Henry Dong

From: Artist House Creative <anamarie@artisthousecreative.com>
Sent: Monday, December 10, 2018 9:36 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: I Support the Proposal for Marriott Residence Inn at Harbor Bay

Dear Planning Board:

The Marriott Residence Inn offers many benefits to Alameda residents, including generating substantial tax revenue to help with city services, shoreline improvements with bike-ped access, shared public open space, a new restaurant with a bar and a coffee house, and conference space for the community and business park - all with sweeping views of the Bay!

The City has rejected other proposals to redevelop this property and this plan meets all of the zoning and other requirements and is a much better use of the space than more office. I appreciate the developer has listened to the community and has allowed more time for review and feedback.

Please vote to move this plan forward on Monday, December 10th.

Thank you!

Ana Marie Aguas
Creative Director | Artist House Creative | www.artisthousecreative.com
(209) 406-7519 | anamarie@artisthousecreative.com | @anamarieaguas

Henry Dong

From: aimee <akokki@gmail.com>
Sent: Monday, December 10, 2018 1:32 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: NO on Marriott Hotel

Hi,

I'm a resident in the Headlands community on Bay Farm Island. Unfortunately I'm unable to attend the City of Alameda Planning Board Meeting tonight at 7pm. But would like to express my objection to the proposal of building a Marriott Hotel next to the ferry terminal. I hope my voice will be considered.

Thank you,
AT

From: Olli Blackburn <olli.blackburn@gmail.com>
Sent: Sunday, December 09, 2018 7:57 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: Proposed Marriott

Dear Sir/Madam,
I am a homeowner in the Columbia development on Harbor Bay Isle close to the proposed Marriott.

I am against this development as currently designed.

1) The building is too large
    a. It dwarfs everything for miles around and is an out of character eyesore on the skyline.
    b. It does not blend with any of the existing residential, leisure and business development that has been approved for the last few decades on Harbor Isle.
    c. The existing Hampton Inn on Harbor Bay Parkway is a much more appropriate scale for such a business.
2) There is not enough parking to also provide for ferry users
    a. The existing ferry lot is already at capacity.
    b. We recently had to institute a residents parking system in several of the nearby developments, including Columbia, due to the demand for ferry parking.
    c. An additional 120 spaces will be consumed by ferry riders and not provide space for hotel users.
    d. Allowing ferry users to park in the 120 spaces will defeat the systems that were put in place alongside the residents parking to encourage less driving to the ferry.
3) I'm also concerned at the inadequate traffic study
    a. There are two primary routes to this property. To only study one and dismiss the impacts of traffic on the other is unacceptable.
    b. Without a complete traffic study I do not see how it is possible to reach an informed decision.

I urge you to deny the Marriott application.

Yours sincerely,
Olli Blackburn

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 8:41 AM
To: Henry Dong
Subject: FW: Environmental Report, written, by Attorney Michael Lozeau.

-----Original Message-----
From: LARA WEISIGER
Sent: Monday, December 10, 2018 8:06 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: Environmental Report, written, by Attorney Michael Lozeau.

-----Original Message-----
From: AOL [mailto:vachang@aol.com]
Sent: Sunday, December 09, 2018 1:58 PM
To: LARA WEISIGER <LWEISIGER@alamedaca.gov>; cchen@alamedcityattorney.org; ANDREW THOMAS <ATHOMAS@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>
Cc: sue13dives@comcast.net; Wendi Poulson <wlp1272@yahoo.com>; Mark Cachiariehl <cachiariedl@yahoo.com>
Subject: Environmental Report, written, by Attorney Michael Lozeau.

Members of the Planning Board

Please delay the Planning Board decision on the Marriott project.

Surely the Planning Board will want time to research the numerous and complex issues raised in the Environmental Report, written by Attorney Michael Lozeau. The Planning Board should not make a decision on the Marriott project which has such serious impact on the community without being thoroughly apprised of the legal environmental requirements.
Making a decision without thoroughly researching the complex environmental issues has legal ramifications.

The delay will allow all concerned parties to be adequately informed of the serious and far reaching environmental impact of the Marriott project.

Thank you for your consideration and attention to this matter.

Velvet Chang
President Bay Colony HOA

Sent from my iPhone

Henry Dong

From: Greg Cheng <greg.cheng@gmail.com>
Sent: Saturday, December 08, 2018 11:02 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Asheshh Saheba; dmitche@alamedaca.gov; Sandy Sullivan; ateagie@alamedaca.gov
Subject: Proposed Hotel on Bay Farm

Dear Planning Board,
Because I cannot make the 12/10 meeting, I'd like to voice my strong objection to your approval of a hotel on Bay Farm.

We moved to Bay Farm 7 years ago because we were drawn to the isolation and tranquility of bay farm island. I was captivated by the peaceful nature of this hidden gem along the 880 corridor.

I was born and raised in the Bay Area but never knew of this area. My wife and I looked at over 100 properties in dozens of Bay Area cities and decided on bay farm.

To us, Bay Farm is different than the main island because it is primarily made up of families, less crime, and less reasons for non-residents to be here. It feels safe and secure for our kids. You regularly see the same people walking their dogs, riding bikes and jogging. We have our fair share of issues but that's to be expected in any semi-urban setting.

Putting up this hotel right in the middle of our little area destroys the ambiance and feel of this small safe island. First, I do believe it will impact home values. You rarely see these sorts of hotels (lower end) within higher end neighborhoods anywhere.

Second, hotels will bring crime. That's a fact. I know for a fact kids as young as second grade who walk home alone from bay farm elementary a few blocks away from the hotel. With this hotel, this will now become an issue. It is undisputed that hotels in this area attract transients, prostitution and other unsavory activities. A lower end hotel will attract its natural constituents. Every hotel within a 10 mile radius of Oakland airport is a haven of criminal activity. This isn't conjecture but facts.

There will be parties, drug/alcohol consumption and increase in DUIs through our peaceful neighborhoods. That's not okay. We rarely see police on bay farm and we don't anticipate a stronger police presence after the hotel is build.

Moreover, I ride the ferry to sf everyday. We are constantly struggling with parking issues and our cars being broken into. Again, putting this hotel will compound these issue and reduce our daily enjoyment of our home.

All in all, this hotel is "too close to home". I understand the limited economic benefits to the city, but that has to balanced by the desire of the residents who actually live here, pay taxes and vote.

Who is going to police the 25 mph speed limit while our children are walking and biking home down the street at bay farm? Our police force is already stretched thin enough.

There are other places Marriott can build but this should not be one of them. This one hotel will permanently alter the feel of bay farm island. Please do not approve this.

Thanks for your consideration.

Greg Cheng
Resident of the Headlands

Sent from my iPhone

Henry Dong

From: Eddie Chin <eddiec8@gmail.com>
Sent: Monday, December 10, 2018 2:09 PM
To: Henry Dong
Cc: Ronald Curtis; Jeffrey Cavanaugh; David Mitchell; Sandy Sullivan; Alan Teague; LARA WEISIGER; NANCY McPeak; Asheshh Saheba
Subject: oppose Marriot Residence Hotel

Dear Planning Board Members,
We are asking that you vote no on the proposed Marriot Residence Hotel.
5 stories is too large and oversized for our bay front.
This will be the tallest building in the Ron Cowan Parkway.
Out of scale and inappropriate for the area.

The developer states that this will bring in millions in taxes with the TOT- transient occupancy tax.
This proposed hotel is not a resort destination! It will not bring in vacationing customers. This is a business park.
This will just take business customers away from the existing Hampton Inn and the proposed Home 2 Suites and Hilton Gardens.
Three hotels should be more than enough.
A 4th hotel will not net more tax gains for Alameda. It will just take away from the other 3 hotels.

Please vote No

Eddie and Sylvia Chin
Alameda resident
EddieC8@Gmail.com

Henry Dong

From: Arielle's Gmail <arielletragerad@gmail.com>
Sent: Monday, December 10, 2018 9:10 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: Vote YES for Marriott Residence Inn

Dear Planning Board:

Tonight you have an opportunity to deliver a quality, modern hotel and restaurant to Alameda's waterfront at Harbor Bay. We know the proposed plan will bring significant revenue to the city, provide shoreline restoration, open space, and amenities to the public, create jobs, and fill a void in high-end lodging on the island.

The proposal meets all of the zoning requirements, as well as those of all resource agencies. Time is due to create a quality project on this long-languishing property.

Please vote YES tonight for the Marriott Residence Inn at Harbor Bay.

Thank you,
Arielle Crenshaw

Henry Dong

From: Albert <albertdaodds@yahoo.com>
Sent: Monday, December 10, 2018 1:10 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: NO on Marriott hotel in Alameda Bayfarm

Dear City of Alameda Planning Board!
Please DO NOT allow the building of the hotel! It’s a bad thing for families and kids in Bayfarm!
Your sincerely,

Albert Dao

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:12 AM
To: Henry Dong
Subject: FW: Hotel Next to Bay Farm Ferry Terminal

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: DHL ON DEMAND DELIVERY [mailto:JDARRACQ@msn.com]
Sent: Monday, December 10, 2018 5:11 PM
To: ANDREW THOMAS <ATHOMAS@alamedaca.gov>; Henry Dong <HDong@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>; dburton@alamedaca.gov; Ronald Curtis <rcurtis@alamedaca.gov>; Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>; Asheshh Saheba <asaheba@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>
Subject: Hotel Next to Bay Farm Ferry Terminal

Dear City of Alameda Planning Board,

I am very pro growth for the city of Alameda. However this growth can not be arbitary and with out common sense. First, the is no need for a Traffic Study for the various streets in the immediate area. The roads and the current residences would be impacted. The Ferry itself, which was a smart necessity, has proven to impact the local area. The addition of a five story hotel would add continued vehicle pressure on the roads and would most likely impact the current people that reside in the area.

Approximately 1 and 1/2 miles to the south, near the Raider Practise Complex, the is a Hotel already established. It is a two level complex and is in the appropreiate location for that business. In fact the is further space available for new hotel complexes in the immediate area. There is no need to add a new complex that would pressure additional hotel building between the two, current and proposed. This new 5 story hotel would impact the current area and shorline without need.

There is a question of impact to prperty values that should be considered. A Big, tall 5 story building is can not be attractive, or added to the community. It would just creat continue vehicle pressure, increased noise, and population impact to an area that is already beginning to the wear and tear of human inroads.

Joe Darracq
8 Salmon Road
Alameda, Ca
510-522-2349

Henry Dong

From:	Donna Fletcher <ohprimadonna@gmail.com>
Sent:	Sunday, December 09, 2018 11:47 PM
To:	ANDREW THOMAS; Celena Chen; Sandy Sullivan; LARA WEISIGER; NANCY McPeak; Henry Dong
Subject:	Lozeau Drury letter of December 7, 2018 - Marriott Residence Inn

Dear board president and city staff,

Over the weekend I was copied on the letter to the planning board and planning staff from environmental law attorneys Lozeau and Drury regarding the Marriott Residence Inn project being considered on tomorrow night's agenda.

Lozeau Drury is a highly reputable firm representing non-profit environmental groups, labor organizations, and neighborhood associations. In their 23 page letter and subsequent 200+ page document emailed late Friday afternoon, they called into question the adequacy and completeness of the EIR that city staff is referencing for decisions regarding approval of the subject project.

Given that there are many legal issues raised in this document, that the planning board, city staff, and the public have not had sufficient time to fully assess the information, and that the project has strong opposition, I am requesting that the city strongly consider rescheduling item 7-B in order to allow for a proper vetting of the issues prior to any vote for approval.

Thank you for your consideration.

Sincerely,
Donna Toutjian Fletcher
112 Centre Court
Alameda

Henry Dong

From: Paul Foreman <ps4man@comcast.net>
Sent: Sunday, December 09, 2018 5:50 PM
To: ANDREW THOMAS; DEBBIE POTTER; Manager Manager; Henry Dong; Celena Chen; Alan Teague; Asheshh Saheba; David Burton; David Mitchell; Jeffrey Cavanaugh; NANCY McPeak; Ronald Curtis; Sandy Sullivan
Cc: LARA WEISIGER
Subject: Planning Board Agenda Item 7-B-Harbor Bay Hotel

Dear Planning Board Members, City Manager Rudat, and City Development Staff:

The December 7, 2018 letter filed by legal counsel for the Laborers International Union of North America challenges the legitimacy of approving the above captioned development without doing a new or amended EIR. I have no specific expertise on the issues raised in this letter. However, it is patently obvious that this letter and attachments present a significant threat of litigation against the City by the Union or by other groups that have voiced their opposition to the project.

As a taxpayer, I do not want to see our already financially stressed City burdened by expensive litigation. Since the letter was just filed on Friday, I find it very unlikely that the City Attorney has had time to thoroughly review the issues raised in this voluminous document and to consult experts to review the opinions of Dr. Smallwood, Mr. Smith and Mr. Offermann. I strongly urge the Planning Board to postpone further consideration of this matter until a written opinion concerning the issues framed in the letter has been provided to the Board by the City Attorney.

Sincerely,

Paul S Foreman

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 8:41 AM
To: Henry Dong
Subject: FW: Marriott Residence Hotel in the Harbor Bay Business Park

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From: LARA WEISIGER
Sent: Monday, December 10, 2018 8:10 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: Marriott Residence Hotel in the Harbor Bay Business Park

From: Patricia Gannon [mailto:pg3187@gmail.com]
Sent: Friday, December 07, 2018 12:13 PM
To: Asheshh Saheba <asaheba@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Ronald Curtis <rcurtis@alamedaca.gov>; dburton@alamedaca.gov; Sandy Sullivan <SSullivan@alamedaca.gov>; Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>
Subject: Marriott Residence Hotel in the Harbor Bay Business Park

Honorable Sandy Sullivan, President
Alameda Planning Board
Honorable members of the Planning Board:

I am writing to express my strong opposition to this proposal. The hotel is totally inappropriate for this piece of property. It is way out of scale for anything else in the neighborhood and dwarfs the nearby office buildings. It will destroy the tranquility of the Shoreline Park and Trail which all Alamedans love and use extensively; and it will put our wildlife in serious jeopardy

The developer's traffic study is flawed and does not even discuss traffic on Island Drive or within the Bay Farm neighborhoods; it only mentions Harbor Bay Parkway!

The hotel will cause 24/7 activity and traffic coming and going, bringing excessive noise to our currently quiet community. It will also bring crime; the developer admits to the need for 24 hour security. And realtors point out that the property value of homes near mediocre modular hotels goes down. Would you want to live near a 172 room hotel with all the accompanying noise, traffic and crime? I think not!

In summary, people moved to Bay Farm Island because it is a charming, quiet suburban neighborhood. A massive, 172 room hotel is totally out of place. Please find a more appropriate piece of property for this hotel! Don't build a wall on the Bay!!.

Thank you.

Patricia M. Gannon
1019 Tobago Lane 94502
pg3187@gmail.com

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 8:41 AM
To: Henry Dong
Subject: FW: Planning Board Meeting - December 10th

From: LARA WEISIGER
Sent: Monday, December 10, 2018 8:06 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: Planning Board Meeting - December 10th

From: Patricia Gannon [mailto:pg3187@gmail.com]
Sent: Sunday, December 09, 2018 6:49 PM
To: ANDREW THOMAS <ATHOMAS@alamedaca.gov>; Celena Chen <cchen@alamedacityattorney.org>; Sandy Sullivan <SSullivan@alamedaca.gov>; LARA WEISIGER <LWEISIGER@alamedaca.gov>
Subject: Planning Board Meeting - December 10th

Andrew Thomas, Planning Manager
C Chen, City Attorney
Sandy Sulllivan, Plannng Board President
Lara Weisiger, City Clerk

Dear Mr. Thomas:

Attorney Michael Loeau has submitted a 250 page extremely complicated environmental report on the impact of the proposed Marriott Hotel next to the Harbor Bay Ferry terminal. There is no way that the Planning staff or the Planning Board can read and digest this report by tomorrow evening. Nor will the Alameda residents be able to read this report thoroughly. This is an important document which needs to be studied thoroughly by City staff, members of the Planning Board and Alameda citizens.

I strongly urge you to postpone tomorrow night's for this purpose.

Thank you.

Patricia M. Gannon
1019 Tobago Lane 94502
pg3187@gmail.com

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:24 AM
To: Henry Dong
Subject: FW: Please do not approve 5 Story Hotel

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

-----Original Message-----
From: joanne.gosling9@gmail.com [mailto:joanne.gosling9@gmail.com]
Sent: Friday, December 07, 2018 10:05 PM
To: NANCY McPeak <NMcPeak@alamedaca.gov>
Subject: Please do not approve 5 Story Hotel

1. 5 story bldg is wrong for the character of Alameda. Totally inappropriate for the surrounding area and, in fact, anywhere in our town.
2. Activity and traffic are disruptive to community.
3. Three star hotel is not the quality we want in our town.

Please forward my objection to this project to all planning board members.
Thank you
Joanne Gosling

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:15 AM
To: Henry Dong
Subject: FW: Proposed Marriott Hotel - VOTE YES!

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Brock Grunt [mailto:bgrunt@mcguireandhester.com]
Sent: Monday, December 10, 2018 12:35 PM
To: NANCY McPeak <NMcPeak@alamedaca.gov>
Subject: Proposed Marriott Hotel - VOTE YES!

Dear Planning Board Members,

I am writing to voice support for the proposed Marriott hotel that is on the Planning Board meeting agenda for this evening.

I am a 25 year resident of Alameda and have recently been a member of both the Mayor's Economic Development Advisory Panel and the City's Economic Development Strategic Task Force. Coincidentally, I also work immediately next door to this proposed hotel project for McGuire and Hester in our newly constructed office building. In full disclosure, McGuire and Hester does have investment interest in the proposed hotel development property, but we have no interest as the actual developer. Some will feel that our company's interest to sell this property would be the sole reason for my support of the hotel project, but I wish to express the real reasons why I as a caring city resident, believe this project makes good sense for this site.

As a member of the Economic Development Strategic Task Force, which developed the Economic Development Strategic Plan (EDSP) for our City, it became clear early on during the many meetings we had, that hotels were one of the best sources of tax revenue, because hotels generate not just sales tax, but the City also receives an additional Transient Occupancy Tax. This was coupled with the identified demand for more and better hotel options in Alameda. That is why you will find Hospitality listed as one of the 10 targeted areas to foster economic growth in our City as identified in the EDSP. This was probably the least debated idea that we included in the EDSP due to its undisputed net benefits to the City.

Regarding a hotel for this specific Harbor Bay site, I believe it is an ideal location that is greatly enhanced by the shared ferry parking requirement incorporated into the permit. This is a very creative way to acquire more, much needed, ferry parking and have it paid for by a private entity. Since ferry parking is a day-time need and hotel parking is a night-time need, this makes great utilization of the parking lot. The location has many benefits in its proximity to HB businesses and the airport, yet will also well serve the residential community of Alameda with a hotel that is more upscale and with a better bay front location than anything else in town. My feeling is that a hotel in this location provides a nice zoning segue between the HB business park and the residential area. A hotel, restaurant and coffee shop in this location also provides a business that utilizes the waterfront location in a manner that all can enjoy as patrons of the businesses, rather than just an office that is only open to employees. And the idea of a coffee shop must be appealing to the hundreds of ferry riders I see lined up every morning, not to mention the hundreds more path walkers that pass each day.

As far as the height of the proposed building, I am very much in favor the greater height to achieve the square footage vs. horizontal sprawl. Please remember that we at McGuire and Hester also has a view corridor at stake, as this property is located directly between our building and the most desirable view towards San Francisco and the bridges. This is why height appeals more than width, and the loss of some sky view will be more than made up by retaining greater horizon views, since a two story building will block our horizon view just as much as a 5 story building. This point seems to be lost by many of the arguments against the building height. The fear that this sets a new waterfront development height precedent or that this area will become Waikiki, seems unfounded, as this is the only buildable parcel in this immediate area. Also, the approach to this site from any direction will allow a taller building to be seen from a distance first before the height will be immediately upon the viewer, thus lessening the impact of the height.

It is understandable that the residents that live on the lagoon immediately to the east of this proposed hotel are not happy, just as they were not happy when McGuire and Hester proposed to build our new office next door a few years ago. Admittedly, this as well as any development on this property will obstruct their view. But it is only a matter of short time before development will come and their view will change, thus the choice for this hotel proposal should not be about whether views will be altered, but whether this is the best use for of the property to benefit the entire City. My request is that if approved, the Planning Board and Planning Department insist on a final design, finish elements and materials that will stand the test of time as this should be recognized as a very special waterfront parcel in our City.

Thank you,

Brock Grunt | Executive V.P. Operations
McGuire and Hester
Office 510.632.7676
Cell 510.715.1093
Alameda–Oakland–Sacramento

Henry Dong

From: Rick Harkins <rickharkins@comcast.net>
Sent: Friday, December 07, 2018 4:08 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: RE: Harbor Bay Residence Inn by Marriott

Dear Planning Board Members:

Wedo not support the proposal by Marriott to build a hotel and restaurant along the water in the Harbor Bay Business Park.

We have been a residents of Harbor Bay for 32 years and worked in the Harbor Bay Business Park for the first 6 years of that time period. I am an avid runner and cyclist and have enjoyed the surrounding bike path for many years.
The size and design of the proposed hotel is much too large and inappropriate for Harbor Bay's residential neighborhood. There are additional safety and traffic concerns that will negatively impact the surrounding community. But the biggest problem is that a 5 story hotel simply does not fit in this pristine location among all the homes.
There is all kinds of space in the Business Park for a monster hotel, build it there.

We urge the Planning Board to oppose and deny this proposal.

Thank you!

Best Regards,
Rick and Judy Harkins

2819 Sea View Parkway
Alameda CA 94502

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 8:40 AM
To: Henry Dong
Subject: FW: Opposition to Proposed Marriott Hotel

From: LARA WEISIGER
Sent: Monday, December 10, 2018 8:05 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: Opposition to Proposed Marriott Hotel

From: Julie Hong [mailto:julie_hong@yahoo.com]
Sent: Sunday, December 09, 2018 9:12 PM
To: LARA WEISIGER <LWEISIGER@alamedaca.gov>
Subject: Opposition to Proposed Marriott Hotel

Dear Ms. Weisiger,

I'm writing to express my opposition to the development of a new Marriott Hotel on Bay Farm Island. The hotel is too big, doesn't fit the neighborhood and will increase traffic in an already busy area. We already have a number of hotels on Bay Farm, with the Hampton Inn right in the same vicinity as the proposed Marriott.

Please feel free to contact me if you have any questions.

Thanks,
Julie Hong
Resident of The Headlands on Bay Farm

Letter to City and Planning Board

George Humphreys

This is to voice my opposition to the proposed five-story Marriott Hotel south of the Harbor Bay ferry terminal. The building is much too tall and bulky and is incompatible with the nearby residential neighborhood. Homeowners in the "Freeport" development have already experienced adverse impacts on property values.

The front of the hotel is too close (35 ft) to the bayside trail. Resolution 1203 for the Harbor Bay Business Park contains a Table 44 showing a 100 foot setback from the Shoreline Park for "Office Research up to 100 feet in height". There is no listing for hotels, which are only mentioned as fronting Bay Edge Road where the V.F., Stacey and Witbeck and McGuire & Hester offices were built.

This site was originally designated as a park, but was not purchased by the City. The site is on fill material subject to liquefaction during earthquakes. The nearby sea wall and shoreline opposite the "Headlands" was badly damaged by an "El Nino" storm about a decade ago and cost the City millions to repair. The fiscal benefits of hotel tax revenues may prove illusory and be dissapated

Stormwave damage from El Nino storms would be exacerbated by king tides (during December and January) and projected sea level rises from global warming. The last major earthquake on the Hayward Fault was in the late 1800's. These occur about every 140 years. The site should be left as open parkland, perhaps incorporating wetlands, as a buffer protecting the nearby residential neighborhood.

There currently are at least four proposed or rumored hotel developments in Alameda. Planners and the City Council should consider these as a totality and determine which location(s) are most appropriate for the City and whether all are needed. Right now these proposals come up segentially and the best locations don't necessarily get first consideration.

Thank you,

George Humphreys

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:17 AM
To: Henry Dong
Subject: FW: I Support the Proposal for Marriott Residence Inn at Harbor Bay

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: ANDREW THOMAS
Sent: Monday, December 10, 2018 6:38 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>
Subject: Fwd: I Support the Proposal for Marriott Residence Inn at Harbor Bay

Sent from my iPhone

Begin forwarded message:

> **From:** Kristoffer Koster <kkoster79@gmail.com>
> **Date:** December 9, 2018 at 8:56:47 PM PST
> **To:** Andrew Thomas <athomas@alamedaca.gov>, <+hdong@alamedaca.gov>, <+nmcpeak@alamedaca.gov>, <+becca@voxpopulipr.net>
> **Subject: I Support the Proposal for Marriott Residence Inn at Harbor Bay**
>
> Dear Planning Board:
>
> The Marriott Residence Inn offers many benefits to Alameda residents, including generating substantial tax revenue to help with city services, shoreline improvements with bike-ped access, shared public open space, a new restaurant with a bar and a coffee house, and conference space for the community and business park - all with sweeping views of the Bay!
>
> The City has rejected other proposals to redevelop this property and this plan meets all of the zoning and other requirements and is a much better use of the space than more office. I appreciate the developer has listened to the community and has allowed more time for review and feedback.
>
> Please vote to move this plan forward on Monday, December 10th.
>
> Thank you!

Kristoffer Koster
Previous President of the Alameda Planning Board

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:06 AM
To: Henry Dong
Subject: FW: Vote NO on Hotel at 2900 Harbor Bay Parkway

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Ivana Krajcinovic [mailto:unionivana@yahoo.com]
Sent: Saturday, December 08, 2018 10:38 AM
To: Ronald Curtis <rcurtis@alamedaca.gov>; Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>; LARA WEISIGER <LWEISIGER@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>; Asheshh Saheba <asaheba@alamedaca.gov>
Subject: Vote NO on Hotel at 2900 Harbor Bay Parkway

Dear Alameda Planning Board Members,

Please vote against the proposed Marriott Residence Hotel at 2900 Harbor Bay Parkway on December 10, 2018. The proposed hotel is too large for a bayfront parcel directly on the Shoreline Park/Bay Trail. There are better locations for a business hotel and there are other business hotels coming to the area.

As our Planning Board, I hope you reject this proposal since it doesn't use the land wisely and will have a long term impact on the shoreline. The hotel's developer has made false promises about providing amenities for the community (meeting rooms, restaurant) and cannot be trusted. The hotel also doesn't have the right amount of setback from the Bay Trail.

Please vote NO on this project.

Thank you,

Ivana Krajcinovic
949 Buena Vista Ave., Alameda

Henry Dong

From: T Krysiak <tsitjk@gmail.com>
Sent: Saturday, December 08, 2018 1:02 PM
To: Henry Dong
Subject: Fwd: The Marriott Esplanade Hotel Project. Vote No.

Hi Henry,

Thanks for attending the Nov 28 HBI Community Center meeting about the Marriott Hotel Project. I forgot to include you on this email to the planning commission dated Dec 6 so here it is. Thank you. Tom Krysiak

Begin forwarded message:

From: T Krysiak <tsitjk@gmail.com>
Date: December 6, 2018 at 9:53:06 PM PST
To: ssullivan@alamedaca.gov, rcurtis@alamedaca.gov, D Mitchell <dmitchell@alamedaca.gov>, J Cavanaugh <jcavanaugh@alamedaca.gov>, Alan Teague <ateague@alamedaca.gov>, A Saheba <asaheba@alamedaca.gov>
Cc: Lara Weisiger <lweisiger@alamedaca.gov>, NANCY McPeak <NMcPeak@alamedaca.gov>
Subject: The Marriott Esplanade Hotel Project. Vote No.

Dear Members of the Alameda Planning Commission:

I was one of a hundred concerned Harbor Bay Isle home owners who attended both the Bob Leach West River presentation on Nov 28 and THE HBI HOA Master Board meeting of Dec 5.

Our neighborhood strongly believes that the proposed five story structure will create unwanted crime and additional unsafe traffic congestion. This Marriott project will deflate the property values of our fine neighborhood and severely obstruct the Bay's panoramic vistas of the residents .

Don’t let this developer build this huge, low end hotel project on this site. The waterfront pathway and the bay views must be fiercely defended for your Harbor Bay constituents. You are respectfully encouraged to uphold our community’s demands for safety, traffic minimization and protection of precious open space and Bay views.

Vote NO on the Esplanade Marriott Project. Thank you.

Sincerely,

Tom Krysiak
Sweet Road

Henry Dong

From: Emma Kung <esheely@mail.com>
Sent: Monday, December 10, 2018 12:33 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: Vote NO for Marriott Residence Inn

Dear Planning Board,

I plan to be at the meeting tonight with my three young children, but just in case an emergency happens, I would like to register my opposition to this hotel now.

Please vote NO tonight for the Marriott Residence Inn at Harbor Bay.

Thank you,

Emma Kung
12 Britt Ct.
Alameda, CA 94502
650-787-3868

Sent from my iPad

Henry Dong

From: Megan Lam <mchenlam168@gmail.com>
Sent: Monday, December 10, 2018 11:42 AM
To: Henry Dong; dburton@alamedaca.gov; NANCY McPeak; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; ateuge@alamedaca.gov; athomas@alameda.bov
Subject: We don't want A MASSIVE HOTEL NEXT DOOR!

Dear All,
We don't want a MASSIVE HOTEL NEXT DOOR.
Too much traffic at this area.

Regards
Megan Lam

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 8:41 AM
To: Henry Dong
Subject: FW: Please delay Marriot Residence Inn Vote on Monday Dec. 10

From: LARA WEISIGER
Sent: Monday, December 10, 2018 8:05 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: Please delay Marriot Residence Inn Vote on Monday Dec. 10

From: Patricia Lamborn [mailto:patricia.lamborn@aol.com]
Sent: Sunday, December 09, 2018 9:24 PM
To: Sandy Sullivan <SSullivan@alamedaca.gov>; LARA WEISIGER <LWEISIGER@alamedaca.gov>; ANDREW THOMAS <ATHOMAS@alamedaca.gov>; Celena Chen <cchen@alamedacityattorney.org>
Subject: Please delay Marriot Residence Inn Vote on Monday Dec. 10

Dear Alameda Planning Board President Sullivan and Staff,

The Marriot Residence Inn project at 2900 Harbor Bay Parkway has generated numerous exhibits and letters from the public. I believe the Planning Board Members and staff need to look in depth at the Environmental Report, written by Attorney Michael Lozeau. The Planning Board should not make a decision on the Marriott project which has such serious impact on the environment without being thoroughly apprised of the legal environmental requirements and legal implications.

I am also concerned that the letter from WETA was buried in the general correspondence. The letter refers to an attachment- no attachment was included in the correspondence that I can find. The promise by the hotel developer to provide ferry commuter parking spaces is touted as a communitiy benefit. It is a serious default not to have all the information from WETA before Monday's meeting.

Please delay the vote until you can conclude closer examination of all of these documents, thereby giving the Planning Board members and the public time to examine the information and issues. It would be especially disturbing to rush to a vote on a project when so many in the community are expressing serious concerns.

Sincerely,

Patricia Lamborn
patricia.lamborn@aol.com

Henry Dong

From: Jonathan Lee <leejonathan909@gmail.com>
Sent: Sunday, December 09, 2018 6:03 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: Fwd: Please do NOT approve building the Marriott on Bay Farm!

I have attended many of the meetings on this proposal and heard many arguments against building this hotel. The arguments I heard were supported by facts from experienced law enforcement, real estate and law professionals. I have not heard the same level of arguments from the developer or the City in favor of the hotel. Residents at every meeting I have attended are overwhelmingly opposed to building this hotel.

The developer presents information in a way that makes it appear as a benefit to the community and the City (by supplying revenue). He says the hotel is a luxury hotel when it's not. He said BCDC approved it when they haven't. He said the view will be better than four two story office buildings. A five story hotel with lights on all night and the size of city hall is not a better view. There have been many misleading statements made to the community. Both the developer and the city appear to be rushing this under the community radar get it approved quickly thus preventing the community from understanding all the facts and potentially blocking it.

The hotel is to big, does not fit with the other structures along the shoreline and will destroy the tranquility of the neighborhoods that make our properties so valuable.

I urge the City NOT approve building this hotel.

Sincerely a concerned citizen of the great city of Alameda

Jon Lee

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:25 AM
To: Henry Dong
Subject: FW: Vote NO on Marriott Residence Hotel 2900 Harbor Bay Parkway.

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Oscar Lee [mailto:oscarleeptsa@gmail.com]
Sent: Friday, December 07, 2018 3:54 PM
To: LARA WEISIGER <LWEISIGER@alamedaca.gov>; Ronald Curtis <rcurtis@alamedaca.gov>; Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>; Asheshh Saheba <asaheba@alamedaca.gov>
Subject: Vote NO on Marriott Residence Hotel 2900 Harbor Bay Parkway.

Dear Alameda Planning Board Members,

I am writing to ask that you vote no on the Proposed Marriot Residence Hotel at 2900 Harbor Bay Parkway on Monday Dec. 10th 2018. The proposed hotel at 5 stories, 172 rooms , and 275 parking spaces, is too large for that location- a bayfront parcel, directly on the Shoreline Park/Bay Trail. It is a business hotel and will not afford amenities to the public. It will endanger the wildlife, particuarly migratory shorebirds. There are other locations for business hotels in the Harbor Bay Business Park. There are two hotels coming to the Business Park to serve the needs of business travelers. Home 2 Suites next to the Hampton Inn is under construction and a Hilton Garden Inn is proposed in an extremely fitting location- near business offices, at Ron Cowan Parkway.

This is the wrong use/ at an oversized scale for Bay Front Land . As planners you have a responsiblity to the community to use land wisely and consider the long term impact of your decisions. The developer has misrepresented the benefits this developement brings in his presentations at packed community meetings where residents have questioned him and voiced their opposition to the placement of a large scale, low end, Marriot Inn at this location.

Developer False Promises:

- The developer has stated his development is endorsed or approved by BCDC-- not true to our knowledge and we have asked.
- The developer states there will be a restaurant/cafe. The Marriott is not committed to operating a restaurant- there is no guarantee they will find an operator. It is highly unlikely they will.
- The developer stated there would be meeting rooms-- but admitted publicly they will be too small for public gatherings such as weddings/events
- There is NO GUARANTEE the parking will go to ferry commuters. The Transportation study is flawed and understates the # of spaces needed for hotel guests.
- The developer describes tens of millions of dollars in taxes to the City -- The Transient Occupancy Tax- TOT- is only paid when rooms are occupied. And guests staying over 30 days do not pay them. This is a Residence Inn-- that is a possiblity.
- VF Outdoors- the business occupying the space in front of this parcel is moving to Denver. Is there less demand then for Business Hotels? The City Planner at public meetings could not quantify or justify building more busineess hotels. Vacant hotel rooms do not generate taxes.
- The developer is clear in public meetings that he cannot scale down the project either in # of rooms, stories, and make the profit desired. Therefore the setback from the Bay Trail/Shoreline Park is currently at 35 feet- to fit the hotel and parking. That is a violation of Planning Baord Resolution 1203. Setbacks should be between 63 and 100 feet for buildings of this size.

Please vote no on this hotel project. The promises made are false- the damage to the shoreline will be permanent. There is a better place for these hotels- there are better uses for this land.

Sincerely,

Oscar Lee
Alameda Resident

Sent from my iPhone

Henry Dong

From: filolee <filo.lee@gmail.com>
Sent: Saturday, December 08, 2018 3:46 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: Proposed hotel at 2900 Harbor Bay Parkway, Alameda

Alameda City Planning Department,

My family and I have been residents of the Columbia Homeowners Association (208 homes which are directly north across Mecartney Road at the ferry terminal parking lot exit) for the past 23 years. We have used the ferry for commuting to SF and have seen the significant increase in ridership/traffic since 1995. After the BART strike, the nearby adjacent housing developments have been impacted by the weekday commuter deluge of cars rushing through our areas.

With this proposed hotel, there will undoubtedly be more traffic with guests, employees, service deliveries, etc. some of which will drive down Mecartney, Aughinbaugh, or Bay Edge Road. We are gravely concerned that with the additional traffic, it will severely alter our quiet residential area that is currently laden with lovely paths, bikers, and kids enjoying the parks and streets.

While we understand that the area is zoned to allow this development, we are vehemently opposed to this without significant traffic studies and environmental impact to those residential developments such as Columbia, Headlands, Freeport, Bay Colony, and Cantamar which total 540 homes. Even though the Harbor Bay Business Park is not fully developed and full, the addition of this type of use in proximity to all these homes must propose some additional security, noise, and traffic issues. The business park is usually busy during work days, but hotels can be busy 24/7 so realistically, the hotel will impact only those areas surrounding the building which are only HOMES, not offices.

Have studies been made showing the traffic flow exiting Mecartney/Adelphian and Bay Edge Road/Ratto Road? Is it presumptuous that ALL the hotel traffic will only be going southeast on Harbor Bay Parkway toward the airport? It makes sense that there will be additional traffic loading onto the residential areas as guests may travel to other parts of Alameda for dining, shopping, etc. With the recent hotel strikes, will we be faced with potential banging drums and horns from strikers too?? Since the parking lot will allow ferry riders, I am sure more current riders will be rushing through to get to those NEW spaces that riders sorely lacked. More cars parked out there means more potential car thefts, loitering etc. if there will be public restaurants and cafe in house. What type of development would be more in keeping with this neighborhood? The Senior housing would have gotten approved if we had a choice against this hotel.

The Planning department should be requesting the developer to also prepare additional site perspectives (and/or site cross sections) of the building from the Freeport side of the lagoon with landscaping to illustrate realistically what building will look like from the homes, so residents can better understand the scale. Also a view from the ferry parking lot would be helpful.

We ask that the City to delay in passing this hotel development until they investigate the overall impact to the area before allowing the approval of this development.

Thank you,
Tony Lee

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 3:23 PM
To: Henry Dong
Subject: Fwd: I am AGAINST the proposal for a Marriott Residence Inn at Harbor Bay

Sent from my iPhone

Begin forwarded message:

> **From:** LARA WEISIGER <LWEISIGER@alamedaca.gov>
> **Date:** December 10, 2018 at 3:10:29 PM PST
> **To:** ERIN GARCIA <EGARCIA@alamedaca.gov>
> **Subject: FW: I am AGAINST the proposal for a Marriott Residence Inn at Harbor Bay**
>
> **From:** E Lehrer [mailto:erlconsult@gmail.com]
> **Sent:** Monday, December 10, 2018 1:51 PM
> **To:** LARA WEISIGER <LWEISIGER@alamedaca.gov>
> **Subject:** Fwd: I am AGAINST the proposal for a Marriott Residence Inn at Harbor Bay
>
> Dear Members of the Alameda Planning Board ,
> I have attended two of the public meetings with developer presentations and listened to the pros and cons and looked at the traffic study. I live in Harbor Bay. I am against the project primarily for the following reasons :
>
> ? The 5 story building is out of scale with the other buildings in nearby commercial and residential areas.
> ? A previous agreement with the residents in the area to build two-story buildings at this location is not being honored.
>
> Additionally, I have the following concerns:
>
> ? The assumptions in the traffic study need to be validated.
> ? What is the long term plan for the Harbor Bay Ferry? The Ferry is already at capacity, sometimes turning riders away. The parking lot is inadequate It is unclear how many spaces will actually be available at the hotel. The parking designated for ferry parking is not next to the ferry terminal.
> ? How realistic is the projection for income to the city? The projected income to city will only be generated if the rooms are occupied and is also dependent upon the actual room rate. What assumptions were made? I understand that other hotels are also planned for Alameda. How many hotel rooms does Alameda need?
> ? Potential noise impact to residents.
>
> Sincerely,

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:13 AM
To: Henry Dong
Subject: FW: If you build it, they will come . . .

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Arthur Lenhardt [mailto:lenhardta@gmail.com]
Sent: Monday, December 10, 2018 4:34 PM
To: Henry Dong <HDong@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>
Subject: If you build it, they will come . . .

Dear Planning Board:

Tonight you have an opportunity to deliver a quality, modern hotel and restaurant to Alameda's waterfront at Harbor Bay. We know the proposed plan will bring significant revenue to the city, provide shoreline restoration, open space, and amenities to the public, create jobs, and fill a void in high-end lodging on the island.

The proposal meets all of the zoning requirements, as well as those of all resource agencies. Time is due to create a quality project on this long-languishing property.

Please vote YES tonight for the Marriott Residence Inn at Harbor Bay.

Thank you,

Peace.

Art Lenhardt

--
Arthur W. Lenhardt
Alameda, CA
"Until there is peace among the religions of the world there will never be peace on earth"
--H.H. the Dalai Lama

From: Jesse LI <jslml@yahoo.com>
Sent: Sunday, December 09, 2018 9:28 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: No Marriott hotel on Bay Farm

We don't want A MASSIVE HOTEL NEXT DOOR!

A bay farm resident

Henry Dong

From: Michael Mike <mikeisland04@yahoo.com>
Sent: Monday, December 10, 2018 4:19 PM
To: Henry Dong; no.marriott.hotel@gmail.com
Subject: No Marriott Hotel project in Alameda bayfarm waterfront

Dear Mr. Henry Dong

I am the owner of 206 Mcdonnel rd . Alameda , CA 94502. I fully agree with our community's concerns of traffic and safety for Bayfarm island and think this is a bad project in this area . I totally against this project . There is already a hotel nearby . there is no need to build another one here . City of Alameda should use this area for public activities to let everybody benefit . City of Alameda should look for long term benefit for the city .

Best !

Shengjun Li

Owner - 206 Mcdonnel Rd.

Henry Dong

From: Michael Mike <mikeisland04@yahoo.com>
Sent: Monday, December 10, 2018 4:28 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Cc: Michael Mike; No Marriott Hotel
Subject: No Marriott Hotel

- **Alert: Monday December 10, 2018 at 7:00PM the City of Alameda Planning Board is scheduled to approve or disapprove of a 5-story hotel right next to the Bay Farm Ferry Terminal! Please attend the board meeting. This may be the last chance to voice your concerns. They are likely to vote on the project that day.**

  1. **THEY DID NOT DO A TRAFFIC STUDY FOR MECARTNEY RD, AUGHINBAUGH WAY, ROBERT DAVEY JR DR, AND ISLAND DR!** Harbor Bay Pkwy was the only road listed on the traffic study. It is a 172-room hotel that includes 122 parking spaces shared with the ferry riders. That will translate into **AT LEAST 122 EXTRA CARS** going in and out of our neighborhood, especially during morning and evening rush hours! The increased traffics is 24/7! We are lucky enough to live in a neighborhood where many of our kids can either walk or ride bikes to school. With the increased traffic, our kids' road **SAFETY IS A REAL CONCERN**. Just imagine the 122 extra cars rushing to catch the 8 am ferry; the same time many of our kids are either walking or riding their bikes to school.

  2. The hotel will Include conference space for weddings, meetings, or other private events that bring **extra noise and extra safety concerns** on the day to day and nightly basis!

  3. It is a **5-STORY** hotel! It will be the tallest building in Bay Farm **and stand out like a sore thumb**! In fact, it is one of the tallest building in Alameda!

  4. Along with the above concerns come with **negative impact on your property value**.

  City of Alameda Planning Board Meeting:
  WHEN: **Monday, December 10, 2018 at 7pm**
  WHERE: **2263 Santa Clara Ave, Alameda, 3rd Floor.**

  - Owner of 206 Mcdonnel Rd. Alameda , CA 94502.
  - Sincerely,
  - ShengJun Li

- Reply
- ,
- Reply All
- or

- Forward

Send
[ ]

Henry Dong

From: Glenn Lim <glennplim@gmail.com>
Sent: Saturday, December 08, 2018 3:41 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: Fwd: Opposed to the Marriott Residence Inn on Bay Farm

I wanted to voice my opposition to building a new Marriott Residence Inn on Bay Farm next to the ferry parking lot for the following reasons:

1. Safety - the traffic study only looked at Harbor Bay Parkway not the surrounding neighborhoods. Traffic will certainly increase along Mecartney. It's already difficult and dangerous to cross that street during busy hours. Hotel occupants will be using Uber/Lyft and many of those cars will significantly increase traffic on Meccartney.
2. Crime - A retired police officer spoke at the Master Board meeting last night and presented credible facts based on his career as a police officer that crime increases in neighborhoods near a hotel.
3. Quality of the hotel - The developer presents this hotel as a luxury hotel brand when in fact it is a brand at the bottom of Marriott hotel chains. The fact that kitchenettes are included will promote long term stays at lower room rates. This is not the profile of a hotel that professional business people stay at.
4. Size of the hotel - 5 stories is not consistent with the existing buildings long the shoreline. It will ruin the shoreline.
5. Decreasing property values - We heard cases of potential buyers not making bids on two Freeport homes specifically because of the planned hotel. This is real and shocking especially in this market. Property values will go down not just in Freeport but the other surrounding communities.
6. 24/7 operations - Unlike office buildings where there is no weekend occupancy and no activity outside of normal business hours, this hotel will be operated 24/7. This is a big disruption to the quiet residential neighborhoods that make Bay Farm a desirable place to raise families.
7. Lack of adequate notification - It is appalling that the developer and the City did not give residents adequate notification. Many residents just found out about this. The developer and the City say they met the 300 ft notification rule. There are no homes within that distance, 300 ft ends in the lagoon. It is deceitful that the developer hid behind this rule and not notify the homeowners on the other side of the lagoon and surrounding areas. Do we want a business owner like that in our City?
8. Revenue to the City - the City is justifying approval of the hotel based on the projected revenue it will generate. What we haven't heard the cost of that revenue. As the traffic study shows, increased traffic along Harbor Bay Parkway will increase the cost of maintaining it. As the study did not show, traffic and associated maintenance on Mecartney will increase. There are also costs associated with public spaces surrounding the hotel site not to mention sewer, police attention etc that will add to this cost. So residents of the City of Alameda (not just on Bay Farm) are being misled by not disclosing the actual net revenue generated and more importantly how that specific revenue will benefit our citizens.

Glenn Lim

From: Tak Keung Lin <lintklin@sbcglobal.net>
Sent: Sunday, December 09, 2018 6:01 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: No for Marriot Hotel

Dear Members of the Alameda Planning Board,

I hope you will vote **No** for the building of Marriot hotel because it will cause a lot of traffic and will make the neighborhood unsafe for people to walk. The increase traffic will bring a lot of noise and safety concerns.

Thank you.

Tak Lin

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:11 AM
To: Henry Dong
Subject: FW: No Marriott hotel on Bay Farm

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: ying lin [mailto:yingqilin@yahoo.com]
Sent: Monday, December 10, 2018 5:58 PM
To: ANDREW THOMAS <ATHOMAS@alamedaca.gov>; Henry Dong <HDong@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>; dburton@alamedaca.gov; Ronald Curtis <rcurtis@alamedaca.gov>; Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>; Asheshh Saheba <asaheba@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>
Subject: No Marriott hotel on Bay Farm

We don't want A MASSIVE HOTEL NEXT DOOR!

A bay farm resident

Henry Dong

From: Sarah Liston <slliston5@gmail.com>
Sent: Sunday, December 09, 2018 5:37 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: I Support the Proposal for Marriott Residence Inn at Harbor Bay

Dear Planning Board:

The Marriott Residence Inn offers many benefits to Alameda residents, including generating substantial tax revenue to help with city services, shoreline improvements with bike-ped access, shared public open space, a new restaurant with a bar and a coffee house, and conference space for the community and business park - all with sweeping views of the Bay!

The City has rejected other proposals to redevelop this property and this plan meets all of the zoning and other requirements and is a much better use of the space than more office. I appreciate the developer has listened to the community and has allowed more time for review and feedback.

Please vote to move this plan forward on Monday, December 10th.

Thank you!

Sincerely
Sarah Liston

Henry Dong

From: Sugiarto Loni <sugiloni@gmail.com>
Sent: Sunday, December 09, 2018 9:56 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Cc: Sugiarto Loni; sloni@liftech.net; Betty Loni
Subject: PLEASE VOTE AGAINST FIVE STORY MARRIOTT HOTEL IN RESIDENTIAL NEIGHBORHOOD.

Dear All, December 9, 2018

I am a resident of Alameda in the Headland Community for almost 20 years.

I am writing to voice my concerns on this massive five story hotel in our residential neighborhood. This is probably the tallest building in Alameda and is out of place and character for our neighborhood.

This massive hotel will have a negative impact to our neighborhood. The traffic will become worse. As it stands now, there is not enough parking space to allow our own residents to use the Ferry terminal. The parking has spilled over to my neighborhood. In the morning during the commute hours, there have been a significant traffic increase from our own residents to Ferry terminal . The Hotel development will bring more outsiders and make the traffic worse

The area should not be zoned for hotel where crowds and noise will impact our quite neighborhood. When we purchased our building in 1998, we were promised that Bay Farm community would remain residential community and is safe and peaceful for raising children. The hotel with 24/7 activities does not fit in our community.

We urge all of you to vote against this project.

Sincerely,

Sugiarto and Betty Loni
10 Nakayama Ct
Alameda, CA 94502

Henry Dong

From: Michael Lozeau <michael@lozeaudrury.com>
Sent: Friday, December 07, 2018 9:20 PM
To: ANDREW THOMAS; Henry Dong; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Cc: Hannah Hughes
Subject: Dec. 10, 2018 Planning Board Hearing, Agenda Item 7-B - 2900 Harbor Bay Parkway, File # 2018-6059
Attachments: 2018.12.07 LIUNA Planning Board Comment re 2900 Harbor Bay Final with Exhibits.pdf

Dear Planning Board members, Director Thomas and Mr. Dong,

Attached please find comments submitted on behalf of Laborers' International Union of North America, Local Union No. 304 regarding the hotel proposed to be located at 2900 Harbor Bay Parkway scheduled for consideration this coming Monday evening by the Planning Board as agenda item 7.B.

