most successful mitigation programs. Applicants, Lead Agencies, and resource agencies would receive valuable crowd-sourced information and the public would receive much higher levels



The ParkWatch app landing page and how to create a report on the app.

of responsiveness and accountability for required restoration efforts.

DEFINING SIGNIFICANT IMPACTS

Better and more consistent standards are needed to identify impacts that should be found as significant under CEQA. This will help CDFW, USFWS, ACOE, Lead Agencies, applicants, and the public to understand the actions that require avoidance, minimization, or mitigation to comply with CEQA and its Guidelines. If established appropriately, this will lead to better application of laws protecting sensitive natural communities and associated rare and endangered species. The new standards should be applied consistently throughout the state.

At the moment, every jurisdiction gets to determine what is considered significant for its impacts biological or otherwise. What threshold requires some or any mitigation? There is no standard established.

SPECIES AND HABITAT DOCUMENTATION

The California Natural Diversity Database (CNDDB) is a primary source of information on records of special status plant and wildlife species in a given area, relied upon by both biological consultants and resourceagency personnel. The existing voluntary recordsubmission system should be made mandatory, such that any biologist generating biological survey data for a project undergoing CEQA review would be required to submit their observations to the CNDDB. The cumbersome method currently used to submit data to the CNDDB should be upgraded to a modern system such as that employed by *eBird.org* and other state-ofthe-art crowd-sourcing applications.

Based on conversations with CDFW, the CNDDB is the first place the staff goes to look for what species might be in the impact zone for a new project. Yet, if the data never gets added to the system or the data is so outdated it doesn't help, then the staff is at a disadvantage protecting this project's particular species.

LOCAL LONG-TERM MANAGERS

An issue relevant in Orange County—and likely other places in California—is the lack of a long-term steward or manager for many restoration sites and mitigation lands. Without an established entity (non-profit or land trust type organization) the mitigation sites won't be managed properly. Often times the mitigation lands are dedicated to Homeowners' Associations (HOA's) that have no experience, interest, knowledge, and/or training in habitat management. Years after completion of mitigation, HOA boards have been known to change the landscaping, perhaps without even knowing the significance, thus degrading the value of the mitigation lands.

In Orange County a long-term manager that covers the county (and beyond) should be formalized so that conservation groups, developers, Lead Agencies, and the permitting/resource agencies have a land trust to go to. Further to maintain credibility, this long-term manager should be accredited by the national Land Trust Alliance so that restoration, land management, endowment holding, and other critical functions are employed as standard operating procedures.

FUTURE PROTECTIONS

All restoration sites and mitigation lands should be required to have a conservation easement recorded. The boundaries of all recorded conservation easements should be entered into a single database that the public can readily access. This preserves the mitigation completed and allows the agencies and public to follow up on any future violations.

The California Protected Areas Database (CPAD) could be the recipient of such information. Along with protected areas, easements are documented in the California Conservation Easement Database (CCED). Easements and mitigation contribute to the survival of



California's recorded and uploaded easements are blue.



The Trabuco Rose property, part of OCTA's Conservation Plan in the foothills of the Santa Ana Mountains.

many species—not just state and federal threatened and endangered species.

THE ROLE OF LEAD AGENCIES

As a development company will likely dissolve after a project is complete, leaving no legal entity to resolve any future issues that may arise, so may the CEQA Lead Agency for a project walk away from biological mitigation requirements, which it may regard as being outside its purview. Both applicants and the CEQA Lead Agencies should be tied to the biological mitigation to ensure it gets completed, is funded, bonded, permanently managed, etc.

RIPARIAN AREA AVOIDANCE

According to the resource agencies, riparian impacts are seldom successfully mitigated through creation of new riparian habitat. Instead, the agencies recommend *avoiding riparian impacts all together*. This should be captured in state and federal law as opposed to allowing unsuccessful riparian mitigation to continue to the detriment of the environment. In turn, saving riparian areas should be a high priority.

AGENCY CREDIBILITY

The resource agencies frequently participate in the CEQA process by submitting comment letters to Lead Agencies. Resource agencies don't have the capacity to attend every hearing on a project and, unfortunately, Lead Agencies have been known to misrepresent or downplay the relevance or accuracy of what the resource agencies have said or requested. This may lead to a substantial gap between the level of impact that the resource agencies consider acceptable and the level of impact approved by the Lead Agency.

The system is set up to approve the project and then negotiate the terms of mitigation for any impacts deemed significant or potentially significant under CEQA. The resource agencies often have little or no practical authority to stop or substantially modify a project before it is approved and the permits are requested. This dynamic needs to be addressed. The resource agencies are put in the precarious position of being presented with an approved project that may have no viable mitigation strategy. In this case, nature loses.

In some cases, the mitigation envisioned would result in further impacts to existing sensitive resources, such as planting oak trees within existing natural communities that do not naturally support oaks, and that may already support special status plant and/or wildlife species that may be adversely affected by the proposed mitigation actions. Project impacts should be reduced to levels that can be mitigated to below a level of significance, with all mitigation actions specified in the CEQA document, and not left to be determined in subsequent permitting processes.

It is notable that when water, fire or police agencies provide comments, they are listened to, but the resource agencies are consistently NOT listened to. This needs to change.

BETTER FUNDING FOR THE RESOURCE AGENCIES

In the end and based on the 14 recommendations that preceded this final recommendation and programmatic conclusion: the highest priority should be funding and staffing for each of our natural resource and permitting agencies.

This report has identified fundamental issues that each agency faces for projects, mitigation, and mitigation follow up. Our recommendations are meant to address these issues, but they cannot be addressed without support and funding. In order for the agencies to do better, their work needs to be prioritized as important by the government that oversees their work (i.e., the State of California and United States of America).

For example, if California is sincerely interested in conserving biodiversity of the remarkably diverse California Floristic Providence, and in maintaining the status of CEQA as a pragmatic and ecologically relevant regulatory framework, then decision makers in Sacramento must adequately fund and staff the agencies tasked with managing our natural resources. Development pressures will only intensify as our population increases and natural open spaces dwindle; populations of most species will continue to decline. Funding shortfalls mean that declining species and their habitat come up short, jeopardizing the conservation investments already made. This funding/ staffing request applies equally to such agencies as DPR, which manages 1.5 million acres in the state. Current funding levels are clearly inadequate to devote adequate resources to the care, attention, and funding of natural lands and the many special status species that require reasonably intact natural landscapes to persist in California and elsewhere.

Areas for Future Study

Per our discussions with the leads on the CEQA 2.0 legislation, it appears this year's legislation is more focused on process and procedure instead of resolving concerns about the content of the environmental analysis and mitigation measures. Efforts are underway to find an author for the proposed legislation in 2020. The actual environmental analysis and mitigation measures—our recommendations included—will be the focus of a CEQA 2.1 effort. Apparently the participants of the CEQA update are willing to continue to find solutions to identified problems.

The CEQA 2.0 discussions identified two important needs that closely mirror our findings: 1) to update the mitigation tracking and record-keeping system; and 2) to standardize the definition of "significant impact" under CEQA. FHBP is committed to serve as a resource for the CEQA 2.0 group and assist with the knowledge gained from this study.

The following additional areas of inquiry were identified through this study:

- The need to evaluate the influence of restoration techniques—site preparation methods, seeding versus planting, and plant material genetic diversity, etc.—on the longterm viability of the restored habitat (e.g., to avoid restored habitats from being overtaken by weeds after wildfire or other disturbances).
- Do certain restoration specialists and contractors consistently provide high-quality restoration work, and how does their fee schedule relate to less successful providers of these services?
- 3. Since the impacts of a given project are typically permanent, should CEQA require that all mitigation actions remain viable in perpetuity (e.g., through adequate funding of mitigation bonds)?
- 4. Are the easements for mitigation lands recorded and tracked by Lead Agencies and resource agencies? Is this accessible to the public? Can it be added to the CPAD and CCED?
- Critically review the mission and funding of each state/federal resource and permitting agency to determine the adequacy of funding and staffing relative to the agency's conservation mandate.
- 6. A biological opinion of restored lands postmitigation should be evaluated. For example, did the species survive and thrive post-project or did they disappear?
- 7. What is the importance or relevance of acquiring land without a biological analysis of its long-term ecological value to listed or otherwise special status species?



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Appendix B

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Brightwater

Project Name	Details
Project Name:	Brightwater
EIR Number:	551
State Clearinghouse Number:	1993071064
Owner/Applicant:	Hearthside Homes
Prepared For:	County of Orange
EIR Consultants:	LSA Associates
EIR Drafted:	November 2001
Existing General Plan Designation:	County: Vacant City: 1B Suburban Residential
Existing Zoning:	County: Bolsa Chica Planned Community (PC) City: RL – Low Density Residential
New Zoning:	County: R1 – Low Density Residential (Coastal Zone Overlay) City: R1
Permits Required:	ACOE: No Record of Involvement CDFW: No Record of Involvement USFWS: None RWQCB: Unknown Coastal Act: Coastal Development Permit City of Huntington Beach: 9 dwelling units

Figure 29. Statistics on the Brightwater project.

Project Description

The Brightwater project sits on 105 acres of land and has primarily been used for agriculture, oil development, an on-site military bunker, and a material borrow site for off-site construction. The land is mostly in county unincorporated and includes a small portion (0.95 acres) in the City of Huntington Beach. The project was processed through the County of Orange. Residential uses, water storage, and recreation/conservation open space were proposed for the site. The project requires 460,000 cubic yards of cut and 240,000 cubic yards of fill.

The Proposal

- 387 single family residences
- 0.8 acre for an underground water reservoir

Appendix C

- 5 acres of Conservation/Open Space
- 23 acres of Recreation/Open Space

Site Map

View the site map for the Brightwater development on the next page.



Figure 30. The Brightwater project.



Figure 32. The restoration sites for the Brightwater project.

Impacted Plant Communities

- Annual Non-native Grassland
- **Eucalyptus Grove**
- **Coastal Sage Scrub**
- Ruderal
- Wetlands (Willow Woodland)
- Disturbed

Impacted Habitat

- 77.5 acres of the Upper Bench will be used for residential development, including:
 - 0.7 acres of Coastal Sage Scrub •
 - 4.0 acres of Eucalyptus
 - 57 acres of Annual Grasslands
 - 0.2 acres of Wetlands

Impacted Species

- Southern Tarplant is a sensitive plant species found in the project area.
- Southwestern Pond Turtle has been observed on the eastern portion of the East Garden Grove-Wintersburg Channel.
- Western Snowy Plover, California Least Tern, Swainson's Hawk, and Little Willow Flycatcher are all common on the site.
- Burrowing Owls, Southwestern Willow Flycatcher, and Coastal Cactus Wren are rare, but have nested in the area in the past.
- No State or Federally threatened plant species • are present.
- The San Diego Coast Horned Lizard, Silvery Legless Lizard, Black Tailed Jackrabbit, and Salt Marsh Shrew are or may occur on-site.

Key Biological Opinion Findings • No permit required, therefore no BO.

Historic Surveys

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- 2000 Wetland Analysis (Glenn Lukos Associates)
- 2000 Wildlife Survey (LSA Associates) •
- 1999 Wetland Analysis (Glenn Lukos Associates)
- 1999 Wildlife Survey (LSA Associates)

EIR Mitigation Measures

Project Design Feature (PDF) 9-1: Construction monitoring and maintenance requires a botanist to monitor all grading activities, conduct preconstruction meetings with construction contractors, provide onsite assistance to construction personnel, and stake out perimeters of existing habitats to be preserved. Submittal of a construction fencing and monitoring program and appropriately scaled maps prepared by the developer are required prior to issuance of grading permits. The construction fencing exhibits and monitoring program shall be reviewed and approved by the Director, PDSD prior to issuance of grading permits. Fueling, maintenance, and spillage requirements and regular equipment inspection are also required.

PDF 9-2: The portions of the Southern Tarplant population that will be lost within the project area will be replaced on areas of the Bolsa Chica Mesa that will be preserved. Within the current project area, only a small portion of this population would be affected and would require replacement. A Southern Tarplant replacement program shall be prepared by the developer and submitted to the Director, PDSD for review and approval prior to issuance of grading permits. The Director, PDSD shall submit the replacement program to the California Department of Fish and Game for review and comment prior to approval of the replacement program.

PDF 9-3: In conjunction with the County Animal Control, the applicant will devise and implement a place to control the presence of invasive and/or feral pets in wildlife areas. Information on the detrimental effects of domestic cats on common and sensitive species of birds, as well as the hazards to domestic animals, shall be supplied to each original homeowner who purchases property in the residential units. The plan is to be approved by the County Environmental and Project Planning Division prior to issuance of occupancy permits.

PDF 9-4: Floodlamp shielding and/or sodium bulbs will be used in the developed areas to reduce the amount of stray lighting into the wildlife areas.

PDF 9-5: Prior to the issuance of grading permits, and within 30 days of the beginning of construction, surveys shall be done according to the survey and mitigation program that has been developed by the California Burrowing Owl Consortium. If survey results indicate that an active burrow is present within the

project development area, the owls shall be passively relocated according to the consortium mitigation guidelines. Occupied burrows shall not be disturbed during the nesting season, from February 1 through August 31, unless CDFG verifies that birds have not begun egg-laying and incubation or that the juveniles from those burrows are foraging independently and capable of independent survival at an earlier date. Alternative burrows shall be enhanced or created in permanently preserved open space, at a ratio of 1:1. A report indicating completion of the surveys and any necessary mitigation shall be provided to the County Environmental and Project Planning Division prior to the issuance of grading permits. The Burrowing Owl relocation mitigation, if the bird is present and the mitigation is implemented, shall be implemented according to the California Burrowing Owl Consortium mitigation guidelines under County of Orange oversight and by coordination with the Department of Fish and Game. The responsible party to ensure compliance prior to issuance of grading permits is the Manager, County of Environmental and Project Planning Division.

PDF 9-6: The public access component of the proposed project will include 30 public parking spaces and a trail within PA 3A-1. The plan for PA 3A-1 includes fencing and signage to deter the public from leaving designated trails.

PDF 9-7: Planning Area 3A will be revegetated with native plant species and contain constructed wetlands to improve run off water quality. The area will function as a buffer between undisturbed areas adjacent to the site and the project residential development. The project applicant will consult with the Department of Fish and Game in the selection of plant species for the constructed wetland. Maintenance of the constructed wetland routine items such as removal of debris or emergency repairs, should be conducted between September 1 and February 28 to avoid bird breeding season.

Measure 9.1) Prior to issuance of grading permits, the applicant shall establish a trust fund in an amount to be determined in consultation with CDFG, to assist in the ongoing management of raptor predation upon nesting sensitive target species or other sensitive species after the implementation of residential development on the Bolsa Chica Mesa. This fund will be available to CDFG and USFWS if it can be demonstrated by CDFG and USFWS, to the satisfaction of the County Environmental Planning Services Division, that the residential development results

in an increase in raptor predation. If no such effect is demonstrated within five years of completion of project construction, the trust fund shall revert to the Applicant.

Measure 9.2) A management plan shall be developed that specifies how natural areas will be protected from residential landscaping. The plan shall be approved by the County Environmental Project Planning Services Division prior to issuance of building permits and shall include, at a minimum:

- 1. Methods for public education, including information regarding invasive exotics that homeowners may not plant in their yards,
- 2. A landscape plan for common areas that avoids the use of invasive exotic species,
- A list of invasive exotic species that will not be permitted in residential landscaping (Lists A and B of the California Exotic Pest Plant Council's list of "Exotic Plants of Greatest Ecological Concern in California as of October, 1999"),
- A list of palms with persistent leaf bases that will not be permitted in residential landscaping,
- 5. An erosion control and storm runoff plan that shall be prepared prior to construction (see Section 4.5.3); if straw bales are used for erosion control, rice straw or equivalent weed free straw shall be used to prevent additional introduction of exotic species into native habitat.

The portions of the Southern Tarplant population that will be lost within the project area will be replaced on areas of the Bolsa Chica Mesa that will be preserved. Within the current project area, only a small portion of this population would be affected and would require replacement. A Southern Tarplant replacement program shall be prepared by the developer and submitted to the Director, PDSD, for review and approval prior to issuance of grading permits. The Director, PDSD shall submit the replacement program to the California Department of Fish and Game for review and comment prior to approval of the replacement program.

Current Status Ranking: 5/5

Site Visit

Date: October 28, 2019 Time: 10:30 AM to 12:15 PM

Hamilton's Field Notes

For this project, 37.1 acres of habitat preservation and creation consist of:

- Development Area 3A-1: a 29.2-acre Native Grassland and Coastal Sage Scrub Creation Area;
- Development Area 3B, a 5.0-acre Eucalyptus Environmentally Sensitive Habitat Area (ESHA);
- Development Area 7-1, a 2.9-acre area along the northerly edge of the community that contains a Southern Tarplant and Seasonal Pond Habitat Protection Area.

On October 28, I visited these three areas. I did not spend much time on Development Area 7-1, which is a small, fenced-in area tucked into the northern part of the residential neighborhood. The native habitat in this area looked good.

I walked the length of Development Areas 3A-1 and 3B. Coastal sage scrub and native grassland are still being restored in Area 3A-1, but the work appears to be nearly complete and the habitat looks very good. I consider this to be the most successful of all the restoration projects I reviewed, mainly because they took the important step of planting adequate amounts of mature cactus (*Opuntia littoralis and Cylindropuntia prolifera*). The other Coastal Sage Scrub and Grassland plants appeared to be very healthy and welldeveloped, as well, and I detected several California Gnatcatchers using Area 3A-1. The PVC irrigation piping should be removed when mitigation is deemed complete.

Within the 5-acre Area 3B, which the California Coastal Commission identified as an Environmentally Sensitive Habitat Area (ESHA) in 2005, all of the eucalyptus trees appear to have died. These non-native trees formerly provided important raptor nesting habitat, and still do provide perches for raptors and other birds. The non-native eucalyptus trees apparently cannot survive in this area under the recurring drought conditions experienced in the local area during the past two decades. As the eucalyptus snags begin to fall and become a safety hazard for people walking beneath them, managers will need to develop plans for this area. Replanting the area with more nonnative eucalyptus trees does not appear to be a valid approach, especially given the inability of this species to survive in this location over the long term.

Threatened or Endangered Species Seen On-Site

• Four pairs of California Gnatcatchers (*Polioptila californica californica*) in Area 3A-1, and heard two more, for a total of 10 California Gnatcatchers in this area.

Significant Events • None known.



View, facing west-southwest, from the eastern end of Mitigation Site 3A-1. Mature, intact coastal bluff scrub dominated by California Sagebrush (Artemisia californica), California Buckwheat (Eriogonum fasciculatum), Brewer's Saltbush (Atriplex lentiformis ssp. breweri), Coyote Brush (Baccharis pilularis), Coast Goldenbush (Isocoma menziesii), and Alkali Heath (Frankenia salina). Two pairs of California Gnatcatchers were observed in this area. October 28, 2019.



View, facing west-northwest, showing dead and declining eucalytpus trees in mature coastal bluff scrub, dominated by Brewer's Saltbush (Atriplex lentiformis ssp. breweri) and California Buckwheat (Eriogonum fasciculatum), in the western half of Mitigation Site 3B. October 28, 2019.



View, facing east, showing large patches of cactus–Coastal Prickly-Pear (Opuntia littoralis) and Coast Cholla (Cylindropuntia prolifera)–being restored in the east-central part of Mitigation Site 3A-1. Most of the native shrubs in this area were Brewer's Saltbush (Atriplex lentiformis ssp. breweri). Irrigation pipe is appropriate here, since the habitat is still being restored. One pair of California Gnatcatchers was observed in this area. October 28, 2019.



View, facing west, showing large patches of cactus–Coastal Prickly-Pear (Opuntia littoralis) and Coast Cholla (Cylindropuntia prolifera)–being restored in the west-central part of Mitigation Site 3A-1. Native scrub in this area dominated by Mulefat (Baccharis salicifolia) in the background, Brewer's Saltbush (Atriplex lentiformis ssp. breweri), and California Encelia (Encelia californica). A male California Gnatcatcher was observed and a second California Gnatcatcher was heard in this area. Irrigation pipe is appropriate here, since the habitat is still being restored. October 28, 2019.



View, facing west, showing coastal bluff scrub being restored in the western part of Mitigation Site 3A-1. Native scrub in this area dominated by Brewer's Saltbush (Atriplex lentiformis ssp. breweri), *California Encelia* (Encelia californica), *California Buckwheat* (Eriogonum fasciculatum), *and Coastal Prickly-Pear* (Opuntia littoralis). *Irrigation pipe is appropriate here, since the habitat is still being restored. October 28, 2019.*



Diemer Road

Project Name	Details
Project Name:	Robert B. Diemer Treatment Plan North Access Road
EIR Number:	1303
State Clearinghouse Number:	2006081094
Owner/Applicant:	Metropolitan Water District of Southern California
Prepared For:	Metropolitan Water District of Southern California
EIR Consultants:	Metropolitan Water District of Southern California
EIR Drafted:	February 2007
Existing General Plan Designation:	Brea: Natural Open Space Yorba Linda: West Site Area County: Public Facility Chino Hills State Park: Recreation and Operations Zone
Existing Zoning:	Brea: Carbon Canyon Specific Plan Yorba Linda: Shell Master Planned Community Specific Plan (PSCP) County: A1 - Agriculture
New Zoning:	Brea: No Change Yorba Línda: No Change County: No Change
Permits Required:	ACOE: 404 Permit (Nationwide Permit) CDFW: 1600/1603 Permit USFWS: Protocol Surveys (part of existing Section 10) RWQCB: 401 Permit State Parks: Encroachment Permit

Figure 32. Statistics on the Diemer Access Road project.

Project Description The Robert B. Diemer Treatment Plan North

The Robert B. Diemer Treatment Plan North Access Road provides 28' of paved road access to the hilltop treatment plant from Carbon Canyon Road (SR-142) through Chino Hills State Park. The road is approximately 1.25 miles long and climbs approximately 250' to the facility. The land is in county unincorporated territory, but includes portions of land in the Cities of Brea and Yorba Linda. The project provides emergency access, greater Plant security, fire break capabilities, and an additional supplemental route to the Diemer Plant. The access road is limited to 45 round trips per day and may include Orange County Fire Authority emergency drills. The project includes grading on 6.1 acres and grades approximately 50,000 cubic yards of dirt (balanced on-site).

Appendix D

The Proposal

• 1.25-mile-long 30-40-foot-wide roadway in Telegraph Canyon

Site Map

View the site map for the Diemer Road project on the next page.

Impacted Plant Communities

- California Walnut Woodland (Upland and Riparian)
- Coastal Sage Scrub
- Southern Willow Scrub
- Non-Native Grassland
- Giant Reed
- Ruderal
- Ornamental
- Developed

Impacted Habitat

- In 1996, Shell E&P and Metropolitan Water District obtained an ITP under Section 10 of the federal Endangered Species Act for Coastal California Gnatcatcher and Coastal Cactus Wren. "As part of the HCP, Metropolitan and Shell E&P granted a 20-acre Walnut Woodland Conservation Easement to CDFG. The permit also allowed disturbance to California Walnut Woodland on the site. The permit does not cover incidental take (e.g., harming, harassing, etc.) of Coastal California Gnatcatcher or Coastal Cactus Wren or the removal of Coastal Sage Scrub or Walnut Woodland outside the boundary of Metropolitan's fee property."
- There will be 20.19 acres of upland California Walnut Woodland and 5.44 acres of riparian California Walnut Woodland impacted.
- Approximately 5.23 acres of Coastal Sage Scrub is impacted.
- Only 0.44 acres of Southern Willow Scrub are impacted.
- ACOE jurisdictional wetlands and nonwetlands include 0.037 acres.
- CDFW jurisdictional riparian and streambed include 0.637 acres.
- RWQCB jurisdiction (Waters of the US) include 0.637 acres.

Impacted Species

- No rare plants were found in the project site.
- No California Gnatcatchers were found during focused surveys but were present in July 2006. There will be a permanent loss of 0.466 acres of suitable breeding habitat and temporary

loss of 0.685 acres.

- Two Least Bell's Vireo were detected during 2006 focused surveys in 2006 (it may have been dispersing behavior that brought them there). There will be a permanent loss of 0.2157 acres of moderately suitable breeding habitat and 0.2610 acres (as a temporary loss).
- MWD would comply with the HCP.

Key Biological Opinion Findings

The Section 7 Consultation findings were not provided to us, but we do have a letter confirming the requirements of the consultant have been met.

Historic Surveys

- Spring/Summer 2006 Least Bell's Vireo and Southwestern Willow Flycatcher Focused Survey
- January 2001 Least Bell's Vireo Focused Survey
- July 2000 South Western Willow Flycatcher Focused Survey
- February 1997 California Gnatcatcher Focused Survey

EIR Mitigation Measures

BR-1) Metropolitan will continue to implement avoidance and/or mitigation measures contained in the Shell E&P and Metropolitan HCP relative to the removal of Coastal Sage Scrub and impacts to the Coastal California Gnatcatcher and Coastal Cactus Wren.

BR-2) Grading activities will be avoided between February 15 and September 15 to the maximum extent feasible to avoid impacts to nesting birds. If grading is required during this period, Metropolitan will provide USFWS and CDFG with maximum practicable notice of the need to proceed to allow for avoidance or minimization of impacts to nesting birds. In such an event, a qualified biologist will survey all potential nesting vegetation within 100 feet of the proposed grading limits for nesting birds prior to grading activities. If no nesting birds are observed, project grading may commence. If an active nest is located, the site will be marked a minimum of 100 feet in all directions, and this area will not be disturbed until after September 15 or until the nest becomes inactive. In the event that a threatened or endangered species -such as the Southern Willow Flycatcher, Coastal



Figure 33. The Diemer Access Road project.



Figure 34. The restoration sites for the Diemer Access Road project.

California Gnatcatcher, or Least Bell's Vireo—is located within the survey area, consultation with USFWS and/ or CDFG will be required.