If you could please confirm receipt of this email and the attachment would be appreciated. I also will bring hard copies of the attached to submit at Monday evening's hearing.

Thank you for considering these comments.

Sincerely,

Michael R. Lozeau
Lozeau | Drury LLP
410 12th Street, Suite 250
Oakland, California 94607
(510) 836-4200
(510) 836-4205 (fax)
michael@lozeaudrury.com

LOZEAU DRURY LLP
T 510.836.4200
F 510.836.4205
410 12th Street, Suite 250
Oakland, Ca 94607
www.lozeaudrury.com
michael@lozeaudrury.com

December 7, 2018

Via E-mail

Andrew Thomas, Acting Director of
Planning and Building Department
Henry Dong, Planner II
City of Alameda
2263 Santa Clara Avenue, Room 190
Alameda, CA 94501
athomas@alamedaca.gov
hdong@alamedaca.gov

Planning Board Members:

David Burton
dburton@alamedaca.gov
Ronald Curtis
rcurtis@alamedaca.gov
Jeffrey Cavanaugh
jcavanaugh@alamedaca.gov
Asheshh Saheba
asaheba@alamedaca.gov
David Mitchell
dmitchell@alamedaca.gov
Sandy Sullivan
ssullivan@alamedaca.gov
Alan H. Teague
ateague@alamedaca.gov

Re: 2900 Harbor Bay Parkway - PLN18-0381, Harbor Bay Hospitality, LLC (December 10, 2018 Planning Board Hearing, Agenda Item 7-B; File # 2018-6059)

Dear Planning Board members and Messrs. Thomas and Dong:

I am writing on behalf of the Laborers International Union of North America, Local Union 304 and its members living in and around the City of Alameda ("LIUNA") regarding the above-referenced hotel project proposed for the parcel located at 2900 Harbor Bay Parkway along the shore of San Francisco Bay in Alameda. The proposed project includes the construction and operation of a 63-foot tall, 5-story, 172-room hotel on the 5.5 acre parcel. Staff claims that the potential environmental effects of the Project already have been fully addressed by the City's Harbor Bay Isle Environmental Impact Report certified in April 1974 ("1974 EIR"). Fundamentally, the proposed hotel is an entirely different project than the overall development plan reviewed in the 1974 EIR. The 1974 EIR has no informational value to the proposed hotel and is irrelevant to analyzing its environmental impacts. In addition, as proposed, the project is inconsistent with the development plan addressed in the 1974 EIR which states unequivocally that "[b]uildings will not … be closer than 100 feet from the shore." 1974 EIR, p. IV-232.

According to hotel design drawings, the front of the hotel facing the Bay will be significantly less than 100 feet from the Bay shore. *See* Project Plans, Sheet A8. Likewise, the 1974 EIR conceptually only mentions a total of 450,000 square feet of office space in the area zoned for business park. *See* 1974 EIR, p. IV-48. The square footage is at least at 1.2 million square feet and climbing, entirely inconsistent with the amount identified in in the 1974 EIR. Thus, not even tiering is allowed to review the hotel project as proposed. As a result, the hotel project must be reviewed as a separate project pursuant to the California Environmental Quality Act ("CEQA").

A number of highly qualified experts have reviewed the proposed hotel project and its environmental effects. Biologist Shawn Smallwood, Ph.D., traffic engineer Daniel Smith. Jr., P.E., and Certified Industrial Hygienist, Francis "Bud" Offermann, PE, CIH have identified a number of significant impacts from the proposed hotel including wildlife, traffic, and air quality impacts, as well as omissions and flaws in the documents relied upon by staff. These comments are attached as Exhibits A through C. In addition, BAAQMD screening levels indicate the project will have significant greenhouse gas ("GHG") emissions. Local residents have articulated the project's profound visual impacts a five-story hotel building will have on their views of the Bay and access to the shoreline. Because the hotel project has never been reviewed pursuant to CEQA, this substantial evidence of significant impacts requires the preparation of an EIR for the hotel project.

Even assuming the hotel was considered in the 1974 EIR, "[n]ew information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete…, shows …[t]he project will have one or more significant effects not discussed in the previous EIR…." 14 Cal. Admin. Code § 15162(a)(3)(A). Likewise, the project has substantially changed from the Village I and zoning project addressed by the 1974 EIR and profound changes in the circumstances of the project have occurred requiring a comprehensive update of the 1974 EIR. 14 Cal. Admin. Code § 15162(a). Thus, whether the project is a new project distinct from the 1974 development plan or whether it was a considered part of that plan, the City must review with either a stand-alone or supplemental EIR the proposed hotel's impacts on the health of its workers from toxic air emissions of formaldehyde, on birds colliding into the building, on greenhouse gas emissions, on traffic and resulting air pollution emissions, and on people's views of and access to the adjacent San Francisco Bay.

Further, if the City insists on treating the project as being the same project as the 1974 development plan, the City must implement the mitigation measure set forth in the 1974 EIR and purportedly revised by the 1989 Addendum for Village V requiring that, "[i]n the event such technology becomes feasible, applicant should provide an electric car for each house sold in Village V as proposed in the HBI Master Plan for local Alameda trips, to mitigate air and noise impacts of traffic and reduce use of gasoline." 1989 Addendum, p. 4-23. *See* 1974 EIR, pp. I-12, I-20, p. IV-233 ("special electric cars which will be available to all residents"), p. I-21. There can be no serious argument at this date that electric vehicles are not feasible. There is substantial evidence that the hotel project by itself will have and the Bay Farm development generally is having significant GHG impacts. Likewise, Harbor Bay is having traffic impacts to which the proposed hotel will contribute. The electric car mitigation measure must be honored to address the unavoidable traffic, air quality and GHG impacts from the Harbor Bay development, including the proposed hotel.

In contrast to this evidence of environmental impacts from the hotel project, the obvious omission of any evaluation of a hotel project in the 1974 EIR, and the awareness of new impacts of which the City and the public were not aware in 1974, staff suggests that "[p]ursuant to CEQA Guidelines Section 15162, there have been no significant changes in circumstances that require revisions to the previously certified Harbor Bay Isle Environmental Impact Report" and that "[t]he proposed project is not likely to cause substantial environmental damage or substantially and avoidably injure endangered, rare, or threatened fish or wildlife or their habitat." Both of these assertions are incorrect and none of the reports prepared for the project address the significant impacts identified by Dr. Smallwood, Mr. Offermann and Mr. Smith. Nor do they give appropriate weight to the concerns expressed by many residents. As a result, an environmental impact report ("EIR") is required to analyze the project's impacts and to propose all feasible mitigation measures to reduce those impacts. We urge the Planning Board to decline to approve the project and the CEQA determination proposed by staff, and to instruct staff to prepare an EIR for the project prior to any project approvals. We reserve the right to supplement these comments during public hearings concerning the Project. *Galante Vineyards v. Monterey Peninsula Water Management Dist*., 60 Cal. App. 4th 1109, 1121 (1997).

DISCUSSION

I. THE HOTEL PROJECT WAS NOT ADDRESSED IN THE 1974 EIR AND IS A SEPARATE PROJECT FROM THE PROJECT ADDRESSED IN THE 1974 EIR.

A specific development project is not the same as an area plan. The development plan reviewed by the 1974 EIR consisted of a general plan identifying zoning areas for the Harbor Bay development and a specific proposal to build out one of five residential villages envisioned by the development. *See* 1974 EIR, p. I-1 – I-2. The project description found at the beginning of the EIR does not even mention the office park. *Id*. Only at page I-5 does the EIR begin to describe generally the proposed zoning for the office park, which it does so only in the most general terms:

> The 51 acres of land allocated for the administrative/professional office park complex will provide at least 450,000 square feet of net desirable office space. The intent is to provide professional service office space geared to convenient service to nearby residents.

1974 EIR, p. I-5. The only portion of the entire development that was presented in any detail was the first of five residential areas to be developed – Village 1. *See id*., p. II-1. Any projects to be built within the area to be zoned commercial was only conceptual at the time of the 1974 EIR:

> The plan submitted to the City of Alameda by HBI Associates is for 640 acres of the 908.7-acre site and provides for a residential community with associated commercial, educational, and recreational activities, including a 51-acre site intended by the developer for professional administrative office activities.

1974 EIR, p. II-4. A developer's mere intention at the time does not amount to a specific project proposal beyond the zoning change. The plan as of the 1974 EIR was simply to rezone the 51 acre area for commercial development. *See id*., pp. II-7 – II-8; IV-2. No specific proposals were evaluated as part of the 1974 EIR. Just blank spaces on the map were proposed. *Id*. Indeed, the 1974 EIR expressly states that any projects within the business park area were conceptual and not yet proposed:

> The 51 acres immediately northwest along the bay are proposed for development as an administrative-professional office park. It is presently zoned for residential use but the developer has requested a zoning change to C-M-PD. ***Plans for the development of this office park are not yet complete, but the concept is for structures of moderate density in a landscape setting***.

1974 EIR, p. II-19 (emphasis added). Likewise, in addressing the zoning change, the 1974 EIR could only surmise at the scope of office park development that might take place.

> The project also proposes to place 51 acres in an administrative and professional office park. It is estimated that the site could accommodate roughly 567,000 square feet of building area, of which about 450,000 would be usable office space. The ***intention appears to be*** to provide office space for small businesses and for professionals, such as dentists, doctors, lawyers, and others who would derive their trade primarily from residents in the development and in nearby areas. Demand for other types of office uses is not apparent.

1974 EIR, p. IV-48 (emphasis added). Indeed, the 1974 EIR notes the lack of any office demand in the Bay Farm area at the time and uses that fact to downplay any potential impacts from the rezoning of the business park area from residential to commercial. *Id*. ("If the land were not marketable as the developer intends, there would not, however, be any substantial adverse or other impacts on adjacent land in the project or on Alameda"). Thus, it is evident from the 1974 EIR, that the project reviewed in that document was Village 1 plus the zoning changes for the remainder of the site. It did not include any proposed office development, never mind any hotel projects on Bay Farm Island. Accordingly, staff cannot persist with the fiction that the potential environmental impacts of the proposed hotel already were addressed 44-years ago in the EIR prepared for Village 1 and zoning changes.

Because the original EIR did not evaluate any business park proposal but only, in part, the zoning change, the new proposed hotel is an entirely different project from that considered in the 1974 EIR. The proposed hotel is not a change to the 1974 EIR because neither the hotel specifically nor a business park as a whole was described in that 1974 EIR. Even if it were arguable that the hotel is changing any project described in the 1974 EIR, in order to be deemed the same project subject to CEQA's subsequent review provisions Pub. Res. Code 21166 and 14 Cal. Admin. Code § 15182, the prior EIR has to have some informational value. "If the original environmental document retains some informational value despite the proposed changes, then the agency proceeds to decide under CEQA's subsequent review provisions whether project changes will require major revisions to the original environmental document because of the involvement of new, previously unconsidered significant environmental effects." *Friends of Coll. of San Mateo Gardens v. San Mateo Cty. Cmty. Coll. Dist.* (2016) 1 Cal.5th 937, 952. It is clear from the above excerpts that the 1974 EIR, although pertinent to zoning the business park area as commercial, has no informational value or relevance to the currently proposed hotel or to the actual, physical business park that has been approved in piecemeal fashion over the years.

Although the proposed hotel is not the same project as was considered in the 1974 EIR, CEQA does provide for tiering the environmental review of a project from a prior EIR review to the extent some of the environmental impact analysis of the overarching plans would be applicable to considering impacts of this specific project. Thus, **"**[a]gencies are encouraged to tier the environmental analyses which they prepare for ***separate*** but related projects including general plans, zoning changes, and development projects." 14 Cal. Admin. Code § 15152(b). Just because tiering is appropriate does not mean that a specific development project is deemed to be the same project as the prior approved area plan or general plan:

> Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for ***a later project pursuant to or consistent with*** the program, plan, policy, or ordinance should limit the EIR or negative declaration on the ***later project*** to effects which:
>
> > (1) Were not examined as significant effects on the environment in the prior EIR; or
> > (2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means.

14 Cal. Admin. Code § § 15152(d) (emphasis added). Thus, the tiering provision expressly treats a later site specific development project as a separate project from the planning level decisions.

Additionally, when the tiering requirements are being employed by a lead agency, the agency is expressly limited to preparing either an EIR or a negative declaration.

> A ***later EIR shall be required*** when the initial study or other analysis finds that the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR. A ***negative declaration shall be required*** when the provisions of Section 15070 are met.

14 Cal. Admin. Code § § 15152(f) (emphasis added). Although tiering does relieve the lead agency from having to revisit effects of the newer project that were in fact addressed in the prior program-level EIR, it does not eliminate site specific analyses or the need to prepare either an EIR or negative declaration subject to CEQA's public notice, review and hearing requirements. Moreover, by requiring at least a negative declaration when Section 15070's requirements are met, the tiering procedure expressly incorporates CEQA's fair argument standard. Section 15070 provides:

> A public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:
> (a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
> (b) The initial study identifies potentially significant effects, but:
> (1) Revisions in the project plans or proposals made by or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
> (2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

14 Cal. Admin. Code § 15070. There is no authority to use an addendum to another project's EIR in order to tier from that prior program EIR for a specific development project. Hence, the numerous addenda that have been prepared by the City to the 1974 EIR since that time have no bearing on the need for preparing an EIR for the proposed hotel. If, in the end, the City is not presented with substantial evidence of a fair argument that the Project may have a significant environmental effect, it must at least prepare a negative declaration.

Important to the proposed hotel project is the rule under CEQA that a project's environmental review cannot rely on tiering "when the later project is inconsistent with the program, plan, policy, or ordinance for which a prior EIR was prepared." Where a project is inconsistent with the project reviewed in the prior EIR it is outside the scope of the prior review. *See Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th 1307. *See also* Kostka & Zischke, Practice Under the California Environmental Quality Act, ¶ 10.7.

Thus, in regard to the hotel, even assuming it was a project reviewed by the 1974 EIR, it is inconsistent with at least two substantial components of the 1974 zoning project. First, the 1974 EIR discusses potential visual impacts of the zoning changes (though no particular building project). The EIR provides that:

> One of the distinguishing characteristics of the site for the present residents of Bay Farm Island is the view of the bay and San Francisco beyond. At full project development that view will be diminished by the dwelling units to be built and the industrial park now planned. ***Buildings will not, however, be closer than 100 feet from the shore***.

IV-232 (emphasis added). Sheet A1 for the proposed hotel depicts the footprint of the hotel in relation to the Bay shore. The drawing depicts a "contour line at elevation 103" but does not define what this line is intended to depict. It would appear to be the mean high tide line which would reasonably identify the Bay shore consistent with the jurisdiction of the Bay Conservation and Development Commission ("BCDC"). The measurements on the plan indicate that the proposed building will be within 100 feet of the shore. As a result, the proposed building is inconsistent with a basic parameter set forth for the development plan considered by the 1974 EIR.

Likewise, the 1974 development plan estimated the amount of office space that would possibly be included in the 51-acre area proposed to be zoned as a commercial business park. Although only a concept at the time, the EIR "estimated that the site could accommodate roughly 567,000 square feet of building area, of which about 450,000 would be usable office space." 1974 EIR, p. IV-48. Only that concept was addressed, if at all, in the 1974 EIR. The amount of office space in the business park has now ballooned to an amount greatly in excess of the project discussed in the 1974 EIR. Even as of 19 years ago in the 1989 Addendum to the 1974 EIR, the City determined that as of December 1988, "[a]pproximately 1.2 million square feet of office and R&D space has been completed in the Business Park." April 1989 Addendum, p. 1-6. Hence, the addition of a 113,000 square feet hotel is well beyond the concept addressed in the 1974 EIR and is entirely inconsistent with the relatively modest office space contemplated at the time.

For these reasons, even tiering to the 1974 EIR is not appropriate for the proposed hotel project and it must be evaluated on its own as a separate project under CEQA.

II. AN EIR MUST BE PREPARED FOR THE PROPOSED HOTEL BECAUSE THERE IS SUBSTANTIAL EVIDENCE OF A FAIR ARGUMENT THAT THE PROJECT MAY HAVE ONE OR MORE SIGNIFICANT ENVIRONMENTAL IMPACTS.

As the California Supreme Court held, "[i]f no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR." *Communities for a Better Env't v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 319-320 ["CBE v. SCAQMD"], citing, *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, 88; *Brentwood Assn. for No Drilling, Inc. v. City of Los Angeles* (1982) 134 Cal.App.3d 491, 504–505. "Significant environmental effect" is defined very broadly as "a substantial or potentially substantial adverse change in the environment." Pub. Res. Code ["PRC"] § 21068; see also 14 CCR § 15382. An effect on the environment need not be "momentous" to meet the CEQA test for significance; it is enough that the impacts are "not trivial." *No Oil, Inc., supra*, 13 Cal.3d at 83. "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Communities for a Better Env't v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98, 109 ["*CBE v. CRA*"].

The EIR is the very heart of CEQA. *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1214; *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 927. The EIR is an "environmental 'alarm bell' whose purpose is to alert the public and its responsible officials to environmental changes before they have reached the ecological points of no return." *Bakersfield Citizens,* 124 Cal.App.4th at 1220. The EIR also functions as a "document of accountability," intended to "demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." *Laurel Heights Improvements Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392. The EIR process "protects not only the environment but also informed self-government." *Pocket Protectors*, 124 Cal.App.4th at 927.

An EIR is required if "there is substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment." PRC § 21080(d); see also *Pocket Protectors*, 124 Cal.App.4th at 927. In very limited circumstances, an agency may avoid preparing an EIR by issuing a negative declaration, a written statement briefly indicating that a project will have no significant impact thus requiring no EIR (14 Cal. Code Regs.§ 15371), only if there is not even a "fair argument" that the project will have a significant environmental effect. PRC, §§ 21100, 21064. Since "[t]he adoption of a negative declaration . . . has a terminal effect on the environmental review process," by allowing the agency "to dispense with the duty [to prepare an EIR]," negative declarations are allowed only in cases where "the proposed project will not affect the environment at all." *Citizens of*

Lake Murray v. San Diego (1989) 129 Cal.App.3d 436, 440. A mitigated negative declaration is proper only if the project revisions would avoid or mitigate the potentially significant effects identified in the initial study "to a point where clearly no significant effect on the environment would occur, and…there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment." PRC §§ 21064.5 and 21080(c)(2); *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322, 331. In that context, "may" means a reasonable possibility of a significant effect on the environment. PRC §§ 21082.2(a), 21100, 21151(a); *Pocket Protectors, supra*, 124 Cal.App.4th at 927; *League for Protection of Oakland's etc. Historic Resources v. City of Oakland* (1997) 52 Cal.App.4th 896, 904–905.

Under the "fair argument" standard, an EIR is required if any substantial evidence in the record indicates that a project may have an adverse environmental effect—even if contrary evidence exists to support the agency's decision. 14 CCR § 15064(f)(1); *Pocket Protectors*, 124 Cal.App.4th at 931; *Stanislaus Audubon Society v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-15; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602. The "fair argument" standard creates a "low threshold" favoring environmental review through an EIR rather than through issuance of negative declarations or notices of exemption from CEQA. *Pocket Protectors,* 124 Cal.App.4th at 928. An effect on the environment need not be "momentous" to meet the CEQA test for significance; it is enough that the impacts are "not trivial." *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 83.

The "fair argument" standard is virtually the opposite of the typical deferential standard accorded to agencies. As a leading CEQA treatise explains:

> This 'fair argument' standard is very different from the standard normally followed by public agencies in making administrative determinations. Ordinarily, public agencies weigh the evidence in the record before them and reach a decision based on a preponderance of the evidence. [Citations]. The fair argument standard, by contrast, prevents the lead agency from weighing competing evidence to determine who has a better argument concerning the likelihood or extent of a potential environmental impact. The lead agency's decision is thus largely legal rather than factual; it does not resolve conflicts in the evidence but determines only whether substantial evidence exists in the record to support the prescribed fair argument.

Kostka & Zishcke*, Practice Under CEQA*, §6.29, pp. 273-274. The Courts have explained that "it is a question of law, not fact, whether a fair argument exists, and the courts owe no deference to the lead agency's determination. Review is de novo, with a preference for resolving doubts in favor of environmental review." *Pocket Protectors,* 124 Cal.App.4th at 928. As a matter of law, "substantial evidence includes . . . expert opinion." Pub.Res.Code § 21080(e)(1); 14 Cal. Code Regs. § 15064(f)(5). CEQA Guidelines demand that where experts have presented conflicting evidence on the extent of the environmental effects of a project, the agency must consider the environmental effects to be significant and prepare an EIR. 14 Cal. Code Regs. § 15064(f)(5); Pub. Res. Code § 21080(e)(1); *Pocket Protectors*, 124 Cal.App.4th at 935.

A. There Is Substantial Evidence of a Fair Argument That the Hotel Project's Emissions of Formaldehyde to the Air Will Have Significant Health Impacts on Future Employees.

Certified Industrial Hygienist, Francis "Bud" Offermann, PE, CIH, has conducted a review of the proposed hotel project and relevant documents regarding the Project's indoor air emissions. Indoor Environmental Engineering Comments (Oct. 29, 2018) (Exhibit A). Mr. Offerman concludes that it is likely that the Project will expose future workers employed at the hotel to significant impacts related to indoor air quality, and in particular, emissions of the cancer-causing chemical formaldehyde. Mr. Offermann is one of the world's leading experts on indoor air quality and has published extensively on the topic. *See* attached CV.

Mr. Offermann explains that many composite wood products typically used in hotel construction contain formaldehyde-based glues which off-gas formaldehyde over a very long time period. He states, "The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and particle board. These materials are commonly used in residential and hotel building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims." Offermann Comment, p. 3.

Formaldehyde is a known human carcinogen. Mr. Offermann states that there is a fair argument that full-time workers at the hotel project will be exposed to a cancer risk from formaldehyde of approximately 18.4 cancers per million. Offermann Comment, p. 4. This is almost double the Bay Area Air Quality Management District ("BAAQMD") CEQA significance threshold for airborne cancer risk of 10 cancers per million. *See* Exhibit D. Mr. Offermann states:

> With respect to this project, Marriott Residence Inn, located at 2900 Harbor Bay Parkway, Alameda, CA, since this is a hotel, guests are expected to have short-term exposures (e.g. less than a week), but employees are expected to experience longer-term exposures (e.g. 40 hours per week, 50 weeks per year). The longer-term exposures for employees is anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing commonly found in residences and hotels.

Offermann Comments, pp. 3-4. Mr. Offermann concludes that this significant environmental impact should be analyzed in an EIR and mitigation measures should be imposed to reduce the risk of formaldehyde exposure. *Id*., pp. 4. Mr. Offermann identifies mitigation measures that are available to reduce these significant health risks, including the installation of air filters and a requirement that the applicant use only composite wood materials (e.g. hardwood plywood, medium density fiberboard, particleboard) for all interior finish systems that are made with CARB approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins in the buildings' interiors. Offermann Comments, pp. 11-12.

When a project exceeds a duly adopted CEQA significance threshold, as here, this alone establishes a fair argument that the project will have a significant adverse environmental impact and an EIR is required. Indeed, in many instances, such air quality thresholds are the only criteria reviewed and treated as dispositive in evaluating the significance of a project's air quality impacts. *See, e.g. Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 960 (County applies BAAQMD's "published CEQA quantitative criteria" and "threshold level of cumulative significance"). See also *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 110-111 ("A 'threshold of significance' for a given environmental effect is simply that level at which the lead agency finds the effects of the project to be significant"). The California Supreme Court made clear the substantial importance that an air district significance threshold plays in providing substantial evidence of a significant adverse impact. *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 327 ("As the [South Coast Air Quality Management] District's established significance threshold for NOx is 55 pounds per day, these estimates [of NOx emissions of 201 to 456 pounds per day] constitute substantial evidence supporting a fair argument for a significant adverse impact"). Since expert evidence demonstrates that the Project will exceed the BAAQMD's CEQA significance threshold, there is a fair argument that the Project will have significant adverse impacts and an EIR is required.

The City has a duty to investigate issues relating to a project's potential environmental impacts, especially those issues raised by an expert's comments. *See Cty. Sanitation Dist. No. 2 v. Cty. of Kern*, (2005) 127 Cal.App.4th 1544, 1597–98 ("under CEQA, the lead agency bears a burden to investigate potential environmental impacts"). In addition to assessing the hotel project's potential health impacts to workers, Mr. Offermann identifies the investigatory path that the City should be following in developing an EIR to more precisely evaluate the hotels' future formaldehyde emissions and establishing mitigation measures that reduce the cancer risk below the BAAQMD level. Offermann Comments, pp. 5-9. Such an analysis would be similar in form to the air quality modeling and traffic modeling typically conducted as part of a CEQA review.

The failure to address the project's formaldehyde emissions is contrary to the California Supreme Court's decision in *California Building Industry Ass'n v. Bay Area Air Quality Mgmt. Dist.* (2015) 62 Cal.4th 369, 386 ("*CBIA"*). At issue in *CBIA* was whether the Air District could enact CEQA guidelines that advised lead agencies that they must analyze the impacts of adjacent environmental conditions on a project. The Supreme

Court held that CEQA does not generally require lead agencies to consider the environment's effects on a project. *CBIA*, 62 Cal.4th at 800-801. However, to the extent a project may exacerbate existing adverse environmental conditions at or near a project site, those would still have to be considered pursuant to CEQA. *Id*. at 801 ("CEQA calls upon an agency to evaluate existing conditions in order to assess whether a project could exacerbate hazards that are already present"). In so holding, the Court expressly held that CEQA's statutory language required lead agencies to disclose and analyze "impacts on ***a project's users or residents*** that arise ***from the project's effects*** on the environment." *Id*. at 800 (emphasis added).)

The carcinogenic formaldehyde emissions identified by Mr. Offermann are not an existing environmental condition. Those emissions to the air will be from the hotel project. Employees will be users of the hotel. Currently, there is presumably little if any formaldehyde emissions at the site. Once the project is built, emissions will begin at levels that pose significant health risks. Rather than excusing the City from addressing the impacts of carcinogens emitted into the indoor air from the project, the Supreme Court in *CBIA* expressly finds that this type of effect by the project on the environment and a "project's users and residents" must be addressed in the CEQA process.

The Supreme Court's reasoning is well-grounded in CEQA's statutory language. CEQA expressly includes a project's effects on human beings as an effect on the environment that must be addressed in an environmental review. "Section 21083(b)(3)'s express language, for example, requires a finding of a 'significant effect on the environment' (§ 21083(b)) whenever the 'environmental effects of a project will cause substantial adverse effects *on human beings,* either directly or indirectly.'" *CBIA*, 62 Cal.4th at 800 (emphasis in original). Likewise, "the Legislature has made clear—in declarations accompanying CEQA's enactment—that public health and safety are of great importance in the statutory scheme." *Id*., citing e.g., §§ 21000, subds. (b), (c), (d), (g), 21001, subds. (b), (d). It goes without saying that the hundreds of future employees at the project are human beings and the health and safety of those workers is as important to CEQA's safeguards as nearby residents currently living adjacent to the project site.

Mr. Offermann also notes that the high cancer risk that may be posed by the hotel project's indoor air emissions likely will be exacerbated by the additional cancer risk that exists from the project's location near the Oakland Airport and Port of Oakland and the high levels of PM2.5 already present in the ambient air. Offermann Comments, pp. 10-11. No analysis has been conducted of the significant cumulative health impacts that will result to employees working at the proposed hotel.

Because Mr. Offermann's expert review is substantial evidence of a fair argument of a significant environmental impact to future users of the project, an EIR must be prepared to disclose and mitigate those impacts.

B. The Traffic Analysis Prepared for the Proposed Hotel Is Not Substantial Evidence of No Traffic Impacts Because It Leaves Out Key Intersections Most Likely to be Adversely Affected by the Project's Traffic.

Traffic Engineer Dan Smith has reviewed the Transportation Impact Analysis ("TIA") prepared by Abrams Associates dated November 14, 2018. Although Mr. Smith had no concerns with the analysis conducted for the intersections addressed in the report, he explains that the TIA does not fully resolve the hotel project's potential traffic impacts because it leaves out critical intersections that will be affected by traffic to and from the project. As Mr. Smith explains:

> The problem is that the analysis only focuses on intersections within the Harbor Bay Island portion of Alameda close to the Project site. It fails to consider potential traffic impacts on the major gateway intersections to Harbor Bay Island where there is large concentration of traffic and where traffic impacts would be more consequential than at the intersections the TIA studied. Four of the five intersections studied involve intersections of key circulation roads with minor cross streets with only the cross streets controlled by stop signs. Among the gateway intersections that should have been studied are Otis with Fernstein, Doolittle with Island / Otis, Doolittle with Harbor Bay Parkway, Doolittle with Hegenberger, Doolittle with Airport Access Road, Airport Access Road with 98th Avenue and Airport Access Road with Hegenberger.

Smith Comments, p. 1 (Exhibit B). This substantial omission from the traffic analysis is substantial evidence of a fair argument that the hotel project may have significant individual and cumulative traffic impacts.

C. There Is Substantial Evidence of a Fair Argument That the Hotel Project Will Have a Significant Adverse Impact on Wildlife Resulting From Numerous Collisions of Birds, Including Sensitive Species, With the Building's Windows.

Despite the recent attention by the City and others of the massive environmental impact of bird collisions with building windows, no effort is made by staff to consider the impacts of the proposed hotel on birds despite the project's location on the edge of San Francisco Bay. Dr. Shawn Smallwood has reviewed this impact of the project as well as the report prepared regarding wildlife at the proposed site. Dr. Smallwood's evaluation provides substantial evidence that the project will have significant individual and cumulative adverse impacts on birds foraging and flying through the area. Dr. Smallwood's comments and CV are attached as Exhibit C.

During a three hour visit to the site on November 16, 2018, Dr. Smallwood identified 22 species of wildlife on and adjacent to the site. Dr. Smallwood was impressed with the amount of wildlife relying on this site:

> An inescapable impression was the abundance of wildlife on site. High densities of mourning doves, house finches and killdeer crowded together on site. Everywhere I looked there were hordes of mourning doves pecking at the ground while walking along with house finches, white-crowned sparrows and killdeer, often flushing and relocating in reaction to people walking along the trails on the west side, often with leashed dogs.

Smallwood Comments, p. 2. Dr. Smallwood notes the incremental development of the shoreline of Bay Farm Island has left very little undeveloped habitat on Bay Farm adjacent to the open Bay waters, incrementally forcing the once incredible concentration of bird life that was found here in 1973 to a few parcels. As Dr. Smallwood explains, "One of the greatest concentrations of shorebirds in the world has been reduced to a desperate avian foothold upon a 5.5-acre patch of upland that bridges a constructed lagoon and the Bay." *Id*., p. 7. As habitat has been reduced on Bay Farm, the importance of each undeveloped parcel has become ever more important to the bird species in the area, as evidenced by the concentration of birdlife at and near the site observed by Dr. Smallwood.

Dr. Smallwood identifies a number of serious impacts the project will have on birdlife. First and foremost is the fact that many birds will collide with the five-story, window-clad building located at the edge of San Francisco Bay. Smallwood Comments, pp. 13-21. Although initially identified as a concern by a lone scientist in a paper published in the late 1970s, only in the last few decades has the problem of bird collisions with buildings become common knowledge. Indeed, only last month did the City of Alameda take steps to incorporate policies into its municipal code intended to implement some measures intended to hopefully reduce bird collisions for certain new buildings in the City. Despite this attention, no analysis of this serious impact has been prepared for the project. Nor was this issue addressed at all by the 1974 EIR, not having come to light until some years later.

One of Dr. Smallwood's specialized areas of expertise is the effect of human structures on wildlife, in particular bird strikes or collisions with buildings, wind turbines, transmission lines, and other features. In his comment on this project, Dr. Smallwood has evaluated the available studies of rates of bird strikes with buildings. Dr. Smallwood calculates that, based on that available data, the expected mean average of bird strikes with the proposed five-story hotel covered with windows is about 337 strikes per year. Smallwood Comments, p. 17. Applying a 95 percent confidence level, Dr. Smallwood estimates that the range of bird collisions would be from 7 to 2,100 bird deaths per year from this building. *Id*. Over a 50-year lifetime for the project, Dr. Smallwood estimates that, "[a]fter 50 years the toll from this average annual fatality rate would be 16,850 bird deaths, with an empirically founded upper-end possibility of 105,050 deaths." *Id*. Some of these species would be sensitive species, including the fully protected brown pelican.

These many bird deaths do not happen in isolation. As Dr. Smallwood notes,

> The existing conditions – the developed area – is undoubtedly killing many birds each year. Not only are windows killing many birds, but so too are house cats, feral cats, electric distribution lines, electric power poles, and autos. This said, the proposed project will add a level of impact that is entirely missing from the CEQA review. Constructing a five-story building will not only take aerial habitat from birds, but it will also interfere with the movement of birds in the region and it will result in large numbers of annual window collision fatalities.

Smallwood Comments, p.16.

Dr. Smallwood's observations of the site and the surrounding area also indicate that the project likely will pose a significant impact on wildlife movement from the Bay shore to the upland area as well as to the nearby lagoon. As Dr. Smallwood states:

> Not only would the project remove what must now be critically important stop-over habitat (Runge et al. 2014, Taylor et al. 2011, Warnock 2010), but it would replace the open space with a building posing as another barrier to movement through the area by migratory or dispersing volant wildlife. The earlier EIR (City of Alameda 1973, 1989) also neglected to address the project's impact on wildlife movement in the region.

Smallwood Comments, p. 13.

Dr. Smallwood also has reviewed the more recent survey conducted by Monk & Associates on September 10, 2018. Dr. Smallwood points out that the Monk survey was not a detection survey and, hence, does not provide substantial evidence of the absence of any particular species from the site, including for example burrowing owls. Dr. Smallwood explains:

> Monk & Associates (2018) surveyed the site on 10 September 2018, but that survey was a preconstruction survey, not a detection survey. Detection surveys are designed for supporting species absence determinations, whereas preconstruction surveys are intended to follow up on detection surveys just prior to construction; preconstruction surveys are intended to detect the readily detectable animals that might have arrived at a project site since the detection surveys and to salvage nests or individual animals before the tractor blade scrapes them away. Preconstruction surveys are not designed for supporting absence determinations.

Smallwood Comments, p. 9.

Dr. Smallwood also identifies the project's likely impacts on birds and wildlife from its artificial lighting. "Neither the earlier EIR (City of Alameda 1973, 1989) nor the Staff Report (City of Alameda (2018) addressed the project's impacts on wildlife that would be caused by the addition of artificial lighting." Smallwood Comments, p. 13. Dr. Smallwood's evaluation continues:

> Artificial lighting causes a variety of substantial impacts on a variety of wildlife species (Rich and Longcore 2006). At the site of the proposed project I am particularly concerned about the project's lighting impacts on wildlife residing in Bay waters, including harbor seals, California brown pelicans, double-crested cormorants, and other species. Added lighting could cause displacement or altered activity patterns of at least some species. An EIR should be prepared to address potential lighting impacts on Bay wildlife, and how those impacts could be mitigated.

Id. Dr. Smallwood's expert opinion on these many wildlife impacts is substantial evidence of a likely impact of the project.

D. There is substantial evidence of a fair argument that the hotel project will have a significant GHG emission impacts.

The Bay Area Air Quality Management District ("BAAQMD") has established screening thresholds for greenhouse gas emissions. A project exceeding the screening threshold indicates it is likely to exceed BAAQMD's threshold of significant for GHG emissions of 1,100 MT of CO2e/yr. The screening threshold for a hotel is 83 rooms. BAAQMD CEQA Guidelines, p. 3-2 (May 2017) (http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en). The project's proposed 177 rooms is more than double the BAAQMD screening threshold. As a result, a quantitative analysis of the project's GHG emissions from its operations must be conducted and addressed in an EIR in order to disclose and compare the project's GHG emissions to BAAQMD's numeric significance threshold.

A similar sized hotel project was recently proposed in San Jose. The San Jose project includes 166 rooms (slightly smaller than the proposed Alameda hotel) and has similar features including, for example, a restaurant. GHG emissions modeling was conducted for that similar sized hotel. The modeling for that slightly smaller hotel calculated that hotel's operation would emit 1,528 MT of CO2e/year, well in excess of BAAQMD's significance threshold. *See* City of San Jose, Revised Public Review Draft Initial Study – Mitigated Negative Declaration for AC by Marriott – West San Jose, File No. H17-023 (Oct. 2018) (GHG excerpt attached as Exhibit E). The size of the project and the analysis of a similar related project in San Jose are substantial evidence of a fair argument that the hotel project may have a significant GHG emission impact.

III. Alternatively, Assuming Staff is Right That the Hotel Project is the Same Project Addressed by the 1974 EIR, New Information and New Circumstances Have Arisen in the Interim 44-years That Require Significant Revisions to the 1974 EIR.

Even assuming that the zoning change reviewed by the 1974 EIR somehow equates to reviewing a hotel project, numerous substantial changes in the development plans have occurred, new information of substantial importance has arisen, and substantial changes in circumstances have taken place that require a wholesale revision of that dated EIR.

When changes to a project's circumstances or new substantial information comes to light subsequent to the certification of an EIR for a project, the agency must prepare a subsequent or supplemental EIR if the changes are "[s]ubstantial" and require "major revisions" of the previous EIR. *Friends of Coll. of San Mateo Gardens v. San Mateo Cty. Cmty. Coll. Dist.* (2016) 1 Cal.5th 937, 943. "[W]hen there is a change in plans, circumstances, or available information after a project has received initial approval, the agency's environmental review obligations "turn[ ] on the value of the new information to the still pending decisionmaking process." *Id*., 1 Cal.5th at 951–52. The agency must "decide under CEQA's subsequent review provisions whether project changes will require major revisions to the original environmental document because of the involvement of new, previously unconsidered significant environmental effects." *Id*., 1 Cal.5th at 952. Section 21166 and CEQA Guidelines § 15162 "do[] not permit agencies to avoid their obligation to prepare subsequent or supplemental EIRs to address new, and previously unstudied, potentially significant environmental effects." *Id*., 1 Cal.5th at 958.

Section 15162 provides, in relevant part,

> (a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
>
> (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
>
> (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

> (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
>
> (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
>
> (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
>
> (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
>
> (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.
>
> (b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a).

14 Cal. Admin. Code § 15162(a)-(b). All of the evidence indicates that the project considered by the 1974 EIR has undergone significant changes to the project and its circumstances requiring substantial revisions to that 44-year old EIR and, not surprisingly, that new information and mitigations are now available that must be considered in an EIR.

A. Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

Assuming the proposed hotel is the same project as was considered in 1974, it is a substantial change to that project. As discussed above, the only project that was considered regarding the 51-acre business park was to rezone the area from residential to commercial. The use of the area as an office park was mentioned as a conceptual possibility. No specific proposal of how many buildings, how much office space, locations, or specific uses was identified. All of the maps of the business park area are simple outlines with no proposal to fill in the blank on the zoning map. The only mention of size beyond the land footprint zoned commercial, is an estimate that the newly zoned area "could accommodate roughly 567,000 square feet of building area, of which about 450,000 would be usable office space." 1974 EIR, p. IV-48. The hotel alone would contain 113,000 square feet of hotel space – about one-fourth of the entire square footage of office space estimated in the 1974 EIR. That amount of additional space when compared to the 1974 EIR is substantial. Given that the office space within the business park is now greater than 1.2 million square feet, a further increase to 1.3 million square, more than doubling any office park anticipated by the 1974 EIR also is a substantial change.

Significant revisions are necessary for the 1974 EIR to address the individual and cumulative impacts of this massively expanded development beyond that estimated generally in the 1974 EIR. Revisions are necessary to address for the first time, significant impacts of destroying what was, as of 1973, "[o]ne of the greatest concentrations of shorebirds in the world" and developing mitigations for that impact. *See* Smallwood Comments, p. 7. Likewise, Dr. Smallwood discusses the substantial incremental impact of that additional development on wildlife access to open areas in this portion of Bay Farm adjacent to the Bay. *Id*., pp. 8-9. The additional visual, air pollution, traffic and noise impacts of the greatly expanded business park would require entirely new discussions and analyses to be added to the 1974 EIR. The fact that workers throughout this large expanse of office parks are being exposed to cancer-causing levels of formaldehyde would require a new discussion and new mitigation within the EIR. *See* Offermann Comments. Similarly, an entirely new analysis and disclosure of GHG emissions must be added to the EIR to address the development beyond anything envisioned in the 1974 EIR.

B. Substantial changes have occurred with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

Our review of the project has disclosed a number of dramatically altered circumstances requiring a re-write of the 1974 EIR in order to address numerous environmental impacts of the Harbor Bay development. Some of the more dramatic changes in circumstances include:

- The impacts and apparent failure of the burrowing owl relocations that occurred many years after the 1974 EIR was certified. The 1974 EIR references statements by Elsie Roemer noting that, at the time, burrowing owls were "fairly common." 1974 EIR, p. F-2. Dr. Smallwood describes the current plight of burrowing owls in the area:

> Available evidence indicates burrowing owls have declined to their last 1-2 successful breeding pairs in western Alameda County (Trulio et al. 2018). Ironically, the only species for which mitigation was attempted in the 1989 EIR have since been extirpated from all but one site across western Alameda County, and even at that one site the species is essentially extirpated, with only 1 to 2 pairs remaining in 2018.

Smallwood Comments, p. 10. Nor have any owls relocated to the vicinity of Oakland Airport fared well in recent years. *See* Center For Biological Diversity, Petition for Listing the California Population of the Western Burrowing Owl (*Athene Cunicularia Hypugaea*) as an Endangered or Threatened Species Under the California Endangered Species Act (attached as Exhibit F); Smallwood Comments, p. 10. The ongoing plight of burrowing owls in western Alameda county, and beyond, is a substantial change of circumstances from those considered in 1974 requiring major revision of the EIR.

- The traffic impacts considered in the 1974 EIR only extended to 1995. Smith Comments, p. 2. The EIR fails to address the changes in traffic that have occurred over the last 23 years. Given the numerous intersections on Bay Farm Island with a LOS F, those traffic circumstances have grown to significant levels of impact.

These changed circumstances are substantial changes in circumstances and indicate that the severity of the 1974 project's impacts on burrowing owls and traffic is much more extensive than anticipated in that prior EIR. Substantial revisions are necessary to cure this deficiency.

C. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence in 1974, shows that the project will have one or more significant impacts that were not considered or are more severe.

Several of the impacts described above involve new information (i.e. information available after 1974) that demonstrates significant impacts from not only the proposed hotel but the overall development of the Harbor Bay project. Because staff indicates that the hotel is the same project reviewed in 1974, many of these impacts must be addressed for, not only the proposed hotel, but also the portions of the project that have already been constructed.

As discussed above, the hotel project will have significant impacts on air quality and health risks by emitting cancer-causing levels of formaldehyde into the air that will expose workers to cancer risks well in excess of BAAQMD's threshold of significance. Information regarding the health risks posed by the use of formaldehyde-based products in building construction was not known in 1974. The main studies, some of which Mr. Offermann was involved, were not published until 2009. Offermann Comments, pp. 2-3. Hence, these threats are significant new information vis-à-vis the 1974 EIR.

Not only is it true that the hotel will pose these health risks to workers, but it also is true of all of the offices and residences that have been built since 1974. To the extent the hotel is part of the 1974 project, the discretionary approval of that piece of the project opens up the entire project to review and revision of the EIR to address this substantial health risk. Indeed, the risks to the residents of the residential buildings constructed as part of the project have even higher cancer risks of 125 up to 180 cancers per million in gross exceedance of the BAAQMD threshold. Offermann Comments, pp. 2-3. Formaldehyde continues to emit from building materials many decades after its initial installation. As a result, mitigations are still available to long-time residents, including air filters or potentially retrofitting flooring or other sources. Initially however, CEQA requires the City to react to this new information, disclose it in a revised EIR, and determine the appropriate mitigations that should be implemented. Because, according to staff, the 1974 project is being reopened by the proposed hotel, the City's duty to update the EIR with this important health risk information and mitigations is triggered now.

In addition, there is significant new information regarding the impact of the proposed hotel, as well as all of the office buildings already built in the business park, and the thousands of homes constructed as part of the project, on birds colliding into those many buildings. Although not available to a typical resident in the 1970s, the very first study of bird strikes with buildings was not published until 1976, almost three years after the 1974 EIR's certification. Smallwood Comments, p. 13. The issue was not more publicly disseminated until several notable reports issued in 1989. *Id*., pp. 14-15. Either way, the significance of bird fatalities from collisions with buildings like the hotel is significant new information. As shown above, bird strikes even with the one five-story hotel will be significant. As part of the overall project considered in 1974, every office building as well as the homes must be considered in addressing this significant impact recognized post-1974 and formulating appropriate mitigation measures.

D. Mitigation measures previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project.

The 1974 EIR includes as a mitigation measure for the project that "[e]lectric vehicles will be provided each house for internal trips." 1974 EIR, p. I-12. This mitigation was to address air pollution, traffic and noise. *See id*., p. I-20 (noise analysis calls for "[a] maximum use of electrically powered vehicles in the project area"); pp. IV-146-147 (modest mitigation for air quality); p. IV-233 ("special electric cars which will be available to all residents"). For traffic, the 1974 EIR states:

> The major negative impacts associated with the project area will be the extensive traffic generation the project will produce in a location least able to absorb such traffic. The developer, in response to this factor, has instigated an extensive system of alternative transportation systems including pedestrian pathways, bicycle pathways, and ***electrically powered vehicles available with each home*** as an alternative to the second car.

1974 EIR, p. I-21 (emphasis added). Each unit of the residential portion of the project was to provide an enclosed parking space for the electric vehicle. *See* 1974 EIR, p. II-10 ("In addition to these resident parking spaces there will be guest parking and one enclosed parking space per unit for an electric car); *Id*., p. II-19.

According to the 1989 Addendum addressing Village V, the City purportedly modified this mitigation measure when the number of residents to be built for the overall project was reduced in number from 4,950 units to 3,200 units. *See* 1989 Addendum, p. 5-6. However, there is no mention of any modification of the EIR analyzing the impacts of eliminating that mitigation measure relied upon in the 1974 EIR. Nevertheless, the 1989 Addendum modifying Village V carries forward this mitigation, though purporting to add a feasibility condition that was not present in the 1974 EIR. The mitigation for Village V in the 1989 Addendum provides that:

> In the event such technology becomes feasible, applicant should provide an electric car for each house sold in Village V as proposed in the HBI Master Plan for local Alameda trips, to mitigate air and noise impacts of traffic and reduce use of gasoline.

1989 Addendum, p. 4-23. The 1989 Addendum then concludes that, at the time, "[w]hile the technology of electric-powered vehicles has improved and has become somewhat less costly than in 1976, providing electric cars for the new homes in Village 5 would not be a viable mitigation measure at this time." *Id*., p. 5-6.

Of course, given the current ready availability of electric cars, especially the smaller, local vehicles envisioned by the 1974 EIR and the 1989 Addendum, electric vehicles are now entirely feasible. Alameda Municipal Power acknowledges their feasibility, offering rebates and otherwise encouraging the use of electric vehicles. *See https://www.alamedamp.com/environment/electric-vehicles.* There is a wide assortment of smaller electric vehicles consistent with those included in the 1974 EIR and the 1989 Addendum. *See, e.g. http://motoelectricvehicles.com/neighborhood-electric-vehicle.* The feasibility and availability of smaller electric vehicles cannot reasonably be questioned. This new information must be assessed in an EIR that fully explores the implementation of this long-stated mitigation measure.

E. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment.

Lastly, numerous mitigation measures addressing the above issues have been identified by the attached expert comments. None of these measures were addressed in the 1974 EIR. Every identified mitigation measure is significant new information that post-dates the 1974 EIR. In addition, the Project's GHG emissions can be reduced by requiring solar panels, electric shuttles, and other GHG reducing measures that were not available and not considered in the 1974 EIR. A new EIR should be prepared to provide a process consistent with CEQA that would ensure that the 44-year old review of the Harbor Bay project is brought up to current environmental standards and all impacts and mitigations be addressed and disclosed to the public for review and comment.

IV. CONCLUSION

In light of the above comments, staff's recommendation to rely on the 44-year old EIR should be withdrawn, a relevant and updated EIR either for the hotel project or the entire Bay Harbor project should be prepared, and the draft EIR should be circulated for public review and comment in accordance with CEQA. Thank you for considering these comments.

Sincerely,

Michael R Lozeau

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EXHIBIT A

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Date: December 6, 2018

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From: Francis J. Offermann PE CIH

Subject: Indoor Air Quality: Marriott Residence Inn Alameda IAQ

Pages: 14

Indoor Air Quality Impacts

Indoor air quality (IAQ) directly impacts the comfort and health of building occupants, and the achievement of acceptable IAQ in newly constructed and renovated buildings is a well-recognized design objective. For example, IAQ is addressed by major high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014). Indoor air quality in homes is particularly important because occupants, on average, spend approximately ninety percent of their time indoors with the majority of this time spent at home (EPA, 2011). Some segments of the population that are most susceptible to the effects of poor IAQ, such as the very young and the elderly, occupy their homes almost continuously. Additionally, an increasing number of adults are working from home at least some of the time during the workweek. Indoor air quality also is a serious concern for workers in hotels, offices and other business establishments.

The concentrations of many air pollutants often are elevated in homes and other buildings relative to outdoor air because many of the materials and products used indoors contain and release a variety of pollutants to air (Hodgson et al., 2002; Offermann and Hodgson, 2011). With respect to indoor air contaminants for which inhalation is the primary route of exposure, the critical design and construction parameters are the provision of adequate ventilation and the reduction of indoor sources of the contaminants.