BR-3) Protocol surveys have not located any sensitive nesting birds within the proposed project area; nonetheless, construction of the railcar bridge shall occur outside of Least Bell's Vireo breeding season (February 15 through September 15) to avoid any potential impacts to this species. If this is not possible, prior to construction, a qualified biologist will survey all potential nesting vegetation within 250 feet of the proposed grading limits for nesting birds prior to grading activities. If no nesting birds are observed, project grading may commence; however, weekly surveys will continue throughout the construction period when construction activities take place in the vicinity of potential LBV territories. If an active nest is located, the site will be marked a minimum of 250 feet in all directions delineated with temporary fencing or flagging visible to construction employees, and sound barriers will be erected along the construction limits for the railcar bridge. This area will not be disturbed until the nestlings have fledged. In the event that a threatened or endangered species, such as the Southern Willow Flycatcher, Coastal California Gnatcatcher or Least Bell's Vireo is located within the survey area, consultation with USFWS and/or CDFG will be required.

BR-4) Construction work limits, including staging areas, shall be well-defined and marked (i.e., by caution tape, temporary fencing, etc.). All temporary fencing or other markers will be clearly visible to construction personnel. Parking, stockpiling, or storage of equipment will be permitted only within designated staging areas.

BR-5) Construction will be monitored by a biologist, responsible to the project applicant. The contractor and the monitor will review the rough grading plans and staking to ensure that the grading is within the project footprint. A monitoring biologist will be on-site during brush-clearing or grading of coastal sage.

BR-6) Coastal Sage Scrub within the dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on leaves, as recommended by the monitoring biologist.

BR-7) Prior to any construction or grading activities, education of all project personnel regarding avoidance of impacts to sensitive environmental resources and the prevention of harm, harassment, injury or death

of wildlife will be provided by the biological monitor. This instruction shall be given as often as necessary to ensure that all personnel working on-site are adequately briefed in the matter.

BR-8) Except as necessary to respond to public health and safety concerns, or otherwise authorized by USFWS, no physical disturbance of Coastal Sage or Cactus Scrub occupied by nesting Coastal California Gnatcatcher will occur in the breeding season (approximately February 15 through September 15). Metropolitan will provide USFWS with maximum practicable notice of the need to proceed under such circumstances to allow for avoidance or minimization.

BR-9) The monitoring biologist(s) will flush Coastal California Gnatcatchers, Coastal Cactus Wrens, and other wildlife from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. The monitoring biologist(s) will ensure that no Coastal California Gnatcatchers or Coastal Cactus Wrens will be directly harmed by brush clearing and earth-moving equipment.

BR-10) The monitor will be empowered to temporarily halt construction activities and make recommendations to ensure impact minimization and compliance with the relevant provisions of the incidental take statement as well as to ensure that work does not take place in habitat areas outside the clearing limits as staked in the field.

BR-11) Vehicle transportation routes between cut and fill locations will be restricted to a minimum number during construction. Earth-moving equipment will be confined to the narrowest practicable corridor during construction. Waste dirt or rubble will not be deposited on adjacent, native vegetation. Earth-moving equipment will avoid unnecessary maneuvering in areas adjacent to protected habitat. Preconstruction meetings involving the monitoring biologist, construction supervisors, and equipment operators will be conducted and documented to ensure adherence to these measures.

BR-12) Metropolitan shall mitigate for temporary and permanent impacts to ACOE jurisdictional wetlands and waters as administered by the USACOE and CDFG jurisdiction by restoring habitats listed in Table 3.3-6 acceptable to the resource agencies for permanent impacts and temporary impacts. Metropolitan shall prepare a Conceptual Streambed Restoration Plan (CSRP) to document the mitigation program. Habitat shall be mitigated on-site or within the same

watershed, if feasible. The goal of the SRP will be to recreate the functions and values of the habitat being affected. These mitigation requirements will be outlined in the CSRP prepared for this project, with monitoring requirements and specific criteria to measure the success of the restoration. Guidelines for the CSRP shall include:

- The mitigation sites(s) shall have been evaluated and selected on the basis of their suitability for use as riparian mitigation areas.
- The mitigation area shall provide procedures to prepare soils in the mitigation area, provide detailed seeding/planting mixtures, provide seeding/planting methods, and other procedures that will be used for successful revegetation.
- 3. Impacts to jurisdictional waters and wetlands shall be avoided to the extent feasible in the design phase of the project.
- 4. Specific mitigation ratios and performance criteria shall be stated in the CSRP.
- 5. Maintenance and monitoring requirements shall be established, including quarterly and annual monitoring reports to CDFG.

BR-13) Metropolitan shall mitigate for temporary and permanent impacts to ACOE jurisdictional wetlands and waters as administered by the USACOE and CDFG jurisdiction by restoring habitats listed in Table 3.2-6 of the Recirculated DEIR acceptable to the resource agencies for permanent impacts and temporary impacts. Metropolitan shall prepare a Conceptual Streambed Restoration Plan (CSRP) to document the mitigation program. Habitat shall be mitigated on-site, within the same watershed.

The goal of the CSRP will be to recreate the functions and values of the habitat being affected. These mitigation requirements will be outlined in the CSRP prepared for this project, with monitoring requirements and specific criteria to measure the success of the restoration. The minimum performance standards and guidelines for the CSRP shall include:

- The mitigation site(s) shall have been evaluated and selected on the basis of their suitability for use as riparian mitigation areas and will occur in CHSP.
- The mitigation will include provisions to prepare the soils properly, provide detailed seeding/planting mixtures, provide seeding/ planting methods, provide irrigation lines, and other procedures that will be used for successful revegetation.
- The riparian area temporarily impacted by the

proposed project will be replaced at a 1:1 ratio while the area permanently impacted will be replaced at a 3:1 ratio.

- Impacts to jurisdictional waters and wetlands shall be avoided to the extent feasible in the design phase of the project.
- All Giant Reed (A. donax) will be removed within the temporary construction corridor and replaced with Willow (Salix spp.) and Mulefat (B. salicifolia) cuttings.
- Specific performance criteria shall be stated in the CSRP as mandated by state and/or federal permits, but is assumed to involve at least 70% cover of native species and less than 5% cover of non-native species and maintenance of the site for a period of 3 to 5 years.
- Maintenance and monitoring requirements shall be established in the CSRP, including, at a minimum, preparation of quarterly and annual monitoring reports by Metropolitan for submission to CDFG, as mandated by state and/or federal permits.

BR-14) Metropolitan shall mitigate for temporary and permanent impacts on upland Walnut Woodlands by paying one-million, two-hundred thousand dollars (\$1,200,000) to Petitioners or their designee wherein not less than \$700,000 shall be used for obtaining Walnut Woodland habitat within, or immediately adjacent to, State Parks that contains Walnut Woodlands comparable to the values and functions of the Walnut Woodlands impacted by the proposed Project as discussed in the 2008 EIR. Petitioner and DPR will work together to protect and if possible dedicate the Walnut Woodland habitat to State Parks to be preserved in perpetuity. Temporary and permanent impacts on Walnut Woodlands as a result of the proposed Project will be mitigated through these efforts, consistent with typical mitigation requirements for upland habitats and those set forth in the EIR.

BR-15) Walnut Woodland - On-Site Mitigation Metropolitan shall plant walnut trees and a complementary native plant component, including native trailing vines in the temporary impact areas consistent with the aesthetic intent of Mitigation Measure AS-I. The plant list will be provided to State Parks for review and comment. The Walnut trees will be installed within the temporary construction corridor consistent with the most preferred soil and aspect, and consistent with other nearby similar habitat. Walnut trees and understory will be planted in the temporary impact area downslope of the north retaining wall and Chaparral/Sage Scrub species will be planted in the retaining wall. It is anticipated that the majority of the Walnut trees planted will occur downslope of the north retaining wall and will be specifically addressed within a separate chapter of the WWMP. The WWMP will address tree and shrub installation (both container plants and hydroseed), irrigation installation, maintenance and monitoring. In summary, the WWMP will include the goals of the restoration and enhancement effort, details on the onand off-site planting locations, implementation plans, schedule, site preparation requirements, planting plans, installation specifications, habitat protection, site manipulation, invasive exotic plant control, irrigation requirements, maintenance activities, pest management, access control, contingency measures, and a monitoring program to document progress and success.

BR-16) Metropolitan shall prepare, implement, and maintain an Invasive and Exotic Species Vegetation Management Plan that allows not more than five percent cover of non-native species, consistent with the aesthetic intent of Mitigation Measure AS-1 for a period of five years.

Current Status

Ranking: 4/5* * Road was built through a conservation easement

Site Visit Date: November 7, 2019 Time: 11:40 AM to 12:40 PM

Hamilton's Field Notes

This project involved building a northern entrance road to the existing Diemer Water Treatment Plant, connecting to Carbon Canyon Road. The two main biological mitigation measures identified in the project's 2008 EIR are: BR-13, BR-14, BR-15.

Key components of BR-15 are:

Metropolitan shall prepare a Conceptual Walnut Woodland Mitigation Plan (WWMP). Specific sites have been selected in CHSP for inclusion in the WWMP and are shown on Figure 3.3-4 of the Biological Resources Section. State Park staff has concurred on the location and supports the restoration and enhancement effort. The area includes an estimated 1.23 acres of Walnut/Chaparral enhancement and 5.87 acres of Walnut/ Chaparral/Coastal Sage Scrub restoration.

The materials provided included mitigation and monitoring reports for implementation of BR-13, and these reports indicated that an October 2008 "Addendum No. 1" to the FEIR for the project included a "Revised BR-15" stating "Metropolitan shall plant Walnut trees and a complementary native plant component." Plans for the road included planting of Walnuts and other native plants in areas disturbed for construction of the road. The mitigation and monitoring reports focus on documenting compliance with BR-13, but not BR-15.

During my site visit, on November 7, 2019, I observed that the four drainage areas (A, B, C, and D) covered under BR-13 appeared to have been successfully restored to appropriate native riparian, Coastal Sage Scrub, and Walnut Scrub habitats. This success was consistent with the mitigation and monitoring reports prepared for these areas.

I could not access most of the Diemer Road project site, but from a distance it appeared that the plantings along the length of the road had been successfully established.

In a meeting on September 3, 2019, representatives of the USFWS and CDFW indicated that the Diemer Road had been built through a dedicated conservation easement, and that their agencies had not yet signed off on the mitigation provided.

Sensitive Species
None detected.

Significant Events • Freeway Complex Fire (2008)



View, facing north, showing restored riparian habitat in Mitigation Site A. Dominant species include Arroyo Willow (Salix lasiolepis), Mulefat (Baccharis salicifolia), and Coyote Brush (Baccharis pilularis). November 7, 2019.



View, facing southeast, showing restored riparian habitat in Mitigation Site A. Dominant species include Arroyo Willow (Salix lasiolepis), Mulefat (Baccharis salicifolia), and Coyote Brush (Baccharis pilularis). November 7, 2019.



View, facing north, showing restored riparian habitat in Mitigation Site B-1. Dominant species include willows up to 20-25 feet tall (Salix lasiolepis, S. laevigata, S. gooddingii), Mulefat (Baccharis salicifolia), and Coyote Brush (Baccharis pilularis). November 7, 2019.



View, facing south-soutwest, showing restored habitat in Mitigation Site B. Species in the foreground include Mulefat (Baccharis salicifolia) and Coyote Brush (Baccharis pilularis). Native plants growing out of the retaining wall and on the cut slope above Diemer Road include California Buckwheat (Eriogonum fasciculatum) and Coast Goldenbush (Isocoma menziesii). November 7, 2019.



View, facing west, showing restored habitat in Mitigation Site C, above and below the Diemer Road (road not visible in this image). Among plants visible in the foreground is at least one Southern California Black Walnut (Juglans californica ssp. californica). November 7, 2019.

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Eastern Transportation Corridor



Figure 35. Statistics on the Foothill/Eastern Transportation Corridor project.

Project Description

In 1987, through SB 1413, the California Legislature gave the authority to the newly formed Joint Powers Authority (consisting of the Foothill/Eastern Transportation Corridor Agency and the San Joaquin Hills Transportation Corridor Agency to construct toll facilities). The Foothill/Eastern Transportation Corridor consists of two segments: 261, 241, and 133 are the Eastern Corridor and 241 is the Foothill Corridor. The 24 mile long Eastern Corridor runs from State Route 91 (in Anaheim) to Interstate 5 and State Route 133 (in Irvine). The 28 mile long Foothill Corridor extends from Interstate 5 (in San Clemente) to State Route 241 (the Eastern Corridor) in Irvine. Much of the land had been used for cattle grazing as part of the Irvine Ranch land holding. It is unknown how much grading was needed for the Foothill/Eastern Transportation Corridor.

Appendix E

The Proposal

- Amend the Master Plan of Arterial Highways for inclusion of the Foothill alignment, and
- Construction of the Foothill Transportation Corridor.

Site Map

View the site map for the Eastern/Foothill Transportation Corridor on the next page.



Figure 36. The Foothill/Eastern Transportation Corridor.



felanie Schlotterbeck via

Figure 37. The restoration sites for the Foothill/Eastern Transportation Corridor project.

Impacted Plant Communities

- Emergent/Persistent Marsh
- Forested Willow Woodland
- Scrub/Shrub Broad-Leaved Deciduous (Mulefat Scrub)
- Forested Sycamore Woodland
- Alluvial Scrub
- Oak Woodland
- Scrub Oak Chaparral
- Toyon Chaparral
- Ceanothus Chaparral
- Chamise Chaparral
- Mixed Chaparral
- Coastal Sage Scrub
- Mixed Coastal Sage Scrub/Grassland
- Nolina Scrub
- Cactus Scrub
- Native Grassland
- Annual Grassland
- Barren
- Agriculture
- Horticultural/Ornamental
- Graded
- Urban

Impacted Habitat

(A range of habitat impacts existed due to varied alignments)

- Emergent/Persistent Marsh (0.0 acres)
- Forested Willow Woodland (1.9 2.2 acres)
- Scrub/Shrub Broad-Leaved Deciduous (Mulefat Scrub) (6.9 – 10.2 acres)
- Forested Sycamore Woodland (2.4 3.3 acres)
- Alluvial Scrub (1.5 2.5 acres)
- Oak Woodland (18.9 25.4 acres)
- Scrub Oak Chaparral (2.7 3.6 acres)
- Toyon Chaparral (0.2 3.8 acres)
- Ceanothus Chaparral/Chamise Chaparral (87.2 – 88.8 acres)
- Mixed Chaparral (70.9 75.4 acres)
- Coastal Sage Scrub (254 307.2 acres)
- Mixed Coastal Sage Scrub/Grassland (183.5 236 acres)
- Nolina Scrub (4.7 acres)
- Native Grassland (6.0 7.0 acres)
- Annual Grassland (227.2 306.7 acres)
- Barren (22.2 acres)
- Agriculture (187.6 351.0 acres)
- Horticultural/Ornamental (59.1 79.6 acres)
- Grad (6.1 33.5 acres)
- Urban (13.4 13.9 acres)

Impacted Species

- Many-Stemmed Live-Forever is in the general area, but not in the alignment zone.
- Two populations of Coulter's Matilija Poppy are in the Arroyo Trabuco segment.
- Two populations of Catalina Mariposa Lily were found in the Irvine segment, as well as Orange County Turkish Rugging and Many-Stemmed Live-Forever.
- The El Toro Segment has two populations of Coulter's Matilija Poppy and one population of Catalina Mariposa Lily.
- Cactus Wren and California Gnatcatcher were found in the footprint.
- Orange Throated Whiptail and California Gnatcatcher was found in Hicks Canyon.
- No threatened or endangered plant species were found in the Corridor, but populations of Many-Stemmed Dudleya are within the Corridor.

Key Biological Opinion Findings

Per our conservation with USFWS, a Biological Opinion was created (we did not receive a copy) and the hybrid model of adding this project to the Conservation Plan was then the focus.

Historic Surveys

- 1988 California Gnatcatcher focused survey and Orange Throated Whiptail focused survey
- Spring 1989 (ERCE)
- 1989 California Gnatcatcher focused survey and Orange Throated Whiptail focused survey
- 1990 California Gnatcatcher focused survey
- 1991 California Gnatcatcher focused survey

ETR Mitigation Measures wetland and streambed resources

B-1.1) Apply for and obtain Section 404 (Corps of Engineer) and Section 1601 (Calif Fish and Game) permits for alteration of streambeds and wetlands.

B-1.2) Incorporate conditions of 404 and 1601 permits as supplemental mitigation measures and/or implementation actions as appropriate to implement said permit conditions.

B-1.3) Incorporate permit conditions and associated additional mitigation measures/implementation
actions, including replacement habitat, into Final Design Documents as appropriate.

OAK WOODLAND & SAGE SCRUB

B-2.1) Tag and number all native Oak, Sycamore, and Willow trees of 4 inches in diameter within 20' of the limits of grading and construction operations, clearly distinguishing those trees to be protected and those to be removed.

B-2.2) Provide records of the numbered trees to the TCA, Resource Management Coordinator/Monitor, and OCEMA to be maintained for use in mitigation implementation.

B-3.1) Mark trees for preservation and removal [Note: this will be implemented by completion of action *B-2.1*].

B-4.1) Prepare plan for protection of Oak Woodland and Sage Scrub communities using short term soil stabilization techniques.

B-4.2) Incorporate recommendations from action B-4.1 into grading plans and specifications.

B-4.3) Implement stabilization plan during construction.

B-5.1) Prepare cleared or created slope revegetation program as a component of the landscape plan for the corridor, said program to utilize Coastal Sage Scrub species to the maximum extent feasible.

B-5.2) Review program with and obtain input from resource agencies and pertinent jurisdictions.

B-6.1) Incorporate the species identified in measure into plant palette for manufactured slopes to blend with surrounding natural open space.

B-7.1) Prepare Oak tree revegetation program as specified by the measure, including the identified plant palette, in consultation with County of Orange.

B-7.2) Incorporate provisions of program prepared per action B-7.1 into construction plans and specifications, as appropriate.

B-7.3) Implement the program in conjunction with Corridor construction.

B-8.1) Select Project Biologist.

B-8.2) Monitor site preparation, grading, and construction to insure that environmentally sensitive areas are protected in accordance with application mitigation measures.

B-8.3) Formulate monitoring program and procedures.

B-9.1) Prepare and submit Contractor's Water Pollution Control Plan to Resident Engineer, said plan to include measures for:

- a. Minimizing noise, dust, erosion, and sediment runoff into drainages;
- b. Controlling or reducing dust accumulation on vegetation.

B-9.2) Obtain approval of WPCP.

B-9.3) Monitor during construction to insure WPCP implementation.

B-10.1) Map on grading plans all environmentally sensitive species and habitats within 300' of the corridor as specified in the measure.

B-11.1) Prepare procedures for protecting ESA's by adapting Caltrans ESA procedures to project.

B-11.2) Incorporate ESA procedures into Final Design Documents as appropriate.

B-11.3) Attend pre-grading meeting with construction superintendent to review and explain ESA procedures.

B-11.4) Implement Caltrans Environmentally Sensitive Area procedures.

B-12.1) Incorporate requirements for keeping construction equipment out of these fenced areas into construction specifications.

B-12.2) Install protective fencing at least 15' outside the dripline of all Oaks and Sycamores to be protected during construction.

B-13.1) Incorporate provisions for stream bank reinforcement in plans in accordance with the intent of the measure.

B-13.2) Construct stream bank reinforcements as specified.

B-14.1) Develop program to direct runoff away from Oak Woodlands to extent practical.

B-14.2) Incorporate provisions of runoff diversion program into Final Design Documents as applicable.

B-14.3) Implement runoff control program during construction.

B-15.1) Identify sensitive habitat locations along corridor for implementation of low light alternatives.

B-15.2) In conjunction with implementation of measure L-1, insure that corridor lighting design incorporates the specified measures to minimize glare on adjacent sensitive wildlife habitats.

B-16.1) This measure has been superseded by Biological Opinion measure FWS19a. Refer to Biological Opinion measure FWS19a for implementation action. However, with the implementation of the North Lake Interchange a salvage program for the Many-Stemmed Dudleya shall be prepared consistent with the intent of measure B-16 and FWS19a.

PLANT SPECIES OF CONCERN

B-17.1) Consult with County and landowner(s) regarding opportunity for long term preservation of intact populations of Dudleya through acquisition of expanded right-of-way or designated open space.

B-17.2) Acquire right-of-way or open space as recommended per B-17.1.

B-17.3) Develop a long-term management plan for those portions of the corridor right-of-way supporting natural or transplanted Dudleya.

B-17.4) Incorporate provisions of Management Plan into plans and specifications as applicable.

B-17.5) Implement Management Plan.

B-17.6) Complete impact analysis as indicated in this measure.

B-17.7) Incorporate recommendations per action B-17.6 into project final design plans.

B-17.8) Implement recommendations per action B-17.7.

WILDLIFE DISPERSION

B-18.1) Incorporate bridges for wildlife crossings into final design.

B-18.2) Incorporate soft bottom channels for drainage facilities as feasible.

B-19.1) Install Deer proof fencing in accordance with design developed through measure B-20.

B-20.1) Design wildlife crossing bridges in accordance with the provisions of measure B-20, including consideration of splitting the alignment into two halves at bridge locations per measure B-21.

B-20.2) Identify locations of fencing to control wildlife movement at bridge crossings and open space areas adjacent to the corridor containing substantial native habitat.

B-21.1) [Implemented per Action B-20.1].

B-22.1) Identify location of and design signs warning of potential Deer movement.

B-22.2) Install signs prior to corridor opening.

B-23.1) Prepare plan for wildlife watering devices including location, design, and installation per measure.

B-23.2) Install watering devices prior to corridor opening.

B-24.1) Prepare special plant palette similar to that described in measure B-6 for revegetation cut slopes in Blind Canyon.

B-24.2) Incorporate palette in landscape plans and specifications for Blind Canyon slope revegetation.

WILDLIFE SPECIES OF CONCERN

B-25.1) Prepare plan for phasing site preparation and grading in the vicinity of environmentally sensitive wildlife habitat areas.

B-25.2) Monitor site preparation and grading operations to insure compliance with plan.

B-26.1) Prepare specialized plant palette consistent with Gnatcatcher habitat and identify corridor slopes suitable for revegetation and colonization in consultation with USFWS and other resource agencies.

B-26.2) Incorporate revegetation plan into final landscape plan and specifications.

B-27.1) Include restrictions on grading and construction operations in construction specifications as specified during the nesting and breeding period of March 15 to July 15:

- a. Not closer than 500' to nesting sites for candidate and listed bird species;
- b. Not closer than 1000' to nesting sites for raptors;
- c. Not closer than 1000' to dens for covote, bobcat and mountain lions.

B-27.2) Monitor grading and construction to insure compliance with specifications and to redirect construction if Covote, Bobcat or Mountain Lion den encountered.

B-27.3) Resurvey nesting sites and dens to confirm completion of breeding cycle.

B-28.1) This measure has been superseded by the Biological Opinion. Refer to Biological Opinion measure FWS19b for implementation action.

B-29.1) Participate in the development and implementation of the Habitat Conservation Plan as described in the measure.

Current Status

Ranking: N/A I was not able to adequately evaluate the habitat restoration effort during the field visit.

Site Visit

Date: August 13, 2019 Time: 2:30 PM to 3:30 PM

Hamilton's Field Notes

We toured this site by driving up and down the Eastern Transportation Corridor with Margot Griswold, the restoration specialist for the project, and Valarie McFall. While we saw many areas along the route that had been successfully revegetated with appropriate native plant species, we were not able to inspect the restored slopes, or other areas restored as mitigation for the toll road, to properly evaluate the relative success of the restoration effort.

NOTE: The Transportation Corridor Agencies have also purchased land as mitigation to offset the impacts of the Foothill/Eastern Transportation Corridor. According to the Agency's website the following lands are protected in perpetuity (but are not mapped in this project):

- Bonita Creek & Reservoir (28.3 acres) •
- Canada Gobernadora (32.2 acres) •
- Coyote Canyon Landfill (122 acres) •
- Glenwood Drive Mitigation Site (7.3 acres) •
- Greenvield Drive & the 73 Toll Road

Sensitive Species None detected.

nificant Events Santiago Canyon Fire (2007)

- Canyon 2 Fire (2017)



Foothill North Mitigation from the initial year of restoration (1995).



Same location as above, post restoration (2010).



Mitigation for Arroyo Trabuco Bridge Widening (pre-restoration 2000).



Same location as above, post restoration (2010).



SR-261 post Santiago Canyon Fire (2007).



Same location as above, post fire recovery (2012).



Siphon Reservoir post Santiago Fire (2007).



Same location as above (2007, four months later).



Same location as previous page (2012).

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Hawks Pointe

Project Name	Details
Project Name:	Hawks Pointe (Emery Ranch)
EIR Number:	Unknown
State Clearinghouse Number:	1999041034
Owner/Applicant:	Centex Homes
Prepared For:	City of Fullerton
EIR Consultants:	Keeton Kreitzer Consulting
EIR Drafted:	November 2000
Existing General Plan Designation:	County: 1B – Suburban Residential
Existing Zoning:	County: A1(O) (General Agriculture/Oil Overlay)
New Zoning:	City: West Coyote Hills Master Specific Plan 2-A
Permits Required:	ACOE: Section 404 (Nationwide Permit) CDFW: 1600 Streambed Alteration Agreement Permit USFWS: Section 7 RWQCB: 401 Water Quality Permit

Figure 38. Statistics on the Hawks Pointe project.

Project Description

The Hawks Pointe (Emery Ranch) project sits on 86.3 acres of land and has historically be used as an oil field. The land is county unincorporated but is within the Sphere of Influence for the City of Fullerton. The project was processed through the City of Fullerton. Residential, park, and road uses were proposed for the site. The project includes movement of more than one million cubic yards of dirt to be balanced on-site.

The Proposal

- 210 single family detached residential units in seven planning areas
- Hiking trail and park
- Arterial roadway across the property

Site Map

View the site map for Hawks Pointe on the next page.

Appendix F

Impacted Plant Communities

- Coastal Sage Scrub
 - Coyote Brush Scrub
 - Southern Cactus Scrub
- Chaparral
 - Toyon-Sambucus Chaparral
- Disturbed Land

Impacted Habitat

- 13.5 acres of Coastal Sage Scrub
- 6.9 acres of Chaparral
- 57.2 acres of Disturbed Land



Figure 39. The Hawks Pointe project.



Figure 40. The restoration sites for the Hawks Pointe project. 108

- 0.134 acres non-wetland waters (ACOE)
- 0.322 acres non-wetland jurisdictional waters (CDFW)

Impacted Species

- Habitat loss may impact the California Gnatcatcher (2 pair) and Cactus Wren (5 pair)
- No sensitive plant species found on-site.

Key Biological Opinion Findings

- 3 pairs of California Gnatcatcher are impacted
- Create 21.2 acres of Coastal Sage Scrub and enhance 14.3 acres
- Place \$877,500 in an escrow account or post a bond as assurance for the habitat creation and five-year monitoring
- Ensure 2.7 acres of fuel mod zones incorporate non-flammable Coastal Sage Scrub/Cactus Scrub (no non-natives are to be planted)
- Add a conservation easement over all preserved/restored habitat on the Emery Ranch site.
- Place trails with minimal impact to Gnatcatcher areas and Coastal Sage Scrub restoration areas.
- Ensure a biological monitor is present for Coastal Sage Scrub clearing/removal to minimize impact to the Gnatcatcher.
- Clear and grub only between August 30 and February 15 (outside of Gnatcatcher breeding season).
- Maintain two Brown-Headed Cowbird traps on-site to limit impacts to gnatcatchers.

Historic Surveys

- July/August 2000 (Dudek)
- March/April 2000 (Dudek)
- October 1999 (Glenn Lukos Associates)
- September 1998 (Dudek)
- Winter/Spring/Summer 1994 (Dudek)

EIR Mitigation Measures

MM 4.3-1a) The project applicant will be required to mitigate the loss of 10.0 acres of Coastal Sage Scrub and disturbed Coastal Sage Scrub habitat at a 1:1 ratio on the project site. This will take the form of on-site preservation of remaining habitat, revegetation of Coastal Sage Scrub, and enhancement of remaining habitat. On-site restoration areas are depicted in

Exhibit 4.3-4.

MM 4.3-1b) The project applicant will be required to mitigate the loss of 0.9 acre of Coyote Brush Scrub habitat at a 1:1 ratio on the project site.

MM 4.3-1c) The project applicant will be required to mitigate 5.2 acres of Southern Cactus and disturbed Southern Cactus Scrub habitat at a ratio of 1:1.

MM 4.3-2) Prior to commencement of brush clearing, grubbing, or grading operations, or other activities involving soil disturbance, a qualified biologist, will flush any resident CAGN from the area.

MM 4.3-2) Prior to commencement of brush clearing, grubbing, or grading operations, the limits of the impact zone must be clearly, frequently, and regularly demarcated using lathe and flagging. Where the impact zone is adjacent to CSS habitat, silt fence material must be keyed into the soil and caution flagging attached.

MM 4.3-3) All vegetation will be removed prior to the California Gnatcatcher breeding season (15 February to 15 August).

MM 4.3-4) A monitoring biologist(s), acceptable to the USFWS, will be on-site during brush clearing, grubbing, and grading of existing native habitats.

MM 4.3-5) The project applicant or its agents shall utilize best management practices in its construction-related activities to reduce noise and dust impacts.

MM 4.3-6) Prior to initial brush clearing, grubbing, or construction activities, a pre-construction meeting with representatives of all contractor and subcontractors shall be held. Attendees shall be informed of the sensitivity of Coastal Sage Scrub and California Gnatcatcher, legal penalties for unauthorized disturbance, and their responsibility to act in a legal manner.

MM 4.3-7) No construction staging areas, haul roads, access roads, or other intrusion across designated open space areas shall be allowed. All such activities shall be confined to the areas designated for development.

MM 4.3-8) Unauthorized destruction of Coastal Sage Scrub shall be mitigated at a 5:1 ratio. The replacement or restoration will be held to the same standards as existing restoration efforts.

MM 4.3-9) Continuous weekly monitoring by a qualified biologist during grading operations shall be done to ensure no unauthorized grading occurs. If unauthorized grading occurs, construction will cease pending coordination with the USFWS.

MM 4.3-10) All street lights shall be shielded as much as is feasible so as not to shine directly on native or restored habitat.

MM 4.3-11) CSS habitat within the likely dust radius resulting from earth moving activities shall be sprayed periodically with water to reduce accumulated dust on the leaves, as recommended by the monitoring biologist.

MM 4.3-12) Erosion control procedures, as required by the City of Fullerton, shall be implemented to minimize habitat disturbance.

MM 4.3-13) The project applicant shall recover CSS habitat outside the development footprint, including restoration, enhancement, and management. This will result in a minimum of a 1:1 mitigation ratio. A conceptual revegetation plan shall be prepared.

MM 4.3-14) To the maximum extent possible, brushed quality CSS habitat and topsoil will be salvaged and spread within restoration areas. To the maximum extent possible, other CSS community plant material, including seedlings, young plants, mature plants, and cactus pads and plants will be transplanted or salvaged for later transplantation so as to provide immediate structure to the revegetation areas. All restoration areas will be non-irrigated and subject to the following five-year success criteria (measured after July of any year):

- Year 1: 10 20 percent native scrub species, up to 50 percent non-native species; 10 percent cover;
- Year 2: 25 40 percent native shrub species, up to 35 percent non-native species; 30 percent cover;
- Year 3: 40 60 percent native shrub species, up to 25 percent non-native species; 50 percent cover;
- Year 4: 60 75 percent native shrub species, up to 15 percent non-native species; 70 percent cover;
- e. Year 5: 75 100 percent native shrub species, up to 10 percent native species; 90 percent cover.

Peruvian Pepper trees, Brazilian Pepper trees, Eucalyptus, Castor Bean, Tree Tobacco, Black Mustard, Fennel, and Pampas Grass are all highly invasive, weedy species which must be removed to the maximum extent possible. Pepper trees and Eucalyptus, in particular, are highly damaging to native flora because of toxins which leech out of dropped leaves. These toxins inhibit native plant species growth.

MM 4.3-15) Slopes and graded areas within fire management zones and within the preserve, will be revegetated with native CSS/SCS species that are fire resistant, primarily Coast Cholla; however, other species may also be used to a lesser extent, if allowed by the fire marshal.

MM 4.3-16) Slopes and graded areas outside the fire management zones, within the preserve, will be revegetated with Coastal Sage Scrub species dominated by California Sagebrush and California Buckwheat (i.e., approximately 70 percent plant cover). The remaining area should be dominated by White Sage, California Encelia, Bush Monkey-Flower and Giant Wild Rye. Revegetation within non-fire management zones should be consistent with the conceptual revegetation plan. This combined with the fire management zone revegetation effort, will result in additional acreage of CSS habitat.

MM 4.3-17) Habitat adjacent to roads, sidewalks, and trails should be fenced with post and rail or other aesthetically pleasing barrier where cactus is not present to inhibit trespass by pedestrians and domestic animals.

MM 4.3-18) The project applicant and/or its successors shall conduct a Brown-Headed Cowbird trapping program (management program) on the project area for 20 years or until the breeding California Gnatcatcher population on-site maintains a population of three (3) pairs for a period of three (3) years, whichever occurs first. One (1) modified Australian Crow trap shall be placed within the open space and revegetation area outside the original grading zone, in an area which supports both California Gnatcatcher and Brown-Headed Cowbirds. Trapping will begin the first season after initial brushing, grubbing, or grading occurs. During that time, the project applicant and/ or its successors, will provide for a qualified operator to maintain and operate the Brown-Headed Cowbird management program from March 15 to July 15 each year. The project applicant and/or its successors shall directly pay for the management program. Upon

initiation of the management program, records of all captures, activities, and comments shall be kept and submitted to the CDFG and USFWS by September 15 of each year the trapping is conducted.

MM 4.3-19) The project applicant shall place the appropriate deed restrictions over the open space areas and Coastal Sage Scrub restoration areas which provide mitigation credit for the project applicant, as a permanent habitat conservation area. The open space area and Coastal Sage Scrub restoration area will be managed and maintained in a manner consistent with preservation of on-site biological resources. This conservation area includes all remaining land outside the development bubble and those lands within the development which lie outside the fire management zone and are revegetated with Coastal Sage Scrub so as to obtain credit for CSS habitat mitigation.

MM 4.3-20) According to the appropriate deed restrictions, the project applicant or its successors in interest shall be empowered to close any areas of the conservation area to the public if significant, long-term decreases in plant diversity or California Gnatcatcher populations are determined to be caused by people using the conservation area. Closed areas shall be reopened when population and/or diversity levels reach average levels (as measured through biennial surveys), provided the project applicant or its successors in interest has prepared a plan to reduce possibility of further decrease, and the City of Fullerton approves the plan.

MM 4.3-21) Biennial California Gnatcatcher surveys will be conducted within the mitigation areas during the breeding season according to USFWS accepted protocol for NCCP-enrolled areas. These surveys will commence the first year after initial brushing, grubbing, or grading has occurred and continue every two years for the next 10 years, unless the population has reached three pairs for two survey periods. This is necessary to determine if mitigation requirements are sufficient, to determine when Brown-Headed Cowbird trapping may be discontinued, and determine if discontinuing Brown-Headed Cowbird trapping has a negative effect on the population.

MM 4.3-22) An annual report will be submitted to the CDFG and USFWS regarding the activities which occurred during that year. The report will be due by January 30 of the year following initial rubbing, brushing, or soil disturbance and will continue while any monitoring activity is still implemented (e.g.,

5-year mitigation monitoring, biennial CAGN surveying, Cowbird trapping, etc.).

MM 4.3-23) Periodic parallel overhead photographs of the project area will be procured and maintained on file, during the habitat restoration phase of the project, to document activities and gauge restoration success.

MM 4.3-24) All fences, roads, and public facilities shall be kept in good repair. Replacement of these facilities is allowed as needed. The conservation area shall be patrolled once a quarter outside the CAGN breeding season and once a month during the breeding season. Trash shall be removed and any necessary repairs made to facilities.

MM 4.3-25) Emergency agencies (i.e., fire, medical) may enter the open space and Coastal Sage Scrub restoration conservation areas as needed to alleviate the emergency with no mitigation required.

MM 4.3-25) No trappings of Coyotes or other mesopredators shall occur within the conservation area. Homeowners shall be made aware of this policy and that for the safety of their pets which should remain indoors and on their property. A disclaimer shall be signed by all purchasers and a clause written into the CC&Rs.

MM 4.3-26) Should a public facility breakdown occur, the appropriate agency may enter the conservation and perform whatever action is needed to effect the repair. The USFWS should be notified prior to/ or concurrent with work initiation. The area of CSS disturbance shall be restored at the cost of the agency, meeting the stated success criteria.

Current Status Ranking: 4/5

Site Visit Date: July 25, 2019 Time: 12:15 PM to 2:00 PM

Hamilton's Field Notes

The key mitigation measures for the Hawks Pointe project are MM 4.3-1a, 4.3-1b, 4.3-1c, and 4.3-2.

Apparently reflecting permitting requirements determined after certification of the EIR, the Coastal Sage Scrub Mitigation and Monitoring Plan, prepared by PCR Services Corporation in 2001, states on page vii that 21 acres of Coastal Sage Scrub (CSS) would be created and 14 acres of CSS would be enhanced on the project site and adjacent areas. In the field, I observed that approximately 18.3 acres of CSS had been created and 13.1 acres of CSS had been enhanced. A small area of wetland, covering 0.32 acres, was also created. Since virtually all of the upland slopes on the site had been restored, it was not clear to me how 3+ acres of restored/enhanced CSS might be "missing." The acreage of restoration/enhancement should be verified.

The CSS restoration on the graded slopes looks quite good, overall. This was one of the most successful CSS restoration projects I reviewed. I heard a California Gnatcatcher (*Polioptila californica californica*) vocalizing in the created CSS near Photo 1, and photographed a pair (near Photo 5).

An important deficiency of the restoration is that the EIR specified that the applicant would restore 5.2 acres of Southern Cactus Scrub. The scrub in this area —the West Coyote Hills—is naturally rich in Coastal Prickly-Pear Cactus (*Opuntia littoralis*), and supports a regionally important population of the "Coastal" Cactus Wren (*Campylorhynchus brunneicapillus*), a California Species of Special Concern. The photo taken at Photo Point 4 shows how dominant Coastal Prickly-Pear is within extant Cactus Scrub in this area. The scrub restored on the slopes at Hawks Pointe contains only trace amounts of cactus that remains very small, and the cactus-containing scrub seems unlikely to ever develop to the point where it provides suitable habitat for Cactus Wrens.

Fountain Grass (*Pennisetum setaceum*), an invasive exotic species, has been planted along the margin of restored habitat along part of the southern border (Photo 3).

Sensitive Species

 At least three California Gnatcatchers (*Polioptila californica californica*), a federally threatened species, were detected. Two were photographed at Photo 6. The species is resident in this area.

Significant Events



View, facing east-northeast, from near the northern terminus of Hawk Pointe Drive, showing successfully restored Coastal Sage Scrub habitat dominated by California Buckwheat (Eriogonum fasciculatum), California Sagebrush (Artemisia californica), and Coyote Brush (Baccharis pilularis). July 25, 2019.



View, facing northeast, from near the northern terminus of Rimrock Circle, showing successfully restored Coastal Sage Scrub habitat dominated by California Buckwheat (Eriogonum fasciculatum), California Sagebrush (Artemisia californica), Coastal Prickly-Pear (Opuntia littoralis), and Laurel Sumac (Malosma laurina). July 25, 2019.



View, facing southeast, from near the southern terminus of Sageview Court, showing plantings of Fountain Grass (Pennisetum setaceum), an invasive exotic species, on the edge of the habitat restoration area. July 25, 2019.



View, facing northeast from near the eastern terminus of Muir Trail Drive, showing the strong dominance of Coastal Prickly-Pear (Opuntia littoralis) in the undisturbed scrub to the right of the chain-link fence and the restored scrub to the left. The restored habitat, although it does contain non-trivial amounts of cactus, falls far short of the cactus content in the undisturbed scrub. July 25, 2019.



View, facing north, from a point north of Muir Trail Drive, showing successfully restored Coastal Sage Scrub habitat dominated by California Buckwheat (Eriogonum fasciculatum), California Sagebrush (Artemisia californica), and Laurel Sumac (Malosma laurina). I photographed a pair of California Gnatcatchers at this location. July 25, 2019.



Laguna Hills Community Center

Appendix G

Project Name	Details
Project Name:	Laguna Hills Community Center
EIR Number:	Unknown
State Clearinghouse Number:	9609135
Owner/Applicant:	City of Laguna Hills
Prepared For:	City of Laguna Hills
EIR Consultants:	Hogle-Ireland, Inc.
EIR Drafted:	May 1997
Existing General Plan Designation:	Public Park
Existing Zoning:	Parks (OS-1) Drainage Facilities (OS-2) Landscape Corridor (OS-3)
New Zoning:	Parks (OS-1)
Permits Required:	ACOE: Section 404 Permit (Standard Individual Permit) CDFW: 1600 Streambed Alteration Agreement Permit USFWS: No Record of Involvement RWQCB: Unknown

Figure 41. Statistics on the Laguna Hills Community Center project.

Project Description

The Community Center Park project sits on 18 acres of undeveloped land owned by the City of Laguna Hills (12 acres) and Saddleback Valley Unified School District (six acres). The project was processed through the City of Laguna Hills. The site contains riparian vegetation and six acres are characterized by steep slopes. The project site contains a 200-foot-wide SoCal Edison transmission line easement and it is located within a national Flood Insurance Program designated "Special Flood Hazard Area Inundated by 100 Year Flood." The project includes 746,000 cubic yards of fill to raise the elevation four feet above Alicia Parkway, thereby eliminating an existing pond and an on-site wetland.

The Proposal

- Indoor and outdoor athletic fields including two baseball fields, soccer fields, and associated field lighting with restrooms, storage, and concession stands;
- Gathering places like a 15,400 square foot multi-purpose community building and 15,100 sqft gymnasium;
- A 10,000 sqft library;
- Two playground areas; skating amenities specifically a roller hockey rink 12,800 sqft and 5,000 sqft skate park; and
- Parking for 203 cars.



Figure 42. The Laguna Hills Community Center.



Figure 43. The restoration site for the Community Center project.

Site Map

View the site map for the Laguna Hills Community Center on the previous page.

Impacted Plant Communities

- Mixed Coastal Sage Scrub
- Grassland
 - Introduced Annual Grassland
 - **Ruderal Forbs**
- Riparian
 - Mulefat Scrub Riparian
 - Arroyo Willow Riparian Forest
 - Non-Native Tree, and
 - Herbaceous Riparian
- Jurisdictional Wetlands

- Impacted Habitat
 3.41 acres of jurisdictional wetlands including:
 - a 0.07-acre pond
 - 2.65 acres of Willow Riparian Woodland
 - 0.69 acres of Herbaceous Riparian
 - 2.06 non-native Riparian Fringe
 - 0.3 acres of Coastal Sage Scrub
 - 10.0 acres of introduced Annual Grassland
 - 3.01 acres of Ornamental landscaping

Impacted Species

- Habitat loss (riparian) may impact the Least Bell's Vireo, but not impacts are anticipated for the bird.
- The Southwestern Pond Turtle may be impacted as well.

Key Biological Opinion Findings • 5.1 acres for wetland habitat will be enhanced

- with fencing it should result in 8.77 acres of higher quality wetland habitat.
- 3.77 acres of introduced Annual Grassland will be converted to Willow/Mulefat riparian forest.
- Wetlands are mitigated at a 2.6:1 ratio.
- This plan incorporates conditions of approval as specified by the Corps to achieve the following goals:
 - create additional wetland habitat,
 - eradicate non-indigenous riparian species, •
 - relocate Southwestern Pond Turtles, •
 - enhance selective habitats, and
 - preserve and protect restored and existing riparian habitat.

Historic Surveys • Spring 1996

EIR Mitigation Measures

BR-1) The City, in consultation with the California Department of Fish and Game (DFG), shall prepare a relocation plan for the Southwestern Pond Turtle. The plan shall include, at a minimum, the identification of appropriate relocation sites. The plan shall explore the suitability of the on-site wetland mitigation area as a relocation site. The relocation plan shall be reviewed and approved by the DFG prior to the initiation of site clearing and grading activities.

BR-2) The project shall be phased in a manner that allows for the on-site wetland mitigation area included in the Community Center Park project to be initiated prior to the grading and elimination of the wetland area east of Via Lomas. The City Engineer shall verify significant progress towards completion of the on-site wetland mitigation area grading and planting prior to the issuance of a grading permit for the active recreation and community building portion of the site.

Current Status

Ranking: 2/5

Site Visit

Date: July 1, 2019 Time: 11:10 AM to 12:10 PM

Hamilton's Field Notes

The riparian mitigation site is a mish-mash of native and non-native plants. Many exotic plants have been planted inside of the protective chain-link fence that remains in place around the mitigation area. These include Eucalyptus trees (Eucalyptus spp.), Mexican Fan Palms (Washingtonia robusta), Evergreen Ash (Fraxinus uhdei), Tree-of-Heaven (Ailanthus altissima), Blue-Leaf Wattle (Acacia saligna), Tamarisk (Tamarix ramosissima), Century Plan (Agave americana), Bottlebrush (Callistemon sp.), and Carrotwood (Cupaniopsis anacardioides). Native species include Black and Arroyo Willows (Salix gooddingii, S. lasiolepis), Fremont Cottonwood (Populus fremontii), Mugwort (Artemisia douglasiana), Spiny Rush (Juncus acutus), Salt Grass (Distichlis spicata), California Rose

(Rosa californica), and California Blackberry (Rubus ursinus).

The site is too overgrown with tall trees–native and exotic–to be good habitat for the Least Bell's Vireo, which is supposed to be a target of the restoration.

The site is intended to have a "wet meadow" component, but I could not access the center of the site to check it out. Permanent fencing of the site with six-foot chain-link fencing presumably limits the capacity of terrestrial wildlife to access habitats in the site.

Sensitive Species

 Two Yellow Warblers, a California Species of Special Concern, were heard singing and presumably breed here.

Significant Events • None known



Mature riparian habitat dominated by willows (Salix lasiolepis, S. laevigata, S. gooddingii) and Mulefat (Baccharis pilularis), with exotic Mexican Fan Palm (Washingtonia robusta) and Eucalyptus (Eucalyptus spp.). July 1, 2019.



Irrigation pipes remaining in the mitigation area. July 1, 2019.



Non-native Century Plant (Agave americana) in the mitigation site. July 1, 2019.



Numerous Eucalyptus trees (Eucalyptus spp.) in the mitigation site. July 1, 2019.



Lower end of the mitigation area, with native habitat and non-native Mexican Fan Palms (Washingtonia robusta). *July 1, 2019.*



Las Flores PC

Project Name	Details
Project Name:	Las Flores Planned Community
EIR Number:	506
State Clearinghouse Number:	89040513
Owner/Applicant:	Santa Margarita Company
Prepared For:	County of Orange
EIR Consultants:	Michael Brandman Associates
EIR Drafted:	May 1990
Existing General Plan Designation:	Open Space & Open Space - Agricultural
Existing Zoning:	A1 – General Agriculture SG – Sand & Gravel Extraction
New Zoning:	PC – Planned Community
Permits Required:	ACOE: Section 404 Permit (Standard Individual Permit) CDFW: Section 1603 Permit USFWS: No Record of Involvement RWQCB: Unknown

Figure 44. Statistics on the Las Flores Planned Community project.

Project Description

The Las Flores Planned Community encompasses 1,005 acres of Rancho Mission Viejo in unincorporated Orange County. The land has historically been used for ranching purposes and was mostly vacant with no improved access to the site. The project proposed mostly residential uses with neighborhood commercial and community facilities, a water district office, and recreation site. The project included 8.5 million cubic yards of cut and fill, balanced on-site.

The Proposal

- 2,500 residential units
- A school site (25 acres)
- Local parks (16 acres)
- Neighborhood commercial (20 acres)
- Recreational space (34 acres)
- 503 acres of open space

Site Map

View the site map for the Las Flores Planned Community on the next page.

Impacted Plant Communities

Appendix H

- Coastal Sage Scrub
- Grassland
- Coast Live Oak Woodland
- Oak Sycamore Woodland
- Mulefat Scrub
- Southern Willow Riparian Forest
- Turkish Rugging

Impacted Habitat

• The project will impact approximately 413 acres of natural open space—mostly Grassland and Coastal Sage Scrub.



Figure 45. The Las Flores Planned Community.



Figure 46. The restoration site for the Las Flores project with the fence (red). 122

- Impacts to the Catalina Mariposa Lily will be incremental in nature.
- 151 acres of Coastal Sage Scrub, 120 acres of disturbed Coastal Sage Scrub will be graded.
- 10 acres of Grassland and 119 acres of disturbed Grassland.
- Seven acres of Coast Live Oak Woodland and 6 acres of riparian habitat.

Impacted Species

- ^L Three populations of Turkish Rugging were found and no more than 20 individual Catalina Mariposa Lily specimens were found. One site was removed from agricultural operation, one was removed for grading of Oso Parkway and the last population will be removed for the project.
- 14 pairs of California Gnatcatcher were found in April 1989, it was 11 individuals in March 1990. Four of the Gnatcatcher territories (eight birds) would be lost.
- The Cactus Wren surveys found 28 pairs mapped in October 1989, but 31 pairs in March 1990. Ten pairs of Cactus Wren would be lost as the territories would be destroyed.

Key Biological Opinion Findings • There was no Biological Opinion.

Historic Surveys

- March 1990 (Michael Brandman Associates)
- Fall 1989
- Spring 1989 (Michael Brandman Associates)

EIR Mitigation Measures

1) Approximatel 361 acres (57%) of on-site Coastal Sage Scrub (CSS) will be preserved or restored, mostly on Chiquita Ridge. A resource management plan (RMP), approved by the County of Orange EMA, shall be implemented to protect preserved or restored CSS. Replacement of CSS will occur on cut and fill areas of CSS recently disturbed by an agricultural operation.

2) Approximately 63 acres (32%) of on-site Grassland will be retained or restored, mostly on Chiquita Ridge. Another 7 acres (3%) is to be used for replacement of oak woodland habitat.

3) Approximately 37 acres (84%) of on-site Oak Woodland within the project boundaries will be preserved in open space, including approximately 1,300 Oaks. In addition, seven acres of Grassland within the development area will be set aside for Oak Woodland replacement.

4) Approximately 42 acres (87%) of on-site riparian habitat will be preserved in permanent open space. The small area of riparian habitat impacted by the project will be replaced on-site in the Arroyo Trabuco per regulatory agency requirements. Preserved and replaced habitat will be protected through the following measures:

- 1. buffering of habitat,
- 2. control of streambank erosion,
- 3. monitoring and protection of non-point source water quality through implementation of best management practices,
- 4. sedimentation basins during construction,
- 5. limitation of access to trails and Arroyo Trabuco, and
- 6. control of invasive plant species.

5) Seeds shall be collected from the on-site population of Turkish Rugging. These seeds will be resown at an appropriate relocation site identified by recognized experts in conjunction with County of Orange EMA.

6) Barrier fencing will be installed to prevent wildlife crossings at roads and to funnel movement into open space areas, and guzzlers and mineral licks will be installed at strategic locations to funnel wildlife movement along Chiquita Ridge to areas north and south of the site.

Current Status Ranking: 4/5

Site Visit

Date: November 8, 2019 Time: 10:20 AM to 11:30 AM

Hamilton's Field Notes

The restored habitat in this 19.5-acre mitigation site may be characterized as Coastal Sage Scrub (CSS) vegetation with scattered Coast Live Oaks (*Quercus agrifolia*) surrounding two interior retention basins, planted with California Sycamores (*Platanus racemosa*), Arroyo Willows (*Salix lasiolepis*) and Red Willows (S. laevigata), and that also support native cattails (Typha sp.).

In general, the restored natural habitats are welldeveloped, with very little cover of non-native weeds. The dominant plants in the restored CSS, in roughly descending order of abundance, are Coyote Brush (Baccharis pilularis), California Buckwheat (Eriogonum fasciculatum), California Sagebrush (Artemisia californica), Laurel Sumac (Malosma laurina), Sugarbush (Rhus ovata), Toyon (Heteromeles arbutifolia), Lemonade Berry (Rhus integrifolia), California Encelia (Encelia californica), Black Sage (Salvia mellifera), Coast Goldenbush (Isocoma menziesii), and Giant Wild Rye (Leymus condensatus). The scrub is dense and fully mature.

Unlike nearby natural stands of CSS, which include Coastal Prickly-Pear (Opuntia littoralis) as a dominant species, the restored scrub contains only trace amounts of cactus.