Indoor Formaldehyde Concentrations Impact. In the California New Home Study (CNHS) of 108 new homes in California (Offermann, 2009), 25 air contaminants were measured, and formaldehyde was identified as the indoor air contaminant with the highest cancer risk as determined by the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), No Significant Risk Levels (NSRL) for carcinogens. The NSRL is the daily intake level calculated to result in one excess case of cancer in an exposed population of 100,000 (i.e., ten in one million cancer risk) and for formaldehyde is 40 µg/day. The NSRL concentration of formaldehyde that represents a daily dose of 40 µg is 2 µg/m^3, assuming a continuous 24-hour exposure, a total daily inhaled air volume of 20 m^3, and 100% absorption by the respiratory system. All of the CNHS homes exceeded this NSRL concentration of 2 µg/m^3. The median indoor formaldehyde concentration was 36 µg/m^3, and ranged from 4.8 to 136 µg/m^3, which corresponds to a median exceedance of the 2 µg/m^3 NSRL concentration of 18 and a range of 2.3 to 68.

Therefore, the cancer risk of a resident living in a California home with the median indoor formaldehyde concentration of 36 µg/m^3, is 180 per million as a result of formaldehyde alone. Because residential projects typically will be built using typical materials and construction methods used in California, future residents will experience a cancer risk from formaldehyde of approximately 180 per million. The CEQA significance threshold for airborne cancer risk is 10 per million, as established by the Bay Area Air Quality Management District (BAAQMD, 2017a).

Besides being a human carcinogen, formaldehyde is also a potent eye and respiratory irritant. In the CNHS, many homes exceeded the non-cancer reference exposure levels (RELs) prescribed by California Office of Environmental Health Hazard Assessment (OEHHA, 2017b). The percentage of homes exceeding the RELs ranged from 98% for the Chronic REL of 9 µg/m^3 to 28% for the Acute REL of 55 µg/m^3.

The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and particle board. These materials are commonly used in residential and hotel building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims.

In January 2009, the California Air Resources Board (CARB) adopted an airborne toxics control measure (ATCM) to reduce formaldehyde emissions from composite wood products, including hardwood plywood, particleboard, medium density fiberboard, and also furniture and other finished products made with these wood products (California Air Resources Board 2009). While this formaldehyde ATCM has resulted in reduced emissions from composite wood products sold in California, they do not preclude that homes built with composite wood products meeting the CARB ATCM will have indoor formaldehyde concentrations that are below cancer and non-cancer exposure guidelines.

A follow up study to the California New Home Study (CNHS) was conducted in 2016-2018 (Chan et. al., 2018), and found that the median indoor formaldehyde in new homes built after the 2009 CARB formaldehyde ATCM had lower indoor formaldehyde concentrations, with a median indoor concentrations of 25 $\mu g/m^3$ as compared to a median of 36 $\mu g/m^3$ found in the 2007 CNHS.

Thus, while new homes built after the 2009 CARB formaldehyde ATCM have a 30% lower median indoor formaldehyde concentration and cancer risk, the median lifetime cancer risk is still 125 per million for homes built with CARB compliant composite wood products which is more than 12 times the BAAQMD's 10 in a million cancer risk threshold.

With respect to this project, Marriott Residence Inn, located at 2900 Harbor Bay Parkway, Alameda, CA, since this is a hotel, guests are expected to have short-term exposures (e.g. less than a week), but employees are expected to experience longer-term exposures (e.g. 40 hours per week, 50 weeks per year). The longer-term exposures for employees is anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing commonly found in residences and hotels.

Because the hotel will be constructed with CARB Phase 2 Formaldehyde ATCM materials, and is ventilated with the minimum code required amount of outdoor air, the indoor hotel formaldehyde concentrations are likely similar to those concentrations observed in residences built with CARB Phase 2 Formaldehyde ATCM materials, which is a median of 25 $\mu g/m^3$.

Assuming that the employees work 8 hours per day and inhale 20 m^3 of hotel air per day, the formaldehyde dose per work-day at the hotel is 167 µg/day.

Assuming that the hotel employees work 5 days per week and 50 weeks per year for 45 years (start at age 20 and retire at age 65) the average 70-year lifetime formaldehyde daily dose is 73.6 µg/day.

This is 1.84 times the NSRL of 40 µg/day and represents a cancer risk of 18.4 per million, which exceeds the CEQA cancer risk of 10 per million. This impact should be analyzed in an environmental impact report ("EIR"), and the agency should impose all feasible mitigation measures to reduce this impact. Several feasible mitigation measures are discussed below and these and other measures should be analyzed in an EIR.

While measurements of the indoor concentrations of formaldehyde in residences built with CARB Phase 2 Formaldehyde ATCM materials (Chan et. al., 2018), indicate that indoor formaldehyde concentrations in buildings built with similar materials (e.g. hotels, offices, schools) will pose cancer risks in excess of the CEQA cancer risk of 10 per million, a determination of the cancer risk that is specific to this project and the materials used to construct these buildings can and should be conducted prior to completion of the environmental review.

The following describes a method that should be used prior to construction in the environmental review under CEQA, for determining whether the indoor concentrations resulting from the formaldehyde emissions of the specific building materials/furnishings selected for the building exceed cancer and non-cancer guidelines. Such a design analyses can be used to identify those materials/furnishings prior to the completion of the City's CEQA review and project approval, that have formaldehyde emission rates that contribute to indoor concentrations that exceed cancer and non-cancer guidelines, so that alternative lower emitting materials/furnishings may be selected and/or higher minimum outdoor air ventilation rates can be increased to achieve acceptable indoor concentrations and incorporated as mitigation measures for this project.

Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment.

This formaldehyde emissions assessment should be used in the environmental review under CEQA to assess the indoor formaldehyde concentrations from the proposed loading of building materials/furnishings, the area-specific formaldehyde emission rate data for building materials/furnishings, and the design minimum outdoor air ventilation rates. This assessment allows the applicant (and the City) to determine before the conclusion of the environmental review process and the building materials/furnishings are specified, purchased, and installed if the total chemical emissions will exceed cancer and non-cancer guidelines, and if so, allow for changes in the selection of specific material/furnishings and/or the design minimum outdoor air ventilations rates such that cancer and non-cancer guidelines are not exceeded.

1.) Define Indoor Air Quality Zones. Divide the building into separate indoor air quality zones, (IAQ Zones). IAQ Zones are defined as areas of well-mixed air. Thus, each ventilation system with recirculating air is considered a single zone, and each room or group of rooms where air is not recirculated (e.g. 100% outdoor air) is considered a separate zone. For IAQ Zones with the same construction material/furnishings and design minimum outdoor air ventilation rates. (e.g. hotel rooms, apartments, condominiums, etc.) the formaldehyde emission rates need only be assessed for a single IAQ Zone of that type.

2.) Calculate Material/Furnishing Loading. For each IAQ Zone, determine the building material and furnishing loadings (e.g., m^2 of material/m^2 floor area, units of furnishings/m^2 floor area) from an inventory of <u>all</u> potential indoor formaldehyde sources, including flooring, ceiling tiles, furnishings, finishes, insulation, sealants, adhesives, and any products constructed with composite wood products containing urea-formaldehyde resins (e.g., plywood, medium density fiberboard, particleboard).

3.) <u>Calculate the Formaldehyde Emission Rate</u>. For each building material, calculate the formaldehyde emission rate (µg/h) from the product of the area-specific formaldehyde emission rate (µg/m^2-h) and the area (m^2) of material in the IAQ Zone, and from each furnishing (e.g. chairs, desks, etc.) from the unit-specific formaldehyde emission rate (µg/unit-h) and the number of units in the IAQ Zone.

NOTE: As a result of the high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014), most manufacturers of building materials furnishings sold in the United States conduct chemical emission rate tests using the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017), or other equivalent chemical emission rate testing methods. Most manufacturers of building furnishings sold in the United States conduct chemical emission rate tests using ANSI/BIFMA M7.1 Standard Test Method for Determining VOC Emissions (BIFMA, 2018), or other equivalent chemical emission rate testing methods.

CDPH, BIFMA, and other chemical emission rate testing programs, typically certify that a material or furnishing does not create indoor chemical concentrations in excess of the maximum concentrations permitted by their certification. For instance, the CDPH emission rate testing requires that the measured emission rates when input into an office, school, or residential model do not exceed one-half of the OEHHA Chronic Exposure Guidelines (OEHHA, 2017b) for the 35 specific VOCs, including formaldehyde, listed in Table 4-1 of the CDPH test method (CDPH, 2017). These certifications themselves do not provide the actual area-specific formaldehyde emission rate (i.e., µg/m^2-h) of the product, but rather provide data that the formaldehyde emission rates do not exceed the maximum rate allowed for the certification. Thus for example, the data for a certification of a specific type of flooring may be used to calculate that the area-specific emission rate of formaldehyde is less than 31 µg/m^2-

h, but not the actual measured specific emission rate, which may be 3, 18, or 30 µg/m^2-h. These area-specific emission rates determined from the product certifications of CDPH, BIFA, and other certification programs can be used as an initial estimate of the formaldehyde emission rate.

If the actual area-specific emission rates of a building material or furnishing is needed (i.e. the initial emission rates estimates from the product certifications are higher than desired), then that data can be acquired by requesting from the manufacturer the complete chemical emission rate test report. For instance if the complete CDPH emission test report is requested for a CDHP certified product, that report will provide the actual area-specific emission rates for not only the 35 specific VOCs, including formaldehyde, listed in Table 4-1 of the CDPH test method (CDPH, 2017), but also all of the cancer and reproductive/developmental chemicals listed in the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), all of the toxic air contaminants (TACs) in the California Air Resources Board Toxic Air Contamination List (CARB, 2011), and the 10 chemicals with the greatest emission rates.

Alternatively, a sample of the building material or furnishing can be submitted to a chemical emission rate testing laboratory, such as Berkeley Analytical Laboratory (https://berkeleyanalytical.com), to measure the formaldehyde emission rate.

4.) Calculate the Total Formaldehyde Emission Rate. For each IAQ Zone, calculate the total formaldehyde emission rate (i.e. µg/h) from the individual formaldehyde emission rates from each of the building material/furnishings as determined in Step 3.

5.) Calculate the Indoor Formaldehyde Concentration. For each IAQ Zone, calculate the indoor formaldehyde concentration (µg/m^3) from Equation 1 by dividing the total formaldehyde emission rates (i.e. µg/h) as determined in Step 4, by the design minimum outdoor air ventilation rate (m^3/h) for the IAQ Zone.

$$C_{in} = \frac{E_{total}}{Q_{oa}} \quad \text{(Equation 1)}$$

where:

C_{in} = indoor formaldehyde concentration (µg/m^3)

E_{total} = total formaldehyde emission rate (µg/h) into the IAQ Zone.

Q_{oa} = design minimum outdoor air ventilation rate to the IAQ Zone (m^3/h)

The above Equation 1 is based upon mass balance theory, and is referenced in Section 3.10.2 "Calculation of Estimated Building Concentrations" of the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017).

6.) Calculate the Indoor Exposure Cancer and Non-Cancer Health Risks. For each IAQ Zone, calculate the cancer and non-cancer health risks from the indoor formaldehyde concentrations determined in Step 5 and as described in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines; Guidance Manual for Preparation of Health Risk Assessments (OEHHA, 2015).

7.) Mitigate Indoor Formaldehyde Exposures of exceeding the CEQA Cancer and/or Non-Cancer Health Risks. In each IAQ Zone, provide mitigation for any formaldehyde exposure risk as determined in Step 6, that exceeds the CEQA cancer risk of 10 per million or the CEQA non-cancer Hazard Quotient of 1.0.

Provide the source and/or ventilation mitigation required in all IAQ Zones to reduce the health risks of the chemical exposures below the CEQA cancer and non-cancer health risks.

Source mitigation for formaldehyde may include:

1.) reducing the amount materials and/or furnishings that emit formaldehyde
2.) substituting a different material with a lower area-specific emission rate of formaldehyde

Ventilation mitigation for formaldehyde emitted from building materials and/or furnishings may include:

1.) increasing the design minimum outdoor air ventilation rate to the IAQ Zone.

NOTE: Mitigating the formaldehyde emissions through use of less material/furnishings, or use of lower emitting materials/furnishings, is the preferred mitigation option, as mitigation with increased outdoor air ventilation increases initial and operating costs associated with the heating/cooling systems.

Outdoor Air Ventilation Impact. Another important finding of the CNHS, was that the outdoor air ventilation rates in the homes were very low. Outdoor air ventilation is a very important factor influencing the indoor concentrations of air contaminants, as it is the primary removal mechanism of all indoor air generated air contaminants. Lower outdoor air exchange rates cause indoor generated air contaminants to accumulate to higher indoor air concentrations. Many homeowners rarely open their windows or doors for ventilation as a result of their concerns for security/safety, noise, dust, and odor concerns (Price, 2007). In the CNHS field study, 32% of the homes did not use their windows during the 24-hour Test Day, and 15% of the homes did not use their windows during the entire preceding week. Most of the homes with no window usage were homes in the winter field session. Thus, a substantial percentage of homeowners never open their windows, especially in the winter season. The median 24-hour measurement was 0.26 ach, with a range of 0.09 ach to 5.3 ach. A total of 67% of the homes had outdoor air exchange rates below the minimum California Building Code (2001) requirement of 0.35 ach. Thus, the relatively tight envelope construction, combined with the fact that many people never open their windows for ventilation, results in homes with low outdoor air exchange rates and higher indoor air contaminant concentrations.

The Marriott Residence Inn in Alameda project is located close to the Oakland International Airport as well as roads with moderate to high traffic (e.g. Harbor Bay Parkway and Mecartney Road) and as such is anticipated to be in a noise impacted area. The noise analysis report (Saxelby Acoustics, 2018) only considers the noise impact resulting from the Oakland International Airport, and fails to consider the additional impact of vehicle traffic noise on Harbor Bay Parkway and Mecartney Road. This report includes no actual on-site measurements, but rather only considers the Oakland International Airport Noise Contours as depicted in Figure 2 or the report. The report concludes that the noise from the airport alone (vehicle road traffic excluded) would be 65 dBA CNEL or less, and further states that "Modern construction practices typically provide a minimum exterior−to−interior noise level reduction of 25 dBA. Based upon the maximum predicted exterior noise exposure of 65 dBA CNEL, interior noise levels are predicted to be 40 dBA CNEL, or less. Therefore, interior noise levels are predicted to meet the State of California, City of Alameda, and Oakland International Airport Land Use Compatibility Plan interior noise standard of 45 dBA CNEL with no special noise reduction measures."

However, modern construction practices typically provide a minimum exterior−to−interior noise level reduction of 20-25 dBA only if the windows are kept closed. Thus, the report incorrectly concludes that no special noise reduction measures will be required, as mechanical outdoor air ventilation will be required so that windows and doors could be kept closed at the occupant's discretion to control exterior noise within the hotel interior spaces.

An on-site noise survey by a qualified acoustic firm should be conducted to assess the true outdoor noise levels and additional noise reduction strategies (e.g. low sound transmission windows etc.) included as needed to achieve acceptable interior noise levels of 45 dBA CNEL or less.

$PM_{2.5}$ Outdoor Concentrations Impact. An additional impact of the nearby motor vehicle traffic associated with this project, are the increased outdoor concentrations of $PM_{2.5}$.

This development is located in Alameda, CA, which is in the San Francisco Bay Area Basin which is an EPA non-attainment area for $PM_{2.5.}$, with exceedences of both the National (EPA) maximum annual average concentration of 12 µg/m^3 and the maximum 24-hour average of 35 µg/m^3. The closest BAAQMD air monitoring site to the proposed project is the Oakland West monitoring site. At this air monitoring site, the measured $PM_{2.5}$ outdoor air concentrations for the most recent year of data in 2017, exceeded both the EPA maximum annual average concentration of 12 µg/m^3 and the EPA maximum 24-hour average of 35 µg/m^3 (BAAQMD, 2017b).

An air quality analyses should to be conducted to determine the concentrations of $PM_{2.5}$ in the outdoor and indoor air that people inhale each day. This air quality analyses needs to consider the cumulative impacts of the project related emissions, existing and projected future emissions from local $PM_{2.5}$ sources (e.g. stationary sources, motor vehicles, and airport traffic) upon the outdoor air concentrations at the project site. If the outdoor concentrations are determined to exceed the California and National annual average $PM_{2.5}$ exceedence concentration of 12 $\mu g/m^3$, or the National 24-hour average exceedence concentration of 35 $\mu g/m^3$, then the buildings need to have a mechanical supply of outdoor air that has air filtration with sufficient $PM_{2.5}$ removal efficiency, such that the indoor concentrations of outdoor $PM_{2.5}$ particles is less than the California and National $PM_{2.5}$ annual and 24-hour standards.

It is my experience that based on the projected combination of high traffic and airport noise levels, the annual average concentration of $PM_{2.5}$ will exceed the California and National $PM_{2.5}$ annual and 24-hour standards and warrant installation of high efficiency air filters (i.e. MERV 13 or higher) in all mechanically supplied outdoor air ventilation systems.

Indoor Air Quality Impact Mitigation Measures

The following are recommended mitigation measures to minimize the impacts upon indoor quality:

- indoor formaldehyde concentrations
- outdoor air ventilation
- $PM_{2.5}$ outdoor air concentrations

Indoor Formaldehyde Concentrations Mitigation. Use only composite wood materials (e.g. hardwood plywood, medium density fiberboard, particleboard) for all interior finish systems that are made with CARB approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins (CARB, 2009). Alternatively, conduct the previously described Pre-Construction Building Material/Furnishing Formaldehyde

Emissions Assessment, to determine that the combination of formaldehyde emissions from building materials and furnishings do not create indoor formaldehyde concentrations that exceed the CEQA cancer and non-cancer health risks.

Outdoor Air Ventilation Mitigation. Provide each habitable room with a continuous mechanical supply of outdoor air that meets or exceeds the California 2016 Building Energy Efficiency Standards (California Energy Commission, 2015) requirements of the greater of 15 cfm/occupant or 0.15 cfm/ft^2 of floor area. Following installation of the system conduct testing and balancing to insure that required amount of outdoor air is entering each habitable room and provide a written report documenting the outdoor air flow rates. Do not use exhaust only mechanical outdoor air systems, use only balanced outdoor air supply and exhaust systems or outdoor air supply only systems. Provide a manual for the hotel management that describes the purpose of the mechanical outdoor air system and the operation and maintenance requirements of the system.

$PM_{2.5}$ Outdoor Air Concentration Mitigation. Install air filtration with sufficient $PM_{2.5}$ removal efficiency (e.g. MERV 13 or higher) to filter the outdoor air entering the mechanical outdoor air supply systems, such that the indoor concentrations of outdoor $PM_{2.5}$ particles are less than the California and National $PM_{2.5}$ annual and 24-hour standards. Install the air filters in the system such that they are accessible for replacement by the hotel maintenance staff. Include in the mechanical outdoor air ventilation system manual instructions on how to replace the air filters and the estimated frequency of replacement.

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Education

M.S. Mechanical Engineering (1985)
Stanford University, Stanford, CA.

Graduate Studies in Air Pollution Monitoring and Control (1980)
University of California, Berkeley, CA.

B.S. in Mechanical Engineering (1976)
Rensselaer Polytechnic Institute, Troy, N.Y.

Professional Experience

President: Indoor Environmental Engineering, San Francisco, CA. December, 1981 - present.

Direct team of environmental scientists, chemists, and mechanical engineers in conducting State and Federal research regarding indoor air quality instrumentation development, building air quality field studies, ventilation and air cleaning performance measurements, and chemical emission rate testing.

Provide design side input to architects regarding selection of building materials and ventilation system components to ensure a high quality indoor environment.

Direct Indoor Air Quality Consulting Team for the winning design proposal for the new State of Washington Ecology Department building.

Develop a full-scale ventilation test facility for measuring the performance of air diffusers; ASHRAE 129, Air Change Effectiveness, and ASHRAE 113, Air Diffusion Performance Index.

Develop a chemical emission rate testing laboratory for measuring the chemical emissions from building materials, furnishings, and equipment.

Principle Investigator of the California New Homes Study (2005-2007). Measured ventilation and indoor air quality in 108 new single family detached homes in northern and southern California.

Develop and teach IAQ professional development workshops to building owners, managers, hygienists, and engineers.

Air Pollution Engineer: Earth Metrics Inc., Burlingame, CA, October, 1985 to March, 1987.

Responsible for development of an air pollution laboratory including installation a forced choice olfactometer, tracer gas electron capture chromatograph, and associated calibration facilities. Field team leader for studies of fugitive odor emissions from sewage treatment plants, entrainment of fume hood exhausts into computer chip fabrication rooms, and indoor air quality investigations.

Staff Scientist: Building Ventilation and Indoor Air Quality Program, Energy and Environment Division, Lawrence Berkeley Laboratory, Berkeley, CA. January, 1980 to August, 1984.

Deputy project leader for the Control Techniques group; responsible for laboratory and field studies aimed at evaluating the performance of indoor air pollutant control strategies (i.e. ventilation, filtration, precipitation, absorption, adsorption, and source control).

Coordinated field and laboratory studies of air-to-air heat exchangers including evaluation of thermal performance, ventilation efficiency, cross-stream contaminant transfer, and the effects of freezing/defrosting.

Developed an *in situ* test protocol for evaluating the performance of air cleaning systems and introduced the concept of effective cleaning rate (ECR) also known as the Clean Air Delivery Rate (CADR).

Coordinated laboratory studies of portable and ducted air cleaning systems and their effect on indoor concentrations of respirable particles and radon progeny.

Co-designed an automated instrument system for measuring residential ventilation rates and radon concentrations.

Designed hardware and software for a multi-channel automated data acquisition system used to evaluate the performance of air-to-air heat transfer equipment.

Assistant Chief Engineer: Alta Bates Hospital, Berkeley, CA, October, 1979 to January, 1980.

Responsible for energy management projects involving installation of power factor correction capacitors on large inductive electrical devices and installation of steam meters on physical plant steam lines. Member of Local 39, International Union of Operating Engineers.

Manufacturing Engineer: American Precision Industries, Buffalo, NY, October, 1977 to October, 1979.

Responsible for reorganizing the manufacturing procedures regarding production of shell and tube heat exchangers. Designed customized automatic assembly, welding, and testing equipment. Designed a large paint spray booth. Prepared economic studies justifying new equipment purchases. Safety Director.

Project Engineer: Arcata Graphics, Buffalo, N.Y. June, 1976 to October, 1977.

Responsible for the design and installation of a bulk ink storage and distribution system and high speed automatic counting and marking equipment. Also coordinated material handling studies which led to the purchase and installation of new equipment.

PROFESSIONAL ORGANIZATION MEMBERSHIP

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

• Chairman of SPC-145P, Standards Project Committee - Test Method for Assessing the Performance of Gas Phase Air Cleaning Equipment (1991-1992)
• Member SPC-129P, Standards Project Committee - Test Method for Ventilation Effectiveness (1986-97)
  - Member of Drafting Committee
• Member Environmental Health Committee (1992-1994, 1997-2001, 2007-2010)
  - Chairman of EHC Research Subcommittee
  - Member of Man Made Mineral Fiber Position Paper Subcommittee
  - Member of the IAQ Position Paper Committee
  - Member of the Legionella Position Paper Committee
  - Member of the Limiting Indoor Mold and Dampness in Buildings Position Paper Committee
• Member SSPC-62, Standing Standards Project Committee - Ventilation for Acceptable Indoor Air Quality (1992 to 2000)
  - Chairman of Source Control and Air Cleaning Subcommittee
• Chairman of TC-4.10, Indoor Environmental Modeling (1988-92)
  - Member of Research Subcommittee
• Chairman of TC-2.3, Gaseous Air Contaminants and Control Equipment (1989-92)
  - Member of Research Subcommittee

American Society for Testing and Materials (ASTM)

• D-22 Sampling and Analysis of Atmospheres
  - Member of Indoor Air Quality Subcommittee
• E-06 Performance of Building Constructions

American Board of Industrial Hygiene (ABIH)

American Conference of Governmental Industrial Hygienists (ACGIH)

• Bioaerosols Committee (2007-2013)

American Industrial Hygiene Association (AIHA)

Cal-OSHA Indoor Air Quality Advisory Committee

International Society of Indoor Air Quality and Climate (ISIAQ)

- Co-Chairman of Task Force on HVAC Hygiene

U. S. Green Building Council (USGBC)
- Member of the IEQ Technical Advisory Group (2007-2009)
- Member of the IAQ Performance Testing Work Group (2010-2012)

Western Construction Consultants (WESTCON)

PROFESSIONAL CREDENTIALS

Licensed Professional Engineer - Mechanical Engineering

Certified Industrial Hygienist - American Board of Industrial Hygienists

SCIENTIFIC MEETINGS AND SYMPOSIA

Biological Contamination, Diagnosis, and Mitigation, Indoor Air'90, Toronto, Canada, August, 1990.

Models for Predicting Air Quality, Indoor Air'90, Toronto, Canada, August, 1990.

Microbes in Building Materials and Systems, Indoor Air '93, Helsinki, Finland, July, 1993.

Microorganisms in Indoor Air Assessment and Evaluation of Health Effects and Probable Causes, Walnut Creek, CA, February 27, 1997.

Controlling Microbial Moisture Problems in Buildings, Walnut Creek, CA, February 27, 1997.

Scientific Advisory Committee, Roomvent 98, 6th International Conference on Air Distribution in Rooms, KTH, Stockholm, Sweden, June 14-17, 1998.

Moisture and Mould, Indoor Air '99, Edinburgh, Scotland, August, 1999.

Ventilation Modeling and Simulation, Indoor Air '99, Edinburgh, Scotland, August, 1999.

Microbial Growth in Materials, Healthy Buildings 2000, Espoo, Finland, August, 2000.

Co-Chair, Bioaerosols X- Exposures in Residences, Indoor Air 2002, Monterey, CA, July 2002.

Healthy Indoor Environments, Anaheim, CA, April 2003.

Chair, Environmental Tobacco Smoke in Multi-Family Homes, Indoor Air 2008, Copenhagen, Denmark, July 2008.

Co-Chair, ISIAQ Task Force Workshop; HVAC Hygiene, Indoor Air 2002, Monterey, CA, July 2002.

Chair, ETS in Multi-Family Housing: Exposures, Controls, and Legalities Forum, Healthy Buildings 2009, Syracuse, CA, September 14, 2009.

Chair, Energy Conservation and IAQ in Residences Workshop, Indoor Air 2011, Austin, TX, June 6, 2011.

Chair, Electronic Cigarettes: Chemical Emissions and Exposures Colloquium, Indoor Air 2016, Ghent, Belgium, July 4, 2016.

SPECIAL CONSULTATION

Provide consultation to the American Home Appliance Manufacturers on the development of a standard for testing portable air cleaners, AHAM Standard AC-1.

Served as an expert witness and special consultant for the U.S. Federal Trade Commission regarding the performance claims found in advertisements of portable air cleaners and residential furnace filters.

Conducted a forensic investigation for a San Mateo, CA pro se defendant, regarding an alleged homicide where the victim was kidnapped in a steamer trunk. Determined the air exchange rate in the steamer trunk and how long the person could survive.

Conducted *in situ* measurement of human exposure to toluene fumes released during nailpolish application for a plaintiffs attorney pursuing a California Proposition 65 product labeling case. June, 1993.

Conducted a forensic *in situ* investigation for the Butte County, CA Sheriff's Department of the emissions of a portable heater used in the bedroom of two twin one year old girls who suffered simultaneous crib death.

Consult with OSHA on the 1995 proposed new regulation regarding indoor air quality and environmental tobacco smoke.

Consult with EPA on the proposed Building Alliance program and with OSHA on the proposed new OSHA IAQ regulation.

Johnson Controls Audit/Certification Expert Review; Milwaukee, WI. May 28-29, 1997.

Winner of the nationally published 1999 Request for Proposals by the State of Washington to conduct a comprehensive indoor air quality investigation of the Washington State Department of Ecology building in Lacey, WA.

Selected by the State of California Attorney General's Office in August, 2000 to conduct a comprehensive indoor air quality investigation of the Tulare County Court House.

Lawrence Berkeley Laboratory IAQ Experts Workshop: "Cause and Prevention of Sick Building Problems in Offices: The Experience of Indoor Environmental Quality Investigators", Berkeley, California, May 26-27, 2004.

Provide consultation and chemical emission rate testing to the State of California Attorney General's Office in 2013-2015 regarding the chemical emissions from e-cigarettes.

PEER-REVIEWED PUBLICATIONS :

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F.J. Offermann and S. A. Loiselle, "Performance of an Air-Cleaning System in an Archival Book Storage Facility," *IAQ'92*, ASHRAE, Atlanta, GA, 1992.

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"The Building Shell", Tools For Building Green Conference and Trade Show, Alameda County Waste Management Authority and Recycling Board, Oakland, CA, February 28, 1998.

"Identifying Fungal Contamination Problems In Buildings", The City of Oakland Municipal Employees, Oakland, CA, March 26, 1998.

"Managing Indoor Air Quality in Schools: Staying Out of Trouble", CASBO, Sacramento, CA, April 20, 1998.

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"Particulate and Gas Phase Air Filtration", ACGIH/OSHA, Ft. Mitchell, KY, June 1998.

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“Identifying and Mitigating Mold Contamination in Buildings”, Western Construction Consultants Association, Oakland, CA, March 15, 2000; AIG Construction Defect Seminar, Walnut Creek, CA, May 2, 2001; City of Oakland Public Works Agency, Oakland, CA, July 24, 2001; Executive Council of Homeowners, Alamo, CA, August 3, 2001.

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“Mold Contamination: Recognition and What To Do and Not Do”, Redwood Empire Remodelers Association; Santa Rosa, CA, April 16, 2002.

“Investigative Tools of the IAQ Trade”, Healthy Indoor Environments 2002; Austin, TX; April 22, 2002.

“Finding Hidden Mold: Case Studies in IAQ Investigations”, AIHA Northern California Professionals Symposium; Oakland, CA, May 8, 2002.

“Assessing and Mitigating Fungal Contamination in Buildings”, Cal/OSHA Training; Oakland, CA, February 14, 2003 and West Covina, CA, February 20-21, 2003.

“Use of External Containments During Fungal Mitigation”, Invited Speaker, ACGIH Mold Remediation Symposium, Orlando, FL, November 3-5, 2003.

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“Mold Remediation: The National QUEST for Uniformity Symposium”, Invited Speaker, Orlando, Florida, November 3-5, 2003.

“Mold and Moisture Control”, Indoor Air Quality workshop for The Collaborative for High Performance Schools (CHPS), San Francisco, December 11, 2003.

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“Building Sciences: Understanding and Controlling Moisture in Buildings”, American Industrial Hygiene Association, San Francisco, CA, February 14-16, 2005.

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“Improving IAQ = Reduced Tenant Complaints”, Northern California Facilities Exposition, Santa Clara, CA, September 27, 2007.

“Defining Safe Building Air”, Criteria for Safe Air and Water in Buildings, ASHRAE Winter Meeting, Chicago, IL, January 27, 2008.

“Update on USGBC LEED and Air Filtration”, Invited Speaker, NAFA 2008 Convention, San Francisco, CA, September 19, 2008.

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“Infectious Disease Aerosol Exposures With and Without Surge Control Ventilation System Modifications”, Indoor Air 2014, Hong Kong, July, 2014.

“Chemical Emissions from E-Cigarettes”, IMF Health and Welfare Fair, Washington, DC, February 18, 2015.

“Chemical Emissions and Health Hazards Associated with E-Cigarettes”, Roswell Park Cancer Institute, Buffalo, NY, August 15, 2014.

“Formaldehyde Indoor Concentrations, Material Emission Rates, and the CARB ATCM”, Harris Martin’s Lumber Liquidators Flooring Litigation Conference, WQ Minneapolis Hotel, May 27, 2015.

“Chemical Emissions from E-Cigarettes: Direct and Indirect Passive Exposure”, FDA Public Workshop: Electronic Cigarettes and the Public Health, Hyattsville, MD June 2, 2015.

“Creating Healthy Homes, Schools, and Workplaces”, Chautauqua Institution, Athenaeum Hotel, August 24, 2015.

“Diagnosing IAQ Problems and Designing Healthy Buildings”, University of California Berkeley, Berkeley, CA, October 6, 2015.

“Diagnosing Ventilation and IAQ Problems in Commercial Buildings”, BEST Center Annual Institute, Lawrence Berkeley National Laboratory, January 6, 2016.

“A Review of Studies of Ventilation and Indoor Air Quality in New Homes and Impacts of Environmental Factors on Formaldehyde Emission Rates From Composite Wood Products”, AIHce2016, May, 21-26, 2016.

“Admissibility of Scientific Testimony”, Science in the Court, Proposition 65 Clearinghouse Annual Conference, Oakland, CA, September 15, 2016.

“Indoor Air Quality and Ventilation”, ASHRAE Redwood Empire, Napa, CA, December 1, 2016.

EXHIBIT B

December 6, 2018

Mr. Michael Lozeau
Lozeau Drury
410 12th Street, Suite 250
Oakland, CA 94607

Subject: Marriott Residence Inn Project, Alameda

P18062

Dear Mr. Lozeau:

At your request, I have reviewed traffic matters associated with the Marriott Residence Inn Project (the "Project") in the City of Alameda (the "City") including, but not limited to, the Transportation Impact Analysis (the "TIA") prepared by Abrams Associates dated November 14, 2018.

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 50 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and performed adequacy reviews of numerous transportation and circulation sections of environmental impact reports prepared under the California Environmental Quality Act (CEQA). My professional resume is attached. Findings of my review are summarized below.

Focus of the Transportation Impact Analysis Is Too Limited

As a technical analysis document, the TIA's analysis methodology employed and the assumptions and execution of the methodology is satisfactory. The problem is that the analysis only focuses on intersections within the Harbor Bay Island portion of Alameda close to the Project site. It fails to consider potential traffic impacts on the major gateway intersections to Harbor Bay Island where there is large concentration of traffic and where traffic impacts would be more consequential than at the intersections the TIA studied. Four of the five intersections studied involve intersections of key circulation roads with minor cross streets with only the cross streets controlled by stop signs. Among the gateway intersections that should have been studied are Otis with Fernstein, Doolittle with Island / Otis, Doolittle with Harbor Bay Parkway, Doolittle with Hegenberger, Doolittle with Airport Access Road, Airport Access Road with 98th Avenue and Airport Access Road with Hegenberger.

Prior EIR Relied On Is Extremely Dated and Irrelevant

We understand that the City is tiering environmental clearance of this Project on the 1974 Bay Farm Island EIR. That 44 year old EIR is stale and irrelevant especially with regard to the transportation network assumed. That network included a new freeway extending from somewhere south of Alameda along the west side of Bay Farm Island, bending west onto what was then known as the “Southern Crossing”, a new crossing of San Francisco Bay between the Bay Bridge and the San Mateo-Hayward Bridge that would have its western terminus in Southeast San Francisco connecting to I-280 and US-101. Another branch of this assumed freeway would continue northwesterly along the west side of Alameda Island, then swing more northeasterly across the Island, the Estuary and into Oakland, connecting to I-880 and I-980. The network also assumed a westerly extension of Broadway from Alameda Island connecting on a new bridge connecting directly to Bay Farm Island. None of this major network is in place or in current planning.

Given that the assumed roadway network is so divergent from current reality and that the 1974 EIR traffic was forecast to only 1990, it is preposterous that the overall context of impact study is one of localized impact in the immediate project vicinity. Moreover, the current conditions on the major roads that exist and were considered in the 1974 EIR are likely to involve significant impacts that were never evident in the 1990 forecasts. Consequently, they must now be addressed as part of the discretionary review of this portion (the proposed hotel) of the larger project

Conclusion

The City and the Project need a more current and more complete EIR to evaluate the impacts of this and all other concurrent projects.

Sincerely,

Smith Engineering & Management
A California Corporation

REGISTERED PROFESSIONAL ENGINEER
DANIEL T SMITH, JR.
No. 0938
Exp. 6-30-20
TRAFFIC
STATE OF CALIFORNIA

Dan Smith Jr

Daniel T. Smith Jr., P.E.
President

Attachment 1
Resume of Daniel T. Smith Jr., P.E.

5311 Lowry Road, Union City, CA 94587 tel: 510.489.9477 fax: 510.489.9478

SMITH ENGINEERING & MANAGEMENT

DANIEL T. SMITH, Jr.
President

EDUCATION

Bachelor of Science, Engineering and Applied Science, Yale University, 1967
Master of Science, Transportation Planning, University of California, Berkeley, 1968

PROFESSIONAL REGISTRATION

California No. 21913 (Civil) Nevada No. 7969 (Civil) Washington No. 29337 (Civil)
California No. 938 (Traffic) Arizona No. 22131 (Civil)

PROFESSIONAL EXPERIENCE

Smith Engineering & Management, 1993 to present. President.
DKS Associates, 1979 to 1993. Founder, Vice President, Principal Transportation Engineer.
De Leuw, Cather & Company, 1968 to 1979. Senior Transportation Planner.
Personal specialties and project experience include:

Litigation Consulting. Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including condemnations involving transportation access issues; traffic accidents involving highway design or traffic engineering factors; land use and development matters involving access and transportation impacts; parking and other traffic and transportation matters.

Urban Corridor Studies/Alternatives Analysis. Principal-in-charge for State Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer Concept Program, San Francisco, an AA/EIS for completion of I-280, demolition of Embarcadero freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 238 corridor freeway/expressway design/environmental study, Hayward (Calif.) Project manager, Sacramento Northeast Area multi-modal transportation corridor study. Transportation planner for I-80N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sonoma freeway operations study, SR 92 freeway operations study, I-880 freeway operations study, SR 152 alignment studies, Sacramento RTD light rail systems study, Tasman Corridor LRT AA/EIS, Fremont-Warm Springs BART extension plan/EIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

Area Transportation Plans. Principal-in charge for transportation element of City of Los Angeles General Plan Framework, shaping nations largest city two decades into 21'st century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million gsf office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station; extension of MUNI-Metro LRT; a multi-modal terminal for LRT, commuter rail and local bus; removal of a quarter mile elevated freeway; replacement by new ramps and a boulevard; an internal roadway network overcoming constraints imposed by an internal tidal basin; freeway structures and rail facilities; and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million gsf of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64 acre, 2 million gsf multi-use complex for FMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Redevelopment Plan. Project manager for Napa (Calif.) General Plan Circulation Element and Downtown Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.), for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.

TRAFFIC • TRANSPORTATION • MANAGEMENT
5311 Lowry Road, Union City, CA 94587 tel: 510.489.9477 fax: 510.489.9478

Transportation Centers. Project manager for Daly City Intermodal Study which developed a $7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.
Campus Transportation. Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.
Special Event Facilities. Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.
Parking. Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutional campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking .
Transportation System Management & Traffic Restraint. Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.
Bicycle Facilities. Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

MEMBERSHIPS

Institute of Transportation Engineers Transportation Research Board

PUBLICATIONS AND AWARDS

Residential Street Design and Traffic Control, with W. Homburger *et al*. Prentice Hall, 1989.
Co-recipient, Progressive Architecture Citation, *Mission Bay Master Plan*, with I.M. Pei WRT Associated, 1984.
Residential Traffic Management, State of the Art Report, U.S. Department of Transportation, 1979.
Improving The Residential Street Environment, with Donald Appleyard et al., U.S. Department of Transportation, 1979.
Strategic Concepts in Residential Neighborhood Traffic Control, International Symposium on Traffic Control Systems, Berkeley, California, 1979.
Planning and Design of Bicycle Facilities: Pitfalls and New Directions, Transportation Research Board, Research Record 570, 1976.
Co-recipient, Progressive Architecture Award, *Livable Urban Streets, San Francisco Bay Area and London*, with Donald Appleyard, 1979.

EXHIBIT C

Shawn Smallwood, PhD
3108 Finch Street
Davis, CA 95616

Andrew Thomas, Acting Director of Planning and Building
City of Alameda
2363 Santa Clara Avenue
Alameda, CA 94501 7 December 2018

RE: 2900 Harbor Bay Parkway, PLN18-0381

Dear Mr. Thomas,

I write to comment on the City of Alameda's (2018) Staff Report prepared for the proposed Marriott Alameda at 2900 Harbor Bay Parkway, PLN18-0381, which I understand would add 113,000 ft^2 of hotel floor space and 7,000 ft^2 of restaurant floor space in a 63-foot tall building on 5.5 acres of land. I also reviewed the earlier EIR and Addendum (City of Alameda 1973, 1989) cited in the Staff Report and a report of a recent biological survey (Monk & Associates 2018).

My qualifications for preparing expert comments are the following. I hold a Ph.D. degree in Ecology from University of California at Davis, where I also worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research is on animal density and distribution, habitat selection, habitat restoration, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I have authored papers on special-status species issues, including "Using the best scientific data for endangered species conservation" (Smallwood et al. 1999) and "Suggested standards for science applied to conservation issues" (Smallwood et al. 2001). I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I've been a part-time lecturer at California State University, Sacramento. I served as Associate Editor of Biological Conservation and of wildlife biology's premier scientific journal, The Journal of Wildlife Management, and I served on the Editorial Board of Environmental Management.

I have performed wildlife surveys in California for thirty-three years. I studied the impacts of human activities and human infrastructure on wildlife, including on golden eagle, Swainson's hawk, burrowing owl, San Joaquin kangaroo rat, mountain lion, California tiger salamander, California red-legged frog, and other species. I have performed research on wildlife mortality caused by wind turbines, electric distribution lines, agricultural practices, and road traffic, and I've performed wildlife surveys at many proposed project sites. I collaborate with colleagues worldwide on the underlying science and policy issues related to anthropogenic impacts on wildlife.

My CV is attached.

SITE VISIT

I visited the site of the proposed project from 12:45 to 14:00 hours on 16 November 2018 – a windless day during which smoke from the Camp Fire choked the sky. Using binoculars, I scanned for wildlife from the site's northern and western perimeter. The site was covered by grassland, and was lined by trees and shrubs. It supported many pocket gophers, which provide the habitat structure for many species of wildlife and which also serve as prey base for multiple species of raptor including. I saw 22 species of wildlife, including 5 species in or over the Bay just west of the site (Table 1). On the project site I saw many house finches (Photo 1), killdeer (Photo 2), mourning doves (Photo 3), white-crowned sparrows (Photo 4), and at least one Say's phoebe (Photo 5), among other species. In or over the Bay waters next to the site I saw brown pelicans (Photo 6), double-crested cormorants and horned grebes (Photo 7), and great egrets (Photo 8), among other species. The site is rich in wildlife species and abundance.

I also noticed that wildlife using Bay waters were concentrated along the shoreline of the project site, rather than at developed portions of Harbor Bay Isle to the north and south. It could be that wildlife using the Bay are selecting shoreline that borders open upland space. If this is the case, then an analysis of potential project impacts needs to consider barrier and displacement effects of a 5-story building on Bay wildlife.

An inescapable impression was the abundance of wildlife on site. High densities of mourning doves, house finches and killdeer crowded together on site. Everywhere I looked there were hordes of mourning doves pecking at the ground while walking along with house finches, white-crowned sparrows and killdeer, often flushing and relocating in reaction to people walking along the trails on the west side, often with leashed dogs.

Photo 1. *House finches crowd a branch at the site of the proposed Marriott Alameda, 16 November 2018.*

Table 1. *Species of wildlife I observed during 15:18 to 16:33 hours on 16 November 2018 at the site of the proposed Marriott Hotel at 2900 Harbor Bay Parkway, Alameda, along with the number of minutes before first detection.*

Species	***Scientific name***	**Status[1]**	**Note**	**Minutes to first detection**
Mallard	*Anas platyrhynchos*		Flyover	6
Bufflehead	*Bucephala albeola*		Bay waters	41
Horned grebe	*Podiceps auritus*		Bay waters	13
California brown pelican	*Pelacanus occicentalis californicus*	CFP	Bay waters	7
Double-crested cormorant	*Phalacrocorax auritus*	TWL	Bay waters	13
Great egret	*Casmerodius albus*		Bay waters	61
Black-crowned night-heron	*Nycticorax nycticorax*		Flyover	58
American coot	*Fulica americana*		Lagoon	75
Killdeer	*Charadrius vociferus*		On site	37
Herring gull	*Larus argentatus*		Flyover	3
Mourning dove	*Zenaida macroura*		On site	2
Say's phoebe	*Sayornis saya*		On site	38
Black phoebe	*Sayornis nigricans*		On site	15
American crow	*Corvus brachyrhynchos*		On site	1
European starling	*Sturnus vulgaris*	Exotic	On site	40
Yellow-rumped warbler	*Dendroica coronata*		On site	27
White-crowned sparrow	*Zonotrichia leucophrys*		On site	7
House finch	*Carpodacus mexicanus*		On site	5
American goldfinch	*Carduelis tristis*		On site	0
Harbor seal	*Phoca vitulina*		Bay waters	13
Botta's pocket gopher	*Thomomys bottae*		On site	2
Sierran tree frog	*Pseudacris sierra*		On site	17

[1] CFP = California Fully Protected, TWL = Taxa to Watch List (Shuford and Gardali 2008).

Photo 2. *Six of the many killdeer on site, 16 November 2018.*

Photo 3. *One of many mourning doves on site takes a break from foraging and socializing, 16 November 2018.*

Photo 4. *White-crowned sparrow breaks from foraging to warily regard my presence on the project site, 16 November 2018.*

Photo 5. *A Say's phoebe foraging on the project site, 16 November 2018.*

Photo 6. *Brown pelicans prepare to land on Bay waters on the west side of the proposed project site, 16 November 2018.*

Photo 7. *Horned grebe (left and double-crested cormorant (right) use Bay waters on the west side of the project site.*

Photo 8. *Great egrets fly over Bay waters along the west shore of the proposed project site, 16 November 2018.*

BIOLOGICAL IMPACTS ASSESSMENT

According to the Staff Report, "*Pursuant to CEQA Guidelines Section 15162, there have been no significant changes in circumstances that require revisions to the previously certified Harbor Bay Isle Environmental Impact Report. The proposed project is not likely to cause substantial environmental damage or substantially and avoidably injure endangered, rare, or threatened fish or wildlife or their habitat.*" However, this statement is not true. In the following paragraphs I will address several substantial changes since the 1973 EIR: (1) Habitat fragmentation and habitat degradation displaced and ultimately destroyed thousands of shorebirds protected by the International Migratory Bird Treaty Act without any mitigation; (2) Many species of wildlife were since assigned special status or their status was updated; (3) Burrowing owls were relocated without long-term success; and (4) Bird collisions with windows have since emerged as a major mortality factor.

CHANGED CIRCUMSTANCE: UNMITIGATED HABITAT LOSS

The EIR grossly mischaracterized wildlife occurring in the project area prior to 1973 (City of Alameda 1973, 1989), which led to unmitigated impacts that would continue into and intensify with the proposed project. Appendix D of City of Alameda (1973) included a passage from an ornithological expert at the 1958 International Ornithological Congress characterizing the project area as harboring the largest concentration of shorebirds in the world, both in abundance and species diversity. That expert must have been Robert W. Storer, who presented a paper at that 1958 Congress held in Helsinki (Baldwind 1961). Storer (1951) reported his results of a yearlong bird survey on Bay Farm Island in 1948. He reported that Bay Farm Island was known for being one of the major shorebird concentrations in the San Francisco Bay Area, and on Bay Farm Island he reported highest concentrations of shorebirds at the site of the proposed Bay Harbor Isle project. Storer's survey consisted of 39 trips through the year while accompanied by other biologists whose names transcended along with his to legendary status in the fields of ornithology and wildlife ecology. Put simply, City of Alameda cast aside the findings of one of Ornithology's greatest contributors in order to falsely characterize the project area as of low value to birds; city of Alameda (1973) did not even mention Storer's name, let alone his papers. City of Alameda's Staff Report continues the EIR's misleading characterization of wildlife use of the site and of potential project impacts.

City of Alameda (1973) acknowledged many bird species had been detected in Christmas Bird Counts, but dismissed these counts as unrepresentative and likely diminished by heavy machine use. City of Alameda (1973) further dismissed potential impacts to birds by claiming that bird abundance was lower than expected for the vegetation cover on site. However, City of Alameda (1973) presented no level of bird abundance that would have met their expectation. Nor did City of Alameda (1973) present survey data in support of their claims about the status of birds on site; instead, vaguely referencing staging behavior on the site by "shorebirds." City of Alameda (1973) included no list of bird species seen on site, and otherwise provided no evidence of any kind refuting Storer's characterization of the site. One can claim no change from a falsely reported baseline, but City of Alameda cannot honestly claim no change from the conditions described by Storer (1951). Here, at the Harbar Bay Isle project, and because Storer (1951) documented shorebird use of the area prior to the 1973 EIR, we have one of the most devastating environmental impacts on wildlife ever documented under a CEQA review.

After all, whereas I saw about 30 shorebirds of 1 species (killdeer), the low count of birds among Storer's (1951) 39 survey visits was 3,639, and the high count was 41,900 birds of 17 species (23 species detected through the year 1948). Given the changes in the project area, today another count would yield a shorebird count much closer to zero than to even the low count in 1948. Things have most certainly changed since the EIR (City of Alameda 1973, 1989). One of the greatest concentrations of shorebirds in the world has been reduced to a desperate avian foothold upon a 5.5-acre patch of upland that bridges a constructed lagoon and the Bay.

City of Alameda's (1973:IV-204) analysis of project impacts on other types of wildlife consisted of vague characterizations of rabbits being controlled by dog attacks, and rodents making mischief by burrowing into canal banks but otherwise serving to feed "an occasional hawk." But this characterization carries as much credibility as did the characterization of birdlife in the project area. Many more than "an occasional hawk" would visit a site occupied by thousands of shorebirds.