Along the northern boundary of the mitigation site, near Oso Parkway, small amounts of non-native Desert Carpet (Acacia redolens) were planted. Also in that part of the site, but not elsewhere, irrigation pipes and hoses remain in place.

Many of the planted Coast Live Oaks scattered throughout the CSS are in good condition, growing to heights of around 20 feet. Some of the Oaks are more stunted and spindly, however, attaining heights of 8-15 feet.

The Sycamores and Willows appear to be especially healthy, having grown to heights of up to 40-50 feet. The fenced portion of the site can be accessed only through a 75-foot gap in the fence. This gap in the fence consists of rip-rap rocks at the base of a slope to a roadway that encircles the interior basins. This fence, and the rip-rap rocks, both limit the capacity of terrestrial mammals to access the main part of the mitigation area. The 75-foot gap in the fence undercuts any human-safety function the fence might be thought to serve, so the continued existence of the fencing should be reconsidered.

Sensitive Species

None detected.

Significant Events • None known.



View, facing northwest, from just outside the eastern boundary of the mitigation site. The Coast Live Oaks (Quercus agrifolia), California Sycamore (Platanus racemosa), and Willows (Salix sp.) were established as part of the mitigation effort. November 8, 2019.



View, facing northeast, from the southern boundary of the mitigation site. The Coastal Sage Scrub habitat in the area shown is dominated by Coyote Brush (Baccharis pilularis) and California Sagebrush (Artemisia californica), with scattered Coast Live Oaks (Quercus agrifolia). Also visible are some dead weeds, mainly Shortpod Mustard (Hirschfeldia incana). November 8, 2019.



View, facing northeast, showing the six-foot-tall chain-link fence encircling the interior part of the mitigation site. November 8, 2019.



View, facing northeast, showing the southern basin. In the foreground is Coastal Sage Scrub dominated by California Sagebrush (Artemisia californica) and Coyote Brush (Baccharis pilularis). A healthy Coast Live Oak (Quercus agrifolia) is shown in the left foreground. Willows (Salix sp.) and Cattails (Typha sp.) can be seen growing in the basin. November 8, 2019.



View, facing northeast, showing Coastal Sage Scrub habitat with scattered Coast Live Oaks (Quercus agrifolia). Scrub in the area shown is dominated by Coyote Brush (Baccharis pilularis), with Laurel Sumac (Malosma laurina), California Buckwheat (Eriogonum fasciculatum), Coast Goldenbush (Isocoma menziesii), and California Sagebrush (Artemisia californica). Also visible is the chain-link fence that encircles a large part of the mitigation site. November 8, 2019.



View, facing northeast, showing Coastal Sage Scrub habitat with scattered Coast Live Oaks (Quercus agrifolia). Scrub in the area shown is dominated by Coyote Brush (Baccharis pilularis), with California Buckwheat (Eriogonum fasciculatum), and California Sagebrush (Artemisia californica). Also visible is the chain-link fence that encircles a large part of the mitigation site. November 8, 2019.



View, facing northwest, showing Coast Live Oaks (Quercus agrifolia), California Sycamores (Platanus racemosa), and Willows (Salix sp.) in the northern part of the southern basin, with Coastal Sage Scrub in the foreground. November 8, 2019.



View, facing northwest, showing California Sycamores (Platanus racemosa), and Willows (Salix sp.) in the northern basin, with Coastal Sage Scrub in the foreground. November 8, 2019.



View, facing north, showing California Sycamores (Platanus racemosa), and Willows (Salix sp.) in the northern basin, with Coastal Sage Scrub in the foreground. November 8, 2019.



View, facing northeast, showing rip-rap, dead mustard, and Coastal Sage Scrub in the 75-foot gap in the chain-link fence that encircles the interior part of the mitigation site. November 8, 2019.



View, facing north, showing non-native Desert Carpet (Acacia redolens) growing near a large Coast Live Oak (Quercus agrifolia), with Coastal Sage Scrub in the foreground. November 8, 2019.



Showing irrigation pipe and hoses in the northern part of the mitigation site. November 8, 2019.



North Morba Linda Estates PC

Appendix I

Project Name	Details
Project Name:	North Yorba Linda Estates Planned Community
EIR Number:	Unknown
State Clearinghouse Number:	2001091079
Owner/Applicant:	Shapell Industries
Prepared For:	City of Yorba Linda
EIR Consultants:	Environmental & Regulatory Specialists, Inc.
EIR Drafted:	July 2002
Existing General Plan Designation:	Site A: Medium Density Residential & Open Space General Site B: Medium Density Residential Site C: Open Space General
Existing Zoning:	Site A: Public/Semi Public (PS) and Residential Suburban (RS) Site B: Planned Community (PC) Site C: No Change
New Zoning:	Site A: Planned Community (PC) Site B: Planned Community (PC) [increased units] Site C: No Change
Permits Required:	ACOE: Section 404 Permit (Standard Individual Permit) CDFW: Section 1603 Permit USFWS: Section 7 Permit RWQCB: Section 401 Permit

Figure 47. Statistics on the North Yorba Linda Estates Planned Community project.

Project Description

The North Yorba Linda Estates Planned Community project sits on 1,586 acres of land. The project is divided into three sites: A, B, and C. Site A was historically used for cattle grazing, agriculture, a portion was used as a gun club, and portions were used as a wholesale nursery. Site B was historically used for cattle grazing and agriculture, and a portion of the site was used for soil stockpiling. Site C has historically been used for cattle grazing. The land is in and was processed through the City of Yorba Linda. The project includes single family residential and senior housing, dedication of open space, extension of existing multi-use trails, and the extension of Bastanchury Road.

The Proposal

- 688 single family dwelling units
- 383-unit senior residential facility
- Dedicated open space
- Creation of an equestrian/pedestrian trail



Figure 48. The North Yorba Linda Estates project.







Figure 50. The Chino Hills State Park restoration sites for the North Yorba Linda Estates project.



Figure 51. The 1,262 acre donation to Chino Hills State Park (bright green, on right).
system

- Relocation of existing above ground 66 kV powerlines (Site A)
- The extension of Bastanchury Road
- Construction of a water reservoir (Site C)

Site Map

View the site map for the North Yorba Linda Estates Planned Community on the previous pages.

Impacted Plant Communities

- Coastal Sage Scrub (Sites A, B, and C)
- Chaparral (Sites A, B, and C)
- Non-native Grassland (Sites A, B, and C)
- Developed/Disturbed habitat (Sites A & B)
- Riparian (Site B)
- Annual Grassland

Impacted Habitat

- Total impacted Coastal Sage Scrub is 346.72 acres.
- Sites A & B will have a complete loss of vegetation, including:
 - 358.36 acres of Annual Grassland, Ruderal Vegetation, Ornamental Plantings and developed areas
 - 4.42 acres of Needlegrass Grassland
- Jurisdictional Water impacts:
 - Site A: 0.6 acres of waters of the US, 0.58 acres of non-wetland CDFW jurisdiction, 0.07 acres of vegetated waters of CDFG jurisdiction.
 - Site B: 0.97 acres of non-wetland waters of the US, 0.24 acres of Corps jurisdictional wetlands, 0.93 acres of non-vegetated waters of CDFG jurisdiction, and 0.83 acres of vegetated CDFG jurisdiction.
 - Site C: 0.82 acres of non-wetland waters of the US, 0.22 acres of Corps jurisdictional wetlands, 0.56 acres of non-vegetated waters of CDFG jurisdiction, and 3.12 acres of vegetated waters of CDFG jurisdiction.
- Site C includes impacts to:
 - 23.36 acres of California Walnut Woodlands
 - 2.0 acres of Coast Live Oaks

Impacted Species

- Site A: has Catalina Mariposa Lily, Intermediate Mariposa Lily and California Gnatcatcher (4 mated pairs)
- Site B: does not have any sensitive plant species, but includes California Gnatcatcher (6 pairs, two unmated males)
- Site C: has Catalina Mariposa Lily, Intermediate Mariposa Lily, and Southern Black Walnuts including one pair of California Gnatcatchers

Key Biological Opinion Findings

- The Corp's proposes issuing a permit to fill approximately 1.77 acres of jurisdictional waters.
- The applicant will preserve 1272.8 acres (Site C) in perpetuity, which includes 352.0 acres of mature Coastal Sage Scrub and Southern Cactus Scrub, and 196.9 acres of disturbed Sage Scrub.
- Site C will have a conservation easement dedicated.
- 40 acres of existing Annual Grassland, developed, and Ruderal areas will be revegetated with Coastal Sage Scrub.
- The applicants will post a bond or letter of credit for the estimated cost of the site preparation, planting, irrigation, and five years of maintenance and monitoring of the revegetated Coastal Sage Scrub.
- Clearing will take place with a biological monitor and will be conducted outside of Gnatcatcher breading season.
- Four houses on Site C need to reduce impacts to Gnatcatcher habitat including erosion control plans, vegetation clearing prior to construction, fencing, lighting impact reduction, and inclusions of CC&Rs about domestic animal impacts on wildlife, invasive plants, and fuel modification zones.

Historic Surveys

- 2002 CAGN Focused Survey
- 2001 Wildlife Survey (Bonterra)
- 2000 CAGN Focused Survey

EIR Mitigation Measures

MM 4.5-1) Restriction on Landscaping and Fuel Modification Zone Plantings. All non-native plants that are potentially invasive via airborne seeds, or that are particularly difficult to control once escaped, will be prohibited from all parts of the project. Prohibited plant species include, but are not limited to, the following: Tree-of-Heaven (Ailanthus spp.); Giant Reed (Arundo donax); Garland Chrysanthemum (Chrusanthemum coronarium); Pampas Grass (Cortaderia spp.); Brooms (Cytisus spp.); Bermuda Buttercup (Oxalis pes-caprae); Fountain/Kikuyu Grass (Pennisetm spp.); German Ivy (Senecio mikanoides); Tamarisk (Tamarix spp.). To ensure compliance with this measure, all fuel modification and tract revegetation/landscaping plans for the common areas within the development shall be reviewed prior to plan approval by a biologist with a working knowledge of local natural habitats and plant species. Fuel modification landscape restrictions not only reduce fire hazard, but also reduce potential for introduction of invasive species into native plant communities. Implementation of MM 4.5-1 will reduce the potential impacts to adjacent native plant communities to a level of less than significant.

MM 4.5-2) Homeowner Notification Regarding

Vegetation Adjacent to Lots. Prior to final inspection and release of utilities, the CC&Rs will include a provision that the homeowners are hereby notified that any activities beyond the grading limit might be subject to further environmental review and permitting by the City and/or public agencies. Implementation of MM 4.5-2 will reduce the potential impacts to adjacent native plant communities to a level of less than significant.

MM 4.5-3) Homeowner Notification Regarding

Wildlife. Home buyers in Site C shall be clearly advised in writing prior to any sale transaction by the developer or agents or assigns of the implications of living adjacent to natural open space areas. The written information shall be developed in consultation with State Park personnel. It shall include items such as a warning about the dangers and nuisances posed by wildlife that may forage in the development edge, the responsibilities and the benefits that are associated with living near such an area, and fire related management and the potential need to conduct controlled burns. This statement shall be written to foster an appreciation of wildlife and to identify measures that shall be taken to minimize conflicts between wildlife, domestic animals, and humans. Evidence that the statement has been included in the sales disclosure statement and covenants codes and restrictions (CC&Rs) for the Homeowners' Association will be provided to the Director of Community Development prior to the issuance of certificates of

use and occupancy. Implementation of Mitigation Measure 4.5-3 will reduce this impact to a level of less than significant.

MM 4.5-4) Control of Night Lighting. Prior to recordation of a final tract map, a lighting plan shall be prepared for streets and public areas for review and approval by the Community Development and Public Works Directors, demonstrating that the illumination resulting from all community exterior lighting is confined to the project site, and adjacent properties are protected from glare. Methods to achieve this shall include, but are not limited to, the following: 1) use of soft light intensity fixtures, 2) use of shields on the back of lights, or other screening methods. Private lot lighting shall be reviewed as part of design review when houses are proposed in the future. Implementation of MM 4.5-4 will reduce potential lighting impacts to a level of less than significant.

MM 4.5-5) Intermediate Mariposa Lily. Prior to the issuance of grading permits for Sites A or C of the project, the project applicant shall submit an Intermediate Mariposa Lily salvage and transplantation plan to the Director of Community Development Department for review and approval by a qualified biologist. Individual plants (i.e., bulbs) that would be impacted by project construction shall be salvaged for transplantation to suitable on-site locations. The plan shall include provisions for determining the extent of the populations, collection and propagation of seeds and bulbs, site preparation and planting, and monitoring/maintenance. During the plants' dormant period (September through January) bulbs of the individual plants would be excavated and replanted in appropriate off-site open space areas. Some of the bulbs could be stored or propagated in a nursery for planting on finished manufactured slopes. Monitoring of the revegetation sites shall be conducted for a minimum of five years or until the plants are reestablished. Implementation of MM 4.5-5 will reduce potential impacts to the Intermediate Mariposa Lily to a level of less than significant.

MM 4.5-6) Monitoring of Livestock Areas and Control of Brown-Headed Cowbird Populations (Site C): If homeowners within Site C keep livestock, a Monitoring Program shall be implemented to determine whether the Brown-Headed Cowbird population increases as a result of the livestock presence. If the numbers of Brown-Headed Cowbird population increases as a result of the livestock presence. If the numbers of Brown-Headed Cowbirds are on the rise on Site C, maintenance guidelines will be provided to homeowners, and a Cowbird-trapping program will be implemented to minimize impacts to California native bird population's on-site in particular the Gnatcatcher population's on-site.

Prior to final inspection and release of utilities within Site C, a Brown-Headed Cowbird Monitoring Program shall be prepared by a qualified biologist and submitted to the City for review and approval. The Monitoring Program shall be implemented within Site C. The Brown-Headed Cowbird Monitoring Program shall consist of:

- 1. A Homeowner Education and Livestock Maintenance Program;
- 2. Methods for maximum feasible containment of animal feed and waste;
- 3. Requirements for frequent removal of animal waste; and
- 4. Requirements for minimization of dust.

Even with full implementation of a Homeowner Education and Livestock Maintenance Program there is likely to be an increase in Brown-Headed Cowbird presence in the vicinity of livestock. Trapping of Brown-Headed Cowbirds has proven to be an effective means of controlling this species and restoring the successful reproduction of native bird species. The Brown-Headed Cowbird Monitoring Program shall include a trapping program to be implemented if the Homeowner Education and Livestock Maintenance Program is insufficient to control Brown-Headed Cowbird populations. The effectiveness of the Homeowner Education Program shall be evaluated by a qualified biologist upon complete occupancy of the tract. Annual monitoring of the Cowbird population shall be performed by a qualified biologist approved by the Community Development Director (CDD). The CC&Rs shall include this provision to the satisfaction of the CDD. Implementation of MM 4.5-6 will reduce the impacts of Brown-Headed Cowbirds associated with livestock to below significance.

MM 4.5-7) California Black Walnut Protection and

Replacement. Prior to grading, a qualified arborist will determine the extent of the Walnut tree resource within the limits of grading on Site C. From the information garnered, a Walnut tree preservation plan shall be prepared by the arborist. Grading, placement of fill, and storage of building materials and heavy equipment shall be prohibited within the dripline of any tree that is to be preserved. Walnut trees should not be subjected to increased runoff from irrigation systems, impermeable surfaces, or storm drain discharge. Retaining walls shall be used to protect existing grades of Walnut trees identified for preservation from surrounding cut and fill. However, these should not alter the drainage around the trees. In proximity of Walnut trees, only one trench should be dug to accommodate all utility lines. Where necessary, the impacted trees should be carefully pruned by an arborist in proportion to the total amount of root zone lost. Mitigation for the removal of Walnut trees shall be the planting of new trees at a 1:1 ratio within appropriate on-site areas. Appropriate on-site areas include slopes greater than seven feet in height and parkways along streets. Implementation of MM 4.5-7 (Walnut Tree Preservation Plan) shall reduce the impacts to a level less than significant. Replacement of habitat would result in temporary loss of habitat. Since this is a short-term loss, it is not considered significant.

MM 4.5-8) Coast Live Oak Protection and

Replacement. Prior to grading, a qualified arborist will determine the extent of the Coast Live Oak tree resource within the limits of grading on Site C. From the information garnered, an Oak Tree Preservation Plan shall be prepared by the arborist. Grading, placement of fill, and storage of building materials and heavy equipment shall be prohibited within the drip line of any tree that is to be preserved. Walnut trees should not be subjected to increased runoff from irrigation systems, impermeable surfaces, or storm drain discharge. Retaining walls shall be used to protect existing grades of Walnut trees identified for preservation from surrounding cut and fill. However, these should not alter the drainage around the trees. In proximity of oak trees, only one trench should be dug to accommodate all utility lines. Where necessary, the impacted trees should be carefully pruned by an arborist in proportion to the total amount of root zone lost. Mitigation for the removal of Oak trees shall be the planting of new trees at a 1:1 ratio within appropriate on-site areas. Implementation of the MM 4.5-8 (Oak Tree Preservation Plan) would reduce the impacts to a level of less than significant.

MM 4.5-9) Nesting Bird Surveys if Grading Occurs During the Breeding Season. Mitigation for the taking of active nests will be accomplished in two ways. First, efforts will be made to schedule all vegetation removal activities outside the nesting season. This would insure that no active nests would be disturbed and that habitat removal could proceed rapidly. Secondly, during the nesting season, all suitable habitats will be thoroughly surveyed for the presence of nesting raptors by a qualified biologist before commencement of vegetation removal. If any active nests are detected, the area containing the nest, align with a 100-foot buffer around it, will be flagged and avoided until the nesting cycle is complete. In addition, a biologist will be present on the site to monitor the vegetation removal and grading to insure that nests not detected during the initial survey are not disturbed. Implementation of MM 4.5-9 would reduce the impacts to nesting birds to below a level of significance.

MM 4.5-10) Mitigation for Impacts to Jurisdictional

Waters. Mitigation for project impacts to jurisdictional waters will require the project to undergo additional discretionary permit review and approval by the Corps, RWQCB and CDFG prior to disturbance of jurisdictional waters. If the Corps determines that this project activity (impact to "waters") may impact one or more federally endangered species, the Corps is required to Consult pursuant to Section 7 of the federal Endangered Species Act with the U.S. Fish and Wildlife Service. The Corps, RWQCB, and CDFG have policies of "no net loss" of jurisdictional waters. The Project must demonstrate to the satisfaction of these agencies that no net loss of jurisdictional waters will occur. Mitigation for project impacts to riparian habitat will consist of restoring riparian habitat at no less than a 1:1 ratio or as otherwise approved through the ACOE and CDFG permit/agreement process for the proposed project. The location of the mitigation site will also be determined through consultation with the ACOE and CDFG during the permitting/agreement process. The objective of the mitigation would be to ensure no net loss of habitat values from the project.

Typical mitigation for the ACOE/CDFG jurisdictional permit/agreement process may consist of, but would not be limited to, riparian habitat restoration. If the permitting process determines that this would be the appropriate mitigation, the mitigation programs submitted to the ACOE and CDFG, as part of the permit/application process would typically contain the following information.

- A. Responsibilities and qualifications of the personnel to implement and supervise the plan. The responsibilities of the project applicant, specialists, and maintenance personnel that would supervise and implement the plan will be specified.
- B. **Site selection.** The site for the mitigation will be determined in coordination with the project applicant and resource agencies. Site selection will consider and avoid significant impacts to other sensitive biological resources.

- C. Site preparation and planting implementation. The site preparation will include:
 - 1. protection of existing native species;
 - 2. trash and weed removal;
 - soil treatments (i.e., imprinting, decompacting);
 - 4. temporary irrigation installation;
 - erosion control measures (i.e., rice or willow wattles);
 - 6. seed mix application; and
 - 7. cuttings and container species.
- H. **Schedule.** A schedule will be developed in consultation with the resource agencies.
- I. **Maintenance plan/guidelines.** The maintenance plan will include:
 - 1. weed control;
 - 2. herbivore control;
 - 3. trash removal;
 - 4. irrigation system maintenance;
 - 5. maintenance training; and
 - 6. replacement planting.
- G. **Monitoring Plan.** The monitoring plan will include:
 - qualitative monitoring (i.e., photographs and general observations);
 - quantitative monitoring (i.e., randomly placed transects);
 - 3. performance criteria as approved by the resource agencies;
 - 4. bimonthly reports for the first year; and
 - 5. annual reports which will be submitted to the resource agencies for a period of time as specified by the ACOE and CDFG.

The site will be monitored and maintained for a period of time as specified by the ACOE and CDFG to ensure successful establishment of riparian habitat within the restored and created areas; however, if there is successful coverage prior to this time, the project applicant may request from the ACOE and CDFG to be released from monitoring requirements. If the site has not met its performance criteria within the specified time period, a meeting will be held with the resource agencies and the project applicant to determine a contingency course of action.

 F. Long-Term Preservation. Long-term preservation of the site will be outlined in the restoration plan to ensure the mitigation site is not impacted by future development. A conservation easement or some other mechanism will be utilized in order to ensure long-term preservation of the mitigation site. G. Performance standards will be identified and will apply for the restoration of riparian habitat. Revegetation will be considered successful prior for a specified time period if the percent cover and species diversity of the restored and/or created habitat areas are similar to percent cover and species diversity of adjacent existing habitats, as determined by quantitative analysis of existing and restored and/or created habitat areas.

These permit processes can and often do result in modifications to the project design which can and often does require revisions to locally approved plans including tentative tract maps. Applications for 1603 Streambed Alteration Agreement and Section 401 Water Quality Certification require a certified final CEQA document prior to the application being deemed complete. At this time, a complete application cannot be submitted and no official action can be taken by either of these agencies. Therefore, the final form of mitigation is required by these agencies is not known.

However, because the 404 Permit, 401 Certification and 1603 Agreement have not been approved and cannot be approved by state agencies until after final certification of this CEQA document, the final form of mitigation for impacts to jurisdictional waters/riparian resources is not known. Therefore, project impacts to jurisdictional water/riparian resources will be mitigated upon receipt of the 404 Permit, 401 Water Quality Certification, and 1603 Streambed Alteration Agreement have been approved. If performance standard of "no net loss" is achieved through the mitigation measures outlined above, then impacts to jurisdictional waters of the U.S. and state will be reduced to a level of less than significant.

MM 4.5-11A) Coastal Sage Scrub Mitigation. Based on the current site plans, including all remedial grading, approximately 346.72 acres of Coastal Sage Scrub vegetation types (Coastal Sage Scrub, cleared Coastal Sage Scrub, thinned Coastal Sage Scrub, Coastal Sage Scrub/Annual Grassland, Southern Cactus Scrub, cleared Southern Cactus Scrub, thinned Southern Cactus Scrub, Coastal Sage Scrub/Mulefat Scrub, Sagebrush Scrub, Buckwheat Sage Scrub, Coyote Brush Scrub, Mixed Sage Scrub, California Encelia/Sagebrush Scrub, disturbed Coastal Sage Brush, Sage Scrub/ Grassland ecotone, Coastal Sage Scrub/Southern Needlegrass Grassland, Coastal Sage Scrub/Sumac chaparral) would be impacted by the proposed project across all three sites. The final impact to Coastal Sage Scrub vegetation types will be determined based on

the approved grading plan for this project. Prior to the issuance of a grading permit or the initiation of any activity that involves the removal/ disturbance of Coastal Sage Scrub habitat, including clearing, grubbing, mowing, discing, trenching, grading, fuel modification, or any other constructionrelated activity within the project site, whichever occurs first, the project applicant will obtain authorization from the USFWS to remove Coastal Sage Scrub pursuant to Section 7 or 10(a) of the federal Endangered Species Act (FESA). As part of the FESA permitting process, the applicant will develop a detailed Coastal Sage Scrub mitigation plan and submit the plan to the USFWS for review and approval. Mitigation included in the plan will include a combination of on-site or off-site preservation, enhancement, and/or restoration at no less than a 1:1 ratio or as otherwise deemed appropriate by the USFWS during the permitting process. The USFWS may also consider a financial contribution to assist in the funding of the planning and management of a reserve. The objective of the mitigation plan is to ensure no net loss of habitat values as a result of the project implementation. The location of the mitigation will be determined through consultation with the USFWS during the permitting process.

Typical mitigation may consist of, but would not be limited to, preparation of a Coastal Sage Scrub restoration plan. If the permitting process determines that this would be the appropriate mitigation, the mitigation programs submitted to the USFWS as part of the permitting process would typically contain the following information:

- A. Responsibilities and qualifications of the personnel to implement and supervise the plan. The responsibilities of the project applicant, technical specialists, and maintenance personnel that will supervise and implement the plan will be specified.
- B. Site selection. The site for the mitigation will be determined in coordination with the project applicant and USFWS. The site will either be located on the project sites in dedicated open space areas or within dedicated open space areas off-site. Appropriate sites will have suitable soils for the establishment of Sage Scrub species. Site selection will consider and avoid significant impacts to other sensitive biological resources.
- C. Site preparation and planting implementation. The site preparation will include:
 - 1. protection of existing native species;

- 2. trash and weed removal;
- soil treatments (i.e., imprinting, decompacting);
- 4. temporary irrigation installation;
- erosion control measures (i.e., rice or willow wattles);
- 6. seed mix application; and
- 7. container species.
- H. **Schedule.** A schedule will be developed in consultation with the resource agencies.
- I. Maintenance plan/guidelines. The maintenance plan will include:
 - 1. weed control;
 - 2. herbivore control;
 - 3. trash removal;
 - 4. irrigation system maintenance;
 - 5. maintenance training; and
 - 6. replacement planting.
- G. **Monitoring Plan.** The monitoring plan will include:
 - 1. qualitative monitoring (i.e., photographs and general observations);
 - quantitative monitoring (i.e., randomly placed transects);
 - performance criteria as approved by the USFWS; and
 - site documentation (i.e., progress reports submitted after each qualitative survey and annual reports submitted to the USFWS on an annual basis).

The site will be monitored and maintained for a period of time as specified by USFWS to ensure successful establishment of habitat within the restored and created areas; however, if there is successful coverage prior to this specified time, the project applicant may request early release from monitoring requirements from the appropriate resource agencies. If the site has not met its performance criteria within the specified time period, a meeting will be held with the USFWS and the project applicant to determine a contingency course of action.

- E. Long-Term Preservation. Preservation of the site in perpetuity will also be outlined in the restoration plan to ensure the mitigation site is not impacted by future development. A conservation easement or some other mechanism will be utilized in order to ensure long-term preservation of the mitigation site.
- F. **Performance Standards.** Performance standards will be identified and will apply to the restoration of Coastal Sage Scrub habitat. Revegetation will be considered successful

prior to the specified time period if the percent cover and species diversity of the restored and/or created habitat areas are similar to percent cover and species diversity of adjacent existing habitats, as determined by quantitative analysis of existing and restored and/or created habitat areas.

If on-site preservation comprises a portion of the mitigation, typical mitigation would include, but would not be limited to the following: The native and non-native habitats within natural open space on the project site that are not impacted by the proposed project will be preserved in perpetuity. On-site preservation areas shall contain a combination of scrub, grasslands, and riparian vegetation types. These areas will primarily be located at the outer limits of the development boundary, adjacent to other open space areas. The on-site open space areas shall be protected from future development through a conservation easement or other appropriate mechanism. Implementation of these mitigation measures will reduce impacts to CSS to a level of less than significant.

MM 4.5-11B) Coastal California Gnatcatcher. Prior

to the issuance of a grading permit or the initiation of any activity that involves the removal/disturbance of coastal sage scrub habitat (including clearing, grubbing, mowing, discing, trenching, grading, fuel modification, or any other construction-related activity within the project site), the project applicant will obtain authorization from the USFWS to impact the species. The mitigation/compensation for the loss of Coastal Sage Scrub and Gnatcatchers must be approved through either Section 7 or 10(a) of the FESA. Specific measures, including, but not limited to, avoidance, minimization, and compensation developed during consultation with the resource agencies will be implemented to the satisfaction of the resource agencies. This includes negotiation of an appropriate mitigation ratio for Coastal Sage Scrub vegetation as described in MM 5-11A.

In addition, the following measures will be implemented at the site during the construction period:

A. Any activity involving the removal of occupied Coastal Sage Scrub habitat in the study area during the breeding and nesting season will be prohibited (February 15 through August 30), unless otherwise directed by the USFWS. The use of any large construction equipment during site grading will be prohibited within 500 feet of an active Gnatcatcher nest during the breeding and nesting season (February 15 through August 30), unless otherwise directed by the USFWS.

- B. All grubbing operations will be monitored by a qualified biologist with the necessary permits. The monitoring biologist will ensure that only the amount of Coastal Sage Scrub approved during the consultation process will be removed. The monitoring biologist will flush Gnatcatchers from the vegetation to be cleared prior to disturbance to ensure that no Gnatcatchers are directly impacted during the vegetation removal. The monitoring biologist as the authority to stop or direct construction at any time he/she feels that a Gnatcatcher is in danger.
- C. All areas containing habitat suitable for occupation by the Coastal California Gnatcatcher adjacent to the impact area, will be delineated by the use of orange snow fencing or the use of lath and ropes/flagging.

Implementation of these mitigation measures will reduce impacts to the CAGN a level of less than significant.

Current Status Ranking: 2/5

Site Visits PUENTE HILLS MITIGATION SITE

Three gnatcatcher surveys performed by the Habitat Authority: Date: March 27, 2017 (separate from this grant) Time: 9:00 AM to 11:00 AM

Date: May 19, 2017 (separate from this grant) Time: 9:15 AM to 11:15 AM

Date: July 13, 2017 (separate from this grant) Time: 8:20 AM to 10:50 AM

Follow-up visit (within this grant) Date: November 7, 2019 Time: 10:30 AM to 11:00 AM

CHINO HILLS STATE PARK MITIGATION SITE

Date: November 7, 2019 Time: 1:05 PM to 4:00 PM

Hamilton's Field Notes

The DEIR Mitigation Measure 4.5-11A (Coastal Sage Scrub Mitigation) was key to this review. The most useful information on the Coastal Sage Scrub (CSS) restoration efforts is provided in:

BonTerra Consulting. 2008. Second Annual Monitoring Report for the Coastal Sage Scrub Mitigation Program associated with Tentative Tract Nos. 16208 and 16209 (North Yorba Linda Estates, NYLE) in the City of Yorba Linda, California.

Page ES-1 of BonTerra (2008) summarizes the CSS restoration effort:

"The Mitigation Program compensates for impacts on Coastal Sage Scrub habitat (CSS) located within the NYLE project site. The Program was completed in compliance with: (1) the terms of the Biological Opinion (No. FWS-OR-2233.8, January 2004), which the U.S. Fish and Wildlife Service (USFWS) prepared for the project and (2) with the North Yorba Linda Estates (TT 16208 and 16209) Coastal Sage Scrub Mitigation Plan (September 2004) prepared by BonTerra Consulting. A copy of the Biological Opinion is provided in Appendix A of this document. The CSS Mitigation Program is being implemented in partial fulfillment of the overall mitigation/conservation requirements for the development project, which impacted a total of 93.9 acres of CSS within Tracts 16208 and 16209. Other mitigation/conservation measures required for the project included the donation of an approximate 1,300-acre open space property to the State of California (Chino Hills State Park).

The mitigation sites are located off-site within two preserved open space areas: (1) Puente Hills Landfill Native Habitat Preservation Area (PHLA, Site 1) and (2) Chino Hills State Park (CHSP, Site 2), as shown in Exhibits 2, 3, 4, and 5. A total of 20.0 acres of CSS habitat is being created within both open space areas for an overall total of 40.0 acres. The mitigation sites were selected in coordination with the USFWS and the Open Space Land Managers/Ecologists (Land Managers) of both open space areas. The nearby occurrence of known populations of the Coastal California Gnatcatcher (*Polioptila californica californica*, Gnatcatcher), a federally threatened songbird species, was a primary factor in the selection of the mitigation sites.

Mitigation performance criteria include the following standards: (1) the establishment of 75 percent native vegetation coverage within Site 1, and 65 percent native vegetation coverage within Site 2; (2) the establishment of at least 90 percent of the vegetation diversity measured during reference site transects performed in the vicinity of Sites 1 and 2; (3) the occurrence of not more than 5 percent coverage of non-native plant species; and (4) the sites must be self-sustaining without supplemental water for a period of one year."

Regarding the type of CSS to be established, Page 7 of BonTerra (2008) states:

"Numerous Prickly-Pear Cactus pads (*Opuntia littoralis*) were obtained on-site and planted in random groups on south- and west-facing slopes. The intent of the cactus planting is to provide future supplemental habitat for the Cactus Wren (*Campylorhynchus brunneicapillus*), a bird species known to occupy adjacent habitat areas at both Sites 1 and 2."

BonTerra (2008) includes the following Summary on page 18:

"The North Yorba Linda Estates Coastal Sage Scrub Mitigation Program has achieved Year Five native vegetation percent coverage criteria at the Year Two mark. Native plant species diversity far exceeds performance criteria at Sites 1 and 2, relative to the data recorded in the reference site transects. Non-native plant species coverage is within performance limits at Site 1 (PHLA) and is slightly above the allowed maximum at Site 2 (CHSP); however, road access for maintenance was restricted by the California State Parks Department for several weeks in 2007-2008 due to seasonal rains. The Contractor has been able to access the CHSP site since the survey was performed to restore compliance on weed coverage. Estimated current weed coverage in Site 2 is less than 3 percent. Virtually all weed plants are being removed as seedlings or prior to seed set and dispersal. Herbicide use has been suspended in both sites since the detection of the Gnatcatcher within Sites 1 and 2. Buffer weed-abatement areas have been implemented at Sites 1 and 2 to reduce weed seed drift into the mitigation sites from off-site areas.

Wildlife species diversity and abundance is steadily increasing with the development of contiguous patches of mature native shrubs and a diverse mix of native herbs and grasses in gaps in the shrub canopy. The federally threatened Coastal California Gnatcatcher (Polioptila californica californica) has been detected within Sites 1 and 2 during focused, non-protocol surveys performed by a federally permitted Biologist. Gnatcatchers were detected within Site 1 in 16 of the 20 consecutive months in which surveys were performed between July 2006 and February 2008. A Gnatcatcher pair was observed nesting within Site 1 on May 23, 2007, and was subsequently observed feeding 4 fledglings in a nearby off-site area on June 14, 2007. Gnatcatchers were detected within Site 2 in 5 of the 6 consecutive months in which nonprotocol surveys were performed between October 2007 and February 2008.

The overhead irrigation system was operated at the optimal frequency and duration to facilitate native plant establishment until application was discontinued in both sites on November 1, 2007. The placement of perimeter fencing and interpretive signage has successfully deterred unwanted human entry to the mitigation sites.

Based on the early achievement of all project performance criteria and the documentation of the Gnatcatcher within Sites 1 and 2, it is anticipated that the mitigation program will be eligible for sign-off in Year Three."

SITE 1: PUENTE HILLS LANDFILL NATIVE HABITAT PRESERVATION AREA (PHLA; 20.0 ac)

Unrelated to this effort and through the Habitat Authority, I conducted protocol surveys for the California Gnatcatcher (CAGN) in the three mitigation patches that constitute "Site 1" during spring/summer 2017. Observations and photos from those surveys form the primary basis of my evaluation of the success of the CSS restoration in those areas. The purpose of the brief field visit in 2019 was to verify that the condition of the restored habitat had not markedly changed since 2017. Site 1 CSS restoration was very successful, and in spring/summer 2017 I found two pairs of CAGN nesting within the largest patch of restored CSS (10.5 acres). Those birds presumably also used the 5.5-acre patch of restored scrub on the south side of the same canyon. The third restored patch of CSS, covering 4.5 acres, also looked good, but was not found to be occupied by CAGN in 2017.

In 2017, during the three-visit protocol CAGN surveys covering 980 acres of potentially suitable habitat, I detected only five pairs of CAGN in the Puente Hills Landfill Native Habitat Preservation Area. The 20 acres of CSS restored in Site 1 supported 40% of the known CAGN population in the reserve system that year. Both of the CAGN territories were in CSS dominated by California Encelia (*Encelia californica*), California Sagebrush (*Artemisia californica*), and Coastal Prickly-Pear (*Opuntia littoralis*). Other dominant species in the restored scrub, in areas not immediately around the two nest locations, included Black Sage (*Salvia mellifera*), Purple Sage (*Salvia leucophylla*), California Buckwheat (*Eriogonum fasciculatum*), and Laurel Sumac (*Malosma laurina*).

Limited areas of non-native Black Mustard (*Brassica nigra*) were present in the restored CSS, but they did not appear to be substantially compromising the function of the CSS as habitat for CAGN or other native wildlife. Irrigation pipes and fencing had been removed completely.

During my field visit on November 7, 2019, I observed that the CSS restoration sites remained in good condition. I also noted that the Puente Hills Habitat Preservation Authority was undertaking additional habitat restoration immediately north of the Site 1 restoration areas, apparently to build on the success of the earlier effort. **SITE 2: CHINO HILLS STATE PARK** (CHSP; 20.0 ac) BonTerra (2008) states that the two CSS restoration areas in CHSP cover 20.0 acres, but Google Earth imagery from October 22, 2007, shows areas of 2.9 acres (western area) and 14.9 acres (eastern area), for a total of 17.8 acres.

Furthermore, earlier imagery, from 2005, suggests that 2.7 acres in the eastern part of the larger site (outlined in red below) may not have been planted at all.

Thus, although 20.0 acres of CSS restoration are claimed, the total area of restoration appears to have been closer to 15.1 acres. This potential discrepancy warrants further investigation.

Within the two mitigation areas in CHSP, the results of CSS restoration were only marginally successful. Within the easternmost area shown in red (below, right), a relatively flat "bench" running northwest/southeast was vegetated with dense CSS dominated by Black Sage (Salvia mellifera), California Sagebrush (Artemisia californica), Laurel Sumac (Malosma laurina), and Coast Goldenbush (Isocoma menziesii). As shown in the 2005 aerial image (below, left), this band of dense scrub appears to have existed prior to the start of the restoration effort at Site 2. Within the red-outlined area north and south of this band of scrub, the habitat was heavily dominated by Black Mustard (Brassica nigra), Shortpod Mustard (Hirschfeldia incana), with widely scattered Laurel Sumac, Black Sage, and other native scrub species. Thus, I saw no evidence that any restoration at all had taken place in the easternmost 2.7 acres of Site 2.

To the west, the restoration sites support a mix of CSS and non-native weeds. Native shrubs, in roughly descending order of abundance, include California Encelia (*Encelia californica*), Black Sage, California Sagebrush, Laurel Sumac, California Buckwheat (*Eriogonum fasciculatum*), Coyote Brush (*Baccharis*





pilularis), Lemonade Berry (*Rhus integrifolia*), and Coast Goldenbush. Throughout most of the restored habitat, however, mustards, Tocalote (*Centaurea melitensis*), and Tree Tobacco (*Nicotiana glauca*) are at least co-dominant with the native plants. Restoration was most successful in the northern part of the two restoration areas, where the topography was flatter, but generally unsuccessful within the "legs" that extend southward toward the neighborhood below. These mustard-dominated areas show little sign of having been restored.

Consider, as well, that "The intent of the cactus planting is to provide future supplemental habitat for the Cactus Wren (*Campylorhynchus brunneicapillus*), a bird species known to occupy adjacent habitat areas at both Sites 1 and 2." I took a photo of an area of undisturbed Cactus Scrub located just north of Connemara Court, south of the main CSS restoration area in Site 2. That existing scrub is characterized by large expanses of Coastal Prickly-Pear with California Sagebrush, California Buckwheat, and Lemonade Berry, with patches of bare ground that appear to be important for the Cactus Wren, a ground-foraging species. Even the most successful patches of restored CSS at Site 2 include little or no cactus, and thus bear little resemblance to the typical cactus scrub in this area.

Sensitive Species During surveys in 2017 and through the Habitat

During surveys in 2017 and through the Habitat Authority, I documented California Gnatcatchers (*Polioptila californica californica*) at Site 1 in the Puente Hills.





Site 1 (Puente Hills) View, facing west, from near the eastern boundary of the northern mitigation area; the middle of the three mitigation areas is visible in the left-background. These sites support Coastal Sage Scrub dominated by California Sagebrush (Artemisia californica), Black Sage (Salvia apiana), California Encelia (Encelia californica), Purple Sage (Salvia leucophylla), California Buckwheat (Eriogonum fasciculatum), Coastal Prickly-Pear (Opuntia littoralis), and Laurel Sumac (Malosma laurina). As of November 2019, the extensive field of invasive Black Mustard (Brassica nigra) shown in the right-hand part of the image is undergoing restoration as part of a separate project. March 27, 2017.



Site 1 (Puente Hills). View, facing southwest, from the eastern half of the northern mitigation area; the middle of the three mitigation areas is visible in the left-background. Most of the shrubs in this photo are California Encelia (Encelia californica), with Coastal Sage California Sagebrush (Artemisia californica) and Laurel Sumac (Malosma laurina). March 27, 2017.



Site 1 (Puente Hills). View, facing west-northwest, showing the western part of the northern mitigation area. The native and non-native plants visible in the foreground are outside of the mitigation areas. California Encelia (Encelia californica) accounts for most of the yellow flowers in the background. March 27, 2017.



Site 2 (Chino Hills SP). View, facing northwest, from near the southeastern boundary of the eastern mitigation area, showing dense stands of invasive Black Mustard (Brassica nigra) with scattered native shrubs. As discussed in the narrative, this easternmost part of the mitigation site does not appear to have been subject to habitat restoration efforts. November 7, 2019.



Site 2 (Chino Hills SP). View, facing west, from near the eastern boundary of the eastern mitigation area, showing a dense stand of native Black Sage (Salvia mellifera), with non-native Tocalote (Centaurea melitensis) to the south and Black Mustard (Brassica nigra) to the north. Historical aerial photos from 2005 show that this stand of Black Sage existed here prior to the start of restoration of this mitigation site. November 7, 2019.



Site 2 (Chino Hills SP). View, facing northwest, from near the eastern boundary of the eastern mitigation area, shown native Black Sage (Salvia mellifera) and California Sagebrush (Artemisia californica) in the foreground, and dense stands of invasive Black Mustard (Brassica nigra) with scattered Laurel Sumac (Malosma laurina). As discussed in the narrative, this easternmost part of the mitigation site does not appear to have been subject to habitat restoration efforts. November 7, 2019.



Site 2 (Chino Hills SP). View, facing southwest, showing dense stands of invasive Black Mustard (Brassica nigra), with scattered Laurel Sumac (Malosma laurina), in the southern part of the mitigation site. November 7, 2019.



Site 2 (Chino Hills SP). View, facing northwest, showing dense stands of invasive Black Mustard (Brassica nigra) and Tocalote (Centaurea melitensis), with scattered California Buckwheat (Eriogonum fasciculatum) and Laurel Sumac (Malosma laurina). November 7, 2019.



Site 2 (Chino Hills SP). View, facing west, showing invasive Tocalote (Centaurea melitensis) with Laurel Sumac (Malosma laurina). November 7, 2019.



Site 2 (Chino Hills SP). View, facing west, showing scrub dominated by native California Encelia (Encelia californica), Black Sage, California Sagebrush (Artemisia californica), California Buckwheat (Eriogonum fasciculatum), and Coyote Brush (Baccharis pilularis). November 7, 2019.



Site 2 (Chino Hills SP). View, facing south, showing a demarcation between generally intact native scrub in the foreground and invasive mustard with scattered shrubs in the background. November 7, 2019.



Site 2 (Chino Hills SP). View, facing west, showing the westernmost knoll in the eastern mitigation area. Like much of this mitigation site, the areas shown is vegetated with invasive Black Mustard (Brassica nigra) with scattered native shrubs. November 7, 2019.



Site 2 (Chino Hills SP). View, facing north from Connemara Court, a short distance south of the mitigation sites, showing the typical condition of natural (not restored) coastal sage scrub in the local vicinity. November 7, 2019.

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Rolling Hills

Project Name	Details
Project Name:	Rolling Hills (Talega Valley)
EIR Number:	482
State Clearinghouse Number:	87111111
Owner/Applicant:	Talega Valley Partnership
Prepared For:	County of Orange
EIR Consultants:	Sanchez Talarico Associates
EIR Drafted:	January 1988
Existing General Plan Designation:	County: Rural Residential, Suburban Residential, Urban Residential, Employment and Open Space City: Development District, Business Park, Residential (Medium High), Neighborhood Commercial, Open Space and Open Space Corridors
Existing Zoning:	County: Agricultural
New Zoning:	County: Planned Community
Permits Required:	ACOE: None CDFW: None* USFWS: None* RWQCB: Unknown

* the impacted species had not yet been listed in ESA or CESA.

Figure 52. Statistics on the Rolling Hills project.

Project Description

The Rolling Hills project sits on 1,906 acres of land that has primarily been used for livestock grazing. The land is in county unincorporated and is adjacent to the northwest boundary of the City of San Clemente. The project was processed through the County of Orange. Residential, commercial, business, health care, and open space uses are proposed for the site. The project requires significant grading, but that exact amount was not readily found in the EIR.

The Proposal

- 3,000 residential units
- 50.8 acres of business park uses
- 13.6 acres of commercial uses
- A 7.2-acre health care facility
- 1,470 acres of open space and recreational uses

Appendix J

Site Map

View the site map for the Rolling Hills project on the next page.



Figure 53. The Rolling Hills project.



Figure 54. The acquisition site for the Rolling Hills project.

Impacted Plant Communities

- Native Grassland
- Disturbed Grassland
- Coastal Sage scrub
- Mixed Chaparral
- Southern Oak Woodland
- Riparian Woodland

Impacted Habitat

- ^C 506 undeveloped acres
- Loss of Oak and Riparian Woodland as well as Native Grasslands will impact sensitive species

Impacted Species

- No federally listed plant or animal species
- Five locations of Many-Stemmed Dudleya
- <u>Unlisted</u> at the time of the project, but occurring on the site: nine Cactus Wren

Key Biological Opinion Findings • No federally endangered/threatened species

 No federally endangered/threatened species were found on-site, so no biological opinion was done.

Historic Surveys

- November 1984 (Steven G. Nelson)
- May 1983 (Westec Services, Inc.)
- February 1982 (Westec Services, Inc.)

EIR Mitigation Measures

27) In order to prevent impacts on the sensitive biological resources of the Reserve area, and to offset potential indirect adverse impacts of the proposed development on the Reserve area, the Reserve area shall limit uses to natural open space and limited passive recreation (equestrian trails, bike trails, and hiking trails).

28) In areas identified by blue lines on USGS [United States Geological Survey] 7.5 Quad Sheets, the applicant shall consult with the California Department of Fish and Game as a requirement of Sections 1601-6 of the State Fish and Game Code which gives the Department of Fish and Game review authority over projects which could alter drainages containing significant habitat. Also, if necessary, the Army Corps of Engineers shall be consulted pursuant to Section 404 of the Clean Water Act.

29) Most of the oak woodland habitat presently occurring within the site will be incorporated within the golf course development complex. Golf course irrigation will be regulated in a manner to assure rapid establishment of newly planted vegetation, while at the same time avoiding over-watering of Oak trees. Golf course irrigation will be kept at an appropriate distance from Oak trees. Drainage improvements will be designed so as to minimize damage to trees from runoff and erosion.

30) The major Oak groves occurring on-site are proposed for retention and maintenance as permanent open space to frame development areas and add to the open space linkage system within Rolling Hills. Additionally, development will generally be limited in a manner to avoid jeopardizing the survival of individual Oak trees, though removal of a few individuals will be necessary. Guidelines to ensure preservation and continued welfare of groves and individual trees have been developed in general conformance with County of Orange Oak Tree preservation guidelines established by Harbors, Beaches and Parks Department, Environmental Management Agency, and are included as a component of the feature plan (Exhibit 20).

31) Prior to approval of site development plans, the applicant shall submit landscape plans for any development area adjacent to a natural open space area or Reserve area. These plans shall specifically identify all plant material proposed for use in the area. The plans shall provide evidence that none of the plants proposed will be invasive into the surrounding natural open space areas. These plans shall be approved by Director, Environmental Management Agency.

32) The project proponent shall irrevocably offer to the County of Orange Department of Harbors, Beaches, and Parks, dedication of a Resource Preservation Easement for the 1,200-acre Reserve Area, which is within both the City and County jurisdictions. The Resource Preservation Easement shall serve to protect the Reserve's natural resources (e.g., major ridge lines, bluffs in their natural state) provide an open space transition area at the private/public property interface, and limit uses to those areas which are recreational and agricultural in nature and improvements intended to retain open space character.

33) Prior to recordation of the first tentative tract map, the applicant shall submit a Local Park Implementation Plan satisfying the County requirements for local

parks within the Rolling Hills project. The Local Park Implementation Plan shall be approved by the Director of the Environmental Management Agency.

34) Prior to the recordation of the first tentative tract map the applicant shall submit for the review and approval of the Planning Commission, a resource management plan. Said plan shall review and propose acceptable mitigation measures for on-site natural resources including, but not limited to, the several major groves of Oak trees on the property.

Current Status

Ranking: N/A Site visit was limited to one location to view conserved area. There was no restoration to evaluate.

Site Visit

Date: November 8, 2019 Time: 2:00 PM to 2:30 PM

Hamilton's Field Notes

There's really no review, other than to say that they did the set-aside of 1,200 acres, and it looks good from the fence.

Sensitive Species

None detected.

Significant Events • None known.



A view of the preserved land from over the fence. November 8, 2019.



San Diego Creek

Project Name	Details
Project Name:	San Diego Creek Flood Control Channel (F05) Upper Newport Bay to Interstate 405, Programmatic Operations and Maintenance Project
EIR Number:	600
State Clearinghouse Number:	2007061076
Owner/Applicant:	Orange County Public Works
Prepared For:	County of Orange
EIR Consultants:	IFC Jones & Stokes
EIR Drafted:	October 2009
Existing General Plan Designation:	Irvine: Conservation Open Space Preservation / Recreation Newport Beach: Open Space Central Coastal NCCP/HCP
New Zoning:	No Change
Permits Required:	ACOE: Section 404 (Multiple Permits) CDFW: Section 1602 USFWS: Started as Section 10, changed to 7 RWQCB: Section 401 Coastal Act: Coastal Development Permit

Figure 55. Statistics on the San Diego Creek project.

Project Description

The San Diego Creek Flood Control Channel project includes 15,000 linear feet from Upper Newport Bay at the Jamboree Road crossing up to the 405 freeway in the Cities of Newport Beach and Irvine. The Creek varies in height from 12-14 feet. The project aims to restore and maintain the 100-year flood conveyance capacity of the San Diego Creek Channel. The project consists of routine and emergency creek operations and maintenance.

The Proposal

• Emergency and interim maintenance actions, permits, and mitigation status summary.

Site Map

View the site map for the San Diego Creek Channel project on the next page.

Appendix K

Impacted Plant Communities

- Coastal Sage Scrub
- Willow Scrub and Mulefat Scrub
- Freshwater Marsh
- Saltwater Marsh
- Ruderal and Disturbed
- Open Water
- Riprap



Figure 56. The San Diego Creek project.



Figure 57. The Fairview Park restoration sites for the San Diego Creek project. 156



Figure 58. The Mason Regional Park restoration sites for the San Diego Creek project.



Figure 59. The Talbert Nature Preserve restoration sites for the San Diego Creek project.



Figure 60. The Peters Canyon Regional Park restoration sites for the San Diego Creek project.





Impacted Habitat

• Remove a maximum of 11.2 acres of Riparian habitat within the emergency project footprint.