The one part of the original analysis that I believe City of Alameda (1973:IV-207) got right, except for its characterization of habitat as "marginal," was the conclusion, "*As the amount of coastal natural area diminishes, the marginal environmental value of each remaining portion will increase.*" Based on my brief site visit, my impression is that many birds inhabit the site of the proposed project, and these birds therefore value the site – some of the last remaining coastal natural area of Bay Harbor Isle.

Since 1989, and except for the site of the proposed project and the Airport, upland habitat along the entire western shoreline of the Harbor Bay Isle project area was converted to residential and commercial uses (Figure 1). Like a game of musical chairs, each development project left wildlife with one less parcel to find foraging and breeding opportunities or to find refuge during migration or dispersal. And now the only "chair" left is the site of the proposed project. As the only upland habitat remaining along western Harbor Bay Isle, many special-status species have been documented making use of it (Table 2). The music stopped for the last time, leaving wildlife this one last chair while City of Alameda Staff claim that nothing has changed since 1989. In truth, a great deal has changed since the 1973/1989 EIR, including the extent of wildlife habitat remaining in the area, the number of species assigned special status for their increasing rarity and jeopardy, and the number of special-status species documented on the site of the proposed project.

Overwhelmingly demonstrating the inadequacy of the 1973/1989 EIR, at least 42 special-status species of birds have been documented at the site of the proposed project (Table 2). None of these species were addressed in the 1989 EIR. And for none of these species did the 1989 EIR analyze project-specific or cumulative impacts. But then again, not all of these species had been assigned special status in 1989, thus highlighting another change since 1989. As Alameda authorized the destruction of all but the last patch of wildlife habitat, and as other Bay Area communities did likewise, more species declined to the point of warranting listing of one type of special status or another, but all types indicating deep concern for the future of the species.

Five of 23 species of shorebird detected on site by Storer (1951) are now assigned special status. Of the 23 shorebird species seen on site by Storer (1951), I detected only one of them – killdeer. However, other species of shorebird might use the site, and detection surveys would be needed to conclude otherwise.

Figure 1. *Site of the proposed project (red polygon) amidst bay shore that was open space in 1993 (left) and converted to residential and commercial space by 2018 (right).*

In my review of the EIR Addendum, I found no evidence of detection surveys having been performed for burrowing owl or any other species of wildlife since 2013, but without seeing the 2013 burrowing owl survey report, I cannot conclude whether the 2013 survey achieved the standards of the CDFW (2012) guidelines. Monk & Associates (2018) surveyed the site on 10 September 2018, but that survey was a preconstruction survey, not a detection survey. Detection surveys are designed for supporting species absence determinations, whereas preconstruction surveys are intended to follow up on detection surveys just prior to construction; preconstruction surveys are intended to detect the readily detectable animals that might have arrived at a project site since the detection surveys and to salvage nests or individual animals before the tractor blade scrapes them away. Preconstruction surveys are not designed for supporting absence determinations.

CHANGED CIRCUMSTANCE: NEW SPECIAL-STATUS LISTINGS

City of Alameda's (2018) conclusions of potential project impacts on special-status species lack support in timely detection surveys. As habitat continued to be fragmented by residential, commercial and industrial development in the project area, the importance of the remaining habitat patch has grown. I found documented evidence of 42 special-status bird species in the area, and geographic ranges of 5 special-status species of bats overlap the site (Table 2). The listing status of the majority of these species was either initiated or updated since the 1973/1989 EIR (Table 2). Even for animals not breeding at the project site, the site's value for stop-over refuge, staging, and foraging has increased since the last time when any wildlife biologists performed detection surveys at the site. Protocol-level detection surveys are needed before any final decisions are made about the use of the site.

CHANGED CIRCUMSTANCE: BURROWING OWLS

The 1989 EIR addressed burrowing owl as the only special-status species of wildlife warranting CEQA review at the time. According to the 1989 EIR, burrowing owls in the project area were successfully relocated. However, the 1989 EIR neglected to report the relocation site, the number of owls relocated, nor the criteria used for determining relocation success. Given the record of burrowing owl relocations over the past several decades, I am skeptical of the success claimed in the 1989 EIR. Available evidence indicates burrowing owls have declined to their last 1-2 successful breeding pairs in western Alameda County (Trulio et al. 2018). Ironically, the only species for which mitigation was attempted in the 1989 EIR have since been extirpated from all but one site across western Alameda County, and even at that one site the species is essentially extirpated, with only 1 to 2 pairs remaining in 2018.

The East Bay is visited by winter migrant burrowing owls from Idaho and possibly Canada. Migrants are known to over-winter in Cesar Chavez Park and a few other small patches of habitat in the East Bay Area (https://goldengateaudubon.org/conservation/burrowing-owls/). Given the extensive unmitigated habitat fragmentation that has progressed since the 1973/1989 EIR, every remaining patch of habitat qualifies as a likely stop-over site or over-wintering migration site for migratory burrowing owls. Unfortunately, the Monk & Associates (2018) preconstruction survey was not performed during the winter migration period, so it would have missed any winter migrants visiting the site. I will add that the Monk & Associates (2018) survey also missed the burrowing owl breeding season, although I have on rare occasions seen burrowing owls breeding into early fall.

Table 2. *Species reported on eBird (https://eBird.org) on or near the proposed project site, and species of shorebird previously seen in the project area by Storer (1951).*

Species	Scientific name	Status¹, Year of listing	Occurrence potential
Pallid bat	*Antrozous pallidus*	SSC	Unknown, but likely
Western red bat	*Lasiurus blossevillii*	SSC	Unknown, but likely
Fringed myotis	*Myotis thysanodes*	WBWG	Unknown, but likely
Long-eared myotis	*Myotis evotis*	WBWG	Unknown, but likely
Small-footed myotis	*Myotis cililabrum*	WBWG	Unknown, but likely
Brant	*Branta bernicla*	SSC2, 2008	eBird posts nearby
Aleutian cackling goose	*Branta hutchinsonii leucopareia*	TWL, 2008	eBird posts nearby
California brown pelican	*Pelacanus occicentalis californicus*	CFP	
Double-crested cormorant	*Phalacrocorax auritus*	TWL, 2008	eBird posts on site
Long-billed curlew	*Numenius americanus*	TWL, BCC, 2008	eBird posts on site; Storer
Whimbrel	*Numenius phaeopus*	BCC, 2008	eBird posts nearby; Storer
California gull	*Larus californicus*	TWL, 2008	eBird posts on site
Caspian tern	*Hydropogne caspia*	TWL, 2008	eBird posts on site
Black oystercatcher	*Haematopus bachmani*	BCC, 2008	eBird posts on site
Marbled godwit	*Limosa fedoa*	BCC, 2008	eBird posts on site; Storer
Red knot	*Calidris canutus*	BCC, 2008	eBird posts on site; Storer
Short-billed dowitcher	*Limnodromus griseus*	BCC, 2008	eBird posts on site; Storer
Osprey	*Pandion haliaetus*	TWL, CDFW 3503.5	eBird posts on site
Bald eagle	*Haliaeetus leucocephalus*	BGEPA, BCC, CE, CFP	eBird posts nearby
Golden eagle	*Aquila chrysaetos*	BGEPA, BCC, CFP	eBird posts nearby
Red-tailed hawk	*Buteo jamaicensis*	CDFW 3503.5	eBird posts on site
Red-shouldered hawk	*Buteo lineatus*	CDFW 3503.5	eBird posts nearby
Sharp-shinned hawk	*Accipiter striatus*	CDFW 3503.5, TWL	eBird posts nearby
Cooper's hawk	*Accipiter cooperi*	CDFW 3503.5, TWL	eBird posts on site
Northern harrier	*Circus cyaneus*	SSC3, CDFW 3503.5	eBird posts on site
White-tailed kite	*Elanus leucurus*	CFP, TWL, CDFW 3503.5	eBird posts on site
American kestrel	*Falco sparverius*	CDFW 3503.5	eBird posts on site
Merlin	*Falco columbarius*	CDFW 3503.5, TWL	eBird posts nearby
Prairie falcon	*Falco mexicanus*	CDFW 3503.5, TWL	eBird posts nearby

Species	Scientific name	Status[1], Year of listing	Occurrence potential
Peregrine falcon	*Falco peregrinus*	CE, CFP, BCC	eBird posts nearby
Burrowing owl	*Athene cunicularia*	BCC, SSC2, CDFW 3503.5	eBird posts nearby
Great-horned owl	*Bubo virginianus*	CDFW 3503.5	eBird posts nearby
Short-eared owl	*Asio flammeus*	CDFW 3503.5	eBird posts nearby
Western screech-owl	*Megascops kennicotti*	CDFW 3503.5	eBird posts nearby
Barn owl	*Tyto alba*	CDFW 3503.5,	eBird posts nearby
Vaux's swift	*Chaetura vauxi*	SCC2, 2008	eBird posts nearby
Allen's hummingbird	*Calypte*	BCC, 2008	eBird posts nearby
Nuttall's woodpecker	*Picoides nuttallii*	BCC, 2008	eBird posts on site
Olive-sided flycatcher	*Contopus cooperi*	SSC2, 2008	eBird posts on site
Yellow-billed magpie	*Pica nuttalli*	BCC, 2008	eBird posts nearby
Oak titmouse	*Baeolophus inornatus*	BCC, 2008	eBird posts on site
Loggerhead shrike	*Lanius ludovicianus*	BCC, SSC2, 2008	eBird posts on site
Yellow warbler	*Setophaga petechia*	SSC2, BCC, 2008	eBird posts nearby
San Francisco common yellowthroat	*Geothlypis trichas sinuosa*	SSC3, BCC, 2008	eBird posts on site
Bryant's savannah sparrow	*Passerculus sandwichensis alaudinus*	SSC3, 2008	eBird posts on site
Alameda song sparrow	*Melospiza melodia pusillula*	SSC2, BCC, 2008	eBird posts on site
Tricolored blackbird	*Agelaius tricolor*	CT, BCC, 2018	eBird posts nearby

[1] Listed as BCC = U.S. Fish and Wildlife Service Bird Species of Conservation Concern, CE = California endangered, CT = California threatened, CFP = California Fully Protected (CDFG Code 4700), CDFW 3503.5 = California Department of Fish and Wildlife Code 3503.5 (Birds of prey), and SSC1, SSC2 and SSC3 = California Bird Species of Special Concern priorities 1, 2 and 3, respectively (Shuford and Gardali 2008), TWL = Taxa to Watch List (Shuford and Gardali 2008), and WBWG = priority listing by Western Bat Working Group.

Wildlife Movement

The Staff Report (City of Alameda 2018) provides no analysis of the project's potential impacts on wildlife movement in the region, thereby neglecting to address a key CEQA issue. Not only would the project remove what must now be critically important stop-over habitat (Runge et al. 2014, Taylor et al. 2011, Warnock 2010), but it would replace the open space with a building posing as another barrier to movement through the area by migratory or dispersing volant wildlife. The earlier EIR (City of Alameda 1973, 1989) also neglected to address the project's impact on wildlife movement in the region. An EIR is needed for addressing the project's impacts on wildlife movement in the region.

Artificial Light

Neither the earlier EIR (City of Alameda 1973, 1989) nor the Staff Report (City of Alameda (2018) addressed the project's impacts on wildlife that would be caused by the addition of artificial lighting. Artificial lighting causes a variety of substantial impacts on a variety of wildlife species (Rich and Longcore 2006). At the site of the proposed project I am particularly concerned about the project's lighting impacts on wildlife residing in Bay waters, including harbor seals, California brown pelicans, double-crested cormorants, and other species. Added lighting could cause displacement or altered activity patterns of at least some species. An EIR should be prepared to address potential lighting impacts on Bay wildlife, and how those impacts could be mitigated.

CHANGED CIRCUMSTANCE: WINDOW COLLISIONS

Neither the Staff Report (2018) nor the 1973/1989 EIR analyze potential impacts to birds caused by the hotel's glass windows. That window impacts were not addressed was not surprising because most of what is known about the adverse effects of windows on birds has been learned since 1989. The very first serious study of bird collisions with windows was completed a number of years after the EIR was certified (Johnson and Hudson 1976). The first estimate of a nationwide toll of windows on birds was published in 1990 (Klem 1990). Since then many papers have been published on research and mitigation, which I will summarize below.

According to City of Alameda (2018), the building's design would include large panes of clear-glazed windows above the main entrance and at storefronts, and it would include windows with every room. Since 1973/1989 there has been abundant research on the bird collision threat posed by birds, the factors involved, and possible ways to mitigate the threat. An EIR needs to be prepared to address this potential impact and how to mitigate it. Below is a discussion of the issue, ranging from interpreting available impact estimates to collision factors and mitigation.

Glass-façades of buildings intercept and kill many birds. At Washington State University, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a three-story glass walkway (no fatality adjustments attempted). At that rate, and not attempting to adjust the fatality estimate for the proportion of fatalities not found, 2,186 birds were likely killed over the 50 years since the start of their study, and that's at a relatively small building façade (Photo 5). Even if the searchers found a third of the actual collision victims, which would be a generous assumption in my experience, the number of birds likely killed by this walkway over the last 50 years would be 6,559. And this is just for one glass-sided walkway between two college campus buildings.

Photo 5. *A walkway connecting two buildings at Washington State University where one of the earliest studies of bird collision mortality found 85 bird fatalities per year prior to marking windows (254 bird deaths per year adjusted for the proportion of carcasses likely not found). Given that the window markers have long since disappeared, this walkway has likely killed at least 12,700 birds since 1968, and continues to kill birds. Notice that the transparent glass on both sides of the walkway gives the impression of unimpeded airspace that can be navigated safely by birds familiar with flying between tree branches. Also note the reflected images of trees, which can mislead birds into seeing safe perch sites. Further note the distances of ornamental trees, which allow birds taking off from those trees to reach full speed upon arrival at the windows.*

Window collisions are often characterized as either the second or third largest source or human-caused bird mortality. The numbers behind these characterizations are often attributed to Klem's (1990) and Dunn's (1993) estimates of about 100 million to 1 billion bird fatalities in the USA, or more recently Loss et al.'s (2014) estimate of 365-988 million bird fatalities in the USA or Calvert et al.'s (2013) and Machtans et al.'s (2013) estimates of 22.4 million and 25 million bird fatalities in Canada, respectively. However, these estimates and their interpretation warrant examination because they were based on opportunistic sampling, volunteer study participation, and fatality monitoring by more inexperienced than experienced searchers.

Klem's (1990) estimate was based on speculation that 1 to 10 birds are killed per building per year, and this speculated range was extended to the number of buildings estimated by the US Census Bureau in 1986. Klem's speculation was supported by fatality monitoring at only two houses, one in Illinois and the other in New York. Also, the basis of his fatality rate extension has changed greatly since 1986. Whereas his estimate served the need to alert the public of the possible magnitude of the bird-window collision issue, it was highly uncertain at the time and undoubtedly outdated more than three decades hence. Indeed, by 2010 Klem (2010) characterized the upper end of his estimated range – 1 billion bird fatalities – as conservative. Furthermore, the estimate lumped species together as if all birds are the same and the loss of all birds to windows has the same level of impact.

Homes with birdfeeders are associated with higher rates of window collisions than are homes without birdfeeders (Kummer and Bayne 2015, Kummer et al. 2016a), so the developed area might pose even greater hazard to birds if it includes numerous birdfeeders. Another factor potentially biasing national or North American estimates low was revealed by Bracey et al.'s (2016) finding that trained fatality searchers found 2.6× the number of fatalities found by homeowners on the days when both trained searchers and homeowners searched around homes. The difference in carcass detection was 30.4-fold when involving carcasses volitionally placed by Bracey et al. (2016) in blind detection trials. This much larger difference in trial carcass detection rates likely resulted because their placements did not include the sounds that typically alert homeowners to actual window collisions, but this explanation also raises the question of how often homeowner participants with such studies miss detecting window-caused fatalities because they did not hear the collisions.

By the time Loss et al. (2014) performed their effort to estimate annual USA bird-window fatalities, many more fatality monitoring studies had been reported or were underway. Loss et al. (2014) were able to incorporate many more fatality rates based on scientific monitoring, and they were more careful about which fatality rates to include. However, they included estimates based on fatality monitoring by homeowners, which in one study were found to detect only 38% of the available window fatalities (Bracey et al. 2016). Loss et al. (2014) excluded all fatality records lacking a dead bird in hand, such as injured birds or feather or blood spots on windows. Loss et al.'s (2014) fatality metric was the number of fatalities per building (where in this context a building can include a house, low-rise, or high-rise structure), but they assumed that this metric was based on window collisions. Because most of the bird-window collision studies were limited to migration seasons, Loss et al. (2014) developed an admittedly assumption-laden correction factor for making annual estimates. Also, only 2 of the studies included adjustments for carcass persistence and searcher detection error, and it was unclear how and to what degree fatality rates were adjusted for these factors. Although Loss et al. (2014) attempted to account for some biases as well as for large sources of uncertainty mostly resulting from an opportunistic rather than systematic sampling data source, their estimated annual fatality rate across the USA was highly uncertain and vulnerable to multiple biases, most of which would have resulted in fatality estimates biased low.

In my review of bird-window collision monitoring, I found that the search radius around homes and buildings was very narrow, usually 2 meters. Based on my experience with bird collisions in other contexts, I would expect that a large portion of bird-window collision victims would end up farther than 2 m from the windows, especially when the windows are higher up on tall buildings. In my experience, searcher detection rates tend to be low for small birds deposited on ground with vegetation cover or woodchips or other types of organic matter. Also, vertebrate scavengers entrain on anthropogenic sources of mortality and quickly remove many of the carcasses, thereby preventing the fatality searcher from detecting these fatalities. Adjusting fatality rates for these factors – search radius bias, searcher detection error, and carcass persistence rates – would greatly increase nationwide estimates of bird-window collision fatalities.

The existing conditions – the developed area – is undoubtedly killing many birds each year. Not only are windows killing many birds, but so too are house cats, feral cats, electric distribution lines, electric power poles, and autos. This said, the proposed project will add a level of impact that is entirely missing from the CEQA review. Constructing a five-story building will not only take aerial habitat from birds, but it will also interfere with the movement of birds in the region and it will result in large numbers of annual window collision fatalities.

Buildings can intercept many nocturnal migrants as well as birds flying in daylight. As mentioned above, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a four-story glass walkway at Washington State University (no adjustments attempted). Somerlot (2003) found 21 bird fatalities among 13 buildings on a university campus within only 61 days. Monitoring twice per week, Hager at al. (2008) found 215 bird fatalities of 48 species, or 55 birds/building/year, and at another site they found 142 bird fatalities of 37 species for 24 birds/building/year. Gelb and Delacretaz (2009) recorded 5,400 bird fatalities under buildings in New York City, based on a decade of monitoring only during migration periods, and some of the high-rises were associated with hundreds of fatalities each. Klem et al. (2009) monitored 73 building façades in New York City during 114 days of two migratory periods, tallying 549 collision victims, nearly 5 birds per day. Borden et al. (2010) surveyed a 1.8 km route 3 times per week during 12-month period and found 271 bird fatalities of 50 species. Parkins et al. (2015) found 35 bird fatalities of 16 species within only 45 days of monitoring under 4 building façades. From 24 days of survey over a 48 day span, Porter and Huang (2015) found 47 fatalities under 8 buildings on a university campus. Sabo et al. (2016) found 27 bird fatalities over 61 days of searches under 31 windows. In San Francisco, Kahle et al. (2016) found 355 collision victims within 1,762 days under a 5-story building. Ocampo-Peñuela et al. (2016) searched the perimeters of 6 buildings on a university campus, finding 86 fatalities after 63 days of surveys. One of these buildings produced 61 of the 86 fatalities, and another building with collision-deterrent glass caused only 2 of the fatalities, thereby indicating a wide range in impacts likely influenced by various factors. There is ample evidence available to support my prediction that the proposed project will result in many collision fatalities of birds.

Project Impact Prediction

Predicting the number of bird collisions at a new project is challenging because the study of window collisions remains in its early stages. Researchers have yet to agree on a collision rate metric. Some have reported findings as collisions per building per year and some as collisions per building per day. Some have reported findings as collisions per m^2 of window. The problem with the temporal factor in the collision rate metrics has been monitoring time spans varying from a few days to 10 years, and even in the case of the 10-year span, monitoring was largely restricted to spring and fall migration seasons. Short-term monitoring during one or two seasons of the year cannot represent a 'year,' but monitoring has rarely spanned a full year. Using 'buildings' in the metric treats buildings as all the same size, when we know they are not. Using square meters of glass in the metric treats glass as the only barrier upon which birds collide against a building's façade, when we know it is not. It also treats all glass as equal, even though we know that collision risk varies by type of glass as well as multiple factors related to contextual settings.

Without the benefit of more advanced understanding of window collision factors, my prediction of project impacts will be uncertain. Klem's (1990) often-cited national estimate of avian collision rate relied on an assumed average collision rate of 1 to 10 birds per building per year, but studies since then have all reported higher rates of collisions 12 to 352 birds per building per year. The more recent studies, however, were likely performed at buildings known or suspected to cause many collisions, so could be biased. By the time of these comments I had reviewed and processed results of bird collision monitoring at 13 buildings and façades for which bird collisions per m^2 of glass per year could be calculated and averaged. These averaged 0.199 bird deaths per m^2 of glass per year (95% CI: 0.004-1.240). Looking over the proposed building's design, I estimated the building would include 1,694 m^2 of glass windows, which applied to the mean fatality rate would predict **337 bird deaths per year (95% CI: 7-2,101)** at the building. After 50 years the toll from this average annual fatality rate would be 16,850 bird deaths, with an empirically founded upper-end possibility of 105,050 deaths. As mentioned earlier, the accuracy of this prediction would depend on factors known or hypothesized to affect window collision rates, and it could be mitigated to a much reduced rate. In the comments that follow I will discuss these window collision factors and mitigation.

Window Collision Factors

Below is a list of collision factors I found in the scientific literature. Following this list are specific notes and findings taken from the literature and my own experience.

(1) Inherent hazard of a structure in the airspace used for nocturnal migration or other flights
(2) Window transparency, falsely revealing passage through structure or to indoor plants
(3) Window reflectance, falsely depicting vegetation, competitors, or open airspace

(4) Black hole or passage effect
(5) Window or façade extent, or proportion of façade consisting of window or other reflective surface
(6) Size of window
(7) Type of glass
(8) Lighting, which is correlated with window extent and building operations
(9) Height of structure (collision mechanisms shift with height above ground)
(10) Orientation of façade with respect to winds and solar exposure
(11) Structural layout causing confusion and entrapment
(12) Context in terms of urban-rural gradient, or surrounding extent of impervious surface vs vegetation
(13) Height, structure, and extent of vegetation grown near home or building
(14) Presence of birdfeeders or other attractants
(15) Relative abundance
(16) Season of the year
(17) Ecology, demography and behavior
(18) Predatory attacks or cues provoking fear of attack
(19) Aggressive social interactions

(1) Inherent hazard of structure in airspace.—Not all of a structure's collision risk can be attributed to windows. Overing (1938) reported 576 birds collided with the Washington Monument in 90 minutes on one night, 12 September 1937. The average annual fatality count had been 328 birds from 1932 through 1936. Gelb and Delacretaz (2009) and Klem et al. (2009) also reported finding collision victims at buildings lacking windows, although many fewer than they found at buildings fitted with widows. The takeaway is that any building going up at the project site would likely kill birds, although the impacts of a glass-sided building would likely be much greater.

(2) Window transparency.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the transparency of glass used in windows on the buildings (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred where transparent windows revealed interior vegetation.

(3) Window reflectance.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the reflectance of glass used in windows on the buildings (Klem 1989). Reflectance can deceptively depict open airspace, vegetation as habitat destination, or competitive rivals as self-images (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred toward the lower parts of buildings where large glass exteriors reflected outdoor vegetation. Klem et al. (2009) and Borden et al. (2010) also found that reflected outdoor vegetation associated positively with collisions. Depictions of the proposed building include palm trees likely to be reflected in the windows.

(4) Black hole or passage effect.—Although this factor was not often mentioned in the bird-window collision literature, it was suggested in Sheppard and Phillips (2015). The

black hole or passage effect is the deceptive appearance of a cavity or darkened ledge that certain species of bird typically approach with speed when seeking roosting sites. The deception is achieved when shadows from awnings or the interior light conditions give the appearance of cavities or protected ledges. This factor appears potentially to be nuanced variations on transparency or reflectance or possibly an interaction effect of both of these factors.

(5) Window or façade extent.—Klem et al. (2009), Borden et al. (2010), Hager et al. (2013), and Ocampo-Peñuela et al. (2016) reported increased collision fatalities at buildings with larger reflective façades or higher proportions of façades composed of windows. However, Porter and Huang (2015) found a negative relationship between fatalities found and proportion of façade that was glazed. Some of the proposed windows appear to be quite large and extensive.

(6) Size of window.—According to Kahle et al. (2016), collision rates were higher on large-pane windows compared to small-pane windows.

(7) Type of glass.—Klem et al. (2009) found that collision fatalities associated with the type of glass used on buildings. Otherwise, little attention has been directed towards the types of glass in buildings.

(8) Lighting.—Parkins et al. (2015) found that light emission from buildings correlated positively with percent glass on the façade, suggesting that lighting is linked to the extent of windows. Zink and Eckles (2010) reported fatality reductions, including an 80% reduction at a Chicago high-rise, upon the initiation of the Lights-out Program. However, Zink and Eckles (2010) provided no information on their search effort, such as the number of searches or search interval or search area around each building.

(9) Height of structure.—I found little if any hypothesis-testing related to building height, including whether another suite of factors might relate to collision victims of high-rises. Are migrants more commonly the victims of high-rises or of smaller buildings?

(10) Orientation of façade.—Some studies tested façade orientation, but not convincingly. Confounding factors such as the extent and types of windows would require large sample sizes of collision victims to parse out the variation so that some portion of it could be attributed to orientation of façade. Whether certain orientations cause disproportionately stronger or more realistic-appearing reflections ought to be testable through measurement, but counting dead birds under façades of different orientations would help.

(11) Structural layout.—Bird-safe building guidelines have illustrated examples of structural layouts associated with high rates of bird-window collisions, but little attention has been directed towards hazardous structural layouts in the scientific literature. An exception was Johnson and Hudson (1976), who found high collision rates at 3 stories of glassed-in walkways atop an open breezeway, located on a break in

slope with trees on one side of the structure and open sky on the other, Washington State University.

(12) Context in urban-rural gradient.—Numbers of fatalities found in monitoring have associated negatively with increasing developed area surrounding the building (Hager et al. 2013), and positively with more rural settings (Kummer et al. 2016a). Based on what is known, I cannot at this time predict whether the project's location would contribute more or less to the collision risk already posed by the proposed extent of windows and nearness to trees and wetlands.

(13) Height, structure and extent of vegetation near building.—Correlations have sometimes been found between collision rates and the presence or extent of vegetation near windows (Hager et al. 2008, Borden et al. 2010, Kummer et al. 2016a, Ocampo-Peñuela et al. 2016). However, Porter and Huang (2015) found a negative relationship between fatalities found and vegetation cover near the building. In my experience, what probably matters most is the distance from the building that vegetation occurs. If the vegetation that is used by birds is very close to a glass façade, then birds coming from that glass will be less likely to attain sufficient speed upon arrival at the façade to result in a fatal injury. Too far away and there is probably no relationship. But 30 to 50 m away, birds alighting from vegetation can attain lethal speeds by the time they arrive at the windows.

(14) Presence of birdfeeders.—Dunn (1993) reported a weak correlation ($r = 0.13$, $P < 0.001$) between number of birds killed by home windows and the number of birds counted at feeders. However, Kummer and Bayne (2015) found that experimental installment of birdfeeders at homes increased bird collisions with windows 1.84-fold.

(15) Relative abundance.—Collision rates have often been assumed to increase with local density or relative abundance (Klem 1989), and positive correlations have been measured (Dunn 1993, Hager et al. 2008). However, Hager and Craig (2014) found a negative correlation between fatality rates and relative abundance near buildings.

(16) Season of the year.—Borden et al. (2010) found 90% of collision fatalities during spring and fall migration periods. The significance of this finding is magnified by 7-day carcass persistence rates of 0.45 and 0.35 in spring and fall, rates which were considerably lower than during winter and summer (Hager et al. 2012). In other words, the concentration of fatalities during migration seasons would increase after applying seasonally-explicit adjustments for carcass persistence. Fatalities caused by collisions into the glass façades of the project's buildings would likely be concentrated in fall and spring migration periods.

(17) Ecology, demography and behavior.—Klem (1989) noted that certain types of birds were not found as common window-caused fatalities, including soaring hawks and waterbirds. Cusa et al. (2015) found that species colliding with buildings surrounded by higher levels of urban greenery were foliage gleaners, and species colliding with buildings surrounded by higher levels of urbanization were ground foragers. Sabo et al.

(2016) found no difference in age class, but did find that migrants are more susceptible to collision than resident birds.

(18) Predatory attacks.—Panic flights caused by raptors were mentioned in 16% of window strike reports in Dunn's (1993) study. I have witnessed Cooper's hawks chasing birds into windows, including house finches next door to my home and a northern mocking bird chased directly into my office window. Predatory birds likely to collide with the project's windows would include Peregrine falcon, red-shouldered hawk, Cooper's hawk, and sharp-shinned hawk.

(19) Aggressive social interactions.—I found no hypothesis-testing of the roles of aggressive social interactions in the literature other than the occasional anecdotal account of birds attacking their self-images reflected from windows. However, I have witnessed birds chasing each other and sometimes these chases resulting in one of the birds hitting a window.

Window Collision Solutions

Given the magnitude of bird-window collision impacts, there are obviously great opportunities for reducing and minimizing these impacts going forward. Existing structures can be modified or retrofitted to reduce impacts, and proposed new structures can be more carefully sited and designed to minimize impacts. However, the costs of some of these measures can be high and can vary greatly, but most importantly the efficacies of many of these measures remain uncertain. Both the costs and effectiveness of all of these measures can be better understood through experimentation and careful scientific investigation. Post-construction fatality monitoring should be an essential feature of any new building project. Below is a listing of mitigation options, along with some notes and findings from the literature.

(1) Retrofitting to reduce impacts
(1A) Marking windows
(1B) Managing outdoor landscape vegetation
(1C) Managing indoor landscape vegetation
(1D) Managing nocturnal lighting

(1A) Marking windows.—Whereas Klem (1990) found no deterrent effect from decals on windows, Johnson and Hudson (1976) reported a fatality reduction of about 69% after placing decals on windows. In an experiment of opportunity, Ocampo-Peñuela et al. (2016) found only 2 of 86 fatalities at one of 6 buildings – the only building with windows treated with a bird deterrent film. At the building with fritted glass, bird collisions were 82% lower than at other buildings with untreated windows. Kahle et al. (2016) added external window shades to some windowed façades to reduce fatalities 82% and 95%. Many external and internal glass markers have been tested experimentally, some showing no effect and some showing strong deterrent effects (Klem 1989, 1990, 2009, 2011; Klem and Saenger 2013; Rössler et al. 2015).

(2) Siting and Designing to minimize impacts
(2A) Deciding on location of structure
(2B) Deciding on façade and orientation
(2C) Selecting type and sizes of windows
(2D) Designing to minimize transparency through two parallel façades
(2E) Designing to minimize views of interior plants
(2F) Landscaping to increase distances between windows and trees and shrubs

Guidelines on Building Design

If the project goes forward, it should at a minimum adhere to available guidelines on building design intended to minimize collision hazards to birds. The American Bird Conservancy (ABC) produced an excellent set of guidelines recommending actions to: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). The ABC document and both the New York and San Francisco documents provide excellent alerting of potential bird-collision hazards as well as many visual examples. The San Francisco Planning Department's (2011) building design guidelines are more comprehensive than those of New York City, but they could have gone further. For example, the San Francisco guidelines probably should have also covered scientific monitoring of impacts as well as compensatory mitigation for impacts that could not be avoided, minimized or reduced.

City of Alameda has developed its own guidelines on bird-safe building standards, which is a helpful step forward. These standards have yet to be adopted, but City of Alameda deserves credit for developing standards. Hopefully, the standards can be modified a bit to further improve efficacy. For example, they assume that glazed windows are safe, but I have not seen sufficient evidence to confirm this assumption. Also, the minimum window size standard ought to be reduced or eliminated, and so should the minimum percentage of façade composed of glass. Another needed modification would be the addition of fatality monitoring provisions requiring at least one year of scientific monitoring by qualified biologists and public reporting of results. A provision is also needed for funding care and rehabilitation of injured birds. Multiple studies I reviewed reported finding injured birds, including one that reported a third of all collision victims having been injured and alive.

The proposed building's north and south façades would come very close to meeting the ordinance's minimum standard for percentage of the façade composed of glass, but a predicted toll of 337 (95% CI: 7-2,101) bird deaths per year (see earlier comment) should compel compliance with the ordinance even if the percentage glass on a façade falls short of the current draft standard. Otherwise, every window on the proposed building would exceed the minimum 12-ft^2 extent, so all of the windows would fall under the ordinance. Provisions of the ordinance should be enforced wit this proposed project. The evidence shows that window collisions can be substantially reduced through mitigation measures.

CUMULATIVE IMPACTS

City of Alameda (2018) did not address the project's potential cumulative effects on wildlife, nor did the previous EIR (City of Alameda 1973, 1989). A cumulative effects analysis is mandatory, according to the CEQA Guidelines.

MITIGATION

City of Alameda (2018) proposes no mitigation for impacts to special-status species of wildlife. The only mitigation in the earlier EIR (City of Alameda 1973, 1989) was (1) the side-benefit of a constructed lagoon, the primary purpose of which was for providing residents with open space and recreation, and (2) a vague mention of burrowing owl translocation, which I assume failed because only 1 to 2 pairs of burrowing owls remained in western Alameda County in 2018. No mitigation is proposed for any of the 47 special-status species in Table 2.

RECOMMENDED MEASURES

Detection Surveys

Detection surveys are needed to inform a project decision, as well as preconstruction take-avoidance surveys and the formulation of appropriate mitigation measures. For example, to comply with the CDFW (2012) burrowing owl breeding-season survey guidelines, at least four surveys are needed during the breeding season, each separated by 3 weeks and according to specific schedule attributes. Protocol-level detection surveys have been developed for most special-status species of wildlife, some of which overlap to various degrees in methodology. Without detection surveys, absence determinations lack foundation.

Wildlife Movement

City of Alameda (2018) provides no mitigation for adverse impacts on regional movement of wildlife. At a minimum, substantial compensatory mitigation is needed in response to the project's impacts on wildlife movement, including impacts on birds using the site as stop-over or staging habitat during migration. The proposed project site composes the last patch of open space available to birds on long-distance dispersal or migration flights on this portion of Harbor Bay Isle.

Artificial Lighting

A mitigation objective should be minimization of nighttime light pollution on the Bay side of the project. Compensatory mitigation could also include steps to reduce artificial lighting elsewhere along Harbor Bay Parkway.

Window Collisions

Transparency and reflectance increase collision risk, but there are materials available to minimize the effects of transparency and reflectance, including the glass itself. Landscaping around buildings can also affect collision risk, but risks can be minimized by carefully planning the landscaping. Interior lighting also increases risk to nocturnal migrants, but the effects of interior lighting is readily mitigated by minimizing use of lights as well as the lighting of any interior landscaping. I recommend consulting available guidelines on minimizing impacts to wildlife caused by windows. For example, the American Bird Conservancy produced an excellent set of guidelines recommending: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). Based on these guidelines, I recommend that City of Alameda revise and adopt its own ordinance on bird-safe building designs, and that the proposed project be subject to the City's ordinance.

Fund Wildlife Rehabilitation Facilities

Compensatory mitigation ought also to include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals that will be delivered to these facilities for care. Most of the injuries will likely be caused by window collisions, collisions with cars driven to and from the site by hotel guests, and attacks by dogs walked by hotel guests. But the project's impacts can also be offset by funding the treatment of injuries to animals caused by other buildings, electric lines, cars, and cats.

Thank you for your attention,

Shawn Smallwood

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Shawn Smallwood, Ph.D.

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White-crowned sparrow (left) and house finch (right) on site

Mourning doves on site

Kenneth Shawn Smallwood
Curriculum Vitae

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Born May 3, 1963 in
Sacramento, California.
Married, father of two.

Ecologist

Expertise

- Finding solutions to controversial problems related to wildlife interactions with human industry, infrastructure, and activities;
- Wildlife monitoring and field study using GPS, thermal imaging, behavior surveys;
- Using systems analysis and experimental design principles to identify meaningful ecological patterns that inform management decisions.

Education

Ph.D. Ecology, University of California, Davis. September 1990.
M.S. Ecology, University of California, Davis. June 1987.
B.S. Anthropology, University of California, Davis. June 1985.
Corcoran High School, Corcoran, California. June 1981.

Experience

- 477 professional publications, including:
- 81 peer reviewed publications
- 24 in non-reviewed proceedings
- 370 reports, declarations, posters and book reviews
- 8 in mass media outlets
- 87 public presentations of research results at meetings
- Reviewed many professional papers and reports
- Testified in 4 court cases.

Editing for scientific journals: Guest Editor, *Wildlife Society Bulletin*, 2012-2013, of invited papers representing international views on the impacts of wind energy on wildlife and how to mitigate the impacts. Associate Editor, *Journal of Wildlife Management*, March 2004 to 30 June 2007. Editorial Board Member, *Environmental Management*, 10/1999 to 8/2004. Associate Editor, *Biological Conservation*, 9/1994 to 9/1995.

Member, Alameda County Scientific Review Committee (SRC), August 2006 to April 2011. The five-member committee investigated causes of bird and bat collisions in the Altamont Pass Wind Resource Area, and recommended mitigation and monitoring measures. The SRC reviewed the science underlying the Alameda County Avian Protection Program, and advised the County on how to reduce wildlife fatalities.

Consulting Ecologist, 2004-2007, California Energy Commission (CEC). Provided consulting services as needed to the CEC on renewable energy impacts, monitoring and research, and produced several reports. Also collaborated with Lawrence-Livermore National Lab on research to understand and reduce wind turbine impacts on wildlife.

Consulting Ecologist, 1999-2013, U.S. Navy. Performed endangered species surveys, hazardous waste site monitoring, and habitat restoration for the endangered San Joaquin kangaroo rat, California tiger salamander, California red-legged frog, California clapper rail, western burrowing owl, salt marsh harvest mouse, and other species at Naval Air Station Lemoore; Naval Weapons Station, Seal Beach, Detachment Concord; Naval Security Group Activity, Skaggs Island; National Radio Transmitter Facility, Dixon; and, Naval Outlying Landing Field Imperial Beach.

Fulbright Research Fellow, Indonesia, 1988. Tested use of new sampling methods for numerical monitoring of Sumatran tiger and six other species of endemic felids, and evaluated methods used by other researchers.

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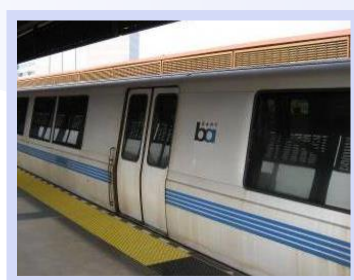
EXHIBIT D

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

California Environmental Quality Act

Air Quality Guidelines



Note: This May 2017 version of the Guidelines includes revisions made to the Air District's 2010 Guidelines to address the California Supreme Court's 2015 opinion in Cal. Bldg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist., 62 Cal.4th 369. ***The May 2017 CEQA Guidelines update does not address outdated references, links, analytical methodologies or other technical information that may be in the Guidelines or Thresholds Justification Report. The Air District is currently working to update any outdated information in the Guidelines.*** *Please see the CEQA webpage at http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa for status updates on the Air District's CEQA Guidelines or contact Jaclyn Winkel at jwinkel@baaqmd.gov for further information.*

May 2017

California Environmental Quality Act

Air Quality Guidelines

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MAY 2017

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PART I: THRESHOLDS OF SIGNIFICANCE & PROJECT SCREENING

2. THRESHOLDS OF SIGNIFICANCE

The SFBAAB is currently designated as a nonattainment area for state and national ozone standards and national particulate matter ambient air quality standards. SFBAAB's nonattainment status is attributed to the region's development history. Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The analysis to assess project-level air quality impacts should be as comprehensive and rigorous as possible.

Similar to regulated air pollutants, GHG emissions and global climate change also represent cumulative impacts. GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. Climate change impacts may include an increase in extreme heat days, higher concentrations of air pollutants, sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts.

BAAQMD's approach to developing a *Threshold of Significance* for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move us towards climate stabilization. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. Refer to Table 2-1 for a summary of Air Quality CEQA Thresholds and to Appendix D for *Thresholds of Significance* documentation.

Table 2-1 Air Quality CEQA Thresholds of Significance*			
Pollutant	**Construction-Related**	**Operational-Related**	
Project-Level			
Criteria Air Pollutants and Precursors (Regional)	**Average Daily Emissions (lb/day)**	**Average Daily Emissions (lb/day)**	**Maximum Annual Emissions (tpy)**
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
PM_{10}/$PM_{2.5}$ (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
GHGs – Projects other than Stationary Sources	None	Compliance with Qualified GHG Reduction Strategy OR 1,100 MT of CO_2e/yr OR 4.6 MT CO_2e/SP/yr (residents+employees)	
GHGs –Stationary Sources	None	10,000 MT/yr	
Risk and Hazards for new sources and receptors (Individual Project)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient $PM_{2.5}$ increase: > 0.3 µg/m^3 annual average Zone of Influence: 1,000-foot radius from property line of source or receptor	
Risk and Hazards for new sources and receptors (Cumulative Threshold)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) $PM_{2.5}$: > 0.8 µg/m^3 annual average (from all local sources) Zone of Influence: 1,000-foot radius from property line of source or receptor	
Accidental Release of Acutely Hazardous Air Pollutants*	None	Storage or use of acutely hazardous materials locating near receptors or new receptors locating near stored or used acutely hazardous materials considered significant	
Odors*	None	5 confirmed complaints per year averaged over three years	

Table 2-1 Air Quality CEQA Thresholds of Significance*		
Pollutant	**Construction-Related**	**Operational-Related**
Plan-Level		
Criteria Air Pollutants and Precursors	None	1. Consistency with Current Air Quality Plan control measures, and 2. Projected VMT or vehicle trip increase is less than or equal to projected population increase
GHGs	None	Compliance with Qualified GHG Reduction Strategy OR 6.6 MT CO_2e/SP/yr (residents + employees)
Risks and Hazards*	None	1. Overlay zones around existing and planned sources of TACs (including adopted Risk Reduction Plan areas) and 2. Overlay zones of at least 500 feet from all freeways and high volume roadways
Accidental Release of Acutely Hazardous Air Pollutants	None	None
Odors*	None	Identify the location, and include policies to reduce the impacts, of existing or planned sources of odors
Regional Plans (Transportation and Air Quality Plans)		
GHGs, Criteria Air Pollutants and Precursors, and Toxic Air Contaminants	None	No net increase in emissions

CEQA = California Environmental Quality Act; CO = carbon monoxide; CO_2e = carbon dioxide equivalent; GHGs = greenhouse gases; lb/day = pounds per day; MT = metric tons; NO_X = oxides of nitrogen; $PM_{2.5}$= fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; ROG = reactive organic gases; SO_2 = sulfur dioxide; SP = service population; TACs = toxic air contaminants; TBP = toxic best practices; tons/day = tons per day; tpy = tons per year; yr= year; TBD: to be determined.

*The receptor thresholds were the subject of litigation in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369. The use of the receptor thresholds is discussed in section 2.8 of these Guidelines.

** The Air District recommends that for construction projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of actual days that peak impacts are to occur, rather than the full year.

2.1. CRITERIA AIR POLLUTANTS AND PRECURSORS – PROJECT LEVEL

Table 2-2 presents the *Thresholds of Significance* for operational-related criteria air pollutant and precursor emissions. These represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. If daily average or annual emissions of operational-related criteria air pollutants or precursors would exceed any applicable *Threshold of Significance* listed in Table 2-2, the proposed project would result in a cumulatively significant impact.

Table 2-2
Thresholds of Significance for Operational-Related Criteria Air Pollutants and Precursors

Pollutant/Precursor	Maximum Annual Emissions (tpy)	Average Daily Emissions (lb/day)
ROG	10	54
NO_X	10	54
PM_{10}	15	82
$PM_{2.5}$	10	54

Notes: tpy = tons per year; lb/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or lCOess; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year.
Refer to Appendix D for support documentation.

2.2. GREENHOUSE GASES – PROJECT LEVEL

The *Thresholds of Significance* for operational-related GHG emissions are:

- For land use development projects, the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year (MT/yr) of CO_2e; or 4.6 MT CO_2e/SP/yr (residents + employees). Land use development projects include residential, commercial, industrial, and public land uses and facilities.
- For stationary-source projects, the threshold is 10,000 metric tons per year (MT/yr) of CO_2e. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate.

If annual emissions of operational-related GHGs exceed these levels, the proposed project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact to global climate change.

2.3. LOCAL COMMUNITY RISK AND HAZARD IMPACTS – PROJECT LEVEL

The *Thresholds of Significance* for local community risk and hazard impacts are identified below, which apply to the siting of a new source. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level. If emissions of TACs or fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less ($PM_{2.5}$) exceed any of the *Thresholds of Significance*

listed below, the proposed project would result in a significant impact.

- Non-compliance with a qualified risk reduction plan; or
- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 would be a cumulatively considerable contribution; or
- An incremental increase of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$) annual average $PM_{2.5}$ would be a cumulatively considerable contribution.

Cumulative Impacts

A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000 foot radius from the fence line of a source plus the contribution from the project, exceeds the following:

- Non-compliance with a qualified risk reduction plan; or
- An excess cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- 0.8 $\mu g/m^3$ annual average $PM_{2.5}$.

A lead agency should enlarge the 1,000-foot radius on a case-by-case basis if an unusually large source or sources of risk or hazard emissions that may affect a proposed project is beyond the recommended radius.

2.4. LOCAL CARBON MONOXIDE IMPACTS – PROJECT LEVEL

Table 2-3 presents the *Thresholds of Significance* for local CO emissions, the 1- and 8-hour California Ambient Air Quality Standards (CAAQS) of 20.0 parts per million (ppm) and 9.0 ppm, respectively. By definition, these represent levels that are protective of public health. If a project would cause local emissions of CO to exceed any of the *Thresholds of Significance* listed below, the proposed project would result in a significant impact to air quality.

Table 2-3
Thresholds of Significance for Local Carbon Monoxide Emissions

CAAQS Averaging Time	Concentration (ppm)
1-Hour	20.0
8-Hour	9.0
Refer to Appendix D for support documentation.	

2.5. ODOR IMPACTS – PROJECT LEVEL

The *Thresholds of Significance* for odor impacts are qualitative in nature. A project that would result in the siting of a new source should consider the screening level distances and the complaint history of the odor sources:

- Projects that would site a new odor source farther than the applicable screening distance shown in Table 3-3 from an existing receptor, would not likely result in a significant odor impact.

- A type of odor source with five (5) or more confirmed complaints in the new source area per year averaged over three years is considered to have a significant impact on receptors within the screening distance shown in Table 3-3.

Facilities that are regulated by the CalRecycle agency (e.g. landfill, composting, etc) are required to have Odor Impact Minimization Plans (OIMP) in place and have procedures that establish fence line odor detection thresholds. The Air District recognizes a Lead Agency's discretion under CEQA to use established odor detection thresholds as thresholds of significance for CEQA review for CalRecycle regulated facilities with an adopted OIMP. Refer to *Chapter 7 Assessing and Mitigating Odor Impacts* for further discussion of odor analysis.

2.6. CONSTRUCTION-RELATED IMPACTS – PROJECT LEVEL

2.6.1. Criteria Air Pollutants and Precursors

Table 2-4 presents the *Thresholds of Significance* for construction-related criteria air pollutant and precursor emissions. If daily average emissions of construction-related criteria air pollutants or precursors would exceed any applicable *Threshold of Significance* listed in Table 2-4, the project would result in a significant cumulative impact.

Table 2-4
Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors

Pollutant/Precursor	Daily Average Emissions (lb/day)
ROG	54
NO_X	54
PM_{10}	82*
$PM_{2.5}$	54*

* Applies to construction exhaust emissions only.

Notes: CO = carbon monoxide; lb/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; SO_2 = sulfur dioxide. Refer to Appendix D for support documentation.

2.6.2. Greenhouse Gases

The District does not have an adopted *Threshold of Significance* for construction-related GHG emissions. However, the Lead Agency should quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction-generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals, as required by the Public Resources Code, Section 21082.2. The Lead Agency is encouraged to incorporate best management practices to reduce GHG emissions during construction, as feasible and applicable.

2.6.3. Local Community Risk and Hazards

The *Threshold of Significance* for construction-related local community risk and hazard impacts is the same as that for project operations. Construction-related TAC and PM impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site receptors, as applicable. The Air District recommends that for construction projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of actual days that peak impacts are to occur, rather than the full year.

2.7. THRESHOLDS OF SIGNIFICANCE FOR PLAN-LEVEL IMPACTS

The *Thresholds of Significance* for plans (e.g., general plans, community plans, specific plans, regional plans, congestion management plans, etc.) within the SFBAAB are summarized in Table 2-5 and discussed separately below.

Table 2-5
Thresholds of Significance for Plans*

Criteria Air Pollutants and Precursors	Construction: none Operational: Consistency with Current AQP and projected VMT or vehicle trip increase is less than or equal to projected population increase.
GHGs	Construction: none Operational: 6.6 MT CO_2e/SP/yr (residents & employees) or a Qualified GHG Reduction Strategy. The efficiency threshold should only be applied to general plans. Other plans, e.g. specific plans, congestion management plans, etc., should use the project-level threshold of 4.6 CO_2e/SP/yr.
Local Community Risk and Hazards	Land use diagram identifies special overlay zones around existing and planned sources of TACs and $PM_{2.5}$, including special overlay zones of at least 500 feet (or Air District-approved modeled distance) on each side of all freeways and high-volume roadways, and plan identifies goals, policies, and objectives to minimize potentially adverse impacts.
Odors	Identify locations of odor sources in plan; identify goals, policies, and objectives to minimize potentially adverse impacts.
Regional Plans (transportation and air quality plans)	No net increase in emissions of GHGs, Criteria Air Pollutants and Precursors, and Toxic Air Contaminants. Threshold only applies to regional transportation and air quality plans.