Impacted Species

- Habitat loss may impact the Catalina Mariposa Lily, Southern Tarplant, Saltmarsh Bird's Beak, Estuary Seablite, Crownbeard
- On-site six Least Bell's Vireo territories, four foraging Southwestern Willow Flycatchers, California Gnatcather, California Least Tern, California Brown Pelican, and Southwestern Pond Turtle

Key Biological Opinion Findings • Create 17.77 acres of Willow Riparian habitat

- Create 17.77 acres of Willow Riparian habitat and 1.51 acres of Coastal Sage Scrub at Talbert Nature Reserve
- Create/Restore Willow Riparian (4.25 acres of Mulefat and Mexican Elderberry) and 4.26 acres of Coastal Sage Scrub at Mason Regional Park
- Remove 13.5 acre of Giant Reed (Arundo donax) at Gypsum Canyon (along the Santa Ana River)
- Contribute funds toward existing Cowbird trapping programs within Talbert and Mason Parks and along the Gypsum segment of the Santa Ana River
- Survey breeding Vireo in the project area for three years

Historic Surveys

- 2008 Least Bell's Vireo Survey (ICF Jones and Stokes)
- 2007 Bio Survey (BonTerra)
- 2005 Bio Survey (Chambers Group)

EIR Mitigation Measures MM 3.4-1) Avoidance of Southern Tarplant

MM 3.4-1) Avoidance of Southern Tarplant **Populations.** Prior to maintenance work during the spring season, a qualified biologist will survey the vicinity of the known populations of Southern Tarplant and flag the boundaries of the population that occur within the project area. Project impacts within this boundary will be limited to hand-weeding of invasive or non-native species, and impacts to Southern Tarplant will be avoided. MM 3.4-2) Southwestern Pond Turtle. A trap and release program for Southwestern Pond Turtle will be developed to address avoidance and minimization measures prior to each clearing or sediment removal maintenance activity. The intent of the trap and release plan will be to capture Southwestern Pond Turtles prior to maintenance activities in order to remove them from potential harm. The turtles will be captured and held during maintenance activities and returned to the creek once dredging in completed. Focused trapping activity will take place when the turtles are active, prior to September 30 of each year, unless the project biologist determines that weather conditions are suitable for the turtles to be active. The trapping plan will also include specifications for removing non-native turtle species from the creek. The detailed methodology for this effort will be approved by the CDFG prior to implementation of the program. Results of the program will be provided to the CDFG and the County.

MM 3.4-3) Least Bell's Vireo. Prior to initiation of work activities that involve the removal and/or disturbance of riparian habitat—including clearing, grubbing, mowing, discing, trenching, grading, or any other maintenance-related activity on the project site—the County will obtain authorization from the USFWS and the CDFG to impact habitat occupied by Least Bell's Vireo. Under the NCCP, a mitigation plan must be developed in compliance with the requirements of the USFWS and the CDFG and will be approved by these agencies. Specific measures including, but not limited to, avoidance, minimization, and compensation determined through consultation with the resource agencies.

The following measures will be implemented at the site prior to or during maintenance activities:

- A. All activities involving the removal of riparian habitat occupied by the Least Bell's Vireo will be prohibited in the study area during the Vireo breeding and nesting season (March 15 to September 15), unless otherwise directed by the USFWS and the CDFG;
- B. All grubbing operations will be monitored by a qualified biologist. The monitoring biologist will ensure that only the amount of riparian habitat approved during the consultation process will be removed;
- C. All areas containing habitat suitable for occupation by the Least Bell's vireo adjacent to the impact area will be delineated by the use of lath and ropes or flagging.

Mitigation for permanent impacts to occupied Least Bell's Vireo habitat will be mitigated at a ratio of 2:1 for Basins 2 and 3, and a ratio of 3:1 for Basin 1. Mitigation will consist of restoration of riparian vegetation to enhance suitability for use or occupation of the mitigation area by Least Bell's Vireo.

The proposed mitigation area for Basins 2 and 3 consists of restoring and enhancing approximately 7.8 acres (3.9 at 2:1) of riparian habitat. The site includes a segment of Peters Canyon Wash, which is a tributary to San Diego Creek. This area was identified as potentially suitable for Least Bell's Vireo mitigation in the Evaluation of Potential Least Bell's Vireo Mitigation Sites memorandum, prepared by ICF Jones and Stokes (See Appendix O).

The proposed mitigation area for Basin 1 consists of restoring and enhancing approximately 41.46 acres (13.82 at 3:1) of riparian habitat located within Peters Canyon Regional Park, Serrano Creek, or other mitigation site(s) identified by the County. These locations are subject to the review and approval of the USFWS and CDFG. These areas were both identified as potentially suitable for Least Bell's Vireo mitigation in the Evaluation of Potential Least Bell's Vireo Mitigation Sites memorandum, prepared by ICF Jones & Stokes (See Appendix O). However, these sites are not located within the coastal zone. The County of Orange conducted a review of available mitigation areas within the coastal zone, including Big Canyon in the City of Newport Beach, near Newport Back Bay, and Banning Ranch. No available mitigation sites suitable for Least Bell's Vireo habitat were identified within the coastal zone at this time.

Prior to implementation of the project within the subject basins, the County will develop two riparian restoration and enhancement plans. The first plan will set forth the mitigation plan for Basin 1, and the second plan will set forth the mitigation plan for Basins 2 and 3. The objective of the plans will be to ensure no net loss of Least Bell's vireo habitat values as a result of the project activities through off-site mitigation at Peters Canyon Regional Park, Serrano Creek, or other mitigation site identified by the County and approved by the resource agencies. The County will be authorized to impact riparian resources in the future up to the baseline in compliance with project minimization measures. The County will implement the mitigation plan, as approved by the resource agencies, and according to guidelines and performance standards of the O&M Plan. Prior to implementation, a detailed riparian restoration and enhancement plan

will be developed and will contain the following items:

- A. Responsibilities and qualifications of the personnel to implement and supervise the plan: The responsibilities of the County, specialists, and maintenance personnel that will supervise and implement the plan will be specified.
- B. Site selection: Site selection for restoration and enhancement mitigation will be determined in coordination with the County and resource agencies. The mitigation site(s) will be located within the project site in a dedicated open space area or on land that will be dedicated and/or purchased off-site.
- C. Site preparation and planting implementation: The site preparation will include
 - 1. protection of existing native species;
 - 2. trash and weed removal;
 - native species salvage and reuse (i.e., duff);
 - soil treatments (i.e., imprinting, decompacting);
 - 5. temporary irrigation installation;
 - erosion control measures (i.e., rice or willow wattles);
 - 7. seed mix application; and
 - 8. container species.
- I. Schedule: A schedule will be developed that includes planting to occur in late fall and early winter, between October and January 30.
- J. Maintenance plan/guidelines: The maintenance plan will include:
 - 1. weed control;
 - 2. herbivory control;
 - 3. trash removal;
 - 4. irrigation system maintenance;
 - 5. maintenance training; and
 - 6. replacement planting.
- G. Monitoring Plan: The monitoring plan will include:
 - 1. qualitative monitoring (i.e., photographs and general observations);
 - quantitative monitoring (i.e., randomly placed transects);
 - 3. performance criteria as approved by the resource agencies;
 - 4. monthly reports for the first year and bimonthly for following years; and
 - annual reports from three to five years, which will be submitted to the resource agencies annually. The site will be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored

and created areas; however, if there is successful coverage prior to five years, the County may request to be released from monitoring requirements by USACE and CDFG.

F. Long-Term Preservation: Long-term preservation of the site will also be outlined in the restoration and enhancement plan to ensure the mitigation site is not impacted by future development. In addition, all activities involving the removal of riparian habitat occupied by the Least Bell's Vireo will be prohibited in the study area during the Vireo breeding and nesting season (March 15 to September 15), unless otherwise directed by the USFWS and the CDFG.

MM 3.4-4) Southwestern Willow Flycatcher. Although the Southwestern Willow Flycatcher does not currently occupy the project site, suitable habitat is present, and the species has potential to occur on the project site in the future. Therefore, focused surveys following the protocol for this species will be conducted every other year to determine the presence or absence of this species on the project site. If no Southwestern Willow Flycatchers are observed, no further mitigation would be required. However, if the Southwestern Willow Flycatcher is observed, informal consultation with the resource agencies will occur prior to fall maintenance activities to confirm that measures included in the Least Bell's Vireo avoidance and minimization plan (MM3.4-4), are adequate enough to address the Southerwestern Willow Flycatcher. Prior to maintenance activities, take authorization will be obtained from the USFWS and the CDFG.

MM 3.4-5) Burrowing Owl. Prior to any work activities on the project site (i.e., vegetation clearing, invasive species removal and/or spraying, and sediment removal), a pre-construction focused survey will be conducted to determine the presence or absence of the Burrowing Owl in the study area. If the species is not observed, no further mitigation will be necessary. Results of the survey will be provided to CDFG. In the event occupied burrows are discovered, they will not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the CDFG verifies through noninvasive methods that either:

- 1. the birds have not begun egg-laying and incubation; or
- 2. that juveniles from the occupied burrows are foraging independently and are capable of independent survival (CDFG\ESD 1995).

Active burrows will be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for Burrowing Owl normally occurs from February 1 to August 31. To protect any active burrows, the following restrictions are required between February 1 and August 31 (or until borrows are no longer active as determined by a qualified Biologist):

- Clearing limits will be established a minimum of 300 feet in any direction from any occupied nest;
- 2. Access and surveying will be restricted within 200 feet of any occupied nest.

Any encroachment into the 300/200 buffer area around the known nest will only be allowed if it is determined by a qualified biologist that the proposed activity will not disturb the nest occupants. During the non-nesting season, proposed work activities can occur only if a qualified biologist has determined that fledglings have left the burrow.

If owls must be moved away from the disturbance area, passive relocation techniques will be used rather than trapping. Passive relocation techniques will take at least one or more weeks to allow the owls to acclimate to alternate burrows. Two natural or artificial burrows will be provided for each burrow in the project area that will be rendered biologically unsuitable. Owls will either be excluded from burrows within 160 feet (50 meters) of the impact zone by installing one-way doors in burrow entrances or simply waiting until owls have left their burrows. The project area will be monitored daily (for one week, if using one-way doors) to confirm owl use of burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe will be inserted into the tunnels during excavation to maintain an escape route for animals inside the burrow.

When destruction of occupied burrows in unavoidable, existing unsuitable burrows will be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on the protected lands.

MM 3.4-6) Nesting Raptor. Seven days prior to the onset of maintenance activities, a qualified biologist will survey within the limits of project disturbance for the presence of any active raptor nests (common or special status). Any nest found during survey efforts will be mapped on the maintenance plans. If no

active nests are found, no further mitigation would be required. Results of the surveys will be provided to the CDFG.

If nesting activity is present at any raptor nest site, the active site will be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the project site normally occurs from February 1 to June 30. To protect any nest site, the following restrictions on maintenance activities are required between February 1 and June 30 (or until nests are no longer active as determined by a qualified biologist):

- Clearing limits will be established a minimum of 300 feet in any direction from any occupied nest;
- Access and surveying will be restricted within 200 feet of any occupied nest.

Any encroachment into the buffer area around the known nest will only be allowed if it is determined by a qualified biologist that the proposed activity will not disturb the nest occupants. During the non-nesting season, proposed work activities can occur only if a qualified biologist has determined that fledglings have left the nest.

If an active nest is observed during the non-nesting season, the nest site will be monitored by a qualified biologist, and when the raptor is away from the nest, the biologist will flush any raptor to open space areas. The biologist will then monitor removal of the nest site so raptors cannot return to the nest. This measure does not authorize the removal of White-Tailed Kite (*Elanus leucurus*) nests. White-Tailed Kite nests are state fully protected; therefore, removal of nests cannot be authorized.

MM 3.4-7) Water Quality BMPS. Prior to the issuance of a grading permit, the County will apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General NPDES Permit) and will comply with all the provisions of the permit, including the development of a SWPPP, which includes provisions for the implementation of BMP's and erosion control measures.

The County will also implement appropriate standard BMPs during project sediment removal activities to minimize the potential indirect impacts on the creek, such as the following:

- Clean Water Diversion (BMP No. NC-S): The County will utilize clear water diversion structures and measures to intercept clear surface water runoff upstream of a project, transport it around the work area, and discharge it downstream with minimal water quality degradation from the project. This will enclose the sediment removal area and reduce sediment pollution from maintenance work occurring in or adjacent to water. The structures to be used will include diversion ditches, berms, dikes, slope drains, rock, gravel bags, wood, aqua barriers, cofferdams, filter fabric or turbidity curtains, drainage and interceptor swales, pipes, or flumes.
- Vehicle and Equipment Cleaning (BMP No. NS): Vehicle and equipment cleaning procedures and practices will eliminate or reduce the discharge of pollutants to storm water from vehicle and equipment cleaning operations. Procedures and practices include, but are not limited to, using off-site facilities; washing in designated, contained areas only; eliminating discharges to the storm drain by infiltrating the wash water; and training employees and subcontractors in proper cleaning procedures.
- Vehicle and Equipment Fueling (BMP No. NS-9): Vehicle equipment fueling procedures and practices will be designed to prevent fuel spills and leaks and to reduce or eliminate contamination of storm water. This can be accomplished by using off-site facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures.
- 4. Silt Fence (BMP No. SE-1): The contractor will install silt fencing within appropriate locations to reduce sediment transport to the channel area. A silt fence is a temporary sediment barrier consisting of filter fabric stretched across and attached to supporting posts, entrenched, and (depending upon the strength of fabric used) supported with plastic or wire mesh fence. Silt fences trap sediment by intercepting and detaining small amounts of sediment-laden runoff from disturbed areas in order to promote sedimentation behind the fence.
- Stabilized Project Site Entrance/Exit (BMP No. TC-1): The contractor will create a stabilized maintenance access at a defined point of the entrance/exit to a project site that is stabilized in order to reduce the tracking of mud and dirt

onto public roads by maintenance vehicles.

6. Vehicle & Equipment Maintenance (BMP No. NS-10): The contractor will prevent or reduce the contamination of stormwater resulting from vehicle and equipment maintenance by running a "dry and clean site." This would be accomplished by performing maintenance activities at an off-site facility. If this option is not available, work should be performed in designated areas only while providing cover for materials stored outside, checking for leaks and sills, and containing and cleaning up spills immediately. Employees and subcontractors must be trained in proper procedures. On-site vehicle and equipment maintenance should only be used where it is impractical to send vehicles and equipment off-site for maintenance and repair. Sending vehicles/equipment off-site should be done in conjunction with TC-1, Stabilized Project Site entrance/Exit.

MM 3.4-8) Wildlife Corridor Enhancement. OCFD will restore scrub vegetation in the area between the access road and fence line within in OCFCD easement to provide a continuous connection between upper Newport Bay and the San Joaquin Marsh (refer to Exhibit 3.4-5). The purpose of the corridor will be to provide protective cover for the movement of small mammals and herpetofauna. OCFCD will implement the following conditions:

- A. The wildlife corridor will be planted and seeded in accordance with the native scrub plant palette provided in Appendix A of the Review of Wildlife Corridor Design for the San Diego Creek Project Site prepared by BonTerra Consulting (BonTerra Consulting 2010). The area to be planted and seeded is approximately 0.5 acre, based on a width of 12 feet and a length of approximately 1,650 feet;
- B. A qualified biologist or restoration ecologist monitor will perform annual inspections for three years or until the corridor meets its performance criteria. Vegetation cover within the corridor will be approximately 70% native cover. If there are any gaps in vegetation great than 20 feet, OCFC will seed the corridor openings following the methodology and seed mix recommended in the Review of Wildlife Corridor Design for the San Diego Creek Project Site prepared by BonTerra Consulting (BonTerra Consulting 2010). Remedial planting, if necessary, will occur in the fall/winter (October 1 to January 31) to take advantage of

the winter rains;

- C. OCFCD will ensure that the corridor is not affected by future projects until such time that a viable wildlife corridor is provided through other means (e.g., NCCP-related restoration activities or restoration activities conducted by the University of California, Irvine); and
- D. Any maintenance of established vegetation (i.e., trimming branches that extend into the access road) will be conducted outside of the nesting season for migratory birds (February 15 to September 15) to avoid impacts on active nests of both common and specialstatus species. If maintenance must be conducted during nesting season, a qualified biologist will be present to ensure that there are no impacts on active nests.

MM 3.4-9) Regulatory Permits. Prior to maintenance, the County will apply for and obtain a 404 Authorization from the USACE, 401 Water Quality Certification from the RWQCB, a Streambed Alteration Agreement from the CDFG, and a Coastal Development Permit from the CCC (Basin No. 1 only). Refer to MM 3.4-3 and MM 3.4-7 (above).

Current Status Ranking: 2/5

Site Visits

SANTA ANA RIVER Date: July 24, 2019 Time: 1:30 PM to 2:30 PM

TALBERT REGIONAL PARK

Date: July 29, 2019 Time: 10:00 AM to 1:00 PM

MASON REGIONAL PARK

Date: July 29, 2019 Time: 2:00 PM to 3:00 PM

Date: October 28, 2019 Time: 12:50 PM to 1:50 PM

PETERS CANYON WASH

Date: October 28, 2019 Time: 2:20 PM to 3:50 PM

Hamilton's Field Notes

This project involves maintaining the lowermost segment of San Diego Creek channel. Streambed

Alteration Agreement No. 1600-2009-0297-R5 describes the overall project actions as follows:

Impacts will occur within the entire channel from Interstate 405 to Campus Drive. The total project area consists of 59.51 acres. The project area includes 50.44 acres of CDFG jurisdiction, of which 31.45 acres is Streambed, and 18.99 acres of Open Water. Impacts resulting from vegetation and sediment removal will occur outside the 40-foot wide vegetated corridor, except minor vegetation trimming for inspection access, removal of exotic vegetation and removal of trees with dbh [diameter at breast height] greater than three inches will occur within the 40-foot wide vegetated corridor.

An initial project to remove sediment and vegetation from the San Diego Creek channel in 2006 was followed by a programmatic EIR in 2010 seeking to codify maintenance and management of sediment and vegetation in the channel. A report dated October 2, 2006, entitled, "Compensatory Mitigation Program, San Diego Creek Flood Control Capacity Restoration Emergency Project," prepared by Chambers Group, Inc., for the County of Orange, identified the following mitigation requirements for the initial "emergency" clearing project:

- The creation and enhancement of 17.77 acres of Willow Riparian habitat and 1.51 acres of Coastal Sage Scrub (CSS) within the Talbert Nature Preserve Study Area in Costa Mesa.
- The creation of 4.25 acres of Mulefat and Mexican Elderberry habitat, 1.39 acres of Willow Riparian habitat, and 4.26 acres of CSS habitat within Mason Regional Park in Irvine, and
- The reassigning of 13.5 acres of the Giant Reed abatement program element of Phase I of the Santa Ana River HMMP located in the Gypsum Canyon segment of the Santa Ana River from a voluntary program to an obligate/compulsory program."

A 2010 Programmatic EIR prepared by the Orange County Dept. of Public Works included the following mitigation measures, among others:

MM 3.4-3 (part 6)

Least Bell's Vireo

Mitigate for permanent impacts on occupied Least Bell's Vireo habitat at a ratio of 2:1 for Basins 2 and 3 by off-site restoration of riparian vegetation to enhance suitability for use or occupation by Least Bell's Vireo. The proposed mitigation area for Basins 2 and 3 involves restoring and enhancing approximately 7.8 acres (3.9 acres at 2:1) of riparian habitat. The site includes a segment of Peters Canyon Wash, which is a tributary to San Diego Creek.

MM 3.4-3 (part 7) Least Bell's Vireo

Mitigate for permanent impacts on occupied Least Bell's Vireo habitat at a ratio of 3:1 for Basin 1 by off-site restoration of riparian vegetation to enhance suitability for use or occupation by Least Bell's Vireo. The proposed mitigation area for Basin 1 involves restoring and enhancing approximately 1.46 acres (13.82 acres at 3:1) of riparian habitat located within Peters Canyon Regional Park, Serrano Creek, or other mitigation site(s) identified by OCFCD. These locations are subject to review and approval from USFWS and CDFG. These areas were both identified as potentially suitable for Least Bell's Vireo mitigation in the Evaluation of Potential Least Bell's Vireo Mitigation Sites memorandum prepared by ICF Jones & Stones (see Appendix O). However, these sites are not located within the Coastal Zone. OCFCD conducted a review of available mitigation areas within the Coastal Zone, including Big Canyon in the City of Newport Beach, near Newport Back Bay, and Banning Ranch. No available mitigation sites that would be suitable for Least Bell's Vireo habitat were identified within the Coastal Zone at that time.

The above-stated mitigation requirements are not reflected in subsequent permitting, and I cannot determine from the information provided whether they were ever completed.

As of 2019, current mitigation requirements are specified in two documents. The first is an Incidental Take Permit (ITP) Amendment entitled, "California Department of Fish and Wildlife (CDFW) "Amendment No. 1 (A Minor Amendment), California Endangered Species Act Incidental Take Permit No. 2081-2011-052-05, County of Orange, San Diego Creek Reach II Operations and Maintenance Project in Orange County." The ITP Amendment is a 14-page document signed by James Volz of the County of Orange on 8/2/17 and by Edmund Pert of CDFW on 8/10/17. Pages 7–8 of the ITP Amendment state [emphasis added in bold font]: "9. Habitat Management Land Restoration: ... the Permittee shall provide for the permanent protection, restoration and management of 51.8 acres including: 14.96 acres in Peters Canyon Regional Park, 17.7 acres in Talbert Preserve, 5.64 acres in William R. Mason Regional Park, and 13.5 acres in Featherly Regional Park, hereafter collectively the "Habitat Management (HM) lands."

9.1.2. Long-term management funding as described in Condition 9.3 below, estimated at \$52,481 per year (\$262,405 per five years). The long-term management Escrow Agreement and Pledge of Revenue endowment fund is estimated for the purpose of providing longterm management on an annual basis.

The second relevant document is the "Formal Section 7 Consultation for San Diego Creek Reach II (Campus Drive to 1405) Operations and Maintenance Project, Irvine, Orange County, California." This letter, dated July 13, 2011, was provided to Jason Lambert of the ACOE by Jim A. Bartel, Field Supervisor for USFWS. In addition to the habitat restoration, habitat enhancement, and habitat management actions identified in the ITP Amendment (see above), the Section 7 Consultation requires restoration of 4.26 acres of Coastal Sage Scrub at Mason Regional Park, as initiated in fall 2009 (URS 2010. Mason Regional Park Habitat Creation Project, Orange County, California, 2010 Annual Monitoring Report. Report prepared for Orange County Public Works, Santa Ana.).

PETERS CANYON REGIONAL PARK (15 acres) Required actions in Peters Canyon Regional Park are identified and described in the following document: BonTerra Consulting. 2011. Habitat Mitigation Program for Peters Canyon Wash, Orange County, California. Report dated August 4, 2011, prepared for OC Public Works.

The Peters Canyon mitigation area is shown right (above).

The southern part of area of Peters Canyon Regional Park, including this mitigation site, is characterized by dense plantations of exotic Eucalyptus trees (*Eucalyptus spp.*), both along the wash and on the hillsides of Coastal Sage Scrub. These trees greatly affect the ecological function of this area, transforming it from low-growing scrub with riparian woodland to a Eucalyptus forest with Riparian Woodland.



October 28, 2019, I walked a half-mile-long segment of Peters Canyon Wash, above the untreated segment above the lower reservoir that is being reserved for future mitigation allocation. I could see that exotic species had been removed from the streambed, as evidenced by stumps of Eucalyptus and other shrubs and trees, and yet numerous exotic plants remained. This included Eucalyptus trees up to 80 feet tall, Palms, Evergreen Ash trees (Fraxinus uhdei) up to 60 feet tall, Chinese Elms (Ulmus parviflora), a 35-foot Aleppo Pine (Pinus halepensis), a 25-foot European Olive (Olea europaea), and a patch of Spanish Dagger (Yucca aloifolia) that crossed from one side of the stream to the other. Invasive grasses and weeds were generally well-controlled, but I did observe a single specimen of Fountain Grass (Pennisetum setaceum).

My evaluation of this site is that most, but not all, of the exotic species have been removed. Numerous exotic trees, and some shrubs, remain. More importantly, the basic premise of the mitigation program is questionable, because in the context of a Eucalyptus-dominated landscape removing exotic species from a narrow strip of riparian woodland can have only limited ecological benefit.

FEATHERLY REGIONAL PARK (13.5 Acres of Arundo Management)

Page 1-4 of the Compensatory Mitigation Program, San Diego Creek Flood Control Capacity Restoration Emergency Project (Chambers Group 2006) describes this aspect of the mitigation program:

"The County of Orange RDMD also proposes to reassign 13.5 acres of the Giant Reed (Arundo donax) abatement program element of Phase I of the Santa Ana River HMMP located in the Gypsum Canyon segment of the Santa Ana River from a voluntary program to an obligate/compulsory program. The Giant Reed abatement program (by convention considered to be a type of habitat enhancement) has been an ongoing cooperative effort between RDMD and the Orange County Flood Control District (OCFCD). The cooperative effort began in 1989 after a wildfire in Gypsum Canyon. The program goals and objectives, along with baseline biological conditions for the removal of Giant Reed and other invasive exotic vegetation were initially presented in a Baseline Condition Study (PCR Services Corp 2004)."

I visited the segment of the Santa Ana River upstream of Gypsum Canyon Road on July 24, 2019, from 1:30 to 2:30 p.m. I observed that Giant Reed (*Arundo donax*) was generally controlled in that segment of the river, although I did see a small number of mature plants of Giant Reed. A large part of the river channel/floodplain upstream of Gypsum Canyon Road was, at the time of my visit, undergoing a major construction project, but it was beyond the scope of my investigations to determine the nature of this work or how it was being mitigated. Therefore, no pictures are provided on this mitigation area.

TALBERT PARK (17.77 acres of Willow Riparian Creation; 1.51 acre of CSS Creation) Both the State's ITP Amendment and the federal Section 7 Consultation refer to a requirement to establish 17.77 acres of new Willow Riparian habitat and 1.51 acre of Coastal Sage Scrub at Talbert Regional Park. The restoration areas are identified in several exhibits (below).

I visited Talbert Regional Park on July 29, 2019, from 10:00 AM to 1:00 PM. I observed that the 1.51-acre CSS restoration was generally quite successful,









with two juvenile California Gnatcatchers using the restored habitat. The only negative aspects of the CSS restoration were that the site contained almost no cactus, and the PVC irrigation pipes and yellowrope fencing had not been removed. Once the CSS restoration is complete and signed off, the fencing and irrigation pipes become eye-sores that often remain indefinitely. They should be removed.

The effort to establish 17.77 acres of Willow Riparian habitat in the main part of this mitigation site has completely failed. As the photos show, this area now supports an alkaline meadow type of habitat dominated by native Alkali Sacaton (*Sporobolus* airoides), Alkali Weed (*Cressa truxilensis*), Alkali Heath (*Frankenia salina*), and Pickleweed (Salicornia pacifica), as well as non-native Five-hook Bassia (*Bassia hyssopifolia*). This low-growing habitat is not used by the Least Bell's Vireo (*Vireo bellii pusillus*), the endangered species most impacted by the San Diego Creek maintenance project. Given that efforts to establish Willow Riparian habitat in this alkaline area have failed for a number of years, an alternative mitigation approach should be developed that provides habitat of value to the Least Bell's Vireo. **MASON REGIONAL PARK** (1.39 acre of Willow Riparian; 4.25 acres of Mulefat and Mexican Elderberry; 4.26 acres of Coastal Sage Scrub) The northerly mitigation areas in Mason Park, shown on Figure 4 from the 2010 URS report, are shifted from those Figure 6-2 from the 2006 Chambers Group report.

Referring to Figure 4, above, I observed in the field that restoration of Areas A, B, C, D, E, F, and I appeared to have been generally successful. Restoration of Sites G, H, J, and K were less successful. Dense stands of non-native Poison Hemlock (*Conium maculatum*) had recently been cleared from Areas J and K as of October 28, 2019, and Brazilian Pepper (*Schinus terebinthifolius*) was sprouting in the southwestern part of Area H.

Sensitive Species

- On July 29, 2019, I detected a Least Bell's Vireo (Vireo bellii pusillus) at Area B and a juvenile California Gnatcatcher (Polioptila californica californica) near Area G. On October 28, 2019, I heard a California Gnatcatcher near Area H.
- Talbert Regional Park: California Gnatcatchers
- Mason Park: Least Bell's Vireo and California Gnatcatchers.

Significant Events • None known.



Site 1. Talbert Regional Park CSS Mitigation Area. View, facing west, from near the eastern boundary of the site, showing well-developed CSS dominated by Black Sage (Salvia mellifera), Coast Goldenbush (Isocoma menziesii), Mulefat (Baccharis salicifolia), California Buckwheat (Eriogonum fasciculatum), Giant Wild Rye (Leymus condensatus), California Sagebrush (Artemisia californica), Toyon (Heteromeles arbutifolia), and Laurel Sumac (Malosma Iaurina). Only trace amounts of Coastal Prickly-Pear (Opuntia littoralis). Two juvenile California Gnatcatchers were detected here during the field visit. July 29, 2019.



Site 1. Talbert Regional Park CSS Mitigation Area. View, facing west, from near the northern boundary of the site, showing well-developed CSS but also fencing and irrigation pipe left on the site after restoration was complete. July 29, 2019.



Site 1. Talbert Regional Park CSS Mitigation Area. View, facing southwest, from near the northern boundary of the site, showing well-developed CSS habitat, but with only one small plant of Coastal Prickly-Pear (Opuntia littoralis). July 29, 2019.


Site 1. Talbert Regional Park CSS Mitigation Area. View, facing south, showing well-developed CSS but also irrigation pipes left on the site after restoration was complete. July 29, 2019.



Site 1. Talbert Regional Park CSS Mitigation Area. View, facing west, from near the eastern boundary of the site, showing well-developed CSS habitat. July 29, 2019.



Site 1. Talbert Regional Park Willow Riparian Mitigation Area. View, facing west-southwest, from near the eastern boundary of the site, showing low-growing, mostly native, salt-tolerant plants such as Alkali Weed (Cressa truxilensis), Alkali Heath (Frankenia salina), and Pickleweed (Salicornia pacifica), with scattered Mulefat (Baccharis salicifolia). July 29, 2019.



Site 1. Talbert Regional Park Willow Riparian Mitigation Area. View, facing south-southwest, from near the eastern boundary of the site, showing low-growing, mostly native, salt-tolerant plants, and patches of bare ground. Irrigation pipes and sprinkler heads remain on the site. July 29, 2019.



Site 1. Talbert Regional Park Willow Riparian Mitigation Area. View, facing southwest, from the center part of the site, showing a dense patch of native Alkali Sacaton (Sporobolus airoides), a grass native to the region but not known from the lower Santa Ana River before it was planted as part of this restoration effort. July 29, 2019.



Site 1. Talbert Regional Park Willow Riparian Mitigation Area. View, facing north from the southwestern part of the site, showing a dense patch of non-native Five-hook Bassia (Bassia hyssopifolia). July 29, 2019.



Site 1. Talbert Regional Park Willow Riparian Mitigation Area. View, facing north-northwest along the southwestern boundary of the site, where non-native Five-hook Bassia (Bassia hyssopifolia) on the site, at right, abuts non-native Poison Hemlock (Conium maculatum) off the site, at left. July 29, 2019.



Site 1. Talbert Regional Park Willow Riparian Mitigation Area. View, facing southwest from near the northern boundary of the site, showing non-native Five-hook Bassia (Bassia hyssopifolia) in the foreground and non-native Poison Hemlock (Conium maculatum) in the background. July 29, 2019.



Site 2. Mason Regional Park Riparian Mitigation Area "G." View, facing southwest, showing nonnative grasses and dying Mulefat (Baccharis salicifolia) and Coyote Brush (Baccharis pilularis). Irrigation pipes remain in place. July 29, 2019.



Site 2. Mason Regional Park Riparian Mitigation Area "B." View, facing southeast, showing well-developed riparian scrub habitat dominated by Brewer's Saltbush (Atriplex lentiformis ssp. breweri); other species present include willows (Salix gooddingii, S. lasiolepis, S. laevigata), Arrow Weed (Pluchea sericea), and Mulefat (Baccharis salicifolia). Some of the willows were still in basins, with hoses and stakes, so it does not appear that restoration was totally complete in this area. I photographed a singing male Least Bell's Vireo (Vireo bellii pusillus) near this area. July



Site 2. Mason Regional Park Riparian Mitigation Area "C." View, facing east, in the middle part of the mitigation area, showing riparian scrub dominated by Coast Goldenbush (Isocoma menziesii) and non-native Rabbitsfoot Grass (Polypogon monspeliensis). Irrigation pipes and sprinklers remain in place. July 29, 2019.



Site 2. Mason Regional Park Riparian Mitigation Area "C." View, facing northeast, showing a wet part of this mitigation area, with bulrush (Schoenoplectus sp.) *and Sandbar Willow* (Salix exigua). *July 29, 2019.*



Site 2. Mason Regional Park Riparian Mitigation Areas "C" and "F." View, facing southeast, in the eastern part of these mitigation areas, showing Alkali Heath (Frankenia salina) in the foreground, bulrush (Schoenoplectus sp.) in the mid-ground, and Coastal Sage Scrub dominated by Coyote Brush (Baccharis pilularis) in the background (Area "F"). July 29, 2019.



Site 2. Mason Regional Park Riparian Mitigation Area "F." View, facing east, in the central part of this area, showing Coastal Sage Scrub dominated by California Sagebrush (Artemisia californica), Black Sage (Salvia mellifera), Giant Wild Rye (Leymus condensatus), and Coyote Brush (Baccharis pilularis). July 29, 2019.



Site 2. Mason Regional Park Riparian Mitigation Area "F." View, facing east, in the central part of this area, showing Coastal Sage Scrub dominated by California Sagebrush (Artemisia californica), Black Sage (Salvia mellifera), Giant Wild Rye (Leymus condensatus), and Coyote Brush (Baccharis pilularis). July 29, 2019.



Site 2. Mason Regional Park Riparian Mitigation Area "J." View, facing south, showing an area of Elderberry Scrub recently cleared of dead weeds. Blue Elderberries (Sambucus nigra ssp. caerulea) stand among the cleared weeds. October 28, 2019.



Site 2. Mason Regional Park Riparian Mitigation Area "I." View, facing east, showing an area of Elderberry Scrub recently cleared of dead weeds. Irrigation pipe is visible in the mid-ground. Native species in this area include Blue Elderberry (Sambucus nigra ssp. caerulea), California Sagebrush (Artemisia californica), and Coyote Brush (Baccharis pilularis). October 28, 2019.



Site 2. Mason Regional Park Riparian Mitigation Area "H." View, facing east, showing Coastal Sage Scrub restoration area recently cleared of Brazilian Pepper Trees (Schinus terebinthifolius), which are resprouting. October 28, 2019.



Site 3. Peters Canyon Regional Park Riparian Enhancement Area. View, facing northwest, showing willow riparian habitat with exotics removed from the main part of the streambed, but with large non-native Eucalyptus trees (Eucalyptus sp.), Evergreen Ashes (Fraxinus uhdei), and a Mexican Fan Palm (Washingtonia robusta) visible in the background. October 28, 2019.



Site 3. Peters Canyon Regional Park Riparian Enhancement Area. View, facing north, showing willow riparian habitat with exotic species on the north bank, as well as in the main part of the streambed (both banks). Non-native species present include Eucalyptus (Eucalyptus sp.), Spanish Dagger (Yucca aloifolia), and Mexican Fan Palm (Washingtonia robusta) visible in the background. October 28, 2019.



Site 3, Peters Canyon Regional Park Riparian Enhancement Area. View, facing north, showing exotic Chinese Elms (Ulmus parvifolia) and Eucalyptus trees (Eucalyptus sp.). October 28, 2019.



Site 3. Peters Canyon Regional Park Riparian Enhancement Area. View, facing northwest, showing two large non-native Eucalyptus trees (Eucalyptus sp.) growing out of the willow riparian habitat. October 28, 2019.



Site 3. Peters Canyon Regional Park Riparian Enhancement Area. View, facing northwest, showing an exotic Aleppo Pine (Pinus halepensis) growing out of the willow riparian habitat. October 28, 2019.



Site 3. Peters Canyon Regional Park Riparian Enhancement Area. View, facing northwest, showing an exotic European Olive (Olea europaea) growing out of the willow riparian habitat. October 28, 2019.

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San Joaquin Hills Toll Road

Project Name	Details
Project Name:	San Joaquin Hills Transportation Corridor
EIR Number:	494
State Clearinghouse Number:	1990010230
Owner/Applicant:	San Joaquin Hills Transportation Corridor Agency
Prepared For:	San Joaquin Hills Transportation Corridor Agency
EIR Consultants:	Unknown
EIR Drafted:	February 1991
Existing General Plan Designation:	Included in the Master Plan of Arterial Highways Corridor Legislated via SB 1413
Existing Zoning:	Unknown
New Zoning:	Unknown
Permits Required:	ACOE: Section 404 Permit (Standard Individual Permit) CDFW: 1601 Permit, Central-Coastal NCCP/HCP USFWS: Hybrid – Biological Opinions Created, late inclusion in the Coastal NCCP/HCP RWQCB: Unknown Coastal Act: Coastal Development Permit

Figure 62. Statistics on the San Joaquin Hills Transportation Corridor project.

Project Description

In 1987, the California Legislature gave the authority to the newly formed Joint Powers Authority consisting of the Foothill/Eastern Transportation Corridor Agency and the San Joaquin Hills Transportation Corridor Agency to construct toll facilities through SB 1413. The San Joaquin Hills Transportation Corridor is a 17.5 mile long, eight lane roadway that parallels Interstate 5 and Pacific Coast Highway (Highway 1). The roadway is bounded on the south by San Juan Capistrano at Interstate 5 and ultimately at the north end in Costa Mesa at the 405 Freeway. Much of the land had been used for cattle grazing, and acreage had already been protected as Crystal Cove State Park or was in the process of being protected: Laguna Coast Wilderness Park and Aliso & Wood Canyons Regional Park. After all the phases were complete, the project included 10 interchanges, 68 bridges, 725,000 square feet of retaining walls. The project includes 32 million cubic yards of grading.

Appendix L

The Proposal

 Construction of a roadway between Jamboree to Interstate 5.



Figure 63. The San Joaquin Hills Transportation Corridor.





Site Map

View the site map for the San Joaquin Hills Toll Road on the previous page.

Impacted Plant Communities

- Grassland
- Coastal Sage Scrub-Mixed
- Mixed Chaparral
- Oak Woodland/Savannah
- Forested Wetland
- Riverine Intermittent Stream Bed
- Scrub/Shrub Broad-Leaved Deciduous/ Evergreen
- Emergent/Persistent Wetland (Five wetland types)
- Sand/Gravel Wash
- Rock Outcrop
- Disturbed Area

Impacted Habitat

(A range of habitat impacts existed due to varied alignments)

- Forested Wetland (~21.0 acres)
- Riverine-Intermittent Streambed (~2.4 acres)
- Emergent/Persistent Marsh (~1.1 acres)
- Scrub/Shrub Broad-Leaved Deciduous Evergreen (~6.9 acres)
- Coastal Sage Scrub Mixed (~168.2 -~180.4 acres)
- Mixed Chaparral (~71.6 ~73.1acres)
- Oak Savannah (~2.9 acres)
- Oak Woodland (~18.7 ~20.9 acres)
- Grassland (~304.6 ~322.1 acres)
- Rock Outcrop (~3.5 ~6.2 acres)
- Sand/Gravel Wash (~7.3 acres)

Impacted Species

- Many-Stemmed Dudleya and Orange County Turkish Rugging are in the transportation corridor. The Laguna Beach Dudleya is south of the corridor.
- Coast Horned Lizard found near El Toro and Moro Canyon and the Orange-Throated Whiptail near Bonita Canyon.
- Black-Tailed and Blue/Gray Gnatcatchers were seen in the area.

Key Biological Opinion Findings • Per our conservation with USFWS a Biological

Per our conservation with USFWS a Biological Opinion was created (we did not receive a copy) and the hybrid model of adding this project to the Conservation Plan was then the focus.

Historic Surveys

- 1991 (LSA)
- June 1988 (P&D Technologies)
- June 1987 (P&D Technologies)
- April 1985 (P&D Technologies)

EIR Mitigation Measures

6-1.1) Retain project biologist to monitor implementation of biological mitigation measures during construction; and guide habitat reestablishment.

6-1.2) Prepare summary of restrictions on grading as contained in measures 6-2, 6-4; 6-5; 6-6; 6-7; 6-8; 6-9; 6-10; 6-11; 7-2; 7-5; 7-6; 7-7; & 7-8.

6-2.1) Map environmentally sensitive areas (ESA's) within project right of way.

6-2.2) Determine the necessity of fencing around the mapped ESA's and install such protective fencing where appropriate.

6-3.1) Prepare a construction access plan showing construction roads and staging areas, including restrictions on driving vehicles outside of planned access roads and staging areas; and review with Project Biologist to obtain concurrence.

6-3.2) Hold pregrading meeting with project biologist and construction contractor to review construction access plan and agree on enforcement techniques to ensure compliance during construction.

6-3.3) Monitor construction activity to ensure compliance with construction access plan restrictions regarding driving in sensitive or undisturbed areas.

6-4.1) Prepare detailed plans for implementing the construction impact mitigation measures set forth in measure 6-4 et.al.; and review with Design Build Team for concurrence.

6.4-2) Hold pregrading meeting with contractor to review detailed plan prepared pursuant to action 6-4.1 above and to assure understanding of plan intent, and roles and responsibility.

6.4-3) Monitor construction activity to ensure compliance with detailed implementation plan prepared pursuant to action 6-4.1.

6-5.1) Prepare detailed plans for implementing the construction impact mitigation measures set forth in measure 6-4 et.al.; and review with Design Build Team for concurrence.

6-5.2) Hold pregrading meeting with contractor to review detailed plan prepared pursuant to action 6-4.1 above and to assure understanding of plan intent, and roles and responsibility.

6-5.3) Monitor construction activity to ensure compliance with detailed implementation plan prepared pursuant to action 6-4.1.

6-6.1) Prepare detailed plans for implementing the construction impact mitigation measures set forth in measure 6-4 et.al.; and review with Design Build Team for concurrence.

6-6.2) Hold pregrading meeting with contractor to review detailed plan prepared pursuant to action 6-4.1 above and to assure understanding of plan intent, and roles and responsibility.

6-6.3) Monitor construction activity to ensure compliance with detailed implementation plan prepared pursuant to action 6-4.1.

6-7.1) Prepare detailed plans for implementing the construction impact mitigation measures set forth in measure 6-4 et.al.; and review with Design Build Team for concurrence.

6-7.2) Hold pregrading meeting with contractor to review detailed plan prepared pursuant to action 6-4.1 above and to assure understanding of plan intent, and roles and responsibility.

6-7.3) Monitor construction activity to ensure compliance with detailed implementation plan prepared pursuant to action 6-4.1.

6-8.1) Prepare detailed plans for implementing the construction impact mitigation measures set forth in measure 6-4 et.al.; and review with Design Build Team for concurrence.

6-8.2) Hold pregrading meeting with contractor to review detailed plan prepared pursuant to action 6-4.1

above and to assure understanding of plan intent, and roles and responsibility.

6-8.3) Monitor construction activity to ensure compliance with detailed implementation plan prepared pursuant to action 6-4.1.

6-9.1) Prepare detailed plans for implementing the construction impact mitigation measures set forth in measure 6-4 et.al.; and review with Design Build Team for concurrence.

6-9.2) Hold pregrading meeting with contractor to review detailed plan prepared pursuant to action 6-4.1 above and to assure understanding of plan intent, and roles and responsibility.

6-9.3) Monitor construction activity to ensure compliance with detailed implementation plan prepared pursuant to action 6-4.1.

6-10.1) Retain qualified raptor specialist.

6-10.2) Map raptor nesting areas and prepare construction restrictions consistent with the intent of measure 6-10.

6-10.3) Conduct pregrading meeting with raptor specialist and contractor to communicate restrictions on grading activities in raptor nesting areas to ensure understanding of intent and roles/responsibilities.

6-11.1) Prepare detailed plans for implementing the construction impact mitigation measures set forth in measure 6-4 et.al.; and review with Design Build Team for concurrence.

6-11.2) Hold pregrading meeting with contractor to review detailed plan prepared pursuant to action 6-4.1 above and to assure understanding of plan intent, and roles and responsibility.

6-11.3) Monitor construction activity to ensure compliance with detailed implementation plan prepared pursuant to action 6-4.1.

6-12.1) Prepare detailed implementation plan for the on-site and off-site transplantation of plant species of concern as identified in measure 6-12.

6-12.2) Complete implementation actions required by plan prepared pursuant to action 6-12.1.

6-13.1) Prepare landscape plan and program for revegetation of corridor slopes as described in measure 6-13; and review with Project Biologist, Caltrans and the Department of Fish and Game to insure consideration of biological and wildlife values as well as maintenance requirements.

6-13.2) Replant corridor slopes as provided for by revegetation plan prepared per action 6-13.1 above.

6-14.1) Prepare plan for design and location of installation of guzzlers to insure that they meet intent of measure 6-14 and review with Design Build Team to obtain concurrence.

6-14.2) Install guzzlers in accordance with plan prepared pursuant to action 6-14.1 and have inspected by project biologist.

6-15.1) Prepare Oak tree revegetation program in consultation with project biologist and Orange County EMA.

6-15.2) Replant Oak trees as provided for by approved revegetation plan.

6-16.1) Incorporate plans for wildlife crossings as described in measure 6-16 in final corridor design and review with project biologist to obtain concurrence on design features.

6-17.1) Develop specifications and performance standards for roosting sites and incorporate into Resource Management Plan.

6-17.2) Install raptor roosting sites per specifications in Resource Management Plan.

6-18.1) Incorporate plans for chain link fencing (to be installed as described in measure 6-20) in final corridor design and review with Project Biologist to obtain concurrence on precise locations and specifications for fencing.

6-19.1) Prepare draft Resource Management Plan.

6-19.2) Review Resource Management Plan with and obtain concurrence of Department of Fish and Game and U.S. Fish and Wildlife Service.

6-19.3) Obtain TCA Board approval of Resource Management Plan.

6-20.1) Prepare survey plan in consultation with the Department of Fish and Game to identify most

appropriate time of year for survey.

6-20.2) Conduct surveys in accordance with plan prepared per 6-20.1.

6-20.3) Incorporate mitigation measures resulting from 6-20.2, if any, into final plans and specifications.

6-20.4) Insure that mitigation measures are implemented prior to or during construction as applicable.

6-21.1) Prepare revised plans for MacArthur interchange section of Corridor so that

- a. MacArthur and its associated ramps will bridge the Bonita Canyon Drainage; and
- b. Bonita Creek will remain as an open channel.

6-22.1) Coordinate the preparation of the Resource Management Plan required by Measure 6-19 with the HCP Coastal Sage Scrub habitat management plan to be prepared in cooperation with the USFWS.

6-22.2) Adopt resolution approving TCA specific funding participation in Coastal Sage habitat enhancement measures contained in the HCP.

Current Status

Ranking: 5/5

Site Visit

Date: August 13, 2019 Time: 1:30 PM to 2:30 PM

Hamilton's Field Notes

We toured the habitat restoration sites, including the large slopes on the sides of the toll road, with Margot Griswold, the restoration specialist for the project. This is one of the most successful restoration efforts in Orange County. Construction of the road required massive cut- and fill-slopes, and these have been restored so well that in most areas it's hard to tell them apart from the natural coastal sage scrub in the San Joaquin Hills. Dominant species include California Sagebrush (*Artemisia californica*), California Buckwheat (*Eriogonum fasciculatum*), Black Sage (*Salvia mellifera*), California Encelia (*Encelia californica*), Coyote Brush (Baccharis pilularis), Lemonade Berry (*Rhus integrifolia*), and Laurel Sumac (*Malosma laurina*). The one weakness in the Coastal Sage Scrub restoration effort on the slopes of the toll road is that it included only small amounts of cactus, Coastal Prickly-Pear (Opuntia littoralis). Both this species and Coast Cholla (Cylindropuntia prolifera) are found throughout the San Joaquin Hills, but have been greatly diminished by wildfires. Remedial restoration efforts have been made to add some more cactus back into some restoration areas, but more should have been included in the original restoration plantings, which took place in the 1990s.

The former Coyote Canyon Landfill was restored to Coastal Sage Scrub that is strongly dominated by California Encelia (Encelia californica), with smaller amounts of California Buckwheat (Eriogonum fasciculatum), California Sagebrush (Artemisia californica), and Coast Goldenbush (Isocoma menziesii). Monitoring surveys of this restored area have documented up to 20 pairs of California Gnatcatchers (Polioptila californica californica) in recent years. We heard California Gnatcatchers there during our tour of this area.

Willow riparian mitigation, which took place along lower Bonita Creek, was also very successful. Dominant species include Willows (Salix Iasiolepis, S. Iaevigata, S. gooddingii), Fremont Cottonwood (Populus fremontii), Mulefat (Baccharis pilularis), and Desert Grape (Vitis girdiana). Least Bell's Vireos (Vireo bellii pusillus) regularly breed in the restored habitat.

NOTE: The Transportation Corridor Agencies have also purchased land as mitigation to offset the impacts of the Foothill/Eastern Transportation Corridor. According to the Agency's website the following lands are protected in perpetuity (but are not mapped in this project):

- Bonita Creek & Reservoir (28.3 acres) •
- Canada Gobernadora (32.2 acres)
- Coyote Canyon Landfill (122 acres)
- Glenwood Drive Mitigation Site (7.3 acres)
- Greenvield Drive & the 73 Toll Road

Sensitive Species

California Gnatcatchers were heard at the Covote Canyon Landfill restoration site.

Significant Events • None known.



Restored coastal sage scrub on the closed Coyote Canyon Landfill, dominated by California Encelia (Encelia californica), with Coast Goldenbush (Isocoma menziesii), California Sagebrush (Artemisia californica), and Lemonade Berry (Rhus integrifolia). The restoration is very successful, although California Encelia appears largely dead in late summer/fall. California Gnatcatchers were heard in this area. August 13, 2019.



Restored mature riparian habitat along Bonita Creek, dominated by Willows (Salix lasiolepis, S. laevigata, S. gooddingii), Fremont Cottonwood (Populus fremontii), Mulefat (Baccharis pilularis), and Desert Grape (Vitis girdiana). August 13, 2019.



Restored mature riparian habitat along Bonita Creek, dominated by Willows (Salix lasiolepis, S. laevigata, S. gooddingii), *Mulefat* (Baccharis pilularis), *and Desert Grape* (Vitis girdiana). *August* 13, 2019.

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Tonner Hills PC

Project Name	Details
Project Name:	Tonner Hills Planned Community
EIR Number:	581
State Clearinghouse Number:	2001031137
Owner/Applicant:	Nuevo Energy
Prepared For:	County of Orange
EIR Consultants:	Culbertson, Adams, & Associates Inc
EIR Drafted:	April 2002
Existing General Plan Designation:	Suburban Residential (1B) (0.5-18 dua) Community Commercial (2A)
Existing Zoning:	General Agriculture (A1) with an Oil Overlay (O) (1du/4 acres)
New Zoning:	Tonner Hills Planned Community (PC)
Permits Required:	ACOE: Section 404 Permit (Standard Individual Permit) CDFW: 1600 Streambed Alteration Agreement Permit USFWS: Section 7 Consultation RWQCB: 401 Permit (+NPDES Permit)

Figure 65. Statistics on the Tonner Hills PC project.

Project Description

The Tonner Hills project sits on 789.8 acres of land in the Sphere of Influence of the City of Brea. The project was processed through the County of Orange in consultation with the City. Over the past 100 years, the land was used for oil and gas production. The project site is in a hillside area and included 4.5 to 5 million cubic yards of grading, which was balanced on-site.

The Proposal

- 914 residential units (795 were actually built) in eight distinct neighborhoods covering 193.9 acres;
- 32.7 acres for public use;

15 acres for continued oil operations (in the • open space and residential areas)

Appendix M

- 7.7 acres for neighborhood commercial use; and,
- 5.8 acres for a private neighborhood park • (Wildcatters Park).

Site Map

View the site map for the Tonner Hills project on the next page.

Impacted Plant Communities • Six Sagebrush Scrub and Sagebrush Scrub mix

communities



Figure 66. The Tonner Hills PC.



Figure 67. The restoration sites for the Tonner Hills project.

- Two Coyote Brush Scrub and Scrub Mix communities
- Southern Cactus Scrub
- Mulefat Scrub
- Annual Grassland
- Southern Arroyo Willow Woodland
- Coast Live Oak Woodland
- Four California Walnut Woodland mix communities
- Ornamental Woodland and Mix communities
- Ruderal and Developed communities

Impacted Habitat

- The project impacts a total of 326.4 acres of habitat.
- 104.3 acres of Coastal Sage Scrub (CSS) impacted by the development. Mitigation revegetates 188 acres of CSS and 12.4 acres of Coast Live Oak/California Walnut woodlands.
- 4.09 acres of streambed and riparian habitat and 3.08 acres of riparian vegetation.
- 1.6 acres of jurisdictional wetlands will be filled.
- Previous mitigation was performed on 2.49 acres of Willow/Mulefat along Tonner Creek.