* The receptor thresholds were the subject of litigation in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369. The use of the receptor thresholds is discussed in section 2.8 of these Guidelines.

Notes: AQP = Air Quality Plan; CO_2e = carbon dioxide equivalent; GHGs = greenhouse gases; MT = metric tons; SP = service population; TACs = toxic air contaminants; yr = year; $PM_{2.5}$= fine particulate matter

Refer to Appendix D for support documentation.

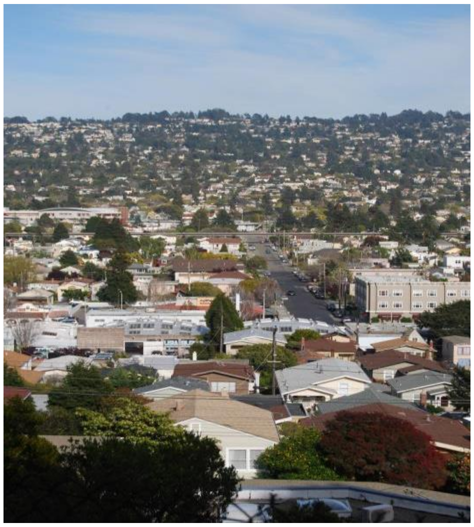
2.7.1. Criteria Air Pollutants and Precursor Emissions

Proposed plans (except regional plans) must show the following over the planning period of the plan to result in a less than significant impact:

- Consistency with current air quality plan control measures.
- A proposed plan's projected VMT or vehicle trips (VT) (either measure may be used) increase is less than or equal to its projected population increase.

2.7.2. Greenhouse Gases

The *Threshold of Significance* for operational-related GHG impacts of plans employs either a GHG efficiency-based metric (per Service Population [SP]), or a GHG Reduction Strategy option, described in Section 4.3.



The *Thresholds of Significance* options for plan level GHG emissions are:

- A GHG efficiency metric of 6.6 MT per SP per year of carbon dioxide equivalent (CO_2e). If annual maximum emissions of operational-related GHGs exceed this level, the proposed plan would result in a significant impact to global climate change.

- Consistency with an adopted GHG Reduction Strategy. If a proposed plan is consistent with an adopted GHG Reduction Strategy that meets the standards described in Section 4.3, the plan would be considered to have a less than significant impact. This approach is consistent with the plan elements described in the State CEQA Guidelines, Section 15183.5.

2.7.3. Local Community Risk and Hazards

The *Thresholds of Significance* for plans with regard to community risk and hazard impacts are:

1. The land use diagram must identify:

   a. Special overlay zones around existing and planned sources of TACs and PM (including adopted risk reduction plan areas); and

   b. Special overlay zones of at least 500 feet (or Air District-approved modeled distance) on each side of all freeways and high-volume roadways.

2. The plan must also identify goals, policies, and objectives to minimize potential impacts and create overlay zones around sources of TACs, PM, and hazards.

Although the Risk and Hazard Thresholds recommend evaluating the impacts of locating new development in areas subject to high levels of TACs and PM, the California Supreme Court determined in 2015 that, as a general rule, CEQA does not require this analysis. Section 2.8 below discusses the Supreme Court's decision with respect to the use of the Risk and Hazard Thresholds.

2.7.4. Odors

The *Thresholds of Significance* for plans with regard to odor impacts are to identify locations of odor sources in a plan and the plan must also identify goals, policies, and objectives to minimize potentially adverse impacts.

2.7.5. Regional Plans

The *Thresholds of Significance* for regional plans is to achieve a no net increase in emissions of criteria pollutants and precursors, GHG, and toxic air contaminants. This threshold applies only to regional transportation and air quality plans.

2.8 Receptor Thresholds

The Receptor Thresholds in these Guidelines address the analysis of exposing new receptors to existing sources of toxic air pollution and odors. These Thresholds were the subject of litigation brought by the California Building Industry Association. The California Supreme Court's decision in that litigation states that: "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents . . . Despite the statute's evident concern with protecting the environment and human health, its relevant provisions are best read to focus almost entirely on how projects affect the environment." The Supreme Court upheld "evaluating a project's potentially significant exacerbating effects on existing environmental hazards . . .Because this type of inquiry still focuses on the project's impacts on the environment—how a project might worsen existing conditions—directing an agency to evaluate how such worsened conditions could affect a project's future users or residents is entirely consistent with this focus and with CEQA as a whole."

The Supreme Court also determined that CEQA requires an analysis of exposing new receptors to existing environmental hazards "in several specific contexts involving certain airport (§ 21096) and school construction projects (§ 21151.8), and some housing development projects (§§ 21159.21, subds. (f), (h), 21159.22, subds. (a), (b)(3), 21159.23, subd. (a)(2)(A), 21159.24, subd. (a)(1), (3), 21155.1, subd. (a)(4), (6))." These provisions "constitute specific exceptions to CEQA's general rule requiring consideration only of a project's effect on the environment, not the environment's effects on project users."

The Supreme Court also indicated that nothing in CEQA prevents local agencies from considering the impact of locating new development in areas subject to existing environmental hazards. However, the Court of Appeal explained "CEQA cannot be used by a lead agency to require a developer or other agency to obtain an EIR or implement mitigation measures solely because the occupants or users of a new project would be subjected to the levels of emissions specified, an agency may do so voluntarily on its own project and may use the Receptor Thresholds for guidance." The Court of Appeal also explained that, under CEQA, the Receptor Thresholds should not be applied to "routinely assess the effect of existing environmental conditions on future users or occupants of a project." The courts did not address the extent to which agencies could rely on their police power, general plans, or other regulatory authority outside of CEQA to require mitigation to address existing environmental hazards. For more information on planning approaches to addressing the impacts of locating new development in areas subject to existing air pollution, please see "Planning Healthy Places." http://www.baaqmd.gov/plans-and-climate/planning-healthy-places

Under the appropriate circumstances described above, the District recommends the following Receptor Thresholds:

Table 2-6

Receptor Thresholds

Risks and Hazards (Individual Project)	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM2.5 increase: >0.3 µg/m3 annual average Zone of Influence: 1,000-foot radius from property line of receptor
Risks and Hazards (Cumulative Threshold)	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM2.5: > 0.8 µg/m3 annual average (from all local sources) Zone of Influence: 1,000-foot radius from property line of receptor
Accidental Release of Acutely Hazardous Air Pollutants	New receptors locating near stored or used acutely hazardous materials considered significant
Odors	5 confirmed complaints per year averaged over three years

3. SCREENING CRITERIA

The screening criteria identified in this section are **not thresholds of significance**. The Air District developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether the proposed project could result in potentially significant air quality impacts. If all of the screening criteria are met by a proposed project, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration. In addition, the screening criteria in this section do not account for project design features, attributes, or local development requirements that could also result in lower emissions. For projects that are mixed-use, infill, and/or proximate to transit service and local services, emissions would be less than the greenfield type project that these screening criteria are based on.

If a project includes emissions from stationary source engines (e.g., back-up generators) and industrial sources subject to Air District Rules and Regulations, the screening criteria should not be used. The project's stationary source emissions should be analyzed separately from the land use-related indirect mobile- and area-source emissions. Stationary-source emissions are not included in the screening estimates given below and, for criteria pollutants, must be added to the indirect mobile- and area-source emissions generated by the land use development and compared to the appropriate Thresholds of Significance. Greenhouse gas emissions from permitted stationary sources should not be combined with operational emissions, but compared to a separate stationary source greenhouse gas threshold.

3.1. OPERATIONAL-RELATED IMPACTS

3.1.1. Criteria Air Pollutants and Precursors

The screening criteria developed for criteria pollutants and precursors were derived using the default assumptions used by the Urban Land Use Emissions Model (URBEMIS). If the project has sources of emissions not evaluated in the URBEMIS program the screening criteria should not be used. If the project meets the screening criteria in Table 3-1, the project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the *Thresholds of Significance* shown in Table 2-2. Operation of the proposed project would therefore result in a less-than-significant cumulative impact to air quality from criteria air pollutant and precursor emissions.

3.1.2. Greenhouse Gases

The screening criteria developed for greenhouse gases were derived using the default emission assumptions in URBEMIS and using off-model GHG estimates for indirect emissions from electrical generation, solid waste and water conveyance. If the project has other significant sources of GHG emissions not accounted for in the methodology described above, then the screening criteria should not be used. Projects below the applicable screening criteria shown in Table 3-1 would not exceed the 1,100 MT of CO_2e/yr GHG threshold of significance for projects other than permitted stationary sources.

If a project, including stationary sources, is located in a community with an adopted qualified GHG Reduction Strategy, the project may be considered less than significant if it is consistent with the GHG Reduction Strategy. A project must demonstrate its consistency by identifying and implementing all applicable feasible measures and policies from the GHG Reduction Strategy into the project.

Table 3-1 Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes			
Land Use Type	**Operational Criteria Pollutant Screening Size**	**Operational GHG Screening Size**	**Construction-Related Screening Size**
Single-family	325 du (NOX)	56 du	114 du (ROG)
Apartment, low-rise	451 du (ROG)	78 du	240 du (ROG)
Apartment, mid-rise	494 du (ROG)	87 du	240 du (ROG)
Apartment, high-rise	510 du (ROG)	91 du	249 du (ROG)
Condo/townhouse, general	451 du (ROG)	78 du	240 du (ROG)
Condo/townhouse, high-rise	511 du (ROG)	92 du	252 du (ROG)
Mobile home park	450 du (ROG)	82 du	114 du (ROG)
Retirement community	487 du (ROG)	94 du	114 du (ROG)
Congregate care facility	657 du (ROG)	143 du	240 du (ROG)
Day-care center	53 ksf (NOX)	11 ksf	277 ksf (ROG)
Elementary school	271 ksf (NOX)	44 ksf	277 ksf (ROG)
Elementary school	2747 students (ROG)	-	3904 students (ROG)
Junior high school	285 ksf (NOX)	-	277 ksf (ROG)
Junior high school	2460 students (NOX)	46 ksf	3261 students (ROG)
High school	311 ksf (NOX)	49 ksf	277 ksf (ROG)
High school	2390 students (NOX)	-	3012 students (ROG)
Junior college (2 years)	152 ksf (NOX)	28 ksf	277 ksf (ROG)
Junior college (2 years)	2865 students (ROG)	-	3012 students (ROG)
University/college (4 years)	1760 students (NOX)	320 students	3012 students (ROG)
Library	78 ksf (NOX)	15 ksf	277 ksf (ROG)
Place of worship	439 ksf (NOX)	61 ksf	277 ksf (ROG)
City park	2613 acres (ROG)	600 acres	67 acres (PM10)
Racquet club	291 ksf (NOX)	46 ksf	277 ksf (ROG)
Racquetball/health	128 ksf (NOX)	24 ksf	277 ksf (ROG)
Quality restaurant	47 ksf (NOX)	9 ksf	277 ksf (ROG)
High turnover restaurant	33 ksf (NOX)	7 ksf	277 ksf (ROG)
Fast food rest. w/ drive thru	6 ksf (NOX)	1 ksf	277 ksf (ROG)
Fast food rest. w/o drive thru	8 ksf (NOX)	1 ksf	277 ksf (ROG)
Hotel	489 rooms (NOX)	83 rooms	554 rooms (ROG)
Motel	688 rooms (NOX)	106 rooms	554 rooms (ROG)
Free-standing discount store	76 ksf (NOX)	15 ksf	277 ksf (ROG)
Free-standing discount superstore	87 ksf (NOX)	17 ksf	277 ksf (ROG)
Discount club	102 ksf (NOX)	20 ksf	277 ksf (ROG)
Regional shopping center	99 ksf (NOX)	19 ksf	277 ksf (ROG)
Electronic Superstore	95 ksf (NOX)	18 ksf	277 ksf (ROG)
Home improvement superstore	142 ksf (NOX)	26 ksf	277 ksf (ROG)
Strip mall	99 ksf (NOX)	19 ksf	277 ksf (ROG)
Hardware/paint store	83 ksf (NOX)	16 ksf	277 ksf (ROG)
Supermarket	42 ksf (NOX)	8 ksf	277 ksf (ROG)
Convenience market (24 hour)	5 ksf (NOX)	1 ksf	277 ksf (ROG)
Convenience market with gas pumps	4 ksf (NOX)	1 ksf	277 ksf (ROG)
Bank (with drive-through)	17 ksf (NOX)	3 ksf	277 ksf (ROG)
General office building	346 ksf (NOX)	53 ksf	277 ksf (ROG)

Table 3-1 Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes			
Land Use Type	**Operational Criteria Pollutant Screening Size**	**Operational GHG Screening Size**	**Construction-Related Screening Size**
Office park	323 ksf (NOX)	50 ksf	277 ksf (ROG)
Government office building	61 ksf (NOX)	12 ksf	277 ksf (ROG)
Government (civic center)	149 ksf (NOX)	27 ksf	277 ksf (ROG)
Pharmacy/drugstore w/ drive through	49 ksf (NOX)	10 ksf	277 ksf (ROG)
Pharmacy/drugstore w/o drive through	48 ksf (NOX)	10 ksf	277 ksf (ROG)
Medical office building	117 ksf (NOX)	22 ksf	277 ksf (ROG)
Hospital	226 ksf (NOX)	39 ksf	277 ksf (ROG)
Hospital	334 beds (NOX)	84 ksf	337 beds (ROG)
Warehouse	864 ksf (NOX)	64 ksf	259 ksf (NOX)
General light industry	541 ksf (NOX)	121 ksf	259 ksf (NOX)
General light industry	72 acres (NOX)	-	11 acres (NOX)
General light industry	1249 employees (NOX)	-	540 employees (NOX)
General heavy industry	1899 ksf (ROG)	-	259 ksf (NOX)
General heavy industry	281 acres (ROG)	-	11 acres (NOX)
Industrial park	553 ksf (NOX)	65 ksf	259 ksf (NOX)
Industrial park	61 acres (NOX)	-	11 acres (NOX)
Industrial park	1154 employees (NOX)	-	577 employees (NOX)
Manufacturing	992 ksf (NOX)	89 ksf	259 ksf (NOX)
Notes: du = dwelling units; ksf = thousand square feet; NO_X = oxides of nitrogen; ROG = reactive organic gases. Screening levels include indirect and area source emissions. Emissions from engines (e.g., back-up generators) and industrial sources subject to Air District Rules and Regulations embedded in the land uses are not included in the screening estimates and must be added to the above land uses. Refer to Appendix D for support documentation. Source: Modeled by EDAW 2009.			

3.2. COMMUNITY RISK AND HAZARD IMPACTS

Please refer to Chapter 5 for discussion of screening criteria for local community risk and hazard impacts.

3.3. CARBON MONOXIDE IMPACTS

This preliminary screening methodology provides the Lead Agency with a conservative indication of whether the implementation of the proposed project would result in CO emissions that exceed the *Thresholds of Significance* shown in Table 2-3.

The proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria is met:

1. Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.

2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
3. The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

3.4. ODOR IMPACTS

Table 3-3 presents odor screening distances recommended by BAAQMD for a variety of land uses. Projects that would site a new odor source or a new receptor farther than the applicable screening distance shown in Table 3-3 from an existing receptor or odor source, respectively, would not likely result in a significant odor impact. The odor screening distances in Table 3-3 should not be used as absolute screening criteria, rather as information to consider along with the odor parameters and complaint history. Refer to *Chapter 7 Assessing and Mitigating Odor Impacts* for comprehensive guidance on significance determination.

Table 3-3
Odor Screening Distances

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles
Refer to Appendix D for support documentation.	

Facilities that are regulated by CalRecycle (e.g. landfill, composting, etc.) are required to have Odor Impact Minimization Plans (OIMP) in place and have procedures that establish fence line odor detection thresholds. The Air District recognizes a Lead Agency's discretion under CEQA to use established odor detection thresholds as thresholds of significance for CEQA review for CalRecycle regulated facilities with an adopted OIMP.

3.5. CONSTRUCTION-RELATED IMPACTS

3.5.1. Criteria Air Pollutants and Precursors

This preliminary screening provides the Lead Agency with a conservative indication of whether the proposed project would result in the generation of construction-related criteria air pollutants and/or precursors that exceed the *Thresholds of Significance* shown in Table 2-4.

If all of the following *Screening Criteria* are met, the construction of the proposed project would result in a less-than-significant impact from criteria air pollutant and precursor emissions.

1. The project is below the applicable screening level size shown in Table 3-1; and
2. All *Basic Construction Mitigation Measures* would be included in the project design and implemented during construction; and
3. Construction-related activities would not include any of the following:
    a. Demolition;
    b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);
    c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development);
    d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or
    e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

3.5.2. Community Risk and Hazards

Chapter 5, *Assessing and Mitigating Local Community Risk and Hazard Impacts*, contains information on screening criteria for local risk and hazards.

EXHIBIT E

AC BY MARRIOTT – WEST SAN JOSE

Revised Public Review Draft Initial Study – Mitigated Negative Declaration

File No. H17-023

prepared by
City of San José
Department of Planning, Building and Code Enforcement
200 East Santa Clara Street, 3rd Floor
San José, California 95113

prepared with the assistance of
J.B. Anderson Land Use Planning
139 S. Stockton Avenue
Ripon, California 95366

J.B. ANDERSON
LAND USE PLANNING

October 2018

Designation of Neighborhood/Community Commercial and is within the A(PD) Planned Development Zoning District (File No. PDC96-033).

11. DESCRIPTION OF THE PROJECT

The proposed project consists of a Site Development Permit (File No. H17-023), to allow for the development of a new AC by Marriott hotel with 168 rooms, four (4) levels of subterranean parking, a restaurant, and associated on-site improvements including paving and landscaping. The proposed project will require the demolition the existing gas station and convenience store. The proposed project includes an art piece structure on the northwest corner of the projects site. In addition to the structure, art will be featured on the side of the proposed building, facing west.

The proposed project proposes to have a building footprint of approximately 11,500 square feet of the total 18,113 square feet lot area (0.415 acre), which is approximately sixty-three percent (63%) of the site. The project would have a total building area of approximately 78,850 square feet and would include 168 guestrooms, a lobby, fitness room, restaurant, meeting room, market, employee breakroom, and linen/laundry area. The proposed project contains a floor area ratio (FAR) of 3.5 and maintains a front setback of 15 feet and a side corner setback of 12.5 feet. The proposed building has a maximum height of 85 feet with an additional 10 feet for architectural projections. Specifically, the proposed height, including architectural and mechanical elements, of the seven (7) story hotel would be approximately 89 feet at the higher parapet, 86 feet and 6 inches at the lower parapet, and 95 feet at the proposed tower at the northwest corner of the building. The proposed project will also include four (4) levels of subterranean parking with approximately one hundred (100) vehicle parking spaces, including eight (8) ADA accessible parking spaces and eight (8) clean air vehicle parking spaces. The project would also provide twelve (12) motorcycle parking spaces and eighteen (18) bicycle parking spaces on-site. It is feasible that the project can perform all routine maintenance activities such as window cleaning on their site.

Table 1, Project Summary, provides a summary of the primary project components. Appendix A includes of the proposed site plan and illustrates the proposed project elevations from Stevens Creek Boulevard and Stern Avenue. As part of the proposed project, an existing Public Utility Easement (PUE), located in the eastern portion of the property, will be vacated.

Table 1 Project Summary

Project Site Size	
Project site area	18,113 square feet (0.415 acre)
Proposed Number of Rooms	
Guest Rooms	168
Building Area	
Hotel – First Floor	9,850 square feet
Hotel – Second Floor	11,500 square feet
Hotel – Third Floor	11,500 square feet
Hotel – Fourth Floor	11,500 square feet
Hotel – Fifth Floor	11,500 square feet
Hotel – Sixth Floor	11,500 square feet
Hotel – Seventh Floor	11,500 square feet
Total	78,850 square feet (54.3% site coverage)
Landscaping	
Landscape and hardscape areas	Approximately 770 square feet
Floor Area Ratio	
FAR	4.3
Building Height (including mechanical)	
Parapet	89 feet high; 86 feet and 6 inches low
Highest point (proposed tower)	95 feet
Parking Stalls	
Standard	Eighty-Six (86) stalls
Clean Air Vehicle	Eight (8) stalls
ADA Accessible	Eight (8) stalls
Motorcycle	Twelve (12) stalls
Total	One Hundred (100) stalls (subterranean)
Bicycle Parking	
Bike locker stalls	Eighteen (18) stalls

<u>Development Schedule</u>

Development of the proposed project is anticipated to begin the first quarter of 2019. Based on information provided by the Applicant, construction of the project is anticipated to take approximately eighteen (18) months, and will be developed in one (1) single phase.

7. GREENHOUSE GAS EMISSIONS -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation***	***Less Than Significant Impact***	***No Impact***
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

SETTING:

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of Greenhouse Gas Emissions (GHGs) have a broader, global impact. Global warming is a process whereby GHGs accumulating in the atmosphere contribute to an increase in temperature of the earth's atmosphere. The principle GHGs contributing to global warming are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds. These gasses allow visible and ultraviolet light from the sun to pass through the atmosphere, but they prevent heat from escaping back into space, a process known as 'greenhouse effect.' Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to an alteration of the balance of energy transfers between the atmosphere, space, land, and the oceans and a trend of unnatural warming of the earth's climate. Per the United Nations Intergovernmental Panel on Climate Change (IPCC), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater change) that the global average net effect on human activities has been the dominant cause of warming since the mid-20th century.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Observations of CO_2 concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the IPCC projections. The recently observed increase in CH_4 and N_2O concentrations are smaller than those assumed in scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced. CEQA Guidelines provides regulatory direction for the analysis and mitigation of GHG emissions appearing in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

REGULATORY SETTING

California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. California has numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below:

Assembly Bill 1943

Assembly Bill (AB) 1943 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the Low Emission Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.

Executive Order S-3-05

In 2005, the governor issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (California Environmental Protection Agency [CalEPA]). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc. In April 2015 the governor issued EO B-30-15, calling for a new target of 40 percent below 1990 levels by 2030.

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions.

California is on track to meet or exceed the current target of reducing GHG emission to 1990 levels by 2020, as established by AB 32.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

CARB Resolution 07-54

CARB Resolution 07-54 establishes 25,000 MT of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

Senate Bill 375

Senate Bill (SB) 375, signed into law in September 2008, builds on AB 32 by requiring CARB to develop regional GHG reduction targets to be achieved from the automobile and light truck sectors for 2020 and 2035; these regional targets will help achieve the goals of AB 32 and the Scoping Plan through changed land use patterns and improved transportation systems. The Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) adopted a Sustainable Community Strategies in July 2013 that meets greenhouse gas reduction targets. The *Plan Bay Area* is the SCS document for the Bay Area, which is an integrated long-range plan that discusses climate protection, housing, healthy and safe communities, open space and agricultural preservation, equitable access, economic vitality, and transportation system effectiveness within the San Francisco Bay Area. The document is updated every four years and most recently, the update, *Plan Bay Area 2040* was adopted on July 26, 2017.

Executive Order S-13-08

Executive Order S-13-08 indicates that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of tis population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaption strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Senate Bill 2X

In April 2011, the governor signed SB2X requiring California to generate 33 percent of its electricity from renewable energy by 2020.

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, which requires the State to further reduce GHGs to 40 percent below 1990 levels by 2030. SB 32 is an extension of AB 32. The other provisions of AB 32 remain unchanged. CARB adopted the 2017 Climate Change Scoping Plan Update on December 14, 2017 for achieving California's 2030 greenhouse gas target.

METHODOLOGY AND SIGNIFICANCE THRESHOLDS

Regional Thresholds

The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). Neither the State nor the City of San José has adopted GHG emissions thresholds. However, the City of San José adopted the GHG Reduction Strategy in conjunction with the Envision 2040 General Plan. The BAAQMD adopted significance thresholds for GHGs in June 2010 and revised in May 2017 (see Table 6). For land use development projects (residential, commercial, industrial), the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per years (MR/year) or CO_2e; or 4.6 MT CO_2e per service population (residents + employees) per year.

TABLE 6 GHG SIGNIFICANCE THRESHOLDS

Project Type	Thresholds
Non-stationary Sources	Compliance with Qualified Greenhouse Gas Reduction Strategy OR 1,100 MT of CO_2e/year OR 4.6 MT of CO_2e/SP/year (residents + employees)
Stationary Sources	10,000 MT of CO_2e/year
Notes: SP = Service Population Source: BAAQMD CEQA Guidelines, May 2017	

Local Thresholds

The City of San José has adopted a GHG Reduction Strategy in conjunction with the Envision San José 2040 General Plan Update and consistent with the implementation requirements of AB 32 – the Global Warming Solutions Act of 2006. The strategy was adopted by the City Council as an appendix to the Envision Plan on November 1, 2011 and was updated in December 2015. The purposes of the GHG Reduction Strategy are to:

1. Capture and consolidate GHG reduction efforts already underway by the City of San José;

2. Distill policy direction on GHG reduction from the Envision San José 2040 General Plan Update;
3. Quantify GHG reductions that could result from land use changes incorporated in the Envision General Plan Land Use / Transportation Diagram;
4. Create a framework for the ongoing monitoring and revision of the Greenhouse Gas Reduction Strategy;
5. Achieve General Plan-level environmental clearance for future development activities (through the year 2020) occurring within the City of San José.

The Strategy establishes mandatory and voluntary GHG reduction measures. Voluntary measures could be incorporated as mitigation measures for proposed projects, at the City's discretion. Applicable mandatory measures include the following:

- Compliance with the City Green Building Ordinance
- New construction must be developed as green buildings
- Increase Density of development
- Increase location efficiency
- Provide Bike Parking in Non-Residential Projects

Project construction and operation emissions were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 (see Appendix A for calculations).

Construction Emissions
Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment on-site as well as from vehicles transporting construction workers to and from the project site and heavy trucks to export earth materials off-site. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. CalEEMod provides an estimate of emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment used during construction.

Operational Emissions
BAAQMD identifies sources of information on potential thresholds of significance and mitigation strategies for operational GHG emissions from land-use development projects in its CEQA Air Quality Guidelines. The BAAQMD CEQA Guidelines also outline a methodology for estimating greenhouse gases.

In jurisdictions where a qualified Greenhouse Gas Reduction Strategy has been reviewed under CEQA and adopted by decision-makers, compliance with the Greenhouse Gas Reduction Strategy would reduce a project's contribution to cumulative greenhouse gas emission impacts to a less than significant level. The BAAQMD CEQA Guidelines also outline a methodology for estimating greenhouse gases.

CalEEMod provides operational emissions of CO_2, N_2O, and CH_4. Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42, (Compilation of Air Pollutant Emissions Factors) and CCAR, Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CalEEMod User Guide, 2013). The default electricity consumption values in CalEEMod include the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Emissions associated with air sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from CARB, U.S. EPA, and emission factor values provided by the local air district (CalEEMod Use Guide, 2013).

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide, 2013). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California.

For mobile sources, CO_2 and CH_4 emissions were quantified in CalEEMod. Because CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified using the California Climate Action Registry General Reporting Protocol (CAPCOA, 2009) direct emissions factors for mobile combustion (See Appendix B for calculations). The estimate of total daily trips associated with the proposed project was based on the project traffic analysis conducted by TJW Engineering, Inc. and was calculated and extrapolated to derive total annual mileage in CalEEMod. Emission rates for N_2O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the California Action Registry General Reporting Protocol.

IMPACT ANALYSIS

a. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

Construction

The project's proposed construction activities, energy use, daily operational activities, and mobile sources (traffic) would generate GHG emissions. CalEEMod was used to calculate emissions resulting from project construction and long-term operation (See Appendix B). Project-related construction emissions are confined to a relatively short period of time in relation to the overall life of the proposed project. Therefore, construction-related GHG emissions were amortized over a 25-year period to determine the annual construction-related GHG emissions over the life of the project. As shown in Table 7, the project construction would result in an average of approximately 12.1 MT of CO_2e per year.

TABLE 7 ESTIMATED CONSTRUCTION GHG EMISSIONS

Year	Project Emissions MT of CO_2e /yr
Total	303.7
Total Amortized over 25 Years	12.1
See Appendix B for CalEEMod worksheets	

Operation

Operational emissions include area sources (consumer products, landscape maintenance equipment, and painting), energy use (electricity and natural gas), solid waste, electricity to deliver water, and transportation emissions and are shown in Table 8. In accordance with AB 939, this analysis assumes that the proposed project would achieve at least a 50 percent waste diversion rate. As discussed in Section 17, *Utilities and Service Systems*, the City of San José currently achieves a diversion rate of 73 percent. Therefore, the 50 percent diversion rate presents a conservative estimation of waste related emissions. CalEEMod does not calculate N_2O emissions related mobile sources. However, CalEEMod does calculate CO_2e emissions related to construction, operation and mobile sources (CO_2 and CH_4). As shown in Table 8, total emissions associated with the project are estimated to be approximately 1,528 metric tons per year. This estimate does not account for the elimination of the emissions associated with the existing gas station and service station currently on the project site and is therefore a highly conservative estimate and exceeds the BAAQMD threshold of 1,100 metric tons of CO_2e per year. However, this is not considered a significant impact because, as demonstrated in Table 9 below, the proposed project is consistent with the goals, targets and policies of the City of San José GHG Reduction Strategy. The BAAQMD CEQA Guidelines, dated May 2017 state, "If a project is consistent with an adopted qualified GHG Reduction Strategy that meets the requirements set forth in Section 15183.5 of the CEQA Guidelines, it can be presumed that the project will not have significant GHG emission impacts. The intent of the City's adopted GHG Reduction Strategy is to provide a method to streamline the CEQA review process. Projects that conform to the General Plan may make use of the GHG Reduction Strategy in lieu of completing a separate analysis of a project's potential greenhouse gas emissions, by demonstrating conformance to the GHG Reduction Strategy and in conformance with CEQA Guidelines Section 15183.5, which specifically addresses GHG Reduction Plans." As noted above, the proposed project is consistent with the City's Envision San Jose 2040 General Plan, and Table 9 below describes how the proposed project is consistent with the City's adopted GHG Reduction Strategy. Again, the proposed project is consistent with the City's Envision 2040 General Plan and GHG Reduction Strategy, therefore, the proposed project will have a **less than significant impact** related to greenhouse gases emissions.

TABLE 8 COMBINED ANNUAL EMISSIONS OF GREENHOUSE GASES

Emission Source	Annual Emissions (MT of CO_2e/year)
Construction	12.1
Operational	
Area	< 0.1
Energy	460.7
Solid Waste	46.3
Water	13.0
Mobile	
CO_2 and CH_4	995.8
Total	**1,528**
See Appendix B for CalEEMod worksheets.	

b. Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed in the setting section above, the City of San José has an adopted GHG Reduction Strategy as an appendix to the Envision San José 2040 General Plan. The GHG Reduction Strategy includes both mandatory measures for all projects and other measures which are considered voluntary. Voluntary measures could be incorporated in the project as mitigation measures for proposed projects, at the discretion of the City.

The project's consistency with the City of San José GHG Reduction Strategy is demonstrated below by completing the "Evaluation of Project Conformance with the City of San José Greenhouse Gas Reduction Strategy, below. As demonstrated in Table 9, the project would be consistent with the goals, targets, and policies of Plan Bay Area and the City of San José GHG Reduction Strategy.

TABLE 9 PROJECT CONSISTENCY WITH PLAN BAY AREA AND THE CITY OF SAN JOSÉ GHG REDUCTION STRATEGY

Goals, Targets, and Policies	Consistency
Plan Bay Area	
1. Plan for housing sufficient to house 100% of the Bay Area's future workers and residents from all income levels, without displacing current low-income residents	**Consistent** The proposed project consists of an infill development that would add a new hotel on a site currently developed as a gas station and service station. As discussed in Section 13, *Population and Housing*, the project would not add substantial additional residents or employees.
2. Reduce vehicle miles traveled (VMT) per capita by 10%	**Consistent** The proposed project is an infill development. Additionally, four (4) Santa Clara Valley Transit Authority (SCVTA) bus stops along route 23, 101 and 182 are located within one-quarter mile of the project site. With viable alternative transportation options, people are encouraged to drive less to the project site.
City of San José GHG Reduction Strategy	
Mandatory Criteria	
1. Consistency with the Land Use/Transportation Diagram (use and density)	**Consistent** The proposed project is located within the Stevens Creek Boulevard Urban Village Plan and is consistent with the use and density (FAR) of the Plan. The proposed project is also consistent with the City's Envision 2040 General Plan.
2. Compliance with the City Green Building Code	**Consistent** The proposed project will be required to comply with the City's green building ordinance.

3. New construction must be developed as green buildings	**Consistent** The proposed project consists of the following green building features: • Designated Parking for Clean Air Vehicles • Parking is located underground reducing heat island effects • Low water use fixtures • Rainwater (grey water) use in landscaped areas • Rainwater is filtered through bio swells developed on-site • Cooling roofing material shall be utilized reducing heat island effects • Adhesives, sealants and caulks shall be low or no VOC • Dedicated Solar ready zone will be provided on the roof
4. Pedestrian/Bicycle Site Design Measures	**Consistent** The proposed project will provide short-term and long-term bicycle parking in the subgrade parking garage.
5. Salvage building materials and architectural elements from historic structures to be demolished to allow re-use	**Not Applicable** The proposed project includes the demolition of the existing gas station and service station. However, this structure is not considered eligible for or listed on the Historic Resources Inventory.
6. Complete an evaluation of operational energy efficiency and design measures for energey0intensive large employers (e.g., data centers)	**Not Applicable** The proposed project includes the development of a seven-story hotel and is not considered an energy-intensive industry.
7. Preparation and implementation of a Transportation Demand Management (TDM) Program at large employers	**Consistent** A Transportation Demand Management (TDM) plan has been prepared for the proposed project, as discussed further in Section 16 of this Initial Study.
8. Limits on Drive-Through and Vehicle Serving Uses; all new uses that serve the occupants of vehicles (e.g., drive-through windows, car washes, service stations) must not disrupt pedestrian flow	**Not Applicable** The proposed project does not include a drive-through or is considered a vehicle serving use.

Built Environment and Recycling	
1. Installation of solar panels or other clean energy power generation sources on development sites, especially over parking areas	**Consistent** The proposed project will install solar ready zone areas on the roof which is an allocated space suitable for solar panels to be installed at a future date.
2. Use of recycled water. Use recycled water wherever feasible and cost-effective (including non-residential uses outside of the Urban Service Area)	**Not Proposed** The proposed project does not include the use of recycled water.
Transportation and Land Use	
1. Install and maintain trails adjacent to designated trail locations	**Not Applicable** A designated trail route is located adjacent to the project site. The project will pay fees as required under the Parks Ordinance, which may be used for trail construction in the area.
2. Car share programs. Promote car share programs to minimize the need for parking spaces	**Consistent** As described in the proposed project's TDM Plan, the proposed project will implement a carpool/vanpool or car-share program, carpool ride-matching for employees, assistance with vanpool formation, provision of vanpool or car-share vehicles, and assign carpool, vanpool and car-share parking at the most desirable on-site locations at the ratio set forth in the proposed project's conditions of approval.
3. Limit parking above code requirements	**Consistent** The proposed project includes 100 automobile parking spaces, including 6 accessible parking spaces, 86 standard and 8 clean air vehicle parking spaces. The requirement, per the City of San José Municipal Code (SJMC) is 94. The proposed project does not propose parking spaces above the City's Zoning Code requirement.
4. Consider opportunities for reducing parking spaces (including measures such as shared parking, TDM, and parking pricing to reduce demand)	**Consistent** The proposed project includes a Transportation Demand Management (TDM) Plan and will implement measures as a result of the TDM related to parking space reductions.
5. Increased Density of Development	**Consistent** The proposed project consists of an infill development, construction of a seven story hotel on a site currently developed as a gas station and service station. Therefore, the

	project would be increasing development density on the site.
6. Increase location efficiency	**Consistent** The project site would be located near the VTA Routes 23, 101, and 182. Route 23, which operates along Stevens Creek Boulevard between De Anza College and Downtown San José daily. Route 101 serves the Stanford Industrial Park and runs daily from Park & Ride adjacent to State Highway 85 to Hansen and Page Mill. Route 182 operates counter-commuter trips between Palo Alto and South San José, with one trip each from Palo Alto in the morning and from South San José in the afternoon. Further, the project would be located along the Class II bike lane along Stevens Creek Boulevard. Therefore, the project would increase location efficiency.

MITIGATION MEASURES:

Mitigation is not required for this topic.

EXHIBIT F

PETITION

TO THE STATE OF CALIFORNIA FISH AND GAME COMMISSION

AND SUPPORTING INFORMATION FOR

LISTING THE CALIFORNIA POPULATION
OF THE WESTERN BURROWING OWL
(*ATHENE CUNICULARIA HYPUGAEA*)
AS AN ENDANGERED OR THREATENED SPECIES
UNDER THE CALIFORNIA ENDANGERED SPECIES ACT

PETITIONERS

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Petitioners Center for Biological Diversity, Santa Clara Valley Audubon Society, Defenders of Wildlife, San Bernardino Valley Audubon Society, California State Park Rangers Association, and Tri-County Conservation League petition the California Fish and Game Commission to list the western burrowing owl as a state endangered or threatened species. Petitioners submit this petition pursuant to the California Endangered Species Act, Fish and Game Code §§ 2070 *et seq.*, on their own behalf and on behalf of their members and staff with an interest in protecting the western burrowing owl and its habitat in California.

Lead petitioner Center for Biological Diversity is a nonprofit environmental organization dedicated to the protection of native species and their habitats. The Center works to protect and restore natural ecosystems and imperiled species through science, education, policy, and environmental law.

The Santa Clara Valley Audubon Society works to maintain, preserve, and protect native animal and plant habitats and to foster a greater public awareness of our environment, with emphasis on birds and their ecosystems, particularly in Santa Clara County and the San Francisco Bay Area.

Defenders of Wildlife is a nonprofit organization dedicated to the protection of all native wild animals and plants in their natural communities. Defenders programs encourage protection of entire ecosystems and interconnected habitats while protecting predators that serve as indicator species for ecosystem health.

The San Bernardino Valley Audubon Society is a non-profit corporation dedicated to conserving and restoring natural ecosystems, focusing on birds and other wildlife for the benefit of humanity and the earth's biological diversity.

The California State Park Rangers Association is an organization of park professionals dedicated to advancement of the highest principles of public service, established to support and preserve California State Parks for present and future generations.

The Tri-County Conservation League, Inc. is a public interest corporation with a membership that promotes the educational, recreational and conservation values of the natural resources of the Santa Ana River and its drainage system in Riverside, San Bernardino, and Orange Counties.

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I. EXECUTIVE SUMMARY

Petitioners Center for Biological Diversity, Santa Clara Valley Audubon Society, Defenders of Wildlife, San Bernardino Valley Audubon Society, California State Park Rangers Association, and Tri-County Conservation League submit this petition to list the California population of the western burrowing owl (*Athene cunicularia hypugaea*) as an endangered or threatened species under the California Endangered Species Act, Fish and Game Code §§ 2070 *et seq.* ("CESA"). This petition demonstrates that the western burrowing owl is in serious danger of becoming extinct throughout a significant portion of its range in California and clearly warrants listing under CESA, based on the factors discussed herein.

The western burrowing owl is a small ground-nesting bird of prairie and grassland habitats, which in many areas has adapted to human-altered habitats as urban development and agriculture have eliminated natural grasslands. Burrowing owls in the western United States rely upon burrows dug by burrowing mammals for nests, primarily those of ground squirrels in California. Burrowing owls also require open fields with adequate food supply for foraging habitat, low vegetative cover to allow owls to watch for predators, and adequate roosting sites. These owls can often be seen perched or standing by their burrow or hunting insects, rodents, amphibians, or small birds in open fields. Nesting season is from February through August, with most pairs usually fledging 4 or 5 young. After the nesting season, most owls in California remain throughout the winter as year-round residents and owls from others areas augment resident California populations. Burrowing owls are susceptible to predators that can access their nest chamber, such as foxes, coyotes, skunks, raccoons, and snakes, and are also preyed upon by various other raptor species, such as hawks, eagles, and other species of owls.

Burrowing owls in California historically ranged throughout the Central Valley, were found in suitable habitat in coastal areas from Marin County south to the Mexican border, and sparsely inhabited desert areas in the northeastern and southeastern portions of the state. Densities of owls in some areas of the state have increased with intensive agriculture, such as in the Imperial Valley, southern Central Valley, and lower Colorado River Valley.

Once a widely distributed and common grassland bird, the burrowing owl has been declining significantly in California for at least the last half century. Although early accounts of the burrowing owl reported the species as "probably one of the most common birds in California" and "abundant," "common," or "fairly common" range-wide in California, the species has been in continuous decline throughout the state since at least the 1940s. Severe localized declines of owl populations were evident by the early 1900s, for example in the Fresno area, in the region of Los Angeles, and in Orange County. Urbanization corresponding with human population growth has eliminated or greatly reduced breeding populations from large areas where the owl was formerly common, such as in San Diego, Orange, Santa Barbara, Santa Cruz, and Santa Clara Counties.

The decimation of breeding owl populations in Orange and San Diego Counties is indicative of the fate of the species in urbanizing areas of the state. The burrowing owl was once "common everywhere" in coastal San Diego County, with one ornithologist noting that in the late 1860s "burrowing owls stood on every little knoll" around San Diego. Even as late as 1975, burrowing owls were described as "abundant" and "bordering on ubiquitous" in suitable habitat in Orange County and were considered a "regular component" of the coastal environment. By 2001 only 9 or less breeding pairs remained in the entirety of Orange and San Diego Counties.

Breeding burrowing owls have been extirpated from approximately 8% of their former range in California during the last 10-15 years. A comprehensive statewide survey conducted in the early 1990s revealed that breeding owls were entirely eliminated from 5 counties (Napa, Marin, San Francisco, Santa Cruz, and Ventura) and the Coachella Valley, and were nearing extirpation in 6 other counties (Sonoma, San Mateo, Monterey, San Luis Obispo, Santa Barbara, and Orange). Small breeding populations of owls have likely been extirpated from Humboldt and Mendocino Counties, southwestern Solano County, and western Contra Costa County as well, and breeding owls are rapidly disappearing from southern Los Angeles, western San Bernardino, western Riverside, and San Diego Counties.

Local extirpations of owls become cumulatively significant for the species as owl habitat is destroyed and owls are relocated from urbanizing areas. Burrowing owls have never been successfully reintroduced to a location where they have been extirpated, partly due to the owl's strong fidelity to burrow sites. Owls regularly reuse burrows from one year to the next, and for this reason are not easily forced to move to a different burrow, especially during nesting season.

Based on a survey of the majority of the owl's range in California, an estimated 9,450 nesting pairs of owls remained statewide in the mid-1990s, exclusive of the deserts and Great Basin areas. Recent urban development has eliminated or displaced some of these birds. The number of breeding owl colonies located in the survey area throughout California declined nearly 60% from the 1980s to the early 1990s, and the statewide number of owls is currently thought to be declining at about 8% per year.

Over 71% of California's breeding owls currently live in the margins of agricultural land in the Imperial Valley, an area that comprises only 2.5% percent of the land area of the state. Owls in the Imperial Valley, which primarily nest in burrows in earthen irrigation channels, are facing threats from conversion of agricultural lands to urban development, plans to line earthen canals with concrete, and ground squirrel eradication programs. Over 15% of the state's breeding owls reside in the southern Central Valley, an area undergoing explosive human population growth and rapid conversion of agricultural lands to urban development.

California's remaining burrowing owls are threatened primarily by habitat loss to urban development, persecution of ground squirrels and other burrowing rodents, and intensive agricultural practices. The state-approved practice of relocation of owls from development sites is accelerating local extirpations from rapidly urbanizing areas, such as in Santa Clara County. Other factors contributing to the decline of owls statewide include destruction of burrows through disking and grading, impacts of pesticides, increased predation by non-native or feral species, habitat fragmentation, and other human-caused mortality from vehicle strikes, electrified fences, collisions with wind turbines, shooting, and vandalism of nesting sites.

There are currently no state or federal laws that protect owl habitat and such habitat is rarely purchased by agencies for public lands. An estimated 91% of all owls remaining in California occur on private land, most of it under enormous development pressure. Although federally designated as a Species of Special Concern in 1994, federal regulatory mechanisms such as Habitat Conservation Plans have proved inadequate in protecting significant owl habitat or stopping the rapid decline of the species. State regulatory mechanisms, such as designation as a state Species of Special Concern in 1979, adoption of burrowing owl mitigation guidelines by the California Department of Fish and Game in 1995, state Fish and Game Codes protecting nesting raptors, and limited creation of mitigation banks to purchase habitat, have proved unsuccessful in protecting the burrowing owl and its habitat. The failure of owl conservation efforts in the San Francisco Bay Area is indicative of the limitations of attempts at regional and local conservation planning for non-listed species. To the detriment of burrowing owls, their management has been limited to project-by-project responses to development impacts, an approach that is inadequate for the long-term maintenance of the species in significant parts of its range in California.

Throughout the vast majority of the burrowing owl's range in California, breeding owls persist in only small, declining populations of birds that are highly susceptible to extirpation, as seen in the precipitous decline of owl populations in several areas of the state. The burrowing owl is in imminent danger of becoming extinct throughout a significant portion of its range in California, and requires immediate protection as an endangered or threatened species.

II. STATUTORY FRAMEWORK AND REQUESTED ACTION

Recognizing that certain species of plants and animals have gone extinct "as a consequence of man's activities, untempered by adequate concern for conservation," (Fish and Game Code §2051(a)) that other species are in danger of extinction, and that "[t]hese species of fish, wildlife, and plants are of ecological, educational, historical, recreational, esthetic, economic, and scientific value to the people of this state, and the conservation, protection, and enhancement of these species and their habitat is of statewide concern," (Fish and Game Code §2051(c)) the California Legislature enacted the California Endangered Species Act ("CESA"). The purpose of CESA is to "conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat...." (Fish and Game Code §2052).

To this end, CESA provides for the listing of species as "threatened" and "endangered." "Threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by CESA (Fish and Game Code §2067). "Endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease" (Fish and Game Code §2062).

The California Fish and Game Commission ("Commission") is the administrative body that makes all final decisions as to which species shall be listed under CESA, while the California Department of Fish and Game ("Department") is the expert agency that makes recommendations as to which species warrant listing. The listing process may be set in motion in two ways: "any person" may petition the Commission to list a species, or the Department may on its own initiative put forward a species for consideration. In the case of a citizen petition such as this one, CESA sets forth a process for listing that contains several discrete steps.

Upon receipt of a petition to list a species, a 90-day review period ensues during which the Commission refers the petition to the Department, as the relevant expert agency, to prepare a detailed report. The Department's report must determine whether the petition, along with other relevant information possessed or received by the Department, contains sufficient information indicating that listing may be warranted (Fish and Game Code §2073.5). During this period interested persons are notified of the petition and the Commission accepts public comments (Fish and Game Code §2073.3).

After receipt of the Department's report, the Commission considers the petition at a public hearing (Fish and Game Code §2074). At this time the Commission is charged with its first substantive decision: determining whether the petition, together with the Department's written report, and comments and testimony received, present sufficient information to indicate that listing of the species "may be warranted" (Fish and Game Code §2074.2). A California Appellate Court has interpreted this standard as the amount of information sufficient to "lead a reasonable person to conclude there is a substantial possibility the requested listing could occur." *(Natural Resources Defense Council v. California Fish and Game Comm.* 28 Cal.App.4th at 1125, 1129.)

If the petition, together with the Department's report and comments received, indicates that listing "may be warranted," then the Commission must accept the petition and designate the species as a "candidate species" (Fish and Game Code §2074.2).

Once the Commission accepts the petition, then a more exacting level of review commences. The Department has twelve months from the date of the petition's acceptance to complete a full status review of the species and recommend whether such listing "is warranted." Following receipt of the Department's status review, the Commission holds an additional public hearing and determines whether listing of the species "is warranted."

Notwithstanding these listing procedures, the Commission may adopt a regulation that adds a species to the list of threatened or endangered species at any time if the Commission finds that there is any emergency posing a significant threat to the continued existence of the species (Fish and Game Code §2076.5).

Through this petition, the petitioners request that the Commission list the western burrowing owl as an endangered or threatened species. This petition demonstrates that the western burrowing owl is in danger of becoming extinct throughout all or a significant portion of its range, and that therefore listing "is warranted." This petition far exceeds the threshold for demonstrating that listing of the western burrowing owl "may be warranted," and therefore must be accepted by the Commission at the first stage of the listing process.

III. ECOLOGY OF THE WESTERN BURROWING OWL

A. DESCRIPTION

The western burrowing owl (*Athene cunicularia hypugaea*) is a small, brown and white mottled, semi-fossorial[1] owl of prairie and grassland habitats. It is not easily confused with any other owl due to its ground-dwelling nature. Burrowing owls have long, almost bare, stilt-like legs and a stubby tail. Long legs help this ground owl to see over short-grass prairie vegetation in a landscape with few elevated perches, and also aid in running down insect prey. Burrowing owls have a round head lacking ear tufts, white eyebrows, yellow eyes, and a distinct oval facial ruff. Adults are a rich sandy-brown color on the head, back, and upper parts of the wings, and are thickly spotted with whites and buffs on the under-parts. This coloring provides good camouflage in dry grassland habitats. Males and females are difficult to distinguish in the field, although females are usually darker (males may appear faded from spending more time exposed to the sun during the breeding season) and, unlike many other raptors, the female is slightly smaller than the male, which may be an adaptation for squeezing into narrow burrows. Adult birds are about 19-25 cm (about 7-10 inches) tall and weigh an average of 150 grams (Zarn 1974a). Chicks are distinguished from adults by their completely buffy breast and white collar.

B. TAXONOMY

The western burrowing owl belongs to the Class Aves, Order Strigiformes (Owls), Family Strigidae (Typical Owls), Genus *Athene*, Species *cunicularia*, and Subspecies *hypugaea*. As of 1993, up to 18 subspecies of *Athene cunicularia* were recognized (Clark et al. 1978). Two of these occur in North America: the western burrowing owl, *A. c. hypugaea*, inhabiting North and Central America west of the eastern edge of the Great Plains south to Panama; and the Florida burrowing owl, *A. c. floridana*, found in Florida and on the Bahama Islands.

Molina originally classified the burrowing owl as *Strix cunicularia* in 1782. The species has since received several taxonomic changes and been variously placed in the genus *Speotyto* or *Athene*. It was designated as *Athene* by the American Ornithologists' Union ("AOU") in 1983 (AOU 1983), moved back to *Speotyto* in 1991 based on karyotypic evidence (AOU 1991), and reverted to *Athene* in 1997 (AOU 1997).

As for the owl's etymology, Athena was the Greek goddess associated with the owl, and Speotyto was derived from the Greek "speos" meaning cave and "tyto" meaning owl. The Latin "cunicularus" means "little miner." The burrowing owl is commonly known as the ground owl, prairie dog owl, or Billy owl, and is referred to as "Lechuza Llanera" in Hispanic cultures.

C. REPRODUCTION AND GROWTH

Western burrowing owls generally adopt burrows excavated by other animals, usually those of ground squirrels (*Spermophilus* spp.), prairie dogs (*Cynomys* spp.), American badgers (*Taxidea taxus*), or other small burrowing animals. Although some burrowing owls may dig their own burrows if the soil is soft enough (burrowing owls in Florida do this on a regular basis), they generally prefer to enlarge and adapt existing mammal burrows. Burrowing owls in California live primarily in ground squirrel burrows, for the most part taking over burrows abandoned by the squirrels. Where burrows are scarce, owls may attempt to nest in pipes, culverts, or artificial nest boxes.

Nest burrows are usually 1 to 3 meters long, with a downward slope of about 15 degrees, a J- or U-shaped bend, and an enlarged nest chamber at the end (Coulombe 1971). Adults usually return to the same

[1] Fossorial = adapted to digging.

burrow or a nearby area each year. Adult males often use one or more "satellite" burrows near the nest burrow during the nesting period, as do juvenile owls for a few weeks after they emerge from the nest. Both sexes prepare the burrow for nesting using their feet, beaks, and wings to scrape out dirt (Thomsen 1971; Martin 1973; Voous 1988). They often begin these renovations at several burrows, eventually selecting the best one as a nest site. The burrow is frequently lined with horse or cattle dung and other material such as grass, feathers, and other debris, but is sometimes left unlined (Thomsen 1971; Martin 1973; Evans 1982; Johnsgard 1988; Voous 1988). It has been speculated that the lining material acts as an absorbent, attracts dung beetles eaten by the owls, masks odors produced by the birds (making detection by predators more difficult), or produces heat by decomposition, controlling temperature and humidity within the nest cavity and aiding in the incubation of eggs (Martin 1973; Green and Anthony 1989). The habit of lining the burrow with manure is so strong that owls will promptly replace dung when it is removed (Martin 1973).

Burrowing owls often nest in loose colonies, which may be a response to local abundance of burrows and food, or an adaptation for mutual defense. Colony members can alert each other to the approach of predators and join in harassment of them. During the nesting season, adult males forage over home ranges 2 to 3 square kilometers in size and the ranges of neighboring males may overlap considerably. A small territory around the nest burrow is aggressively defended against intrusions by other burrowing owls, squirrels, and predators.

Nesting season for the burrowing owl in California (courtship and egg laying) occurs between February 1 and August 30 (CDFG 1994). In the Imperial Valley, pair formation begins as early as mid-January (Coulombe 1971). The male owl conducts courtship displays in front of the burrow. Capable of producing more than 17 vocalizations, the "primary song" is given only by adult males when near the burrow to attract a female. A two-syllable "who-who" is given at the entrance of a promising burrow. This call is also associated with breeding and territory defense. Once a female is enticed to the site, courtship antics involving various postures, vocalizations, and displays undertaken by both sexes, usually within 15 meters of the burrow. Nest site selection begins after pair formation, with the males gathering and distributing most of the nesting material (Anderson et al. 2001).

By February owls are pairing up and can be observed standing together outside the nest burrow. Actual breeding occurs anywhere from March through August, with the peak activity in April and May. Burrowing owls are primarily monogamous for the nesting season, and some pairs in the Imperial Valley may remain together throughout the year (Coulombe 1971).

Females usually produce only one clutch per year, but may lay a second clutch if the first is lost. Pairs are capable of laying a second clutch after the first brood successfully fledges (Gervais and Rosenberg 1999). Burrowing owls will lay up to 12 eggs in a chamber of the nest burrow, one of the largest clutch sizes of any raptor species, although 7 eggs is the norm (Haug et al. 1993). Eggs are laid between March and May depending upon location. The female incubates the eggs for approximately 3 to 4 weeks, while the male brings food to the female and stands guard near the burrow by day. After hatching, the chicks remain in the nest chamber for approximately 2 to 3 weeks. By this time the young are large and the burrow is very crowded, and young birds will often stand at the burrow entrance eagerly waiting for the parents to bring food.

Just before or just after they emerge (mid-May through early August), chicks lose their natal down and gain juvenal plumage. Chicks emerge from the burrow weighing approximately half to two thirds of adult weight and they reach adult weight within a month of emergence (Landry 1979; L. Trulio, pers. observ., 2002). Fledging (acquiring the feathers necessary for flight) occurs about one month post-emergence. Burrowing owl parents will feed young for another 6 to 8 weeks after emergence, with young remaining near the burrow with their parents until fall. By mid-September the young molt into adult plumage and disperse to find their own burrows.

Although there are not good published accounts for life expectancy of burrowing owls since returns of banded owls are sparse, an average longevity of 5 years is informally used (Kennard 1975). The record age for a banded owl in the wild is 8 years and 8 months (Kennard 1975).

Reproductive success may be the most important factor in maintaining population viability for species with relatively low survivorship and a short life span (Emlen and Pilkitch 1989). This is likely to be true for burrowing owls (Gervais and Rosenberg 1999). Burrowing owl adult and juvenile survivorship is highly variable among studies, with between-year return rates from 30-83% (Thomsen 1971; Haug et al. 1993; Clayton and Schmutz 1997).[2] Although up to 10 young per nest can be fledged in good reproductive years (Gervais and Rosenberg 1999), the number of young successfully fledged from nests in central California in recent years varied from 3 to 6, with most nests fledging 4 or 5 young (DeSante et al. 1997).[3] Anecdotal accounts from the early 1900s suggest that 6 to 8 young were usually fledged (Dawson 1923). This apparent reduction in fledging success corresponds with a documented decline of breeding populations of other avian predators in grassland habitats in central California in recent years, such as the loggerhead shrike (***Lanius ludovicianus***) and American kestrel (*Falco sparverius*) (DeSante et al. 1997). Average young fledged per nest was 2.5 in the Imperial Valley population (Rosenberg and Haley 2003).

D. MOVEMENT

Northern populations of the western burrowing owl are migratory, leaving their breeding grounds in the fall, and returning to the same or nearby burrows each spring. In 2000, 2 owls tagged in Canada were located wintering in Mexico (G. Holroyd, pers. comm., 2001). However, most owls nesting in California remain throughout the winter as year-round residents (Brenkle 1936; Ligon 1961; Thomsen 1971; Haug et al. 1993) or appear to wander within the region during the winter months (Coulombe 1971; Martin 1973; Botelho 1996), particularly in central and southern California. Burrowing owls observed in Oakland, California were thought to stay in the burrow during the winter or become strictly nocturnal (Thomsen 1971). In fall and winter, individual owls can appear in unexpected places, such as on the smaller California islands and even offshore (Lamb 1929; Unitt 1984).[4]

California has a large number of burrowing owls in the winter, relative to other portions of their North American breeding range. Migratory owls from other areas are thought to augment resident California populations during the winter months (Coulombe 1971). It is assumed that migrants may be arriving from northern areas that are covered in snow during the winter where their burrows and food may be inaccessible (possibly from as far away as Canada, Washington, Oregon, and Idaho). Migratory owls in central coastal California will leave in mass by the last week in March, and no breeding or pairing of migrants has been observed (J. Linthicum, B. Walton, pers. comm., as cited in Madden 2002).

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2 Haug et al. (1993) found an adult survivorship of 33-58%. Thomsen (1974) calculated juvenile burrowing owl survival rate to be 30% and adult survivorship to be 81%, based on two years of study at the Oakland Airport in Alameda County. In a study of Canadian burrowing owls, Clayton and Schmutz (1997) found adult female survivorship to be 83%, while adult male survivorship was 46% and juvenile survivorship was 48%. Anderson et al. (2001) reported on annual survival for populations studied from 1997-2000 in the Bay Area (48%), Lemoore Naval Air Station (51%), Carrizo Plain (15%, extrapolated from 3 months of study), and the Imperial Valley (64%).

3 Thomsen (1971) found an average of 3.9 chicks survived to fledging. Martin (1973) reported a mean reproductive success of 4.9 young per pair. At Moffett Field, Santa Clara County, Trulio (1994) found an average fledging success of 2.6 chicks per reproductive pair (s. d. = 1.4) and an average of 1.8 chicks per pair (s. d. = 1.7). Anderson et al. (2001) reported on the mean number of young/nest and young/successful nest for populations studied in the Bay Area (1.5/2.8), Lemoore Naval Air Station (3.1), Carrizo Plain (1.9/4.1), and the Imperial Valley (2.5/2.9) from 1997-2000. J. Barclay (pers. comm., 2002) estimated an overall productivity (number of young surviving to fledging) for the owl population at San Jose Airport from 1996 to 2002 of 3.54 young/pair. Productivity of owls in natural burrows was 2.97 young/pair, and in artificial burrows was 4.08 young/pair, but the natural burrow productivity may be biased on the low side, since Barclay dug up the artificial nests while relying upon visual surveys at the burrow entrance for natural nests (J. Barclay, pers. comm., 2002).

4 Lamb (1929) reported on a burrowing owl that came onboard a steamer 8 miles off of southern Monterey County and another that came on board later that day off of Santa Barbara County, in September 1928. The species has been noted on several occasions flying far out at sea (Unitt 1984).

As of October 1993, the U. S. Fish and Wildlife Service Bird Banding Laboratory ("BBL") records contained 44 encounters of burrowing owls banded in California. Twenty-nine (66%) of these encounters occurred in the same 10-minute blocks where the owls were banded and 10 (23%) occurred in the 10-minute block adjacent to where they were banded. Of the remaining five recoveries, only two represented owls that had moved substantial distances. These were two owls banded in Orange County: a nestling banded in June that was recovered in Mexico (no specific location information) in October; and an owl banded in October that was recovered the following March in Nevada (J. Barclay, pers. comm. 2002).

Of 276 burrowing owls tracked during two consecutive South San Francisco Bay demography studies from 1998 through 2002, the average distance owls moved between breeding seasons was from 0.5 to 0.9 miles (D. Chromczak, unpublished data, 2002). Of the owls monitored, 27% stayed at the same nesting location, 14% moved less than 0.05 miles (~265 feet), 34% moved 0.05 to 0.5 miles, 8% moved 0.5 to 1.0 miles, 14% moved 1.0 to 5.0 miles, and only 2% moved 5.0 to 10.0 miles (D. Chromczak, unpublished data, 2002). Pairs of owls that failed in a breeding attempt have been noted to move up to tens of kilometers before breeding again, even within the same season (J. Gervais, pers. comm., 2003).

Within the breeding season, burrowing owls tend to spend most of their time in the vicinity of the burrow, but will go further afield to hunt (Coulombe 1971). Male owls will forage over home ranges from 2 to 3 square kilometers in size (Haug and Oliphant 1987), concentrating foraging efforts within 600 meters of the nest burrow (Gervais et al. 2003; Rosenberg and Haley 2003). Seasonal movements other than migration may occur. After the young learn to fly, family groups will often move from burrow to burrow, and in the fall young owls will appropriate their own burrow nearby. In the winter, pairs will investigate new burrows and territorial boundaries will be in flux as forming pairs choose their burrows (Thomsen 1971).

As far as daily movements, owls will generally spend most of the day near their burrows, coming out in the late afternoon to perch and beginning to forage at dusk. Adults with young to feed return to the burrow at night (Thomsen 1971).

E. FEEDING

Burrowing owls are primarily crepuscular (active at dusk and dawn) in their foraging, but hunting activity has been observed over 24 hours (Grant 1965; Coulombe 1971; Marti 1974). They will forage in natural, ruderal (areas such as roadsides where vegetation has been disturbed), or manicured grasslands. Burrowing owls prey primarily on large insects and small rodents but will take a wide variety of prey and are known to be opportunistic in their feeding habits (Thomsen 1971; Zarn 1974a). Burrowing owls may hunt from a perch, capturing prey after short flights or glides, or hovering while hunting and returning to the perch after catching their prey. Burrowing owls will also walk, run, or hop after prey on the ground. Hunting style varies with type and activity of prey pursued, time of day, and vegetative substrate (Thompson and Anderson 1988; Haug et al. 1993). Burrowing owls probably also take insects that live in their burrows (Coulombe 1971).

Important food items for burrowing owls include small rodents such as voles (*Microtus* spp.), mice (*Peromyscus* spp., *Mus* spp., *Reithrodontomys* spp., *Zapus* spp.), pocket mice (*Perognathus* spp.), pocket gophers (*Thomomys* spp.), kangaroo rats (*Dipodomys* spp.), and young ground squirrels (*Spermophilus* spp.). It is interesting to note that burrowing owls generally do not hunt the ground squirrels upon which they depend for burrows – although squirrel colonies have many defenses against predators, they do not employ them against burrowing owls (which weigh only one fifth of a full-grown ground squirrel). Burrowing owls also eat a wide array of arthropods (such as beetles, grasshoppers, crickets, dragonflies, and crustaceans),[5] reptiles, amphibians,

5 Arthropods were found to be the main prey item of burrowing owls in the Colorado Desert in southeastern California (Coulombe 1971).

small birds, fish, and even carrion (Bent 1938; Glover 1953; Earhart and Johnson 1970; Thomsen 1971; Zarn 1974a; Gleason and Craig 1979; Conroy and Chesemore 1987; Haug and Oliphant 1990).

Birds documented as prey items of burrowing owls include killdeer (*Charadrius vociferous*), horned larks (*Eremophila alpestris*), western meadowlarks (*Sturnella neglecta*), Wilson's warbler (*Wilsonia pusilla*), American avocets (*Recurvirostra americana*), red-winged (*Agelaius phoeniceus*) and Brewer's blackbirds (*Euphagus cyanocephalus*), black-headed grosbeaks (*Hedymeles melanocephalus*), black terns (*Chlidonias niger*), California least terns (*Sterna antillarum*), mourning doves (*Zenaida macroura*), and various shorebirds (Stoner 1933a; Errington and Bennett 1935; Bent 1938; Neff 1941; Thomsen 1971; Gleason and Craig 1979; Warrick 1982; P. Bloom, pers. comm., 2002; Rosenberg and Haley 2003). Adult owls have also been documented preying on burrowing owl chicks (Botelho 1996; Rosenberg et al. 1998a).

Unexpected prey remains are occasionally found in burrowing owl pellets or burrows, such as remains of spadefoot toads (*Scaphiopus* spp.) found in pellets in Nevada (Bond 1942) and Kansas (Sperry 1941). Crayfish were the most common food item in a study in Colorado (Hamilton 1941) and attacks on large snakes have been documented (Fisher 1893). Pacific Coast newts (*Triturus torosus*) missing their heads were found in an owl burrow in Solano County (Stoner 1932a), and remains of snakes, scorpions, and centipedes have been found in burrows in Solano and Colusa Counties (Stoner 1933a; Neff 1941). Burrowing owls in California have also been known to feed on bats. Thomsen (1971) discovered the remains of a hoary bat (*Lasiurus cinereus*) in pellets collected in Oakland; Hoetker and Gobalet (1999) found the Mexican free-tailed bat (*Tadarida brasiliensis*) to be the dominant vertebrate prey item in 18 owl pellets collected in Bakersfield; and J. Barclay (pers comm., 2002) observed free-tailed bat remains in owl burrows in San Jose.

F. PREDATION

Predators of burrowing owls are of two general types: predators that enter or dig up burrows to eat eggs, nestlings, and/or adult females; or predators that prey on older nestlings and adults when they are above ground. Because burrowing owls are ground nesters, their eggs and young are quite susceptible to predation. Mammals that can access nest chambers and are known predators of the burrowing owl include skunks (*Mephitis mephitis*), badgers (*Taxidea taxus*), foxes (*Vulpes vulpes*, *V. macrotis mutica*, and *Urocyon cinereoargentius*), raccoons (*Procyon lotor*), and various snakes, including rattlesnakes (*Crotalus* spp.) (Coulombe 1971; Kemper 1996). Species that mainly catch owls above ground include prairie falcons (*Falco mexicanus*), red-tailed hawks (*Buteo jamaicensis*), Swainson's hawks (*Buteo swainsoni*), ferruginous hawks (*Buteo regalis*), northern harriers (*Circus cyaneus*), golden eagles (*Aquila chrysaetos*), great horned owls (*Bubo virginianus*), American crows (*Corvus brachyrhynchos*), coyotes (*Canis latrans*), and possibly short-eared owls (*Asio flammeus*) (Fowler 1931; Haug et al. 1993).

Burrowing owls will often line their burrow with dung, presumably to mask the burrow scent from predators (Martin 1973). In one study of burrowing owl nests in Oregon, only 2 of 15 nests (13%) lost to predation were lined with dung, while 23 of 32 successful nests (72%) were dung-lined (Green and Anthony 1989). Burrowing owls once used bison dung in natural habitats in other states, but now cattle dung is often used. If young owls are alarmed in the nest, they will make a rattlesnake-like buzz to deter predators (Voous 1988). Adults will give a short, low-level "chuck" call to warn of approaching predators, usually accompanied by bobbing the head up and down (Voous 1988).

IV. HABITAT REQUIREMENTS

Historically, western burrowing owls were found in natural areas of open prairies or open shrub-steppe habitat (Coulombe 1971; Butts 1973). The species is characteristic of flat arid areas that have rodent burrows and rare floods. In California, almost none of the owl's original prairie habitat remains. Human population growth and continuous land use changes have forced the species to use human-altered habitats ranging from agricultural irrigation ditches (Coulombe 1971) to urban habitats (Thomsen 1971; Collins and Landry 1977; Trulio 1995). Burrowing owls can tolerate a certain amount of non-threatening human activity, noise, and disturbance as long as other habitat requirements are met. Essential habitat requirements include suitable nesting and foraging habitat and available roosting sites (Coulombe 1971; Voous 1988; Johnsgard 1998).

Typical burrowing owl habitat is open, dry, sparsely vegetated land with available burrows (Zarn 1974a). The State of California Department of Fish and Game's Wildlife Habitat Relationships System (CDFG 1990) database lists 18 major habitat types that support burrowing owls. In most of these habitats, burrowing owls are generally found in open country, where tree or shrub canopies cover less than 30% of the habitat (DeSante et al. 1996). Typical habitats include annual and perennial grasslands, open agricultural areas, deserts, and vacant lots. Other habitats include oak savannah; grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitat; sandy beaches; and river bottom lands. Burrowing owls inhabiting urban landscaped areas may live in vacant fields, airports, athletic fields, golf courses, city parks, drainage sumps, railroad beds, and road cuts. Other more subtle characteristics affect burrow suitability. These characteristics include percent vegetative cover, height of vegetation surrounding the burrow, presence of colonial fossorial mammals, soil texture, and presence of perches for horizontal visibility (Green 1983).

Burrow availability is a major factor in defining suitable burrowing owl habitat (Coulombe 1971; Green and Anthony 1989). DeSante et al. (1996) evaluated habitat-related factors associated with the probability of re-occupancy of breeding sites by owls. The presence of ground squirrels was the single highest predictor for re-occupancy. Higher re-occupancy rates were also observed for sites near irrigation canals, sites with more than one pair of owls, and areas with high densities of owls. Burrows excavated by fossorial mammals such as California ground squirrels, prairie dogs, badgers, and marmots (*Marmota flaviventris*) are necessary to the burrowing owl.

Throughout most of California, burrows of the California ground squirrel are used, although in southern desert areas owls use ground squirrel, desert tortoise (*Xerobates agassizii*), or American badger burrows (Weathers 1983). In addition to digging burrows which owls use, the presence of colonial rodents benefits burrowing owls in the form of burrow maintenance between nesting seasons and the two species may assist each other with shared alarm calling behavior warning of predators (Trulio 1994). Natural or unnatural cavities such as rock or lava outcroppings (Gleason and Johnson 1985; Rich 1986), limestone (Coulombe 1971), concrete or asphalt (Trulio 1994) and man-made artificial habitat (Collins and Landry 1977) can occasionally be suitable burrow sites. Artificial burrows require permanent maintenance to provide long-term nesting habitat, otherwise they can become buried (P. Bloom, pers. comm., 2002). Stoner (1933b) even found two burrowing owls occupying holes in hay piles near Dixon.

The burrow protects against predators (Butts 1973; Green and Anthony 1989) and adverse weather conditions (Coulombe 1971), and it creates a microhabitat for arthropods such as earwigs and crickets, which are part of the primary food source (Coulombe 1971). In the Columbia Basin, Oregon, Green and Anthony (1989) studied nest site characteristics in association with nesting failure. They concluded that soil texture was important to long-term suitability of a nest site. They also analyzed the presence, abundance, and height of perches and found particular habitats were used only if elevated perches were present.

Vegetation cover and height are significant habitat factors due to the ground-dwelling nature and small size of the burrowing owl (Coulombe 1971; Zarn 1974a; Green and Anthony 1989; Trulio 1994). Vegetation cover that prevents the owl from observing approaching predators places the burrowing owl at a severe disadvantage. Vegetation cover between 44-57% was observed at occupied burrowing owl habitat in Santa Clara County, California (Trulio 1994) and in the Columbia Basin 28% cover was optimal (Green and Anthony 1989). Green and Anthony (1989) also found that owls selected areas with a greater percentage of bare ground. High vegetation presents similar disadvantages to owls in observing potential predators. In Oklahoma, owls occupied areas where the vegetation height was 4 inches or less (Butts 1973). In Santa Clara County, occupied burrows were found in areas with an average vegetation height of approximately 6 inches (Trulio 1994). Human-altered habitats that allow an owl to stand near the burrow entrance and effectively watch for approaching predators include grazed areas, areas sprayed with herbicide, and areas where vegetation is removed without harm to the burrow (Coulombe 1971; Green and Anthony 1989; Trulio 1994).

The four ecosystems in which burrowing owls are most prevalent in California are: grasslands adjacent to intensive agriculture; intensive agriculture in which owls nest along irrigation banks; large expansive grasslands; and small patches of grassland surrounded by urban development (Rosenberg and DeSante 1997).

V. RANGE

The western burrowing owl is distributed from the Mississippi River to the Pacific Ocean, north into the prairie provinces of Canada and south to Mexico and western Panama (Haug et al. 1993; Trulio 1998b). Grinnell and Miller (1944) characterized the historical range of the burrowing owl in California as follows:

> "Suitable areas (treeless and level) almost throughout the state, from the Oregon line east of the Siskiyou mountains south to the Mexican border, and from the Nevada border and Colorado River west to the ocean shore; includes practically all islands from the Farallones south. Mostly rare or wanting in coastal counties north of Marin and in all mountainous areas. Mainly Lower and Upper Sonoran life zones; but breeds locally in Transition zone, and vagrants go even higher. Altitudes of occurrence extend from 200' below sea level in Death Valley and around the Salton Sea up regularly to 5300 feet in Lassen County."

Historically, burrowing owls have been found to reach maximum abundances in wide, lowland, interior valley bottoms and in flat coastal lowlands (Grinnell and Miller 1944). Surveys by DeSante and Ruhlen (1995) found that fully 92% of the breeding owls located throughout California occurred in such lowland areas, generally below 60-300 meters in elevation. These types of habitat are under the most severe pressure from urban development.

Burrowing owls have apparently disappeared from about 8% of their former breeding range in California (J. Barclay, using data from DeSante et al. 1996). DeSante and Ruhlen (1995) determined that breeding burrowing owls had apparently been extirpated since the early 1980s from Marin, San Francisco, Santa Cruz, Napa, coastal San Luis Obispo, and Ventura counties, as well as from the Coachella Valley, and had nearly been extirpated from Sonoma, Santa Barbara, Orange, coastal Monterey, and San Mateo counties. Perhaps only one or two breeding pairs still exist in most of these latter counties. There is some evidence that breeding owls have been extirpated from Humboldt and Mendocino Counties, southwestern Solano County, and western Contra Costa County as well. The species is rapidly disappearing from southern Los Angeles, western San Bernardino, western Riverside, and San Diego Counties. See Appendix 1 for a map of the range of the burrowing owl in California.

VI. HISTORICAL AND RECENT DISTRIBUTION AND ABUNDANCE

The historical and recent distribution and abundance of breeding burrowing owls in California is discussed below, described by region and then by county. Historical literature sources, as well as a number of California and other western museum collections were searched for historical documentation of breeding burrowing owls.[6] From these sources, a site was considered confirmed as a breeding location if: 1) eggs were collected; 2) a bird was collected during breeding season that had mature reproductive parts; or 3) juvenile owls were seen during or immediately after the nesting season (February 1 through August 31).[7] A site was considered a probable breeding location if: there was evidence of owl occupation of burrows; single or multiple birds were collected or observed during the nesting season; pairs were observed outside of the nesting season; or multiple birds were observed year-round.

Although numerical data on the statewide historical abundance of burrowing owls do not exist, many early naturalists commented on the widespread abundance of the burrowing owl prior to widespread human population growth and development in California. As early as 1869, burrowing owls were observed in abundance in California, with Canfield (1869) reporting "I have seen them every day for years, hundreds and perhaps thousands of them in all." Baird (1870) considered the species to be "probably one of the most common birds in California." Keeler (1891) described the owl as "an abundant resident of the open valleys and foothills of the State." Grinnell (1915) and Dawson (1923) both noted it was a "common resident" within its range. Dawson (1923) observed that the species enjoyed "an almost unbroken distribution throughout the treeless or lightly timbered sections of the State, from the base of the Sierras down to the ocean's edge." Grinnell and Wythe (1927) listed the owl as a "fairly common resident" of the dry interior of the San Francisco Bay Area.

Even by 1944, when a widespread decline in abundance was noticeable, Grinnell and Miller (1944) observed that "numbers in favorable localities [are] large," although "latterly becoming scarce in settled parts of [the] state." By 1978, the Department of Fish and Game (Remsen 1978) commented that the "decline noticeable by the 1940s (Grinnell and Miller 1944) has continued through to the present time…the decline has been almost universal throughout California."

From 1991-1993, a comprehensive census of burrowing owls was conducted throughout most of the breeding range of the species in California (DeSante et al. 1996), which assessed changes in owl distribution from observations made in the 1980s. A copy of DeSante et al. (1996), "The distribution and relative abundance of burrowing owls in California: evidence for a declining population," is attached as Appendix 3. DeSante et al. (1996) located 1,995 breeding pairs of burrowing owls in California. Based on assumptions of sampling design and the actual area surveyed, DeSante et al. (1996) estimated that 9,266 breeding pairs of burrowing owls existed during 1991 to 1993 in their statewide survey area, which excluded the Great Basin, desert areas, and the Channel Islands. The 95% confidence limits on this estimate extended from 7,884 to 10,370 pairs.

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6 Literature searched for historical breeding records included American Birds, the Auk, the Condor, North American Bird Bander, Ornithologist and Oologist, Pacific Coast Avifauna, and the Proceedings of the California Academy of Sciences. Museums collections reviewed for egg set data and breeding season collection records included the American Museum of Natural History, California Academy of Sciences, Chicago Academy of Sciences, Cleveland Museum of Natural History, California State University Chico, California State University Long Beach, California State University Northridge, Delaware Museum of Natural History, Field Museum of Natural History, Los Angeles County Museum, Museum of Southwest Biology, National Museum of Natural History, Occidental College, Oakland Museum, Pacific Grove Museum of Natural History, Santa Barbara Museum of Natural History, Smithsonian Museum, Slater Museum of Natural History, University of California Berkeley Museum of Vertebrate Zoology, University of California Los Angeles Fritz Hertzel Museum, University of California Santa Barbara Museum of Vertebrate Zoology, University of California Santa Cruz, University of Nevada Las Vegas, U. S. Geologic Survey Biological Survey, University of Washington Burke Museum, Western Foundation of Vertebrate Zoology, and Yale Peabody Museum. The California Department of Fish and Game's Natural Diversity Database was also searched.

7 The California Department of Fish and Game considers February 1 through the end of August to be nesting season for burrowing owls (CDFG 1994).

DeSante et al. (1996) estimated that fully 71% (6,571 pairs) of the state's breeding population of burrowing owls occurred in the Imperial Valley, where they exist at very high densities (up to about 2.37 pairs per square kilometer). As the Imperial Valley comprises only 2.5% of the state's land base, this is a hugely disproportionate distribution of the species, and a circumstance dependent upon maintenance of current agricultural practices, as will be discussed below. DeSante et al. (1996) estimated 24% of breeding owls (2,221 pairs) occurred in the Central Valley, with over half of those owls (1,396 pairs) in the southern Central Valley, only 594 pairs in the middle Central Valley, and 231 pairs in the northern Central Valley. Only 474 pairs of owls were estimated to be present in the entire area of central western and southwestern California. Of these owls, it was estimated that 227 pairs were in the southern interior region, 165 pairs in the Bay Area interior region, and the remaining 82 pairs were scattered throughout the central coast (8 pairs), central interior (38 pairs), and southern coast (36 pairs) regions. No breeding pairs of owls are thought to remain in the coastal Bay Area and Coachella Valley regions. The findings of DeSante et al. (1996) are more fully discussed below in Section VII on population trends. See Appendix 1 for a map of the recent distribution of burrowing owls in California, and Appendix 2 for a table of current owl distribution and estimated density in California, by region and county.

A. NORTHERN COASTAL CALIFORNIA

The humid coastal belt of northwestern California has generally been considered outside of the range of the burrowing owl. Baird (1870) noted that "from Monterey north this species becomes very rare, or entirely absent on the west side of the Coast Range" and Grinnell (1915) knew of no records of the species north of Marin County in the humid coast strip proper. However, there is some historical evidence of probable breeding of burrowing owls in Humboldt County, near Carlotta and in the Mattole and Eel River Valleys in the early 1900s (Wilder 1916).[8] There is also a known breeding record from the Middle Fork Eel River drainage in Mendocino County (USDA and USDI 1996). These owl populations are presumably extirpated, as no recent observations of breeding owls in Humboldt or Mendocino County could be located.

B. NORTHERN DESERT RANGE

The northern desert range of the burrowing owl encompasses portions of eastern Siskiyou, Modoc, Lassen, eastern Plumas, and eastern Sierra Counties (DeSante et al. 1996). The owl was apparently never common in most of its northern desert range, except north of Mt. Shasta, where the species was reportedly common in the late 1800s (C. Townsend 1887; C. Merriam 1899). Subsequent accounts of burrowing owl distribution in the northeast part of the state (Dawson 1923; Grinnell and Miller 1944; Small 1974; Zeiner et al. 1990) did not describe local distribution or estimate the number of burrowing owls in the region. A statewide burrowing owl census by DeSante et al. (1996) did not include the northern desert range.

Barclay and Cull (1999) produced a recent population estimate of 90 to 149 pairs of owls within suitable owl habitat in northeastern California (presumed to be 2,647 square miles of portions of Lassen, Modoc, Plumas, Sierra, and Siskiyou Counties). The lower limit of this population estimate uses the mean population density of 0.53 owls/25 km^2 for the northern Central Valley from DeSante and Ruhlen (1995); the upper limit uses the average owl density of 1 adult/5,683 acres outside prairie dog towns in Oklahoma reported by Butts (1973).

<u>Siskiyou County</u>

Burrowing owls were reportedly common in the 1880s "on the sage-covered districts north of Mount Shasta," about 15 miles from the mountain (C. Townsend 1887; C. Merriam 1899). Historical records confirmed breeding at Gazelle in 1918; and indicated probable breeding at Yreka in 1883 and 1922, at Bray in

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8 According to Wilder (1916) burrowing owls were once occasionally found in suitable localities in Humboldt County, such as in the Mattole and Eel River Valleys. Wilder (1916) observed one owl occupying a burrow between Carlotta and Alton for a year or two.

1922, near Lava Beds National Monument in 1936 and 1937, and near the northwest corner of Lower Klamath Lake in 1940 (Bond 1939; South 1940; NMNH 2001; CAS 2002a).[9] Recent breeding season observations in Siskiyou County could not be located, but the species is reported to occur in Shasta Valley, Butte Valley, and in grasslands of the upper Klamath River.[10]

Modoc County

Historical records indicated probable breeding at Alturas in 1910 (MVZ 2001).[11] Recent breeding season observations in Modoc County could not be located.

Lassen County

Burrowing owls apparently regularly occurred at elevations as high as 5,300 feet in Lassen County (Grinnell and Miller 1944). Historical records indicated probable breeding in Petes Valley in 1929, near Herlong in 1963, and at Milford in 1975 (CSULB 2001; MVZ 2001).[12] Three pairs of owls were observed in the spring and summer of 1975 and 1976 east of Schaeffer Mountain (P. Bloom, pers. comm., 2002).

The only recent burrowing owl records in northeastern California are of nesting birds and other observations in the Honey Lake Basin in eastern Lassen County, from 1992 to 1998 (SAD 1992; Holmes and Novick 1993; BioSystems Analysis, Inc. 1993a, 1993b, 1994, 1995; KEA Environmental 1997, 1998; CNDDB 2001).

Plumas and Sierra Counties

Historical breeding season observations in Plumas and Sierra Counties could not be located. In the early 1990s, D. DeSante (pers. comm., 2003) located a small colony of about 5 pairs of breeding burrowing owls in Sierra Valley along the Plumas-Sierra County line. This colony was apparently well known to regular Sierra Valley birders for many years.

C. CENTRAL VALLEY

1. NORTHERN CENTRAL VALLEY

The range of the burrowing owl in the northern Central Valley encompasses the southwestern 20% of Shasta County; most of Tehama County; the western 70% of Butte County; the eastern 80% of Glenn County; the western 85% of Yuba County; the western 20% of Nevada County; all but the northwestern 5% of Colusa County; portions of Lake County; all of Sutter County; and the western 40% of Placer County (DeSante et al. 1996).

Although there are historical records of confirmed breeding in almost every county in the northern Central Valley, there are no historical data on abundance of the burrowing owl in this area. DeSante et al. (1996) estimated that 231 pairs of owls remained in the northern Central Valley in the mid 1990s, about 2.5% of the state breeding population. These pairs were associated to a large degree with agricultural lands although substantial numbers occurred in more urban settings and at airports.

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9 Eggs were collected at Gazelle on 5/9/18 (CAS 2002a). A single bird was collected at Yreka on 8/18/1883 (NMNH 2001). Single birds were collected on 6/8/22 at Yreka and Bray (CAS 2002a). Bond (1939) saw a pair of owls in 1936 and two pairs in 1937 at a cliff area near Lava Beds National Monument, and South (1940) saw an owl and an occupied burrow in January 1940 near the northwest corner of Lower Klamath Lake.

10 Ray Ekstrom reported “a few pairs” of owls breeding recently at the Siskiyou County Airport, northeast of Montague (D. Cooper, pers. comm., 2002).

11 An owl was collected from the South Fork Pitt River, Alturas, on June 10, 1910 (MVZ 2001).

12 Historical collections include from Petes Valley (3 birds) on 6/9/29; at Garnier Ranch, 2.4 miles south and 1.5 miles west of Herlong on 4/5/63; and from Milford August 1975; there is also a non-breeding season record from 5 miles north of Observation Peak on 10/17/24 (CSULB 2001; MVZ 2001).

Southwestern Shasta County

Historical or recent breeding season observations in southwestern Shasta County could not be located.

Tehama County

Historical records indicated probable breeding near Red Bluff in 1874, 1884, and 1924 (MVZ 2001; NMNH 2001).[13] England et al. (1988) failed to find any records or observe any burrowing owls during surveys of the Mill and Deer Creek drainages and higher elevation meadows in Tehama County, during 1980-1987 surveys. Recent observations confirmed breeding near Gerber in 1993 and 1994; and indicated probable breeding near Gerber in 1993 and near Red Bluff in 1994 (CNDDB 2001).[14]

Butte County

Historical records confirmed breeding at Biggs in 1906, and indicated probable breeding at Chico in 1975 (CSUC 2001; NMNH 2001).[15] Recent observations indicated possible breeding southwest of the Chico Airport in 1998 (CNDDB 2001).[16] This site is threatened by commercial development.

Glenn County

Historical records confirmed breeding at Willows in 1928; and indicated probable breeding at Saint John in 1906, and near Norman in 1934 (DMNH 2001; MVZ 2001; NMNH 2001).[17] Recent observations indicated probable breeding southwest of Orland and possible breeding at two other sites in the vicinity of Orland in 1992 (CNDDB 2001).[18]

Yuba County

Historical records confirmed breeding at Sheep Dip in 1906 (MVZ 2001).[19] Recent breeding season observations in Yuba County could not be located.

Nevada County

Historical records indicated probable breeding near Truckee in 1935 (MVZ 2001).[20] Recent breeding season observations in Nevada County could not be located.

Colusa County

Historical records confirmed breeding near Maxwell in 1932 (Neff 1941).[21] Recent observations confirmed a "good" breeding colony west of Antelope Valley in 1992 and 1993 (breeding in artificial burrows

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13 Single birds were collected at Red Bluff on 3/11/1874, and on 3/11 and 4/12, 1884 (NMNH 2001); a single bird was collected 7 miles south of Red Bluff on 5/6/24 (MVZ 2001). There are also non-breeding season records from near Red Bluff: at Dale's on Paine Creek on 1/17/28; and at Coyote Creek, 6 miles south of Red Bluff, on 12/28/27 (MVZ 2001).

14 Recent observations include: 1 adult owl at a burrow site at Little Salt Creek, 5 miles northeast of Red Bluff, on 10/16/92; 1 owl at a burrow site 1.1 miles northwest of Dales, on 2/9/93; 2 adults at a burrow site north of Elder Creek, west of Gerber, on 3/22/93; 2 adults and 5 young at a burrow site 4.5 miles southwest of Gerber on 3/93; 1 adult owl at a burrow at the south end of Dales Lake on 10/16/93; 1 adult 5 miles southwest of Gerber on 6/29/94; 3 adults (1 at the burrow) 4 miles south of Red Bluff, on 7/13/94; and an owl 2 miles northeast of Henleyville on 11/3/94 (possibly used only as a wintering site) (CNDDB 2001).

15 Single birds (including one juvenile) were collected from Biggs on 7/13 and 7/14, 1906 (NMNH 2001). A single bird was collected from Chico on 3/31/75 (CSUC 2001). There is a non-breeding season record from Gray Lodge Waterfowl Management Area, December 1966 (MVZ 2001).

16 Three adults were observed at 2 burrow sites southwest of Chico Airport on 11/12/98 (CNDDB 2001).

17 Four eggs were collected from Willows on 6/19/28 (DMNH 2001). A single bird was collected from Saint John on 6/10/06 (NMNH 2001), and two birds were collected 6 miles east of Norman on 8/5/34 (MVZ 2001).

18 CNDDB observations include: two adults at a burrow site southwest of Orland, on 4/14/92 (one owl was later killed on the road, the burrow was then completely abandoned); one owl a at burrow site southwest of Orland on 10/9/92; and one owl at a burrow site on the North Fork of Walker Creek, 3 miles east of the Orland Buttes, on 10/10/92 (CNDDB 2001).

19 Eggs were collected from Sheep Dip 5/19/06 (MVZ 2001).

20 A bird was collected two miles east of Truckee 3/16/35 (MVZ 2001).

21 An inhabited owl den was observed from April-August 1932, 10 miles northeast of Maxwell (Neff 1941). There is a non-breeding season collection record from Colusa Compton Ranch, 8 miles south-southwest of Princeton, on 11/26/26 (MVZ 2001).

after 22 natural burrows were destroyed in 1992); and indicated probable or possible breeding at 8 additional sites west of Arbuckle, Williams, and Maxwell in 1992 (CNDDB 2001).[22]

Lake County

Burrowing owl eggs have been collected from Lake County, but no specific locality or date is given (NMNH 2001). Historical records also indicated probable breeding at Upper Lake throughout the 1890s (Stephens 1895; McGregor 1898; NMNH 2001).[23] In the 1970s, the burrowing owl was still distributed in the Cache Creek and Stanton Creek watersheds (West 1973). Recent breeding season observations in Lake County could not be located.[24]

Sutter County

Historical breeding season observations in Sutter County could not be located.[25] Recent observations indicated a probable breeding colony near Pleasant Grove in 1993 (CNDDB 2001).[26]

Placer County

Historical breeding season observations in Placer County could not be located. Recent observations indicated probable breeding northwest of Roseville in 1998 (CNDDB 2001).[27]

2. MIDDLE CENTRAL VALLEY

The range of the burrowing owl in the middle Central Valley encompasses all of Yolo and Sacramento Counties; all but the southwestern 5% of Solano County; the eastern 50% of Contra Costa County; the eastern 20% of Alameda County; all of San Joaquin, Stanislaus, and Merced Counties; the western 30% of El Dorado County; the western 55% of Amador County; the western 70% of Calaveras County; the western 25% of Tuolumne County; and the western 60% of Mariposa County (DeSante et al. 1996).

Although there are historical records of confirmed breeding in almost every county in the middle Central Valley, there are little data on overall historical abundance of the burrowing owl in this area. However, the species was documented to have been locally abundant in Solano County (at Fairfield) and Merced County (at Los Banos) in the 1930s (WFVZ 2001), and in Yolo County (at U.C. Davis) and San Joaquin County (at Stockton) in the 1960s (Remsen 1978; Kemper 1996).

An estimated 595 (DeSante and Ruhlen 1995) to 600 (Kemper 1996) pairs of owls remained in the middle Central Valley in the mid 1990s, about 6.4% of the state breeding population. These pairs are thinly distributed in a crescent around the Delta region (in Yolo, Solano, Sacramento, Contra Costa, San Joaquin, Stanislaus, and Merced Counties), and are associated to a large degree with agricultural lands, although substantial numbers occur in more urban settings and at airports.

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22 CNDDB observations include: two owls flushed from burrows in the vicinity of the North Fork of Elk Creek, southwest of Arbuckle in 3/92; 5 burrows 5 miles southwest of Williams with castings present, 3/6/92; one owl flushed from a burrow 5 miles south-southwest of Williams on 3/9/92; an owl flushed from near a burrow 5 miles west of Arbuckle on 3/9/92; a colony of owls south of Mills Orchard April-September 1992 (5 pairs with 21 young) and in 1993 (21 owls - 7 adults, 14 juveniles); 11 miles northwest of Williams on 3/8/92; one owl at a burrow 10 miles northwest of Williams, on 2/11/92 (the burrow site was excavated on 3/8/92 for construction of a pipeline and the owls are possibly extirpated); 1 owl in a burrow complex 5.5 miles north of Mills Orchards, east of Antelope Valley, on 3/5/92 (also active during spring 2001); and castings and recent droppings, 3 miles east of Golden Gate on Funks Creek, on 3/5/92 (CNDDB 2001).

23 Birds were collected at Upper Lake on 5/29/1894 (Stephens 1895; NMNH 2001), and on 2/10 and 3/27, 1897 (McGregor 1898).

24 There has been a report of possible recent breeding activity in grasslands north of the town of Clearlake (D. Cooper, pers. comm., 2002).

25 There is a historical non-breeding season collection record from Butte Creek, six miles north of Merridian, on 11/27/25 (MVZ 2001).

26 Five individual owls were observed south-southwest of Pleasant Grove on 7/10/93 (CNDDB 2001).

27 Owls (never more than 2) were observed northwest of Roseville year-round during 1998 (CNDDB 2001).

Yolo County

Historical records confirmed breeding at Woodland in 1886 and indicated probable breeding there in 1922 (MVZ 2001; NMNH 2001).[28] Recent breeding season observations near Woodland could not be located.

Kemper (1996) reported a "dependable" owl colony on the U. C. Davis campus in 1962, noting that owls could be seen any time then. B. Johnson monitored this colony from 1981, when the colony had 22 pairs, to 1991, when the population plummeted to one adult. This colony increased to several pairs by the late 1990s, but is threatened by development (CNDDB 2001; B. Johnson, pers. comm., as cited in PHBA 2002). The overall burrowing owl population at Davis has likely declined 50% from 40 pairs in the mid-1980s to 20 pairs in the mid-1990s (PHBA 2002).[29] Other owl colonies north of Davis also severely declined or were extirpated in the 1980s: such as a burrowing owl colony adjacent to the Yolo County Airport that had 10 pairs of birds in 1976, that was extirpated by 1983 when the site was flooded to create a pond; and a colony of 3 to 5 pairs observed from 1978 to 1983, near road 102, 2 miles north of Davis, that had only one pair left by 1986 (CNDDB 2001).

In 1985, B. Johnson (pers. comm., as cited in PHBA 2002) estimated Yolo County's burrowing owl population on the order of 70 to 80 pairs. Since then, the species has "gone into serious decline in Yolo County," and as of 1996 the only remaining breeding owls were in pasturelands bordering the Yolo Bypass, south of El Macero, and a few pairs residing near Davis (Kemper 1996; CNDDB 2001).[30] Observations by B. Johnson (pers. comm., as cited in PHBA 2002) suggest that Yolo County's burrowing owl population has declined approximately 50% since 1985 to 30 or 40 pairs in 2000. As of 2001, owls were known to occupy sites at U. C. Davis, the Yolo Airport, and Mace Ranch Park (CDFG 2002a).

Sacramento County

Historical records confirmed breeding near Freeport in 1899 and near Sacramento in 1901 and 1907; and indicated probable breeding in Sacramento in 1867, 1912, 1926, and 1951 (Storer 1926; Kirsher 1951; MVZ 2001; NMNH 2001; CAS 2002a).[31] There were a number of nesting colonies of owls in downtown Sacramento as of 1974 (CNDDB 2001).[32] Recent observations confirmed nesting in the vicinity of Rio Linda from 1987-1993, at Mather Air Force Base in 1989, at the Sacramento Army Depot in 1990, and at a number of locations in southern Sacramento from 1991-2001 (CNDDB 2001).[33] Large populations remain at the Sacramento Army

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[28] Five eggs were collected from Woodland on 4/5/1886 (NMNH 2001). A bird was collected from Woodland on 3/27/22 (MVZ 2001).

[29] Recent CNDDB observations in the vicinity of Davis include: a pair nesting near County Roads 27 and 102B, approximately 4 miles north-northeast of Davis (possibly extirpated by development by 1989); 2 pairs along the north side of Covell Drain, north side of the city of Davis, on 6/30/90 (1 pair abandoned their nest site, probably due to dog/human disturbances); one owl at a burrow site near Hwy. 128, 3.7 miles east-northeast of Winters, on 3/17/92; 2 birds near Road 31 and Hwy. 113, Davis, on 4/25/95; and 2 owls at a burrow near Drew Ave. and Cowell Blvd. in Davis, on 3/12/2000 (though owls were not observed at this site during May-June 2000) (CNDDB 2001).

[30] Recent CNDDB observations near the Yolo Bypass include: the vicinity of the Vaughn Ranch, in 1987 and 1989; 2 adults and 3 juveniles near the intersection of Midway Road and Levee Road, approximately 12.5 mi south of Davis, on 1/30/82 and 2/12/82 (on subsequent trips to this site in 1986, 1987, and 1989, no birds were found, and it appeared that the burrows had been disturbed); two family groupings (2 adults, 8 juveniles, and 1 unknown-age) on the east side of Road 104, between Thomsen Road and Midway Road, 12 mi east of Dixon, on 6/30/90, and 3 birds of unknown age on 7/23/96; 2 adults and 4 juveniles, near Road 152, east of Vaughn Ranch, 14 miles east of Dixon, on 6/30/90; 22 owls (at least 10 of which were young, in 4 family groupings) near Road 106, north of Glide Tule Ranch, 9 miles south of Davis, on 6/30/90; 2 adults and 4 juveniles near Road 155, 13 miles southeast of Dixon, on 6/30/90; at least 4 clusters of family groupings near Road 105 and Road 36, 6.5 miles south of Davis, in 1989 (several burrows and owls were seen at this site in 1993); and multiple sightings near Road 155 and West Levee Road, approximately 13 miles southeast of Dixon (1 adult was seen in 1989; 3 adults near a burrow, 5 young, and 2 owls of unknown-age at a burrow in 1990; 2 adults in 1993; and 2 adults on 7/19/96) (CNDDB 2001).

[31] Eggs were taken one mile north of Freeport on 4/29/1899, from Haggin's Ranch, five miles north of Sacramento on 5/8/01, and from the vicinity of Sacramento on 4/27/07 (CAS 2002a). Single birds were collected from Sacramento on 6/20/1867 (NMNH 2001), and on 5/17/12 (MVZ 2001).