Impacted Species

- Habitat loss (CSS) impacts seven of the 14 pairs of California gnatcatchers
- Habitat loss (Southern Cactus Scrub) impacts the Coastal Cactus Wren
- Habitat loss (Grassland or Scrub) impacts the northern Red-Diamond Rattlesnake and Coast Patch-Nosed Snake
- Habitat loss will impact foraging species, including: Black-Shouldered Kite, Northern Harrier, and Cooper's Hawk.

Key Biological Opinion Findings

- Conservation easement over all preserved and/or restored areas.
- 473.2 acres will be under perpetual management by Nuevo Energy.
- Two endowments will be created for management:
 - \$270,000 initial deposit
 - \$100,000 second deposit for interest to manage the property by a future entity
 - When the property is turned over to the land manager if the combined amount

is less than \$650,000, Nuevo Energy will make it whole.

• Five pair of CAGN will be taken.

Historic Surveys

- 2001 California Gnatcatcher Survey
- 1997 California Gnatcatcher Survey

EIR Mitigation Measures

BR-1 Prior to the issuance of any grading, clearing, or other landform modification permit, the developer shall submit evidence to the Director or designee, Development Services Department, that appropriate federal, state, and county permits have been obtained for the biological resources on-site to be removed by development. Said permits shall specify the timing, nature, and review authority for the mitigation measures, if any, that are required in connection with these removals. No removals shall be authorized until all necessary resource agency permits have been obtained.

BR-2 Prior to the issuance of a grading permit, Walnut trees within drainage channels shall be identified on the grading plan and retained to the greatest extent feasible. Said grading shall be subject to review and approval by the Manager, Current Planning Services.

BR-3 Prior to the issuance of a grading permit, the property owner/developer shall obtain a 1603 Streambed Alteration Agreement, if required by the California Fish and Game Code; and a permit under the guidelines of 404(b)(1) of the Clean Water Act, if required by the U.S. Army Corps of Engineers. Mitigation is intended to adhere to the "no net loss" policies of the CDFG and the U.S. Army Corps of Engineers. If a 404 Permit from the ACOE is required, a 401 Water Quality Certification will also be required from the California Regional Water Quality Control Board, Santa Ana Region. Evidence shall be provided to the Manager, Subdivision and Grading.

BR-4 Prior to initiation of grading, and upon approval from the Manager, Environmental Planning services, the property owner/developer shall implement the Tonner Hills Habitat Mitigation and Monitoring Program (which is included in the Technical Appendices). The Program incorporates measures to:

 Preserve and protect Walnut and Oak Woodlands outside the project footprint

- 2. Preserve and protect Coastal Sage Scrub habitat outside the project footprint
- 3. Preserve and protect riparian habitat outside the project footprint
- 4. Create additional Coastal Sage Scrub habitat prior to and during project implementation
- 5. Create additional Walnut-Coast Live Oak Woodland habitat
- 6. Enhance preserved habitat in Cable Canyon.

The mitigation plan provides for a phased-in creation of riparian, Coastal Sage Scrub, and Walnut-Oak Woodland habitat on-site. Additional features of this mitigation measure (implementation of the mitigation plan) include:

- A Resource Preservation Easement will be placed over the preserved portions of riparian habitat associated with Tonner Creek to preserve the habitat in perpetuity subject to approval of the Manager, PFRD/HBP Program Management & Coordination, consistent with County of Orange Standard Conditions of Approval Manual conditions for resource preservation easement dedications.
- Removal of non-native species will occur outside the nesting season (approximately August 30 to March 10). By avoiding the removal of non-native species from the riparian habitats in the breeding season, there will be no impacts to nesting bird species, and this will avoid violation of the Migratory Bird Treaty Act. This would also allow the salvaging/collection of native materials from the development site such as Willow and Mulefat cuttings.
- 3. Any crushing of existing habitat during the breeding season of the gnatcatcher (February 15 through August 15) will be under the supervision of the biological monitor. The biological monitor will be empowered to restrict such activities to minimize the harm and harassment of breeding Gnatcatchers or fledglings. During this time, the biological monitor will provide USFWS with weekly summaries, via facsimile transmission, of all Gnatcatcher monitoring activities.
- 4. Preserved and/or protected areas will be identified by the project biologist and isolated with construction fencing or similar materials prior to any clearing or grading activities. Protected areas include existing woodland and Coastal Sage Scrub adjacent to revegetation areas and individual trees and patches of native habitat to be preserved within

revegetation areas.

- 5. Vehicles will not be allowed to operate within the drip line of any preserved trees.
- 6. Erosion control measures, including silt fencing, will be installed at the discretion of the project biologist to contain sediments within graded or restoration areas. Silt fencing will be semi-permanently installed at the boundary between upland revegetation areas and existing riparian habitat until vegetation is sufficiently established in the revegetation zone to prevent erosion. Maintenance of the erosion control measures is included as part of the maintenance program.
- 7. Construction equipment will be restricted to designated areas and roads approved by the project biologist. Only low dispersal weight vehicles (less than 20 pounds per square inch (psi) will be operated within the riparian areas. Crossing of Tonner Creek will not be permitted except where designated by the project biologist. Crossing will be limited to the minimum necessary to facilitate enhancement activities within the riparian zone.
- 8. Maintenance and refueling of construction equipment will be limited to areas specified by the project biologist. Storage of potentially hazardous materials, including but not limited to fuel, paint, stains, pesticides, herbicides, solvents, soils, oils, and solvents will not be permitted within 50 feet of any riparian zone. During construction, disposal of such materials will occur in a controlled area that is physically separated from potential storm water runoff.
- 9. A biological monitor will be present at all preconstruction and pregrading meetings and will be on-site during all vegetation clearing and subsequent removal. A monitor also will be on-site periodically during the grading. The biological monitor will be an individual familiar with the biology and ecology of southern California, especially sensitive breeding birds.
- 10. Fencing will be placed along the back of lots of roads that are located adjacent to natural areas. The fencing will be designed to reduce encroachment of humans into the preserved areas.
- 11. Lighting in the residential areas and along roadways will be designed to prevent artificial lighting from reflecting into adjacent natural areas. Specific lighting design/standards will be required in the development plans to achieve this result and shall be incorporated into the design standards in the Area Plan. The CC&Rs

for the development will also require any subsequently installed and maintained lighting to meet this same standard. Additional lighting along the roadways in the wildlife areas-in particular, Tonner Hills Road—shall use low wattage lighting that includes shielding to prevent light spillage into the wildlife corridor. Lighting along the bridge crossing Tonner Creek shall be designed such that roadway safety is achieved while avoiding glare and light spillover into the creek. The bridge lighting may include bollards or other instructure fixtures.

- 12. Owners manuals for the residences will provide a discussion of the impacts of domestic animals on sensitive species and the impacts of wildlife on domestic animals. Residents will be reminded that the development is adjacent to natural open space. Encounters with wildlife will be highly probable.
- 13. Annual surveys will be conducted to document the use of the preserved and revegetated habitats by wildlife species. These surveys will be conducted by biologists who are familiar with the wildlife species typically found in Coastal Sage Scrub and Willow Riparian woodland. The results of the surveys will be included in the annual monitoring and maintenance report submitted to the USFWS according to the requirements of the Fish and Wildlife permit.
- 14. During the five-year maintenance and monitoring period for the revegetation of the various phases, focused surveys will be conducted to document the number of pairs of California Gnatcatchers on the site. Any Cactus Wrens observed during these surveys will also be documented. These surveys will be conducted by qualified biologists who are permitted to conduct Gnatcatchers surveys according to the USFWS protocol. The results of the surveys will be included in the annual monitoring report and will be submitted to the USFWS according to the requirements of the biologists' federal fish and wildlife permit.

BR-5 Crushing of existing habitat would not occur during the breeding season (Feb 15 to July 31) unless approved by a biologist monitor familiar with requirements of breeding birds, especially Coastal California Gnatcatchers. Removal of crushed vegetation could occur in the breeding season if a biological monitor is present to prevent disruption to protect breeding birds.

Current Status Ranking: 1/5

Site Visit Date: June 29, 2019 Time: 12:30 PM to 4:30 PM

Hamilton's Field Notes

- Several of the largest mitigation sites are completely overrun with mustards (Brassica nigra, Hirschfeldia incana).
- At top of Wildcat Way is an ungraded area • with relatively intact CSS—compare with the "restored" CSS to the south, which is overrun with mustard.
- Restored Coastal Sage Scrub looks okay in • limited areas. Large Malosma laurina, Juglans californica, Sambucus nigra ssp. caerulea. Opuntia littoralis remains only knee-high. Artemisia californica, Eriogonum fasciculatum, Brickellia californica, Encelia californica present in the highest-quality restored CSS, located above East Shackle Line Drive.
- Leftover PVC pipes remain in many mitigation • areas.
- Non-native Shortpod Mustard (Hirschfeldia incana) growing along old irrigation pipes.

Sensitive Species

None detected.

Significant Events • Freeway Complex Fire (2008)



View, facing west-southwest, from the top of Wildcat Way. In this undisturbed area, which was not part of the area restored as project mitigation, Coastal Sage Scrub is relatively intact. July 10, 2019.



View, facing north-northeast, from near the southern end of Wildcat Way. In this area, most of which appears to have been restored as mitigation for the project, native scrub plants poke up from an expanse of dead vegetation, mainly non-native Shortpod Mustard (Hirschfeldia incana) and Black Mustard (Brassica nigra). The green groundcover in the foreground (at base of slope) is non-native Acacia redolens (presumably outside of the restored area). July 10, 2019.



View, facing north, from East Lambert Road. Another slope that appears to have been restored as mitigation for the project, with scattered native scrub plants amid an expanse of dead vegetation, mainly non-native Shortpod Mustard (Hirschfeldia incana) and Black Mustard (Brassica nigra). July 10, 2019.



View, facing west, from near North Cable Canyon Place. In this area, which appears to have been restored as project mitigation, native scrub plants poke up from an expanse of dead vegetation, mainly non-native Shortpod Mustard (Hirschfeldia incana) and Black Mustard (Brassica nigra). July 10, 2019.



View, facing north-northwest, from near the southern end of Rubel Drive. In this area, which appears to have been restored as project mitigation, native scrub plants poke up from an expanse of dead vegetation, mainly non-native Black Mustard (Brassica nigra). July 10, 2019.



View, facing southwest, from near Tonner Ridge Drive. This area appears to have been restored as project mitigation and remains dominated by native scrub plants. July 10, 2019.



Vista Del Verde

Project Name	Details
Project Name:	Vista Del Verde (Shell Master Planned Community)
EIR Number:	Unknown
State Clearinghouse Number:	1993081060
Owner/Applicant:	Shell-Aera Energy
Prepared For:	City of Yorba Linda
EIR Consultants:	Hogle-Ireland, Inc.
EIR Drafted:	May-94
Existing General Plan Designation:	County portion: 855 acres City portion (20 acres): Area Plan
Existing Zoning:	Not included in DEIR
New Zoning:	Planned Community (PC)/Specific Plan (SP)
Permits Required:	ACOE: No Record of Involvement (Pre-App indicated Permit is Required) CDFW: 1603 Streambed Alteration Agreement Permit (+No Record of Involvement) USFWS: Section 10 Consultation RWQCB: Unknown

Figure 68. Statistics on the Vista Del Verde project.

Project Description

The Vista Del Verde project sits on 875 acres of land used for oil operations owned by Shell-Aera Energy LLC partially within the City of Yorba Linda, and mostly within the County of Orange (Yorba Linda's Sphere of Influence). The project was processed through the City of Yorba Linda. Residential, park, and school uses were proposed for the site. The project included 12.3 million cubic yards of grading to be balanced on-site. This project created a Shell/MWD Habitat Conservation Plan for the California Gnatcatcher, "Coastal" Cactus Wren, and other species on the site by protecting Oak, Walnut, Chaparral, and Coastal Sage Scrub habitat.

The Proposal

• Phase out of oil field productions (removal of facilities and remediation),

Appendix N

- A maximum of 2,338 dwelling units,
- An 18-hole golf course,
- 14.1 acres of neighborhood parks,
- Two equestrian/multi-purpose trails,
- Two habitat preservation areas (294 acres),
- And elementary school, and
- The creation of a Habitat Conservation Plan.

Site Map

View the site map for the Vista Del Verde project on the next page.



Figure 69. The Vista Del Verde project.



Figure 70. The restoration sites for the Vista Del Verde Project. 200



Figure 71. The conserved areas and Carbon Canyon Sale Area from the Vista Del Verde project.

Impacted Plant Communities • Oak Woodlands

- Walnut Woodlands
- Cactus
- Chaparral
- **Coastal Sage Scrub**
- **Ruderal Grassland**
- **Riparian Habitat**

Impacted Habitat

- 126 acres of Southern Coastal Sage Scrub
- 105 acres of Cactus
- 250 acres of Ruderal/Non-Native Grasses
- 37 acres of Cactus/Ruderal
- **Coastal Sage Scrub**
 - 5.9 acres Cactus
 - 2.5 acres Non-Native Grass
 - 2.2 acres Ruderal
- 27.5 acres Agricultural

Impacted Species

Habitat loss may impact the California Gnatcatcher, Coastal Cactus Wren,

- On-site sensitive species include: Orange County Turkish Rugging, San Diego Coast Horned Lizard, Orange Throated Whiptail Lizard, Osprey, California Gnatcatcher (25 pairs), Coastal Cactus Wren (73 pairs)
- Nearby sensitive species: Southwestern Pond Turtle

Key Biological Opinion Findings • Creation of a Shell/MWD Habitat Conservation

- Plan (HCP)
- A Conditional Sale Agreement for 960-acres in Carbon Canyon to the State of California
- Operator (developer) shall not impact more than 3.3 acres of stream permanently (2.18 acres vegetated, 1.15 acres unvegetated)
- Operator (developer) shall mitigate with the creation of 5.6 acres of riparian habitat (2:1 for the 2.2 acres of vegetated stream and 1:1 for the 1.2 acres of unvegetated stream)

Historic Surveys • No Known Surveys

EIR Mitigation Measures

MM 4.1) Pursuant to the Federal Endangered Species Act, a Section 10(a) permit or Section 7 consultation shall be required in order to "take" California Gnatcatchers or their habitat. A copy of the Section 10(a) permit or Section 7 consultation shall be submitted to the City of Yorba Linda prior to issuance of grading permits for any area containing Coastal Sage Scrub habitat.

MM 4.2) The project applicant shall comply with the Section 10(a) or Section 7 Implementation Agreement or Section 7 consultation, as approved by the USF&WS.

MM 4.3) The applicant shall restrict vehicle transportation routes and trips to a minimum number. Earth-moving equipment shall be confined to the narrowest feasible corridor during construction. Deposition of waste dirt or rubble in drainages outside the impact area shall be prohibited. Unnecessary maneuvering by earth-moving equipment operators in areas outside the immediate project area shall be prohibited. These measures shall be carried out in accordance with the "construction-related minimization measures" specified in the Shell/MWD HCP.

MM 4.4) Revegetation shall be accomplished on all graded and cut-and-fill areas where structures of improvements are not constructed. Native plant species shall be used in a manner consistent with the provisions of the Shell/MWD HCP and applicable fire safety requirements.

MM 4.5) The potentially adverse effects of night lighting on surrounding open space areas shall be reduced by low elevation lighting poles and by internal silvering of the globe or external opaque reflectors which direct light away from natural areas. The degree to which these measures are utilized shall be dependent upon the distance of the light source from the developed edge. Nighttime lighting of the golf facilities shall be limited to the driving range. Nighttime hours of operation for the driving range shall not exceed 10 p.m. Security night lighting (i.e., parking lots, walkways, etc.), and the golf course clubhouse and restaurant areas are exempt from this requirement.

MM 4.6) Project implementation will result in impacts

to six degraded, low-value, blue-line stream courses. As mitigation for these stream course alterations, the project applicant shall implement the Carbon Canyon Sale Agreement as part of the HCP to assure permanent protection of approximately six miles of high-value vegetated riparian stream courses.

MM 4.7) Prior to the issuance of a grading permit, the applicant shall provide evidence that all necessary permits have been obtained from the State Department of Fish and Game (pursuant to Section 1601-1603 of the Fish and Game Code) and the U.S. Army Corps of Engineers (pursuant to Section 404 of the Clean Water Act) or that no such permits are required, in a manner meeting the approval of the City of Yorba Linda Community Development Department. If a Section 404 Permit from the ACOE is required, a Section 401 Water Quality Certification will also be required by the California Regional Water Quality Control Board, Santa Ana Region.

MM 4.8) One or more of the following measures shall be taken to minimize, to the extent feasible, the significant amounts of sediment resulting from construction into drainage courses in accordance with the provisions of the NPDES SWPP: introduction of rapid-developing, soil-anchoring groundcover, and/ or strategic placement of runoff-retaining structures. These runoff-retaining structures and all remaining temporary construction sediment and debris control facilities shall be removed at the time of project completion.

MM 4.9) Existing natural shrub cover shall be retained wherever feasible to reduce visual impact and the threat of erosion and sedimentation due to accelerated rain runoff.

Current Status Ranking: 3/5

Site Visit

Date: August 28, 2019 Time: 1:30 PM to 2:45 PM

Hamilton's Field Notes

I have identified a total of approximately 42.4 acres of graded slopes around the perimeter of the golf course that have been restored with Coastal Sage Scrub. The scrub is dominated by California Buckwheat (Eriogonum fasciculatum), Black Sage (Salvia mellifera), California Sagebrush (Artemisia californica), Coastal Prickly-Pear (Opuntia littoralis), Coyote Brush (Baccharis pilularis), Mulefat (Baccharis salicifolia), and Laurel Sumac (Malosma laurina).

The Coastal Sage Scrub restoration looks quite good, overall. In this case, we could see the line between the restored habitat—in generally good shape, with few invasive weeds—and the pre-existing scrub to the north, that was thoroughly invaded by weeds. This is the opposite of what I observed at the Tonner Hills site.

Unlike most sites, a fair amount of cactus is included in the mix here. The cactus is still very small, but it's there.

The riparian restoration areas appear to be healthy, with well-developed habitat and few invasive plants. Some of the edges of the golf course are planted with exotics, like Peruvian Pepper (Schinus molle), Fountain Grass (Pennisetum setaceum), and Pampas Grass (Cortaderia selloana).

In contrast to the restoration sites on the golf course, the four off-site restoration areas along Carbon Canyon Road, which cover a total of approximately 15.4 acres, are in very bad shape after the Freeway Complex Fire. Large areas are dominated by mustards (Hirschfeldia incana, Brassica nigra) and Tree Tobacco (Nicotiana *glauca*). Laurel Sumac (*Malosma laurina*) accounts for much of the native cover in these area, along with some Coast Live Oaks (Quercus agrifolia), Southern California Black Walnut (Juglans californica ssp. californica), and Blue Elderberry (Sambucus nigra ssp. caerulea).

Sensitive Species

I heard a Least Bell's Vireo singing from Carbon Canyon Creek, near the eastern-most off-site restoration area.

Significant Events • Freeway Complex Fire (2008)



The Vista Del Verde project prior to construction. Note the Diemer Plant in the center-left of the photo.



The Vista Del Verde prior to construction.



Vista del Verde golf course area. View, facing northwest, from the golf course parking lot, showing Coastal Sage Scrub dominated by California Buckwheat (Eriogonum fasciculatum), Black Sage (Salvia mellifera), California Sagebrush (Artemisia californica), Coyote Brush (Baccharis pilularis), and Laurel Sumac (Malosma laurina). August 28, 2019.



Vista del Verde golf course area. View, facing northwest, from the middle part of the golf course showing riparian scrub dominated by Mulefat (Baccharis salicifolia) and Willows (Salix sp.). Dead mustard is in the foreground and some invasive Pampas Grass (Cortaderia selloana) around the edges. August 28, 2019.



Vista del Verde golf course area. View, facing northwest, from the north-central part of the golf course, showing restored coastal sage scrub dominated by California Buckwheat (Eriogonum fasciculatum) in the foreground and weedy habitat off-site in the background. August 28, 2019.


Vista del Verde golf course area. View, facing west, showing an area of dead mustard (foreground) and Coastal Sage Scrub interspersed with substantial patches of dead mustard (background) on slopes near the western part of the golf course. This area was not graded and restored. Note also the substantial patches of large cactus (Opuntia littoralis) in the pre-existing scrub. August 28, 2019.



Vista del Verde golf course area. View, facing north, from the western part of the golf course parking lot, showing Coastal Sage Scrub on a cut-slope dominated by California Buckwheat (Eriogonum fasciculatum) with some Coastal Prickly-Pear (Opuntia littoralis). August 28, 2019.



Vista del Verde golf course area. View, facing northwest, from the middle part of the golf course showing restored Coastal Sage Scrub in the foreground and riparian woodland in the background. August 28, 2019.



Vista del Verde golf course area. View, facing east-northeast, from the north-central part of the golf course, showing restored Coastal Sage Scrub in the foreground, and at right, and weedy habitat off-site in the background. August 28, 2019.



Vista del Verde golf course area. View, facing west, showing weedy scrub (not restored) located north of the golf course and east of the Diemer Water Treatment Plant and its recently constructed entry road and retaining walls. August 28, 2019.



Vista del Verde golf course area. View, facing north, from the middle of the eastern part of the golf course parking lot, showing restored Coastal Sage Scrub dominated by California Buckwheat (Eriogonum fasciculatum) and California Sagebrush (Artemisia californica). August 28, 2019.



Vista del Verde golf course area. View, facing north, from the middle of the eastern part of the golf course showing restored Riparian Scrub dominated by Mulefat (Baccharis salicifolia) and willows (Salix sp.). August 28, 2019.



Vista del Verde golf course area. View, facing north, from the northeastern corner of the golf course showing the condition of preserved, non-restored, intact Coastal Sage Scrub in a habitat preserve north of the golf course. August 28, 2019.



The Carbon Canyon restoration site prior to restoration. Note the green row crops are citrus groves.



The Carbon Canyon restoration site prior to restoration. The water was turned off to the citrus grove to kill the plants prior to their removal.



The water lines are in and sprinklers working for the Carbon Canyon restoration site.



The restoration site post Freeway Complex Fire (2008).



Eastern-most off-site mitigation area in Carbon Canyon. View, facing east, showing weedy habitat dominated by mustards (Hirschfeldia incana, Brassica nigra) *and Tree Tobacco* (Nicotiana glauca), with native Laurel Sumac (Malosma laurina) in the background. August 28, 2019.



Eastern-most off-site mitigation area in Carbon Canyon. View, facing southeast, showing weedy habitat dominated by mustards (Hirschfeldia incana, Brassica nigra) and Tree Tobacco (Nicotiana glauca), with native Laurel Sumac (Malosma laurina). August 28, 2019.



Eastern-most off-site mitigation area in Carbon Canyon. View, facing northwest, showing and extensive area of dead mustards (Hirschfeldia incana, Brassica nigra), with native Coyote Gourd (Cucurbita foetidissima) in the foreground and a line of native shrubs in the background. August 28, 2019.



Eastern-most off-site mitigation area in Carbon Canyon. View, facing south, showing native Laurel Sumac (Malosma laurina) with mustards (Hirschfeldia incana, Brassica nigra) and Tree Tobacco (Nicotiana glauca) in the foreground. August 28, 2019.



Eastern-most off-site mitigation area in Carbon Canyon. View, facing southeast, showing weedy habitat dominated by mustards (Hirschfeldia incana, Brassica nigra), , Tocalote (Centaurea melitensis), Russian Thistle (Salsola tragus), and Tree Tobacco (Nicotiana glauca). August 28, 2019.



Eastern-most off-site mitigation area in Carbon Canyon. View, facing south, showing native Coyote Brush (Baccharis pilularis) and Laurel Sumac (Malosma laurina) with mustards (Hirschfeldia incana, Brassica nigra) and Tree Tobacco (Nicotiana glauca). August 28, 2019.





Figure 72. The perimeter of the Santiago Canyon Fire of 2007.



Figure 73. The perimeter of the Freeway Complex Fire of 2008.



Figure 74. The perimeter of the Canyon 2 Fire of 2017.

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A short list of resources are listed below that planners, agencies, the public and non-profits may find helpful to learning more about CEQA. These are in addition to the resources referenced in Appendix A and/or throughout this document. The brief descriptions below about the resources and where they may be found. directly.

CEQANET WEB PORTAL

https://ceqanet.opr.ca.gov/

The CEQAnet web portal includes information in a searchable database from the State Clearinghouse (SCH) within the Office of Planning and Research (OPR). Files go back to 1990 on CEQA documents, if submitted to OPR. Relevant information (date, SCH number, Lead Agency, project information) are available in the database.

CALIFORNIA OFFICE NATURAL RESOURCES

http://resources.ca.gov/ceqa/more/faq.html

The Office of Natural Resources offers basic information on CEQA: when it passed, who must comply, what the CEQA guidelines are and how often they are updated.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

https://www.wildlife.ca.gov/Conservation/CEQA/Purpose

The CDFW website also provides basic information on CEQA and the statutory language for mitigation within CEQA is found within §21000 - §21004.

PLANNING AND CONSERVATION LEAGUE (PCL) FOUNDATION

https://www.pcl.org/campaigns/ceqa/ceqa-faqs/

The Planning and Conservation League Foundation and its sister organization PCL were authors of the original CEQA language. Today the League defends CEQA against attacks and rollbacks, and is now spearheading the CEQA 2.0 discussions to revise process issues and future programmatic issues. The Foundation has its CEQA Guide available along with workshops to educate the public on how to participate in CEQA.

2019 CEQA STATUTE & GUIDELINES BOOK (ASSOCIATION OF ENVIRONMENTAL PROFESSIONALS) *https://www.califaep.org/statute_and_guidelines.php*

The Association of Environmental Professionals provides a yearly update to this CEQA book. It covers the relevant legislation and court cases from the previous year and CEQA guideline updates (with notations).

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This Study is available electronically as one way to reduce our impact on the environment.



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