[32] CNDDB observations in downtown Sacramento in 1974 include: several colonies with successful nesting in the vicinity of McKinley Park, southwest of the California State Exposition; several colonies with successful nesting immediately southwest of the junction of Howe Ave. and Fair Oaks Blvd. (this site is now completely developed, with no remaining habitat for burrowing owls); and several nesting colonies at Sacramento State College and adjacent levee areas along the American River (CNDDB 2001).

[33] Recent CNDDB observations near Rio Linda include: an extensive burrow network with at least 2 to 3 family groups near Elkhorn Blvd, 2 miles west of Rio Linda, where owls have been observed since at least 1987 (in 1993, 2 adults were observed in mid-March, and by mid-July, 14

Depot, southeast of Sacramento Metro Airport, Consumnes River College, and the Sacramento Regional Wastewater Treatment Plant (CNDDB 2001; SRCSD 2002).[34]

Solano County

Historical records confirmed breeding near Dixon in 1932 and near Fairfield in 1936; and indicated probable breeding near Vacaville in 1894, and on eastern Grizzly Island in 1927 (Stoner 1933b; MVZ 2001; NMNH 2001; WFVZ 2001).[35] A. Anderson noted "lots of owls near Fairfield" in 1936 (WFVZ 2001).

There have been numerous observations in recent years indicating an abundance of breeding owls between the Yolo Bypass and Dixon (CNDDB 2001).[36] There have been numerous colonies observed recently in the vicinity of Vacaville (north of Vacaville and west of Hwy. 505, near the Vaca Dixon Airport, and near Travis Air Force Base) (CNDDB 2001).[37] Breeding owls have also been documented recently in the vicinity of

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individuals were observed); one adult owl roosting just west-northwest of 6th and "U" Streets in 1992, and two adults at a burrow here in 1993; and 2 adults and 2 juveniles approximately 4 miles west of Rio Linda, on 6/22/2001 (CBDDB 2001).

Recent CNDDB observations at Mather Air Force Base include: 1 adult at a burrow at Bldg. 7001, on 4/28/89; 2 adults near Bldg. 7014, on 4/28/89 (a family of burrowing owls had been observed here in the past); at the BX parking lot on 4/28/89; 2 pairs of owls with 3 young at burrows east-northeast of Mather AFB, Rancho Cordova, on 6/14/89; and 1 adult with four young adjacent to the West Gate on 7/15/89 (CNDDB 2001).

Other recent CNDDB observations in southern Sacramento include: at least 6 nesting burrows with at least 14 individual owls at the Sacramento Army Depot, in 1990 (this site is threatened by potential closure of the Army Depot and conversion to development); a minimum of 8 adult owls at burrow sites and other burrows that also appeared active approximately 4 miles southeast of Sacramento Metro Airport, on 1/18/91 (the surrounding habitat is scheduled for a housing development); 4 burrows showing signs of recent occupation at the Kiefer landfill site, in April 1994 (area proposed for landfill expansion); 12 occupied burrows, with a total of at least 18 adults (6-12 pairs estimated), at the Cosumnes River College playing field, in 1994; a burrow near the Sacramento Regional Wastewater Treatment Plant, occupied on 2/19/92 and between 1998-2001; and at least 3 owls on 5/16/95 and 1 adult and 2 juveniles on 9/20/2001 near Elder Creek, just west of Franklin Blvd. (threatened by levee "improvements" - owls will be displaced by one-way burrow doors - and development of foraging habitat) (CNDDB 2001). An owl near a burrow was seen at the Metro Air Park development site, east of the airport, on 3/23/2000 (USFWS 2001).

34 According to the Sacramento Regional County Sanitation District, the burrowing owl population on 2,500 acres of buffer lands around the Sacramento Regional Wastewater Treatment Plant has increased from 12 resident owls in 1991 to more than 20 in 1997, with as many as 38 birds observed in one survey (SRCSD 2002).

35 Stoner (1933b) found two burrowing owls occupying holes in hay piles near Dixon in 1932. There are collection records from Elmira, near Vacaville on 3/4/1894 (NMNH 2001), and from eastern Grizzly Island on 4/24/27 (MVZ 2001). Grinnell and Wythe (1927) observed birds near Rio Vista. Eggs were collected from near Fairfield in April 1936 (WFVZ 2001).

36 Recent CNDDB observations between the Yolo Bypass and Dixon include: 2 owls (one adult and one of unknown age) near Etzel Road and the old Sacramento Northern RR tracks, approximately 6 miles north of Liberty Farms, on 7/2/89; 4 adults near Hackman Road and Buckley Road, on 7/2/89; 1 adult along Thomsen Road on 7/2/89; two adults near Buckley Road and Midway Road, on 7/2/89; a large colony near Yolano Road, King Road, and Liberty Island Road in 1987 (3 adults and road-killed fledgling seen in 1989, 2 adults in 1990); 1 owl near Miller Road and Robben Road, on 7/1/89; 1 owl near Midway Road and Robben Road on 7/1/89; 1 owl along Robben Road, north of Midway Road, on 7/1/89; 2 adult owls near an occupied burrow near Swan Road and Winship Road, on 6/30/90; 1 owl and several burrows showing owl sign near West Levee Road and Delhi Road, on 6/30/90; 2 family groups (approximately 10 individuals) near the Northern Pacific RR tracks, just north of Etzel Road, on 6/30/90; 1 owl near Robben Road and Midway Road, in 1989 and in 1990; two family groups (each with two adults and at least two young) near Maxwell Lane and Road 104, in 1990 (3 adult owls seen at a burrow here on 4/4/92); 1 owl near Buckley Road and Road 38A, on 6/20/90; Sikes Road, between Trefoil Road and Delhi Road (1 owl seen on 6/30/90, 1 owl seen on 11/29/99, but no owls present after 2/1/2000); 12 owls near Pedrick Road and Binghamton Road on 9/7/89 (3 owls seen at this burrow site in January 1992); 2 adults at a burrow site 4 miles southeast of Dixon on 7/23/96; 2 adults and 2 juveniles 4 miles south-southeast of Dixon, on 7/23/96; 1 adult and 2 juveniles 1 mile northeast of Dixon, on 7/19/96 (owls had inhabited this site year-round for at least the past two years); 2 adults and 2 unknown-age owls 2.5 miles north-northeast of Dixon, on 7/23/96; 2 pairs of adults, one with 4 juveniles 2 miles southeast of Libfarm, on 7/19/96; 5 adults and 8 juveniles 2 miles southeast of Libfarm on 7/23/96; 2 adults near Liberty Island Road and King Road, on 7/19/96; 4 owls of unknown-age near Bulkley Road and Hackman Road, on 7/19/96; 3 adults and 2 juveniles near County Road 104 and Hackman Road, on 7/23/96; 1 owl using two different pipes near Sikes Road and Swan Road, north-northeast of Dozier, on 11/29/99; 1 owl using burrows along Bunker Road, east-northeast of Maine Prairie School, between January-May 2000; 3 owls (2 adults/1 juvenile) using 2 burrows near Swan Road and Sikes Road, on 1/3/2000 and 1/24/2000; single owls at burrows near the Swan Road/Binghampton Road curve, on 1/19/ 2000 and 4/28/2000; and a breeding pair near Hwy. 113 and Midway Road, 2 miles south of Dixon, on 3/7/2000 (CNDDB 2001).

37 Recent CNDDB observations north of Vacaville and west of Hwy. 505 include: 2 adult owls and a burrow with owl sign west of I-505, 2 miles north of Sweany Creek, east of the English Hills, on 5/18/92 (a single owl was seen here on 3/18/92); 4 owls near Winters Road, about 5.5 miles south of Winters, on 7/12/94; 1 owl near Allendale Road, west of I-505, about 6 miles south of Winters, on 7/12/94; 2 adults and 4 juveniles near Vaca Valley Parkway and Ackerly Drive, on 6/22/98; and 2 pairs, one with 2 young, near I-505 and Gibson Canyon Creek (north fork), 2 miles west of Vaca Valley Raceway, on 6/18/2000 (this site has been active since at least 1997, with 1-2 pairs present) (CNDDB 2001).

Recent CNDDB observations near the Vaca Dixon Airport include: an unknown number of owls found in burrows at the old Vaca Valley Raceway, on 3/12/89 and 1 adult near Weber Road and Lewis Road, on 7/1/89 (CNDDB 2001). Recent CNDDB observations near Travis Air Force Base include: 2 adults and a burrow near Hay Road and Dally Road, east-southeast of Elmira, on 9/4/89 (3 owls and a burrow were observed at this site on 3/8/84); at least five burrows, with 8 adults (at least 3 pairs) near Meridian Road, 1 mile east of Travis Field, on 4/9/89; 1 owl at Aero Club Airport, near Peabody Road and Air Base Parkway, Travis AFB, on 3/12/89; yearly reports of owls breeding and residing year-round in the vicinity

Fairfield, and observations along Suisun Bay and the Delta confirmed breeding at Montezuma Slough, and indicated probable breeding in the Montezuma Hills and the vicinity of Rio Vista (USACE 1998; CNDDB 2001).[38]

Eastern Contra Costa County

Historical records confirmed breeding at Brentwood in 1915; and indicated probable breeding at Antioch in 1879 (MVZ 2001; NMNH 2001).[39] Owls were frequently observed in the vicinity of Byron in the 1980s (Richmond 1985; CNDDB 2001). There are remaining owl populations in Concord, Pittsburgh, Antioch, Brentwood, Oakley, Byron, the Los Vaqueros watershed, and Vasco Caves Regional Preserve (L. Trulio, pers. comm., 2001; CDFG 2002a; M. Ricketts, pers. comm., 2002; J. DiDonato, pers. comm., 2003).[40] Recent CNDDB records confirmed breeding at the Byron Airport in 1993 and 1994, and southeast of Antioch in 2001; and indicated probable breeding near Clifton Court Forebay in 1992, at Byron in 1999, and in the vicinity of Brentwood in 1999 (CNDDB 2001).[41]

Eastern Alameda County

(Stallcup and Greenberg 1974) observed that burrowing owl numbers continued to decline in eastern Alameda County through the 1970s. There have been numerous observations confirming breeding in the vicinity of Altamont Pass and Bethany Reservoir from 1973-2001 (CNDDB 2001).[42] There is an owl colony at

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of the officer's club at Travis AFB, since 1982; and in the vicinity of Travis elementary school, the post office, vet center, and base exchange, Travis AFB, on 3/12/89 (CNDDB 2001).

38 Recent CNDDB observations in the vicinity of Fairfield include: a breeding colony of many burrows (with 9 adults and 4 juveniles) near Cordelia Road and Orehr Road, in 1982; 3 owls occupying burrows near Hillside Drive and Dover Ave., in 1983 (this population was extirpated by a housing development and no owls were observed at this site in 1989); 1 owl near Cement Hill and Clay Bank Road, on 3/12/89; and single owls near Potrero Hills Lane, near the junction of Scalley Road and Hwy. 12, on 10/15/91 and 2/25/92 (this burrow appeared to be inactive on 5/7/92) (CNDDB 2001).

Burrowing owls breed along the interior levees and drainage canals at Montezuma Wetlands (USACE 1998). Recent CNDDB observations near Montezuma and near Rio vista include: 2 pairs (one with 5 young), and 1 pair, at 2 locations between Montezuma Slough and Collinsville Road, northwest of Collinsville, in March 2000; 1 adult at Montezuma Hills, on 12/8/99, as well as on several other occasions; 1 adult at a burrow near Montezuma Hills Road and Toland Lane intersection, Montezuma Hills, on 1/29/2000; 1 adult at a burrow site near Azevedo Road and Cartwright Road, northwest of Rio vista, on 4/28/2000 (later, the same owl (presumably) was found dead on the road); 1 adult near Emigh Road and Azevedo Road, west of Rio Vista, on 1/21/2000; 1 adult near Emigh Road and Anderson Road, west of Rio Vista, seen numerous times between 12/2/99 through February 2000; 3 adult owls at 3 adjacent burrows near Anderson Road and Montezuma Hills, southwest of Rio Vista, on 12/8/99; 1 adult at a fourth burrow near this site, on 1/3/2000 (this burrow was flooded on 1/24/2000); 1 adult near Robinson Road and Flannery Road, northwest of Rio Vista, seen on multiple visits between November 1999-April 2000; and 1 adult in a burrow near Montezuma Hills Road and Anderson Road, southwest of Rio Vista, on 1/13/2000 (CNDDB 2001).

39 Eggs were collected from Brentwood on 3/25/15 (MVZ 2001). A single bird was collected in Antioch on 5/20/1879 (NMNH 2001).

40 Two pairs of burrowing owls were observed in southeast Antioch throughout the summer of 2002, although no fledglings were ever seen (M. Ricketts, pers. comm., 2002). One of these pairs was evicted in September 2002 from a development site using standard "passive relocation" methods. A separate pair was observed on three occasions just outside the development area, but was not seen during August or September. Neither of the pairs or any other burrowing owls were seen during initial ground disturbance activities in early September and the current location and status of these owls is unknown.

There is a non-breeding season record of a bird collected from Sellers Ave. (by a canal) in Brentwood on 9/11/98 (MVZ 2001). Two other owl pairs were seen occupying burrows within 50 meters of each other on a development site in Brentwood (junction of Highway 4 and Brentwood Blvd.) in 2002 (M. Ricketts, pers. comm., 2002). One of these pairs was confirmed breeding and two young were at the burrow in early June. The other pair was only seen once and apparently did not remain at the site to breed. The breeding pair was not located in an area scheduled for grading in 2002, and the young fledged successfully (current whereabouts are unknown). This area is proposed for future development.

There is a population of 4 or 5 pairs of owls at Vasco Caves Regional Preserve east of Los Vaqueros watershed, with successful breeding recorded over the past few years; and a larger population on adjacent windfarm lands (J. DiDonato, pers. comm., 2003).

41 Recent CNDDB observations include: 2 owls and 4 burrows with owl sign, west and southwest of Clifton Court Forebay, on 6/12/92 (threatened by proposed pipeline); a colony of 6 breeding pairs (12 adults and 9 juveniles) near the Byron Airport, in 1994 (owls were passively relocated in 1993 from airport expansion construction areas); 2 adults at Byron on 4/2/99; 1 adult at a burrow 1.5 miles west of Brentwood, on 12/16/96 (threatened by a proposed housing project); 3 adults at 2 burrow sites 3 miles west of Brentwood, on 11/9/99 (threatened by development); and 4 adults and 3 juveniles at two burrow sites at Rolling Hills Ranch, 3 miles southeast of Antioch, on 6/30/2001 (threatened by fire control disking and residential development) (CNDDB 2001).

42 CNDDB observations in the vicinity of Altamont Pass include: several sightings of owls and/or burrows along Greenville Road near Tesla Road, between 1972 and 1979; several owls near Midway, in 1982; 2 owls and evidence of breeding near North Midway Road, reported in 1983; a burrow with 2 adults along Mendota Canal, 1 mile north of Mountain House, on 9/16/89 (this burrow remained occupied throughout the fall); 2 birds observed leaving a burrow north of Grant Line Road and south of Mountain House Creek, on 3 consecutive nights in May 1992; 2 nests between Patterson Pass and Midway, in 1999 (EBBC 1999); a colony along Altamont Pass Road, 1.5 miles southwest of Mountain House (a single bird was observed during the breeding season, on 4/30/73; owls were passively relocated from an 80-acre area for a proposed golf course in January 2001; 4

Lawrence Livermore Laboratory (L. Trulio, pers. comm., 2001), and a small number of burrowing owls have been observed breeding on the Lawrence Livermore Laboratory Site 300, on the north side of Corral Hollow Road (LLNL 1998; Jones & Stokes 2000).[43] No burrowing owls have been observed during field studies at the Carnegie State Vehicle Recreation Area conducted by Jones & Stokes and the California Department of Fish and Game (Jones & Stokes 2000).

San Joaquin County

Historical records confirmed breeding at Waterloo and near Stockton in 1882, near Lathrop in 1896; and indicated probable breeding in the San Joaquin Valley in 1905, at Tracy in 1911, and at Holt in 1930 (Ray 1906; MVZ 2001; WFVZ 2002; CAS 2002a).[44] In the Stockton area, known populations consisting of at least 17 pairs had dwindled to no more than three pairs from 1968-1978 (Remsen 1978). Burrowing owl colonies were reported in the 1980s at the Stockton Oxidation Ponds near Thornton, near the California Youth Authority facility southeast of Stockton, along Duck Creek northeast of Farmington, and just south-southeast of Mountain House (Richmond 1985; CNDDB 2001).

A large breeding population remains in the vicinity of Tracy; 41 adults were seen at a colony in southwest Tracy in August 1998 (CNDDB 2001).[45] Relatively large breeding colonies are found throughout southern Stockton, at the San Joaquin County Fairgrounds (15+ pairs in 1993), Moss Tract (7 adults in 1998), Walker Slough-French Camp Slough (6 adults and 6 juveniles in 1998), Stockton Metro Airport (4 adults and 6 juveniles in 1999), Stockton Railroad Yard, and Sharpe Depot (4 pairs in 1993, 8 pairs in 1997, 4 pairs in 1998, 7 pairs in 1999, and 13 pairs with 55 young in 2001) (CNDDB 2001).[46] There have also been recent

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adults were observed on 1/16/2001; 7 pairs and 8 juveniles were observed during monitoring from February-June 2001; all birds observed were outside of the proposed golf course area); 2 birds observed leaving burrow near Midway Road and I-580, on 2 consecutive nights in May 1992 (2 owls were seen here on 6/27/82); 8-10 active burrow sites near Kelso Road and Bruns Ave., north of Bethany Reservoir, between 1992 and 1994; 11 burrows (1 with owl sign) along a pipeline near Grantline Road and Mountain House Creek, on 9/30/92 (burrows were monitored, then excavated in spring 1993 - 1 burrow with an owl nearby seen here on 4/16/93); and 5 dens with owl sign and 1 owl at Altamont Speedway parking lot, on 10/10/97 (CNDDB 2001).

43 Twenty-one burrowing owl dens (it is not clear how many were occupied) have been recorded at Site 300 (LLNL 1998).

44 Eggs were collected from Waterloo and near Stockton on 5/12/1882 (CAS 2002a), and near Lathrop on 5/8/1896 (WFVZ 2001). Birds were collected from the San Joaquin Valley in summer 1905 (Ray 1906), from Tracy on 3/8 and 3/14, 1911, and from Holt on 4/22/30 (MVZ 2001). There is a non-breeding season collection record from Victoria Island on 1/11/39 (MVZ 2001).

45 Recent CNDDB observations in the vicinity of Tracy include: an active burrow with at least 2 resident owls near Jefferson Blvd. and Valpico Road, 2 miles south of Tracy, on 8/11/91; a burrow with 1 adult south of the intersection of Patterson Pass Road and I-580, 5 miles southwest of Tracy, on 7/3/92; 2 owls at a burrow site with owl sign between Delta-Mendota Canal and Schulte Road, 4 miles southwest of Tracy, on 9/28/92 (burrow was monitored, then excavated with CDFG approval – this site is extirpated); a burrow with owl sign (no owls) near Patterson Pass Road and I-205, southwest of Tracy, on 9/29/92; 1 owl at a burrow with owl sign near Patterson Pass Road and Hansen Road, southwest of Tracy, on 9/29/92; a pair of owls at a colony site near Patterson Pass Road and Hansen Road, southwest of Tracy, on 2/11/93 (this was one of several burrows monitored, then excavated with CDFG approval); 1 owl at a complex of 3 burrows with owl sign near Hansen Road and the Delta Mendota Canal, southwest of Tracy, on 4/6/93 (burrows were monitored, then excavated with CDFG approval during spring 1993); a large colony near Schulte Road and the SPRR tracks, Tracy (1 pair with 4 young and another pair with 5 young seen on 7/24/97, 18 adults seen on 5/4/98, 41 adults seen on 8/27/98); 1 adult at a burrow near Byron Road and West 11th Street, west of Tracy, on 8/3/98; 1 juvenile at a burrow near Kelso Road and Byron Bethany Road, southeast of Clifton Court Forebay, on 9/2/89; and 1 bird at a burrow near Tracy Blvd. and I-205, north of Tracy, on 5/30/94 (CNDDB 2001).

46 Recent CNDDB observations in southern Stockton include: 8 adults (4 pairs) at Stockton Airport and Sharpe Army Depot Complex, south of Stockton, on 6/19/93; 30+ adults (15+ pairs) and an unknown number of juveniles at the San Joaquin County Fairgrounds, Stockton, on 6/19/93; 2 adults at 2 adjacent burrows near Arch Road and Hwy. 99, northeast of Stockton Metropolitan Airport, on 6/12/95; 2 adults and 5 juveniles near Arch Road and Hwy. 99, northeast of Stockton Metropolitan Airport, on 7/2/95; 2 adults and 2 juveniles near Yosemite Ave. and McKinley Ave., southeast of Lathrop, on 7/24/97 (1 adult also observed on 1/21/00); a pair of owls, possibly with eggs, 0.75 miles east of Lathrop, on 3/14/97; 7 adults at a burrow site near Fresno Ave. and West 8th Street, in the Moss Tract area of Stockton, on 2/27/98; 2 adults at a burrow site along Duck Creek, near Airport Way, Stockton, on 3/20/98; 6 adults and 6 juveniles near Walker Slough/French Camp Slough confluence, south of Stockton, on 9/3/98; 1 adult at a burrow near Hammer Lane and Hwy. 99, east of Stockton, on 5/4/99; a small breeding colony 1 mile north of Stockton Metropolitan Airport (2 adults and 2 nearly-mature juveniles seen on 6/24/99, 4 adults and 6 juveniles seen on 7/6/99); 2 adults at a burrow near Fresno Ave. and West 8th Street, South Stockton, on 4/2/99 (the site was to be developed after the 1999 nesting season was over); 2 adults at a burrow near French Camp Road and I-5, south of Stockton, on 5/11/99; 2 adults at a burrow near Carolyn Weston Blvd., west of Manthey Road, south of Stockton, on 5/11/99; 2 adults at a burrow near French Camp Road and Manthey Road, south of Stockton, on 5/11/99; 1 adult at a burrow near junction of Walker Slough and Duck Creek, south of Stockton, on 8/26/99 (+ one dead owl observed that appeared to have been killed by a feral cat); 2 adults and 3 juveniles west of McLeod Lake, northeast of I-5, central Stockton, on 7/8/99; 2 adults at a burrow near French Camp Road and Wolfe Road, near San Joaquin River, Stockton, on 5/11/99; a large breeding colony at Sharpe Depot, Lathrop (8 breeding pairs estimated in 1997; 4 breeding pairs and young observed in 1998; 7 breeding pairs, 3 in natural burrows/4 in artificial burrows and young, observed in 1999; 13 pairs, 11 breeding, produced 55 young, 5/24-6/29, 2001); a large colony at the Stockton railroad yard, near Charter Way and Airport Way, 2 miles south of

observations indicating probable breeding in southwestern San Joaquin County south of I-580 (CNDDB 2001).[47]

Stanislaus County

Historical records confirmed breeding in 1928 in the Del Puerto Canyon area, on the San Joaquin side of the Mount Hamilton Range, and indicated probable breeding there in 1957 (Fowler 1931; MVZ 2001).[48] Beedy and Granholm (1985) reported that burrowing owls could be found in the foothills west of Yosemite National Park, for example northeast of Waterford in Stanislaus County. Recent records indicated probable breeding east of Oakdale, along Highway 120, in 1990 (SBMNH 2001).

Merced County

Historical records confirmed breeding near Dos Palos in 1923, at Los Banos in 1898, 1932, and 1933; and indicated probable breeding at Los Banos in 1903, at Snelling in 1925, and at Merced in 1908 and 1941 (Dawson 1923; AMNH 2001; MVZ 2001; UCLA 2001; WFVZ 2001).[49] Egg collector D. De Groot noted "many burrowing owls" in the vicinity of a nest he raided at Los Banos in 1932 (WFVZ 2001). There was a large resident burrowing owl population at the San Luis National Wildlife Refuge, near Los Banos, in the 1970s and 1980s (Stebbins and Taylor 1973; Richmond 1985) - the 1978 population was estimated at 25 pairs (Remsen 1978). Although no systematic surveys have been done, there is apparently still a "healthy" owl population at this Refuge, with recent observations of up to 26 owls in one hour (D. Warren, pers. comm., 2002).

Recent observations confirmed breeding colonies in the vicinity of Los Banos Reservoir (many of these sites are threatened by the proposed Los Banos Grandes Reservoir), and indicated probable breeding along the Hwy. I-5 corridor around San Luis Reservoir, the vicinity of Merced (many of these sites are threatened by the proposed 2000-acre UC Merced campus), and in northeastern Merced County near Kelsey Reservoir (CNDDB 2001).[50]

Stockton (over 90 burrows were counted in a 1.9 mile stretch of the railroad yard in 1999; 14 owls counted on 10/2 and 10/11, 1999; 18 owls counted on 11/10 and 11/11, 1999; and 1 owl banded on 11/11/99); 2 adults and 3 juveniles at a burrow near Mariposa Road and Hwy. 99, Stockton, on 7/19/00; 4 owls in the vicinity of many burrows near the confluence of Duck Creek and Walker Slough, south end of Stockton, on 10/16/00; and 3 juveniles at a burrow south of Stockton, on 7/9/99 (CNDDB 2001).

47 Recent CNDDB observations in southwestern San Joaquin County include: 2 resident owls at a burrow and another active burrow site along Smiths Ridge, northeast of Lone Tree Mineral Spring, on 10/20/91; 1 owl at a burrow along Hospital Creek, southwest of I-580 junction with I-5, on 9/14/92; and a pair of owls and sign at a burrow just northeast of Lone Tree Mineral Spring, on 5/24/01 (no owls observed during a subsequent visit on 6/5/01) (CNDDB 2001).

48 Fowler (1931) reported burrowing owl families living in the canyons on the San Joaquin side of the Mount Hamilton Range (likely the Del Puerto Canyon area) in the summer of 1928. Fowler found the remains of 8 burrowing owls (adults and juveniles) in prairie falcon nests in the area. A bird was collected from the mouth of del Puerto Canyon, four miles west of Patterson, on 4/19/57 (MVZ 2001). There is a recent non-breeding season record from Del Puerto Canyon on 10/17/91 (CNDDB 2001).

49 Eggs were collected from unspecified locations in Merced County in 1896 and 1916; and from Los Banos on 6/8/1898, 5/29/32, and 5/30/33 (WFVZ 2001). Dawson (1923) found several owl burrows near Dos Palos. Breeding season collections include 2 birds from Los Banos on 6/22/03 (AMNH 2001), at Snelling on 4/8/25 (MVZ 2001), from Merced on 6/18/08 (UCLA 2001) and on 7/26/41 (MVZ 2001). There is also a non-breeding season collection record from Snelling on 1/9/15 (MVZ 2001).

50 CNDDB observations near the Los Banos Reservoir include: 1 adult approximately 3 miles west of Los Banos Reservoir, on 8/9/94; 2 adults at a burrow site 1 mile north of Los Banos Valley, on 7/6/98; 1 adult along Salt Creek, 3 miles south of Los Banos Reservoir, on 7/13/98; 9 adults at a burrow site at the north end of Los Banos Valley, on 8/18/98; and 2 adults and 4 juveniles, 5 miles north-northwest of little Panoche Reservoir, on 7/26/2000 (CNDDB 2001). CNDDB observations along the I-5 corridor include: 5 burrows with owl sign along 1 mile of the California Aqueduct, southeast of Dos Amigos pumping plant, on 2/24/93; one adult at a burrow near the intersection of I-5 and Hwy. 152, on 9/3/92 and 2/13/93; one burrow with owl sign at Santa Nella Village, on 3/23/93; and 3 burrows with owl sign southwest of Gustine, on 3/23/93 (CNDDB 2001).

Recent observations in the vicinity of Merced include: 1 adult and a nearby active burrow 3 miles northeast of Planada, in May 1999; 6 observations of occupied burrows or burrowing owls along Le Grand Canal in 1999; 3 owls and 8 burrows with owl sign south of Yosemite Lake, north-northeast of Merced, on 2/1/2000; and several dozen burrowing owls north of the proposed UC Merced campus site (CNDDB 2001; URS 2002).

There was a breeding season observation of an owl near a burrow at Kelsey Ranch, just west of Kelsey Reservoir, on 5/1/99 (CNDDB 2001).

El Dorado County

The species has been recorded historically from near Latrobe (Barlow 1901). Recent breeding season observations in El Dorado County could not be located.

Amador County

Historical records indicated probable breeding in Amador County in 1896 (CAS 2002a).[51] Recent breeding season observations in Amador County could not be located.

Calaveras County

Historical breeding season observations in Calaveras County could not be located. There have been recent observations of burrowing owls along the lower Mokelumne River in Calaveras/San Joaquin Counties (EBMUD 2001), but it is unknown whether these were during breeding season.

Tuolumne County

Historical breeding season observations in Tuolumne County could not be located, other than a report by Beedy and Granholm (1985) that burrowing owls could be found in the foothills along Hwy. 120, west of Chinese Camp. Recent breeding season observations in Tuolumne County could not be located.

Mariposa County

Historical records indicated probable breeding east of Merced in 1941 (MVZ 2001).[52] Recent breeding season observations in Mariposa County could not be located.

3. SOUTHERN CENTRAL VALLEY

The range of the burrowing owl in the southern Central Valley encompasses the western 70% of Madera County; the southeastern 25% of San Benito County; the western 80% of Fresno County; all of Kings County; the western 50% of Tulare County; and the northwestern 55% of Kern County (DeSante et al. 1996).

Although there are historical records of confirmed breeding in almost every county in the southern Central Valley, there are little data on overall historical abundance of the burrowing owl in this area. However, the species was documented to have been locally abundant at a number of locations such as at Fresno in the early 1900s (Miller 1903; Tyler 1913a), in the Kettleman Hills in the 1940s (Wilson 1945), and at Tulare Lake in the early 1900s (Goldman 1908).

DeSante and Ruhlen (1995) estimated that 1,396 pairs of owls remained in the southern Central Valley in the mid 1990s, about 15.1% of the state breeding population. In contrast to most regions, a substantial number of these pairs (396 pairs) were estimated to live in uplands, although owls are primarily concentrated in low-lying agricultural areas surrounding the mostly dry lake basins, such as the Tulare Lake Basin in Tulare and Kern Counties. Some numbers still exist in remaining grasslands, which are in uplands. Only 14% of the remaining breeding sites were found within 15 meters of irrigation canals (DeSante et al. 1996).

Madera County

Historical records confirmed breeding near Madera in 1917 and 1920, and at Chowchilla in 1900; and indicated probable breeding at Madera in 1939 (CAS 2002a).[53] There is one recent breeding season observation northwest of Friant in 2000 (CNDDB 2001).[54]

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51 A bird was collected from an unspecified location in Amador County on 5/13/1896 (CAS 2002a). There is also a non-breeding season collection record from Amador County in January 1896 (McGregor 1898).

52 A bird was collected 20 miles east of Merced on 7/26/41 (MVZ 2001).

San Benito County

Historical records indicated probable breeding at Paicines in 1894 and 1897 (CAS 2002a).[55] There were several owl observations indicating probable breeding northwest of Hollister in the early 1990s (CNDDB 2001).[56] In 2001, Sam Fitton reported burrowing owls to be resident in small numbers in Panoche Valley (D. Cooper, pers. comm., 2002).

Fresno County

Historical records confirmed breeding near Wheatville in 1907, around Fresno in 1912 and 1913, near Monmouth in 1917, near Selma in 1917, near Cantua Creek in 1917, near Firebaugh in 1919, and at Kettleman Hills in 1944; and indicated probable breeding at Fresno and Visalia in the 1920s and near Cantua Creek in 1940 (Tyler 1913b; Storer 1926; Wilson 1945; WFVZ 2001; CAS 2002a).[57]

As early as 1903, Miller (1903) reported that the burrowing owl, "one of the most prevalent species formerly" in the Fresno area "is now becoming extinct wherever the country is thoroughly cultivated." Tyler (1913a) remarked that although burrowing owls could be heard throughout most of the Fresno region around the turn of the century, "civilization, cultivation, and squirrel extermination have now crowded these little owls farther and farther out to the edges of the Fresno District, to the west side plains and a few other unsettled areas." Tyler noted that a few owls could be found within cultivated areas, where they nested in waste fields and along roadsides, "but their numbers are limited and it seems only a matter of a few more years until we will be unable to number the Burrowing Owl among the birds of the Fresno District." Wilson (1945), who listed the species as a "fairly common resident" of the Kettleman Hills, observed owls occasionally during the year in the hills or on the flats and confirmed breeding there in 1944.[58] By the 1970s, burrowing owl numbers were further decreasing in the Fresno area (Remsen 1978). The population at the federally protected Mendota Wildlife Area was estimated at 30 pairs in 1978 (Remsen 1978).[59]

Currently, very few burrowing owls breed within the Mendota Wildlife Area, but recent observations indicated confirmed breeding along the San Luis Drain, northwest of the Mendota Wildlife Area, in 1987 and 1989; and probable breeding near Monocline Ridge in 1994 and near Huron in 2001; a population of at least 80 pairs nested in 2002 within cracked concrete along the San Luis Drain for a three-mile stretch adjacent to the western boundary of the Wildlife Area (CNDDB 2001; R. Huddleston, CDFG, pers. comm., 2002).[60]

Kings County

Historical records indicated probable breeding at Hanford in 1882 (CAS 2002a).[61] Goldman (1908) found the burrowing owl "abundant" in the region of Tulare Lake in the summer of 1907. There is currently a

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53 Egg sets were collected from 5 miles south of Madera on 5/13/17 and 5/8/20 (2 sets), and from Terry School (northeast of Lemoore NAS on 5/2/17 (CAS 2002a). Juvenile birds were collected from Chowchilla on 6/27, and 6/29, 1900; adult birds were collected from Chowchilla on 6/26/1900 and from Madera on 3/6/39 (CAS 2002a).

54 One adult was observed at a burrow site near Hwy. 41, 8 miles northwest of Friant, on 4/4/2000 (CNDDB 2001).

55 Birds were collected from Paicines on 4/1/1894, 1/29/1896, and 2/21/1897 (3 birds) (CAS 2002a).

56 Recent CNDDB observations include: 1 adult at a burrow site 2 miles west-northwest of Hollister Airport, on 2/12/91 and 2/17/91; an active burrow site along Hwy.. 25, south-southeast of the Pajaro River, in September 1992; and 1 adult bird observed at a burrow 1.2 miles south of the Hwy. 25 crossing over the Pajaro River, south-southeast of Gilroy, on 3/1/94 and 3/10/94 (CNDDB 2001).

57 Eggs were collected 10 miles north of Wheatville on 4/30/07; near Monmouth on 5/30/17; 3 miles west of Selma on 4/21/17; and near Firebaugh on 4/5/19 (WFVZ 2001). Tyler (1913b) found eggs and feathered young when he opened up four nesting burrows in Fresno County in April 1912. A single bird was collected from 20 miles south of Mendota (near Cantua Creek) on 3/23/40 (CAS 2002a).

58 Wilson (1945) saw 4 half-grown owls standing by a burrow near Huron in June 1944.

59 A large concentration of 19 burrowing owls was seen near Mendota on 6/14/74 (Stallcup and Greenberg 1974).

60 Recent CNDDB observations include: along the east bank of the San Luis Drain, northwest of the Mendota Wildlife Area, in 1989 (the number of juveniles, adults, and burrows was lower than the number observed in 1987, due to ORV's, indirect poisoning from poison bait stations, and possibly plinking); one adult at a nest site on the eastern edge of Monocline Ridge, in June 1994; and active burrow sites northeast and north-northwest of Huron, from 5/8-5/10, 2001 (CNDDB 2001).

61 There is a collection record from Hanford on 5/20/1882 (CAS 2002a).

significant population at Lemoore Naval Air Station ("NAS"), where owls nest in established wildlife areas, runway buffer strips, and adjacent to runways. The number of active burrowing owl nests at Lemoore NAS from 1997 to 2000 has fluctuated from 54 to 85 (Rosenberg and DeSante 1997; Rosenberg et al. 1998a, 1998b; Gervais and Anthony in press). Recent CNDDB observations indicated probable breeding at several locations in the Kettleman Hills in 1996 and 2001, in northeastern Kings County near Visalia in 1999, and in the Tulare Lakebed area in 2001 (CNDDB 2001).[62] At least 5-10 owl pairs were observed from 2001-2002 in the general vicinity of Corcoran along Tulare Lake Drainage District canals and evaporation basin ponds (N. Brown, pers. comm., 2002).

Tulare County

Historical records confirmed breeding on the valley floor at Tulare in 1894 and at Tipton in 1936; and indicated probable breeding at Visalia in 1880, at Earlimart in 1903, and at Tipton in 1911 (MVZ 2001; NMNH 2001; WFVZ 2001).[63] The burrowing owl had not been seen in Sequoia National Park since Fry observed them there in 1911 according to Dixon (1933). A former population of several pairs at Shepherd's Cove, on the north side of the Kaweah River, was gone by 1937 (USNPS 1937; Sumner and Dixon 1953). Beedy and Granholm (1985) noted a collection record from Ash Mountain, in Sequoia National Park.

During the decade from 1968-1978, there was an estimated 70% reduction in suitable burrowing owl habitat in Tulare County (Remsen 1978). Beedy and Granholm (1985) reported declines in Tulare County, but noted that burrowing owls were still fairly common in scattered localities in the lower foothills in the 1980s.

There was confirmed breeding at Pixley in 1998 (Rosenberg et al. 1998a) and recent CNDDB observations indicated probable breeding at two locations northwest of Visalia in 1990 and 1998, and west of Earlimart in 1990 (CNDDB 2001).[64] A colony of owls at Colonel Allensworth State Historic Park ("CASHP") consisted of 14 breeding pairs in 2002 (Van Mantgem 2002), down from 23 pairs in 1999 (N. Brown, pers. comm., 2002). There is ongoing reconstruction of historic buildings at this park in areas of occupied burrows and foraging habitat. Although there is a burrowing owl management and mitigation plan in place to minimize the impacts, apparently not all of the mitigations are being followed and burrows are being closed without providing new burrows (N. Brown, pers. comm., 2002). At least 1 owl pair nested just north of CASHP along Highway 43 in 2000 (N. Brown, pers. comm., 2002). There are currently several breeding pairs at a site in Alpaugh and 3 owls at the Hebert Preserve that appear to be resident birds (K. Kreitin, pers. comm., 2002). R. Hansen reports that the James K. Herbert Wetland Prairie Preserve, near Highway 137 and Road 168 (owned and managed by Los Tulares Land Trust) has at least 5 known burrowing owl nests, as well as at least 3 wintering owls (N. Brown, pers. comm., 2002).

Kern County

The burrowing owl is known to have occurred historically near Buena Vista Lake, although it was "not common" there in the summer of 1907 (Linton 1908b; DeMay 1942).[65] Sheldon (1909) reported the species to be "common" south of Poso Creek during the summer of 1908. Historical records confirmed breeding at Semi Tropic in 1917, at Tejon Ranch in 1941, at Grapevine in 1962, and in Antelope Valley in 1964; and indicated

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62 Recent CNDDB observations in the Kettleman Hills area include: 2 owls in the foothills on the east side of Kettleman Plain, in 1989; 3 locations along the California Aqueduct at the Kings/Kern County line, on 6/3/96 and 6/4/96; and along Blakeley Canal, southeast of Kettleman City, on 3/15 and 3/23, 2001. Active burrow sites were also observed near Cross Creek, 1 mile south of Settlers Ditch, northwest of Visalia (4 adults), on 3/1/99; 4 miles northeast of Kettleman City, on 3/15 and 3/23, 2001; and 3.5 miles east of Kettleman City (5 active burrow sites), on 3/15 and 3/23, 2001 (CNDDB 2001).

63 Eggs were collected from Tulare on 4/20/1894 (NMNH 2001) and from Tipton on 3/27/36, where 3 nesting pairs were also observed (WFVZ 2001). Breeding season collection records include from Visalia on 4/1/1880 (NMNH 2001), 3 birds from Earlimart on 6/18/03 (NMNH 2001), and 3 birds from Tipton on 4/27/11 (MVZ 2001).

64 Recent CNDDB observations include: 1 mile west of Road 112, approximately 9 miles north-northwest of Visalia, on 6/26/90; at Colonel Allensworth State Historic Park, on 5/17/90; south of Cross Creek, 4.5 miles southeast of Traver, on 4/10/98 (CNDDB 2001).

65 Burrowing owl bones (likely not more than 500 years old) were taken from a Native American kitchen midden on the southwest shores of Buena Vista Lake from 1933-1934 (DeMay 1942). According to Linton (1908b) the species was "not common" around the lake during May and June of 1907.

probable breeding at Walker Pass in 1891, and at Weldon in 1911 and 1984 (Wheeler et al. 1941; CSUC 2001; MSB 2001; MVZ 2001; NMNH 2001; UCSB 2001; WFVZ 2001).[66] The California State University at Bakersfield campus had a small plot (40 acres) with burrowing owls: 23 owls were captured in 17 trapping sessions in July 1987 (Barrentine and Ewing 1988). There have been numerous recent observations of owls during breeding season throughout Kern County; breeding has been documented at the Kern National Wildlife Refuge in 1987, in the vicinity of the Tule Elk State Reserve in 1989 and 1990, near the Antelope Plain in 1994, along the California Aqueduct in the vicinity of Buena Vista Lakebed in 1998 and 1999, and in the vicinity of Grapevine in 2001 (CNDDB 2001).[67]

D. SAN FRANCISCO BAY AREA

The range of the burrowing owl in the San Francisco Bay Area encompasses all of Sonoma, Napa, and Marin Counties; the southwestern 5% of Solano County; the western 50% of Contra Costa County; the western 80% of Alameda County; and all of San Francisco, San Mateo, Santa Clara, and Santa Cruz Counties (DeSante et al. 1996).

Although there are historical records of confirmed breeding in every county in the San Francisco Bay Area, there are little data on the overall historical abundance of the burrowing owl in this area. The burrowing owl in the San Francisco Bay Area was historically "most numerous in parts of Alameda, Contra Costa, and Santa Clara Counties" (Grinnell and Wythe 1927). The species was documented to have been locally abundant in southwestern Solano County (at Benicia) in the 1920s and 1930s (WFVZ 2001), in Alameda County (at Newark) in the early 1900s (WFVZ 2001) and at the Oakland Airport in the 1960s (Thomsen 1971), in San

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[66] Eggs were collected at Semi Tropic Ranch on 4/26/17 (MSB 2001); at an unspecified location in Kern County on 4/18/35 (WFVZ 2001); at Grapevine on 4/30/62 (WFVZ 2001); and at Blackwells Corners (2 sets) on 4/5/64 (WFVZ 2001). Single birds were collected from Walker Pass on 7/2/1891 (NMNH 2001), and from Weldon on 7/2/11 (MVZ 2001) and in spring 1984 (UCSB 2001). Single birds were collected from El Tejon Ranch on 6/28/41 (Wheeler et al. 1941) and from an unknown location in Kern County on 3/16/52 (CSUC 2001). There are non-breeding season collection records from Kelso Valley, 2 miles north of Sorell Ranch, on 11/28/33; and from 2 miles north of McKittrick on 9/12/47 (MVZ 2001).

[67] Recent CNDDB observations in northwestern Kern County include: a pair of owls and a single owl at a den along the California Aqueduct near Lost Hills Road, on 3/26/96 and 3/27/96; 1 adult at a burrow site along the California Aqueduct northwest of Lost Hills, on 6/4/96; 1 owl along the California Aqueduct, southwest of Barker Road in the Antelope Plain, on 6/3/96 (2 owls were also seen here in October 1995); 2 adult owls at another site along the California Aqueduct southwest of Barker Road in the Antelope Plain, on 6/3/96; 1 adult and 2 juvenile owls northeast of Kecks Corner, north of Antelope Valley, on 6/23/94 (3 owls were flushed from 3 separate burrows here on 11/17/93); 1 adult observed at a burrow 2.5 miles south-southeast of Lost Hills, on 12/21/95; a pair of owls at a den along the California Aqueduct 2 miles east of Lost Hills Road, south-southeast of Lost Hills, on 5/16/98; 1 owl at a burrow along the California Aqueduct south of Lost Hills Road, on 7/15/96 (a second owl was observed nearby on 5/16/96 and 7/15/96); 4 adults and 1 juvenile at the Kern National Wildlife Refuge, in 1987; an unknown number of owl colonies at 2 sites at Semitropic Ridge, between 6/13/82 and 6/19/82; and an unknown number of owl colonies 1 mile west of Delano, between 6/13/82-6/19/82 (CNDDB 2001).

Recent CNDDB observations in western Kern County include: 3 owls (1 flying from a burrow) northeast of Buena Vista Lake Bed, on 9/21/88; 3 owls at a burrow 2.5 miles north-northeast of Tupman, on 6/14/89 (2 adults and 2 juveniles were also seen at this site on 6/21/90); 1 owl near I-5 and Buttonwillow Road, 4 miles north of Buttonwillow, on 3/13/90; owls at 5 locations in the vicinity of Tule Elk State Reserve (3 adults and 4 juveniles were seen at a burrow here on 6/11/89 but by 6/14/89 the burrow had been run over; 2 adults and 6 juveniles were seen on/around the burrow on 6/23/90; 3 adults and 3 juveniles were seen at a 2nd burrow during June 1990; 3 adults and 3 juveniles were observed at a 3rd burrow during June 1990; 2 adults and 3 juveniles were seen at a 4th burrow during June 1990; 3 adults and 2 juveniles were observed at a 5th burrow during June 1990); 2 adults at a burrow along the California Aqueduct, near Tupman Road, on 10/3/94 (owls have used a cluster of burrows here for an extended period of time); 5 adults 3.2 air miles northwest of Tupman, on 6/5/96; 4 burrows and 4 owls northwest of Fellows, on 4/28/98; 1 adult and 1 juvenile along the California Aqueduct at Maricopa Flat, on 8/25/98; 2 adults at a burrow northwest of Fellows, on the western edge of Midway Valley, on 3/17/99; 2 owls at burrows 6 miles northeast of McKittrick on 3/24/99; 3 owls at a burrow west of Buttonwillow, on 4/15/99; 1 adult at a burrow near Crocker Canyon Road, 6.5 miles west of Fellows, on 4/21/99; 1 adult and 3 juveniles along the California Aqueduct southeast of Taft, on 4/27/99; 1 adult at a burrow along the California Aqueduct, on the west side of Buena Vista Lake Bed, on 2/8/2000; 2 adults at a burrow at Richfield oil pumping station, on the southwest side of Buena Vista Lake Bed, on 4/6/2000 (1 adult was observed here on 2/8/2000); and 1 adult at a burrow 3 miles east-southeast of the intersection of Skyline Road and Elk Hills Road, on 3/22/2000 (CNDDB 2001).

Recent CNDDB observations in the vicinity of Bakersfield include: 3 owls approximately 6 miles east of Edison, reported in 1987; 1 owl and a burrow near Brimhall Road and Calloway Drive, on the west edge of Bakersfield, reported in 1987; 1 owl near a burrow near Calloway Drive and Coffee Road, approximately 3 miles west of Bakersfield, reported in 1987; 2 burrow sites with at least 2 adults near Bear Mountain Blvd., east of Arvin, on 1/29/90 (CNDDD 2001).

Other recent CNDDB observations in Kern County include: 3 owls in the vicinity of Tejon Ranch, west of the Tehachapi Mts., on 1/29/90; 5 owls in the Rand Mountains, 6 miles southwest of Garlock, on 7/10/92; and 1 adult and 1 juvenile near I-5 and the California Aqueduct, southwest of Wheeler Ridge, on 7/9/2001 (CNDDB 2001).

Mateo County (at Redwood City) in the 1800s (WFVZ 2001), in Santa Clara County (at Palo Alto) in the early 1900s (WFVZ 2001), and in Santa Cruz County in the 1800s and early 1900s (Skirm 1884; McGregor 1901).

DeSante and Ruhlen (1995) estimated that 165 pairs of owls remained in the southern San Francisco Bay Area in the mid 1990s, about 1.8% of the state breeding population. This likely represented a decline of about 53% from the period 1986-1990 (DeSante and Ruhlen 1995; DeSante et al. 1997). Over 65% of Bay Area owl colonies known in the 1980s were gone by the 1990s, and even when new groups located during the 1990s were included, there was still a 51% decline in colonies (DeSante and Ruhlen 1995). Except for a few pairs in the Livermore Valley and a population at Camp Parks in Dublin, virtually all the remaining owls are located in a crescent extending around the southern end of San Francisco Bay, from Palo Alto to Milpitas, north of Highway 101. Almost all the birds are located in parks or in developed urban settings. Breeding owls have now been extirpated from Napa, Marin, San Francisco, and Santa Cruz Counties, and have been nearly eliminated from Sonoma and San Mateo Counties. No breeding pairs have been observed recently on the Bay Area coast, despite the fact that small populations existed in the 1980s. Burrowing owl populations around the north end of San Francisco, San Pablo, and Suisun Bays have been reduced to remnants or extirpated.

Sonoma County

Historical records confirmed breeding at Cotati in 1900, at Santa Rosa in 1901, at Stony Point in 1913, and near Petaluma in 1939; and indicated probable breeding at Petaluma and at Freestone in 1870, at Cotati in 1898 and 1900, and at Napa and Santa Rosa in the 1920s (Storer 1926; Grinnell and Wythe 1927; FMNH 2001; MVZ 2001; PMNH 2001; WFVZ 2001; CAS 2002a).[68]

By the 1970s, when a steady decline in numbers had been reported in Sonoma County for decades (Remsen 1978), the burrowing owl was still an uncommon permanent resident in the open areas of the county, becoming numerous and more widespread in winter (Bolander and Parmeter 1978). Breeding owls were nearly extirpated from Sonoma County by 1987 (Burridge 1995); an extensive census begun in 1991 (DeSante and Ruhlen 1995) confirmed that perhaps only one or two breeding pairs remained in the early 1990s. The last confirmed breeding in the county was at Skaggs Island in 1986 (Burridge 1995).[69]

Napa County

There are several historical non-breeding season records from Napa County, but no records of burrowing owls in northern Napa County since 1963 (Fisher 1900; Grinnell and Wythe 1927; Remsen 1978; MVZ 2001).[70] Breeding burrowing owls have been extirpated from Napa County since the 1980s (DeSante and Ruhlen 1995).[71]

Marin County

Mailliard (1900) as well as Stephens and Pringle (1933) noted the burrowing owl to be a year-round resident in limited areas of Marin County. Historical records indicated probable breeding at Nicasio in 1879

[68] Eggs were collected from an unspecified location in Sonoma County on 5/15/1891; from Cotati on 5/12/1900 (2 eggs sets), from the Walker Tract, Santa Rosa, on 5/13/01; from Stony Point on 5/10/13; and from 4 miles southeast of Petaluma on 5/10/39 (WFVZ 2001). A male and female were collected from Petaluma on 8/27/1870; a single bird was collected from Freestone on 8/29/1870 (PMNH 2001). Two juvenile birds were collected from Cotati on 6/7 and 7/7, 1900, and adult birds were collected there on 1/23, 1/24, and 6/9 (2 birds), 1898 and 7/7/1900 (FMNH 2001; CAS 2002a). There are non-breeding season records from Santa Rosa on 10/8/01 and 12/24/02 (MVZ 2001; CAS 2002a).

[69] There were subsequent observations of single birds in Sonoma County, 1 near the old Santa Rosa Air Center in southwestern Santa Rosa (where burrowing owls had traditionally nested for many years), and another near Sears Point, close to Skaggs Island. The CNDDB has a record of an owl flushed from its burrow at upper Tubbs Island, approximately 1.5 miles northeast of Sears Point on 10/22/88 (CNDDB 2001). Surveys by the Madrone Audubon Society in 1997 at Skaggs Island and numerous other known historical nesting areas in Sonoma County found no breeding pairs (Leaves Newsletter, Volume 31, Number 1).

[70] Owls were recorded from vicinity of Mt. St. Helena (Fisher 1900; Grinnell and Wythe 1927). Single birds were collected from Sears Point Cut-Off Road on 10/19/37 and from Huichica Creek on 11/24/39 (MVZ 2001).

[71] A single bird was collected from Napa on 10/19/85 (MVZ 2001).

(CAS 2002a).[72] The owl was still a "relatively common resident" of open fields around Tomales Bay in 1971 (R. Johnson et al. 1971). Although there were several non-breeding season observations in the 1980s, the last evidence of breeding birds was at Terra Linda in 1976 and 1977, by which time the species was considered to be a very rare, very local breeder, with a very small overall breeding population (Shuford 1993; CNDDB 2001).[73] Breeding owls have been completely extirpated from Marin County since the 1980s (DeSante and Ruhlen 1995).[74]

Southwestern Solano County

Burrowing owls were apparently quite abundant at and near Benicia in the 1920s and 1930s; breeding owls were documented at Benicia before 1922, in 1927, 1930, 1932, 1933, and 1936 (Stoner 1922, 1932a, 1932b, 1933a; WFVZ 2001).[75] Burrowing owl nests were abundant enough that multiple sets of eggs were collected at Benicia; 7 sets on a single day in 1927, 4 sets over 3 days in 1930, 7 sets on a single day in 1932, and 5 sets on a single day in 1933 (WFVZ 2001). There were non-breeding season observations made northeast of Vallejo in the late 1970s and early 1980s (CNDDB 2001), but recent breeding season observations in southwestern Solano County could not be located.[76]

Western Contra Costa County

Historical records indicated probable breeding at Albany in 1922 and at Richmond in 1936 (MVZ 2001).[77] Recent breeding season observations from western Contra Costa County could not be located.

Alameda County

There are confirmed breeding records from Oakland in 1879 and 1881, Hayward in 1907, and numerous records in Newark from 1905 to 1914 (FMNH 2001; MVZ 2001; WFVZ 2001; CAS 2002a).[78] Historical records indicated probable breeding in Hayward and Fremont in the 1880s, in Berkeley in 1911, in Albany in 1922, and at Livermore in 1896 (FMNH 2001; MVZ 2001; PMNH 2001).[79] Burrowing owls were "fairly common" residents in Newark (as evidenced by large collections of eggs) through the 1950s, but suffered a "steady, marked decline" through the 1980s due to habitat loss from conversion of fields to urban and commercial development (CNDDB 2001; WFVZ 2001).

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72 There is a breeding season record from Nicasio on 3/24/1879 (CAS 2002a). Single birds were also collected from Tiburon in September 1897 (McGregor 1898), from Mill Valley on 9/30/28 (CAS 2002a), and from Fort Barry on 1/21/45 (MVZ 2001). Grinnell and Wythe (1927) observed the species in the drier portions of Marin County.

73 Non-breeding season records include: successive sightings of several owls residing near Abbott's Lagoon at Point Reyes National Seashore, in 1983; and a colony of at least 3 owls observed at St. Vincent School, approximately 1 mile south of Hamilton Air Force Base, on 1/30/84 and 2/6/84 (CNDDB 2001).

74 The U. S. Army Corps of Engineers reported burrowing owls nesting along airfield runways and levees at Hamilton Air Force Base through 1993 (USACE 1991, 1995), but owls were not found there during a 1994 field survey (USACE 1998).

75 Stoner (1922) reported capturing burrowing owls in Benicia before 1922. Stoner documented a "few" nests, a nesting female with eggs he had banded in 1930, a road-killed bird in 1932; and a few nests in 1933 (Stoner 1922, 1932a, 1932b, 1933a).

76 CNDDB records include an observation just off Susan Road, northeast edge of Vallejo in 1979; and non-breeding season observations made during the annual Benicia Christmas Bird Count on the lower slopes of Sulphur Springs Mountain, northeast of Vallejo (3 owls on 12/30/79; 1 owl on 12/28/80; 1 owl on 12/27/81; and 1 owl on 12/18/83), although no owls have been observed there since 1983 (CNDDB 2001).

77 A bird was collected from Albany on 3/13/22 (MVZ 2001). An owl was collected at Yacht Harbor in Richmond on 4/26/36 – birds were also collected there on 10/21/38 and in 1966 (MVZ 2001). Non-breeding season collection records include: from San Pablo on 12/27/08; from Point Richmond on 2/27/09; from Rogue Ranch, 4 miles from Concord on 1/7/20; and from El Sobrante on 11/28/73 (MVZ 2001).

78 Eggs were collected from Adams Pasture in Oakland on 4/25/1879 (MVZ 2001), and 2 female birds were collected and a nest with 5 fresh eggs observed in April 1881 in Oakland (FMNH 2001). Eggs were collected from Newark on 5/2/05; on 4/16 and 5/11, 1906; on 4/3/07; on 4/11/10; on 4/14 and 5/10, 1911; on 4/1/12; on 3/25/13; and on 4/4 and 4/10 (3 sets), 1914 (WFVZ 2001; CAS 2002a). Three juvenile birds were collected at Hayward on 7/4/07 (CAS 2002a).

79 A male bird was collected on 5/23 and a female collected on 9/29, 1881, in Hayward (PMNH 2001). A single bird was collected from Warm Springs in the Fremont area, on 4/12/1889 (MVZ 2001). A single bird was collected in Berkeley in March 1911 (MVZ 2001). Subsequent non-breeding season records from Berkeley include single birds collected at Carleton and Dana Streets on 11/22/36 and on the U. C. campus on 10/26/39 (MVZ 2001); and a bird seen on 1/10/37 (Carter 1937). A single bird was collected in Albany on 3/13/22 (MVZ 2001). A bird was found on Fruitvale Ave. on an unknown date in the 1930s (Grinnell 1936). A male bird was collected in Livermore on 4/7/1896 (FMNH 2001).

Formerly large owl colonies in Alameda County along the Bay shoreline have been severely reduced in size. A population at the Oakland Airport studied by Thomsen (1971) from 1964 to 1966 was once "one of the largest populations of burrowing owls in the Bay Area," with significant breeding populations remaining at the airport and around San Leandro Bay and Bay Farm Island in the 1970s and 1980s.[80] There are now very few birds left in this population (L. Trulio, pers. comm., 2001). A large former breeding colony at Jarvis Landing in Newark in the 1970s is now extirpated (CNDDB 2001).[81]

Along eastern San Francisco Bay, there are currently only 5-10 nesting pairs of owls remaining from Newark to Fremont, and also a few pairs near the bay edge (including at Don Edwards National Wildlife Refuge in Newark, Hayward Regional Shoreline in Hayward, the Oakland Airport and Martin Luther King Jr. Regional Shoreline in Oakland) up to Alameda (CNDDB 2001; L. Trulio, pers. comm., 2001, J. DiDonato, pers. comm., 2003).[82] Dwindling pairs of owls remain in scattered locations in Dublin (including a colony at Camp Parks), Pleasanton, and the Livermore Valley (CNDDB 2001; L. Trulio, pers. comm., 2001; M. Ricketts, pers. comm., 2002).[83]

San Francisco County

Historical records confirmed nesting in San Francisco, and indicated probable nesting on the San Francisco peninsula in 1909 and 1915 (Ray 1916; Hansen and Squires 1917; MVZ 2001; NMNH 2001).[84] Owls were historically observed as wanderers near Lake Merced (Grinnell and Wythe 1927), and were recorded in Golden Gate Park by Mailliard (1930). The last breeding season record from the City of San Francisco was in 1972 (MVZ 2001).

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80 The population at the Oakland Airport observed by Thomsen (1971) consisted of 18 breeding adults which produced 40 young in 1965 and 18 breeding adults which produced 31 young in 1966. Two pairs of owls were observed at Bay Farm Island, northwest of Oakland International Airport in 1983; and southeast of San Leandro Bay, several juveniles were observed in 1982 and 2 owls were seen at burrows in 1983 (CNDDB 2001).

81 There were repeated observations of up to 16 individual owls at Jarvis Landing, on the east end of the Dumbarton Bridge, between 1972 and 1979 (CNDDB 2001).

82 CNDDB records indicate that a population along the Hayward shoreline showed a marked decrease from 1990 when at least 4 owl pairs were present, to 1991, when a single owl pair was observed during breeding season (lack of grazing is cited as the reason for decline) (CNDDB 2001). Recent CNDDB records from Newark include: 2 adults and 5 juveniles at a burrow site on the east side of Coyote Hills, on 6/29/93 (the main threat here is predation by the introduced red fox); 2 pairs (1 pair with 2 young) in a burrow complex on Cherry Street, near Mowry Ave., from mid-June to mid-July, 1998; and 1 pair at another burrow site near the intersection of Cherry Street and Mowry Ave. on 7/22/98 (this site was threatened by disking) (CNDDB 2001). Burrowing owls nested at the Alameda Naval Air Station along the airfield runway and along the levees through 1993, but were not found there during a 1994 field survey (USACE 1998). There are small remnant non-breeding owl populations on East Bay Regional Park District lands at Hayward Shoreline (1 or 2 owls with no successful breeding – the population here has declined since the early 1990s mostly due to land management changes and predation by the red fox) and at Martin Luther King Jr. Shoreline Park (from 1 to 5 birds depending on the season, with no successful breeding) (J. DiDonato, pers. comm., 2003).

83 The Dougherty Valley in the San Ramon area south of Mt. Diablo is undergoing rapid urban development with associated owl habitat loss. According to the EIR for the Dougherty Valley Project, burrowing owls have been sighted recently throughout the Dougherty Valley, adjacent to Camp Parks in east Dublin (the entire valley is slated for intensive urban development). The complete number of breeding pairs in the Valley has not been quantified, but 2 pairs were confirmed breeding in 2001 in the middle of grading operations (M. Ricketts, pers. comm., 2002). One of the pairs fledged at least 6 young, while the other fledged 2. The young were excluded from their burrow complexes immediately after fledging (using one-way doors) to make way for grading. As with most passive relocation efforts, the final whereabouts of both the fledgling and adult owls are unknown. Subsequent passive relocation efforts in the winter of 2001-2002 prevented the establishment of nesting territories within the 2002 grading limits. Although the direct mortality of individuals was avoided, loss of nesting and foraging habitat continues in this area.

Five owls were observed at a burrow site near Coronado Lane and Hopyard Road in Pleasanton, on 10/17/90 (this site was threatened by continued development into a business park) (CNDDB 2001).

CNDDB observations in the Livermore valley include: individual sightings from 1979 to 1982 near Dagnino Road and Raymond Road, on the northeast edge of Livermore; many sightings from 1973 to 1978 (as many as 6 owls at one time) at Springtown, in northeast Livermore; 1 pair occupying a burrow at Springtown Alkali Sink, in 1993 (this site is threatened by ORV's, altered burn regime, refuse dumping, and invasion by exotic plants); a pair of owls near Dalton Ave. and Ames Street, in Livermore, on 4/20/93 and 5/10/93; and an unknown number of nesting owls near Hartford Ave. and North Livermore Ave., north of Livermore, between March and August 1997 (this site is threatened by a proposed development) (CNDDB 2001). Owls and evidence of occupied nests were observed from February-April 1999 in west Livermore (this site is threatened by a proposed business park, with no acknowledgement of the species' presence nor any mitigation), and near the Livermore Airport in 1999 and 2000 (L. Tung, pers. comm., 2000).

84 The NMNH (2001) has 3 eggs collected from San Francisco, unknown date. Two birds were collected from Ingleside Race Track, San Francisco on 3/15/09 (MVZ 2001). Three owls were spotted at the entrance of a used burrow just south of Visitacion Ave., in February 1915, and several other owl burrows were observed at the time (Ray 1916). A burrowing owl was also captured at 43rd Ave. and Fulton St. in February 1916 (Hansen and Squires 1917).

Burrowing owls historically bred on the Farallon Islands off of San Francisco. Indicative of probable breeding, Bryant (1888) recorded two birds there in the spring of 1887. Dawson (1911, 1923) found a single owl on S. E. Farallon in 1911, reporting it to be "a sole survivor, we were informed, of a former breeding colony" that had been shot off because of their persecution of smaller migrant birds. A single burrowing owl egg collected on the Farallones in spring 1911 was donated to the Point Reyes Bird Observatory in 1971 (DeSante and Ainley 1980). DeSante and Ainley (1980) presumed owls must have nested there for only a few years, since there are no other reports of breeding, although remains of owls were found on South Farallon Island in June 1958, June 1964, and May 1965 (Bowman 1961; Tenaza 1967) and single birds were collected from Southeast Island in April 1972, March 1986, and June 1988 (MVZ 2001; CAS 2002a).[85]

Breeding burrowing owls have been extirpated since the 1980s from San Francisco County (DeSante and Ruhlen 1995).

San Mateo County

Historical records confirmed breeding at Redwood City in 1898 and indicated probable breeding at Menlo Park in 1906 (MVZ 2001; PMNH 2001; WFVZ 2001; CAS 2002a).[86] Collector C. Littlejohn, who collected 2 sets of eggs at Redwood City in the summer of 1898, remarked that although owls were "very numerous" previously, the nests he found were the first seen in 25 years of looking (WFVZ 2001).

Breeding owls were nearly extirpated from San Mateo County by the 1970s (Remsen 1978) and perhaps only 1 or 2 breeding pairs now remain (DeSante and Ruhlen 1995; C. Breon, pers. comm., 2001).

Santa Clara County

At the turn of the century, the western burrowing owl was a common bird of Santa Clara County (Price 1898; Van Denburgh 1899; Fisher 1904). Historical records confirmed breeding in the Santa Clara Valley in 1882, east of Los Gatos in 1890, southeast of Milpitas in 1892, in East San Jose in 1902, and near Palo Alto in 1892, 1901, 1909, 1911, and 1940 (FMNH 2001; MVZ 2001; SBMNH 2001; WFVZ 2001; CAS 2002a).[87] There are breeding season records of owls from Milpitas in 1883, Stanford in 1893, Alviso in 1901, Steven's Creek in 1903, and Jasper Ridge at Stanford University in 1909 (MVZ 2001; CAS 2002a).[88] Egg collector J. Snyder remarked that the species was common near Palo Alto in 1909 (WFVZ 2001). In 1927, Grinnell and Wythe wrote that the bird was still a "fairly common resident in the drier, unsettled interior parts of the [Bay Area] region," being most abundant in Alameda, Contra Costa, and Santa Clara Counties. However, accounts suggest that by the late 1930s and early 1940s the species was beginning to decline. J. Snyder found burrowing owls to be "very rare" in Palo Alto by 1939, due to lack of ground squirrels to prepare the nesting burrow (WFVZ 2001). The species was noted to be further decreasing in Palo Alto in the 1970s (Remsen 1978).[89]

In Santa Clara County, detailed records of owl locations and their fate are most complete from the early 1980s onward, when the county began experiencing explosive human population growth. In 1989, the

[85] DeSante and Ainley (1980) characterized the owl as an uncommon visitor to the South Farallon Islands in the fall (approximately 50 fall visitors had been recorded), and a rare resident in winter (a total of 15 birds were recorded, with from 1 to 3 individuals wintering each year), based on Point Reyes Bird Observatory bird counts from 1968-1975. Most wintering birds disappeared by March or April.

[86] Eggs were collected from Redwood City on 6/13 and 7/9, 1898 (WFVZ 2001). Birds were collected from an unspecified location in San Mateo County on 2/6 and 5/4, 1896 (PMNH 2001); and 2 birds were collected from Menlo Park in 1906 (MVZ 2001). Non-breeding season records include from Palo Alto in October 1897 (McGregor 1898), and from Redwood City on 2/13/14, and 11/6, 11/10, 11/23, and 11/27, 1892 (CAS 2002a).

[87] Eggs were collected from the Santa Clara Valley on 5/13/1882 (SBMNH 2001); from 8 miles east of Los Gatos on 5/31/1890 (CAS 2002a); from Stanford University on 5/28/1892 (CAS 2002a); from Berryessa, southeast of Milpitas, on 5/28/1892 (FMNH 2001); from East San Jose on 4/1/02 (WFVZ 2001); from near Palo Alto on 5/12/09 (WFVZ 2001) and 5/2/11 (MVZ 2001); and from East Palo Alto on 5/27/40. Juvenile birds were collected during breeding season from Palo Alto on 7/6 and 7/14, 1901 (CAS 2002a).

[88] Breeding season records include from Steven's Creek on 3/10/03 (MVZ 2001); Milpitas on 8/20/1883 (CAS 2002a); Stanford on 8/28/1893 (CAS 2002a); Jasper Ridge at Stanford University on 3/31/09 (CAS 2002a); and Alviso on 5/4/01 (CAS 2002a).

[89] A colony of 5 adults was documented near the Palo Alto dump on 7/3/74 (Stallcup and Greenberg 1974).

consulting firm of H.T. Harvey & Associates compiled a list of 215 sites where burrowing owls were observed between 1984 and 1988 (H. T. Harvey and Associates 1994). Many of these observations were anecdotal and many others were sites confirmed as part of on-going research or systematic owl observation. H.T. Harvey and Associates found that 97% of the sites supported fewer than 10 birds and 81% supported only 1 or 2 birds (H. T. Harvey and Associates 1994).

In the summers of 1995 and 1998, Trulio (1998a) re-surveyed 123 of the 215 occupied sites identified by H. T. Harvey and Associates (1994).[90] The sites were located in the cities of Palo Alto, Mountain View, Sunnyvale, Santa Clara, and San Jose, including Alviso. Moffett Airfield and San Jose Airport, 2 sites not available to development, were excluded from the survey. The survey results showed a steady decline in remaining owl habitat. In 10 years, 70 of 123 sites (57%) were lost to development, an average of almost 6% per year. Another 12 sites (10%) were reduced in size or habitat quality.[91] At this rate of loss, Trulio (1998a) predicted that all remaining sites on private or city owned land could be lost by 2005.

From their surveys, DeSante and Ruhlen (1995) estimated that approximately 60% of known owl locations in Santa Clara County were lost between the early 1980s and 1993. By 1997, the breeding owl population in the county had dwindled to about 120-141 pairs, distributed in a crescent around the southern San Francisco Bay, with most owls in Mountain View and San Jose (J. Barclay pers. comm., 2002). J. Barclay (pers. comm., 2002) estimates 43 to 47 owl pairs remained in San Jose in 1997 and 39 to 40 pairs remained in 2000, based on a thorough census of 50 previously known breeding locations.

In 2002, Trulio resurveyed 111 of the sites listed by H.T. Harvey that were located on private land. By 2002, only 27% of these 111 locations still contained suitable owl habitat; 66% had been developed completely and 7% were significantly reduced in size (Trulio in press). A number of large sites were not included in this survey because they were on public land and were the subject of more detailed observations. These sites, Bixby, Shoreline and Sunnyvale Baylands Parks, Moffett Federal Airfield, Mission College in Santa Clara, and the San Jose Airport, all continued to support more than 10 owls each in 2002 (J. Barclay, pers. comm., 2002). At these locations, researchers have collected specific data on the number of owls over time. These data show that the numbers of breeding owl pairs have fluctuated over the years.

At Bixby, Shoreline and Sunnyvale Baylands Parks, where little development has occurred, numbers have remained relatively stable since 1997. The 2002 owl population at Shoreline Park in Mountain View was 5 breeding pairs, up from an average of 3 pairs the previous 10 years (P. Delevoryas, pers. comm., 2002).[92] At Moffett Airfield, which has had little development, breeding owl pairs have fluctuated from a high of 30 pairs to a low of 15 (Trulio 2002, amplified by pers. comm., 2002).[93] During this period, the number of breeding pairs at Mission College declined from approximately 30 pairs (Buchanan 1996) to 9 active burrows (Trulio 2002, amplified by pers. comm., 2002); the decline is the result, in large part, of habitat loss at Mission College due to urban development.[94] At San Jose Airport, active management has helped to substantially increase the number of breeding pairs from approximately 15 pairs in 1988 to 40 pairs in 2002 (J. Barclay, pers. comm., 2002).

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[90] H. T. Harvey and Associates (1994) found that on 97% of the sites there were 10 or fewer owls, and on 81% just 1 or 2 birds survived.

[91] Trulio listed sites completely developed as “lost,” those diminished in size or habitat quality as “reduced,” and those which could still support a pair of owls as “extant.”

[92] 4 adults and 2 fledglings were observed near Rengstorff Ave. and Charleston Ave., near Mountain View Shoreline Park, in late April 1982. Development of this site began in January 1983, and the last owl observation here was of 2 adults in February 1983. 8 adults (4 pairs) and an unknown number of juveniles were seen at Long Point shoreline at Mountain View Park, north of Moffett Naval Air Station, on 6/22/93 (CNDDB 2001). 13 adults and 16 young were seen at Shoreline Park in 2002 (P. Delevoryas, pers. comm., 2002).

[93] Annual counts of breeding pairs at Moffett Field in recent years have fluctuated from 18 to 27 (CNDDB 2001); J. Barclay (pers. comm.. 2002) estimates 35 pairs currently reside at Moffett Field.

[94] According to the Mission College web site the breeding population of owls there has recently fallen from 60 owls to about a dozen birds in recent years (15 pairs were recorded in 1998, 6 of which nested successfully, producing 14 chicks; 8 pairs in 1999, 3 of which nested successfully, producing 15 chicks; 7 pairs in 2000, 6 of which nested successfully, producing 13 chicks (only 10 fledged); and 8 pairs in 2001).

Small colonies of owls also persist in Alviso (currently estimated at 15 pairs), San Jose, Santa Clara, and Milpitas (CNDDB 2001; J. Barclay, pers. comm., 2002).[95] Formerly large owl populations in the northern San Jose/Alviso area and City of Santa Clara have been significantly impacted in recent years (CNDDB 2001; J. Barclay, pers. comm., 2002) and former colonies known in urban Sunnyvale in the 1980s and early 1990s have likely been extirpated (CNDDB 2001; D. Plumpton, pers. comm., 2002).[96] Breeding owls may have been extirpated recently from Morgan Hill as well (J. Barclay, pers. comm., 2002).[97]

<u>Santa Cruz County</u>

Historical records confirmed breeding at Santa Cruz in 1882 and 1901 (McGregor 1901; SBMNH 2001; WFVZ 2001).[98] Skirm (1884) described the species as "common" in Santa Cruz County and reported collecting eggs. McGregor (1901) described it as a "fairly common" breeding bird of Santa Cruz County, noting that "fresh eggs can be found at Santa Cruz about April 15." By mid-century, Streator (1947) reported that the species was "now rare due to the poisoning of ground squirrels" around Santa Cruz.

The species had "greatly declined" in Santa Cruz County by the 1970s (Remsen 1978), with only 2 recently reported sightings – one in February 1969 on the lower UC Santa Cruz campus; another near Moss Landing elementary school (Gordon 1974). Warrick (1982) reported on a population of about 20 burrowing owls inhabiting grasslands on the U. C. Santa Cruz campus that apparently wintered there, as well as nested (CNDDB 2001).[99] Burrowing owls have not been documented nesting on the campus since 1987, although owls of unknown origin still occur there in the winter (J. Barclay, J. Linthicum, pers. comm., 2002).

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95 A small owl colony (2 adults and 3+ juveniles seen on 6/14/2000; and 4 owls seen in January 2001) has been observed north of Hwy. 237, near Los Esteros Road and North First Street, in Alviso (CNDDB 2001).

Significant breeding populations remain in San Jose at the San Jose International Airport (28 adults/19 juveniles seen in 1990; 12 adults/11 juveniles in 1991; 30 adults/68 juveniles in 1997; 50 adults/92 juveniles in 1998; 48 adults/101 juveniles in 1999; and 62 adults/129 juveniles in 2001) (CNDDB 2001) and in the Coyote Valley (3 families of burrowing owls with 16 to 22 adults and chicks were seen there in 1998). Recent CNDDB observations in San Jose include: 2 adults near Karina Court and North First Street, on 4/1/92; 4 owls at a den at the end of Nortech Parkway, 1 mile east of Alviso, on 8/4/93; near Airport Parkway and Guadalupe Parkway, east of the airport (4 adults and 2 juveniles seen on 8/28/93, 9 owls (2 adults, 7 juveniles) banded in 1993); a burrow with owl sign near Monterey Road and Curtner Road, on 3/10/93; 1 owl near a possible burrow site at Silver Creek Hills, on 3/2/2000; a burrow near Tully Road (Swift Lane) and Capitol Expressway (2 adults seen on 6/19/99, 2 adults and 3 juveniles seen on 6/21/2000, and 2 adults and 3 juveniles seen on 7/1/2001); 4 adults and 4 juveniles using 2 burrows on the south side of Devcon Court, from 4/17/2001 to 9/4/2001 (2 owls found dead in July 2001, likely killed by feral animals); and 2 adult owls at a burrow site north of Meadowfair Park, near Aborn Road and King Road, on 3 occasions in July 2001 (CNDDB 2001).

There are breeding owls at 3Com Corp, near Hwy. 237 and Great America Parkway (5 dead adult owls were collected here on 8/31/91); and east of Great America Amusement Park (1 adult and 1 juvenile were seen at a burrow site on 6/16/99, and 3 adults and 1 juvenile were seen on 7/2/2001) (CAS 2001).

There were owl observations in Milpitas and along Arroyo de las Coches Creek in June 1975 (CDFG 1975). 2 adults and 1 juvenile seen at a burrow near Curtis Ave. and South Main, on 9/15/98 (these owls were "passively excluded" on 10/26/98); and 2-3 adults were documented breeding along Barber Lane, west of I-880, in 1999 (these owls were excluded from the site on 10/18/99) (CNDDB 2001). Both sites were subsequently developed and the owls are extirpated (CNDDB 2001).

96 A breeding pair of owls was seen between Patrick Henry Jr. High School and Peterson High School - each year from 1981 to 1983 (1 young fledged in 1981, 1 in 1982, and 0 in 1983); there were active owl colonies near Fairoaks Ave. and Alviso Fwy., and near Hwy. 101 and Mathilda Ave., in northern Sunnyvale in 1983; a colony southeast of the junction of Coyote Creek and Alviso Slough, north of Sunnyvale, was extirpated by 1983; 2 pairs of owl were seen off Caribbean Drive, near Lawrence Expy. and Hwy. 237, on 6/10/99 (CNDDB 2001).

97 Burrowing owls may now be extirpated from Morgan Hill (there were 2 known breeding pairs in 2000, only 1 adult in 2001, and no known owls in spring of 2002) (J. Barclay, pers. comm., 2002). Recent CNDDB observations in Morgan Hill include: 1 adult at a burrow site near Day Road, southeast of Lions Peak, south of Morgan Hill, on 12/24/92; 2 owls at burrows in Kirby Canyon, 3 miles north of Morgan Hill, from 1991-93; a burrow with signs of occupation, 2 adults, and 1 recently-fledged juvenile near Cochran Road and Hwy. 101, north of Morgan Hill, on 7/14/2000; and El Toro School, and near Calle Mazatlan and East Central Ave., Morgan Hill (1 owl seen on 6/3/98; 2 owls seen shortly after a disturbance created by grading; 2 adults and a maximum of 4 juveniles seen between 6/9/2000 to 8/2/2000; only 1 adult seen during several visits from June to August 2001) (CNDDB 2001). No adults were seen in Morgan Hill in 2002 (J. Barclay, pers. comm., 2002).

98 Eggs were collected from Santa Cruz on 5/20 and 6/1, 1882 (SBMNH 2001; WFVZ 2001) and on 4/15/01(McGregor 1901). There are non-breeding season records from San Andreas Road, in the vicinity of Watsonville on 12/29/37; and from Santa Cruz in 1900 and on 1/23/38 (MVZ 2001).

99 It was reported in 1987 that 2 adults and 2 juveniles were previously observed at the East Field, on the UC Santa Cruz Campus, north of Santa Cruz (this site was threatened by University expansion (CNDDB 2001). Fourteen owls were reported to winter on the campus in 1994, with an additional owl observed at a winter burrow site between Wilder Creek and Empire Grade, on 12/19/94 (CNDDB 2001).

Breeding burrowing owls have been extirpated from Santa Cruz County since the 1980s (DeSante and Ruhlen 1995), although wintering birds are often seen in dune and coastal grasslands (L. Trulio, pers. comm., 2001).

E. CENTRAL WESTERN CALIFORNIA

The range of the burrowing owl in central western California encompasses Monterey County; the western 75% of San Benito County; and San Luis Obispo and Santa Barbara Counties (DeSante et al. 1996).

Although there are historical records of confirmed breeding in every county in central Western California, there are little data on overall historical abundance of the burrowing owl in this area. The species was documented to have been locally abundant in Monterey County (around Aromas) in the 1930s (Gordon 1974), in San Benito County (at Paicines) in the late 1800s (Mailliard and Mailliard 1901), and in Santa Barbara County (at Santa Barbara) in the late 1800s (Streator 1886).

Breeding burrowing owls have been eliminated from these specific locations, extirpated from coastal San Luis Obispo County, and very nearly extirpated from coastal Monterey County and the western 75% of Santa Barbara County. DeSante and Ruhlen (1995) estimated that only 82 pairs of owls (0.5% of California's population) persist in the combined central coast, central interior, and southern coast regions. These owls are mostly in isolated pairs and very small groups, and are facing intense development pressure (DeSante et al. 1996).

<u>Monterey County</u>

Historical records confirmed breeding near Monterey in the 1890s and indicated probable breeding in Monterey in 1903 (FMNH 2001; MVZ 2001).[100] Burrowing owls were reported to be "fairly common" during summer (Willett 1908) and probably bred in the lower and upper Salinas Valley and surrounding foothills along the Monterey/San Luis Obispo County line (Roberson 1985; MVZ 2001).[101] Owls were probably breeding near Big Sur in 1903-1904 and in the Jolon Valley in 1909 (Pemberton and Carriger 1915),[102] but there are no known recent records of owls from these areas (Roberson 1985). Owls were "plentiful" around Aromas in the 1930s (Gordon 1974) and were found by Grinnell and Linsdale in 1934-1935 at Point Lobos Reserve (Drury 1953). Mowbray (1947) reported never seeing burrowing owls during 2 years of observations at Camp Roberts, in the Upper Salinas Valley, and concluded that they must be present in very small numbers if at all, as he visited all parts of the camp that were typical habitat for the owl.

Breeding was confirmed near Marina in 1972 and owls were thought to still occur within the Big Sur Planning Unit (coastal Monterey County south of Point Sur) in the 1970s (Gordon 1974; USDA 1978).[103] Roberson (1985) reported them to be a rare resident in the mouth of the Salinas Valley, noting that widespread cultivation had limited habitat to a few remaining colonies. A likely breeding colony was reported north of Castroville in the 1980s (CNDDB 2001).[104]

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[100] Eggs were collected from 6 miles north of Monterey on 6/17/1897 and on 5/5/1899 (MVZ 2001). A single bird was collected from Monterey on 3/19/03 (FMNH 2001).

[101] A single bird was collected from the Salinas Valley on 8/29/07, and 2 birds were taken 2 miles northeast of San Lucas on 7/16/19 (MVZ 2001). An owl was seen in June 1960 at Gonzales (Roberson 1985). There is a non-breeding season record from Blanco Road on the west side of Salinas on 10/3/36 (MVZ 2001).

[102] Several owls were noted on bare hillsides near the ocean north of the Little Sur River during winter (December-January) of 1903-1904. Owls were seen from May-June of 1909 in the Jolon Valley, but according to Pemberton and Carriger (1915) the burrowing owl was "not a common bird at all" in this area.

[103] In 1972 a family of burrowing owls was seen close to Hwy. 1, immediately north of Marina (Gordon 1974).

[104] In 1983 owls were reported frequently observed (including a group of 8 owls) along Dolan Road, about 2 miles north of Castroville (CNDDB 2001).

Breeding burrowing owls have now been completely or very nearly extirpated (perhaps only 1 or 2 breeding pairs still exist) from coastal Monterey County (DeSante and Ruhlen 1995). A 1992 breeding owl survey located only 14 pairs in the entire county, centered near the City of Salinas and rangeland east of King City (Roberson 1993). Most recent observations of nesting colonies in Monterey County are from the Salinas River Valley (CNDDB 2001) and breeding was confirmed at the Salinas Airport in 1994 (J. Barclay, pers. comm., 2002).[105]

San Benito County

The burrowing owl was listed as a "common resident" (although scarce in some years) at Paicines, from 1888-1901 by Mailliard and Mailliard (1901). Historical records confirmed breeding at an unspecified location in San Benito County in 1889, and indicated probable breeding near Panoche in 1936 (MVZ 2001; OM 2001).[106] Other than a breeding pair of owls observed near Hollister since 1999 (P. Delevoryas, pers. comm., 2003), recent breeding season observations in San Benito County could not be located.[107]

San Luis Obispo County

Historical records confirmed breeding near San Luis Obispo in 1928, at McMillan Canyon in 1930, south of Coalinga in 1934, and near Simmler in 1949; and indicated possible breeding at Morro in 1939 and Cholame before 1940 (Roberson 1985; MVZ 2001; WFVZ 2001).[108] Breeding burrowing owls have been extirpated from coastal San Luis Obispo County since the 1980s (DeSante and Ruhlen 1995). A substantial breeding population of owls remains at the 200,000-acre Carrizo Plain Natural Area (managed by the Nature Conservancy, BLM, and CDFG) in eastern San Luis Obispo County, which is the largest area of undeveloped grassland habitat for burrowing owls in California (Rosenberg et al. 1998a; CNDDB 2001).[109] Large numbers of active owl nests can be found here during breeding season: 37 active nests were located in 1997, 32 nests in 1998, and 40 nests in 1999 (Rosenberg and DeSante 1997; Rosenberg et al. 1998b; Rosenberg 1999).[110]

Santa Barbara County

Historical records confirmed breeding at Santa Barbara in 1875 and 1885 (Streator 1886; NMNH 2001).[111] Streator (1886) noted that the burrowing owl was "common" at Santa Barbara in 1885. Bartholomew (1940) recorded 7 burrowing owl sightings in 1937 and 1938 in the upper Santa Ynez River and along the crest of the Santa Ynez Mountains.

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105 The species is currently known to occur within Monterey Bay Marine Sanctuary. Recent breeding season observations include: a single bird at King City on 4/14/94; several pairs of breeding owls at the Salinas Airport (2 adults and 4 juveniles observed on 7/10/94, and 1 pair observed in 1999); 6 birds reported and an additional 2 birds that appeared to have nested observed on 8/27/97 between Salinas and Santa Rita (this site was threatened by development); and 2-3 adult owls at Johnson Canyon, east-northeast of Gonzales, in April-May 1998, with 1 adult also observed there in December 1997 (this site was threatened by landfill expansion) (CNDDB 2001).

106 A clutch of 8 eggs were collected in San Benito County on 5/17/1889 (OM 2001), and an owl was collected from 3 miles northwest of Panoche on 7/10/36 (MVZ 2001).

107 A breeding pair of owls was seen north of the town of Hollister, 1 mile south of Shore Road along Highway 25. The birds were first observed in November, 1999 by John Delevoryas. A breeding pair of owls and young were observed from spring through fall in 2000, 2001, and 2002 by J. Delevoryas. Photographs were taken of 1 adult and 1 fledgling in June, 2002 by J. Delevoryas.

108 Eggs were collected 4 miles north of San Luis Obispo on 4/25/28; at McMillan Canyon on 4/9/30; at Cottonwood Pass, south of Coalinga on 3/24/34; and on the Carrizo Plains, near Simmler on 4/3/49 (WFVZ 2001). Single birds were collected from Morro on 1/13/39 and 2/7/39 (MVZ 2001). There is also a record from Cholame Flats pre-1940 (Roberson 1985).

109 Recent CNDDB observations at Carrizo Plain include 2 adults at the south end of Soda Lake, on 3/25/90, and numerous burrows with signs of occupation along Arrowbear Trail, on 3/25/90 (CNDDB 2001). Other recent non-breeding season observations in San Luis Obispo County include: 1 owl at a burrow and owl sign at several other burrows about 4 miles northeast of Cholame on 10/22/93 (all of these burrows were excavated in November 1993 with CDFG approval); 1 owl at a burrow at Camp Roberts Military Reservation, on 12/22/97; and single adult owls observed at 2 locations at Camp Roberts in 1998 (CNDDB 2001).

110 J. Gervais (pers. comm., 2003) believes the owl population at Carrizo Plains Natural Area is much larger than survey efforts indicate, due to a survey method limited to finding nesting pairs along roads.

111 An immature bird was collected at Santa Barbara on 7/1/1875 (NMNH 2001), and Streator (1886) noted that owls bred there in 1885.

There was probable breeding at Montecito and Santa Barbara in the 1970s (SBMNH 2001), but owl numbers had drastically declined in the Santa Barbara region by then (Remsen 1978).[112] The burrowing owl was uncommon, but not rare in the Santa Barbara area in the late 1970s and early 1980s, with owls seen at the U. C. Santa Barbara campus, Santa Barbara Airport, Goleta Slough, and Santa Barbara Community College (R. Panza, pers. comm., 2002).

Lehman (1994) noted that owls had been "formerly much more numerous," and were "nearly completely extirpated" from Santa Barbara County. By the 1990s only 1 or 2 pairs nested in fields west of Santa Maria and probably also in the Santa Ynez Valley (Lehman 1994).[113] The number of wintering birds had also declined severely during since the 1980s and an average of only 1 or 2 were seen each year along the South Coast east of Gaviota (Lehman 1994). Burrowing owls may possibly still nest in the San Marcos Foothills (SMFA 2002). Owls once nested at Vandenberg Air Force Base, but evidently have not bred there since 1979-1980 when 4-5 pairs nested in rangeland east of Pt. Arguello for 2 consecutive years (there have been only 3 summer records at Vandenberg AFB between 1977 and 1994); although there is still significant use of suitable habitat on the base by migrants and winter visitors (Holmgren and Collins 1999). Breeding burrowing owls have apparently been very nearly extirpated from the western 75% of Santa Barbara County (DeSante and Ruhlen 1995), and according to Lehman (1994), "the species' future [in Santa Barbara County] looks bleak."

F. SOUTHWESTERN CALIFORNIA

The range of the burrowing owl in southwestern California encompasses the southern 55% of Ventura County; the southern 50% of Los Angeles County; all of Orange County; the western 40% of San Diego County; the southern California islands; the western 25% of Riverside County; and the southwestern 5% of San Bernardino County (DeSante et al. 1996).

Although there are historical records of confirmed breeding in every county in southwestern California, there are little data on overall historical abundance of the burrowing owl in this area. The species was documented to have been locally abundant throughout Ventura County in the late 1800s (Evermann 1886), throughout western Los Angeles County from the late 1800s into the early 1900s (Willett 1912; FMNH 2001; MVZ 2001; NMNH 2001; WFVZ 2001), in western San Bernardino County (near Chino) in the early 1900s (WFVZ 2001), and throughout coastal San Diego County in the late 1800s (Emerson 1884; Van Dyke 1888; Sharp 1907).

Breeding burrowing owls have now been extirpated from coastal Ventura County and nearly eliminated from Orange, San Diego, and Los Angeles Counties (DeSante and Ruhlen 1995). The species is greatly reduced in numbers and is now quite local in coastal southern California. An estimated 260 nesting pairs (3% of California's population) persisted in the area in the early 1990s, representing a decline of about 57-85% since the mid 1980s (DeSante and Ruhlen 1995). Owls in Southern California west of the deserts exist at very low densities (much less than 0.01 pairs per square kilometer). Remaining owls in this area are now found only on undeveloped federal lands, having been almost entirely extirpated from private lands by urban sprawl. These owls are mostly in isolated pairs and very small groups, and are threatened by intense development pressure (DeSante et al. 1996).

Ventura County

In the late 1800s the burrowing owl was a "common and generally distributed" nesting bird throughout Ventura County (Evermann 1886). Historical records confirmed breeding at Simi in 1897; and indicated

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112 Single birds were collected from Sycamore Canyon, Montecito on 3/22/75, and from Child's Estate Zoo, Santa Barbara on 7/10/76 (SBMNH 2001).

113 Recent summer records from Santa Barbara County include an owl seen between July and October in 1984 on More Mesa in Goleta and pairs seen in June 1995 and June-July 1996 on the Santa Maria River levee; it is unknown whether the 1995 pair produced young and the 1996 nesting may have failed when the levee was graded and the nest destroyed (Holmgren and Collins 1999).

probable breeding at Ventura in 1906 and in the southern part of the county in 1911 (MVZ 2001; UCLA 2001; WFVZ 2001).[114] The species was known to occur in the 1970s in the Pine Mountain-Sespe-Wheeler Gorge area of the southern Los Padres National Forest, north of Ojai (Stebbins and Taylor 1973).

Breeding burrowing owls have been extirpated from coastal Ventura County since the 1980s (DeSante and Ruhlen 1995).[115]

Los Angeles County

Numerous historical records confirmed widespread breeding of owls throughout the entire region of what is now the urbanized Los Angeles area, from the 1880s through the 1930s (Hartzell 1888; McGregor 1898; Swarth 1900; Willett 1912; AMNH 2001; FMNH 2001; LACM 2001; MVZ 2001; NMNH 2001; UCLA 2001; WFVZ 2001; CAS 2002a).[116] The burrowing owl was apparently once an extremely abundant resident in the Los Angeles region (e.g. Willett 1912).

With urban development, burrowing owl numbers had gone way down in the Los Angeles region by the 1970s (Remsen 1978). There was confirmed breeding at Playa del Rey from the 1960s through the 1980s; probable breeding at Los Angeles and Hermosa Beach in the 1980s; and non-breeding season sightings in the Long Beach area from the 1950s through the 1970s (CNDDB 2001; CSULB 2001; LACM 2001; WFVZ 2001).[117] There were apparently "many" burrowing owls at the California State University, Long Beach campus in the past (C. Collins, pers. comm., 2002), but this population was extirpated by the early 1980s (P. Bloom, pers. comm., 2002). Breeding burrowing owls have most likely been nearly extirpated from southern Los Angeles County.[118] Small numbers of breeding burrowing owls persist in the Antelope Valley, in northeastern Los Angeles County; these birds are discussed in the section on the southern desert range, below. Recent raptor surveys throughout most of the Santa Monica Mountains National Recreation Area have located no nesting burrowing owls, although owls winter there (P. Bloom, pers. comm., 2002).

Orange County

Historical records confirmed breeding at Anaheim in the 1880s and in 1918; at Balboa Beach in 1920; at Buena Park in 1927, 1928, 1935, and 1938; at Newport Beach in 1931 and 1955-1964; near Sunset Beach in 1938; near Cypress in 1945, at Los Alamitos in 1958, Costa Mesa from 1955-1972, and Santa Ana from 1956-1959 (Robertson 1929, 1930; T. Howell 1964; FMNH 2001; LMDBL 2001; SBMNH 2001; WFVZ 2001; J.

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114 Eggs were collected at Simi on 5/10/1897 (WFVZ 2001). There are bird collection records from Ventura on 4/21/06 (MVZ 2001) and from the southern part of county on 5/27/11 (UCLA 2001).

115 There is 1 recent breeding season record from upper Dry Canyon, approximately 2 miles north of Simi Valley, on 3/27/90 (CNDDB 2001).

116 Eggs were collected from: El Monte on an unknown date (FMNH 2001); Los Angeles County in March 1884 (Hartzell 1888); the City of Los Angeles on several occasions in June 1885 (Hartzell 1888; WFVZ 2001), 6/4/1886 (FMNH 2001), 6/25/1887 (NMNH 2001), 1892, 5/30/1893, 5/8/1895, 5/15/1895, 4/11/1898, 4/14/1898, 5/9/1898, 5/24/03, 5/31/03, and 5/2/04 (WFVZ 2001); Anaheim on 5/21/1887 (NMNH 2001); Pasadena on 5/4/1889, 4/26/1892, and 6/11/1894, near Pasadena on 4/17/1895 (MVZ 2001; WFVZ 2001); Barley Field, near Harbor City, in June 1902 (Willett 1912), 4/29/04, 4/26/14, 5/17/14, 5/31/14, 4/18/16 (WFVZ 2001); San Pedro on 5/19/08 and 5/9/09 (FMNH 2001; WFVZ 2001); Hermon Hills, Los Angeles on 4/28/19 and on 5/5/20 (MVZ 2001); Cahuenga on 5/9/1895; 2 miles northwest of Claremont on 5/2/02; Gardena on 5/17/13; Athens on 5/14/21 (2 sets); near Redondo on 5/10/29 (2 sets); near Culver City in May 1934; and near Pomona in April 1938 (WFVZ 2001).

Breeding season records include: birds collected from Highland Park on 3/23/1887 (MVZ 2001); from Cahuenga (now Universal City) on 5/18/1888 (AMNH 2001); from Cienega on 3/7, 3/10, 3/26, and 3/27, 1890 (LACM 2001); from Long Beach in August 1894 (McGregor 1898; LACM 2001) and 3 birds on 7/9/00 (LACM 2001); from Pasadena on 5/22/1895 and 8/14/00 (LACM 2001); several pairs of breeding owls found in fields in northwestern Los Angeles (1 mile northwest of Westlake Park) from 1893 to 1900, when the area was ranch land (Swarth 1900); 3 birds from Point Firmin, near San Pedro on 9/15/06 (MVZ 2001); from Gardena on 3/7/15 (FMNH 2001) and on 6/17/32 (FMNH 2001); a male bird with sexually developed gonads from Redondo Beach on 3/1/08 (LACM 2001) and 5/28/17 (FMNH 2001); from Cedar Hill on 7/12/09 (LACM 2001); from Bixby on 5/29/08 (CAS 2002a); from Palmdale on 4/16/14 (CAS 2002a); from Dominguez on 8/22/17 (LACM 2001); and from Pomona on 3/27/15 (two birds) (UCLA 2001) and on 6/2/25 (MVZ 2001).

117 Eggs were collected from Playa del Rey on 4/3/64 (WFVZ 2001); and nesting was observed in the vicinity of Playa del Rey along Ballona Creek in 1981 (CNDDB 2001). Pettingill (1953) reported burrowing owls in the banks of Ballona Creek. There were breeding season observations at Los Angeles on 7/28/80 and at Hermosa Beach on 7/20/82 (LACM 2001). Observations in the vicinity of Long Beach include: Lakewood in October 1953; CSULB Campus in January and December 1954; and Long Beach in December 1972 and October 1975 (CSULB 2001).

118 The only known recent observation of a burrowing owl during breeding season in Los Angeles was on 7/13/94 (LACM 2001).

Bath, pers. comm., 2003).[119] There are probable breeding records from Santiago Springs in 1903, Seal Beach in 1908, Corona del Mar in 1957, and Irvine in 1968 (CSULB 2001; LACM 2001; NMNH 2001; UCSC 2001).[120] As early as the 1930s, the burrowing owl in western Orange County was noted to be "far less common than it used to be" according to Robertson (1931), due to the elimination of ground squirrels.

Further owl declines due to development and human impacts were evident in western Orange County before 1960, with documentation of local extirpations and habitat loss in Costa Mesa, Newport Beach, and Santa Ana (J. Bath, pers. comm., 2003).[121] Still, the burrowing owl in Orange County between 1960-1975 could best be described as "abundant," and for a raptor, "bordering on ubiquitous" throughout the grasslands and non-orchard agricultural areas (P. Bloom, pers. comm., 2002). Burrowing owls were at that time a "regular component" of the coastal Orange County environment in Seal Beach, Huntington Beach, Fountain Valley, Newport Beach, Irvine, Mission Viejo, Corona del Mar, Costa Mesa, Laguna Niguel, and portions of Santa Ana (P. Bloom, pers. comm., 2002). Most vacant fields or flat agricultural acreages greater than 5 acres within 5 miles of the coast had their own pair or colony of owls (P. Bloom, pers. comm., 2002).

Significant nesting burrowing owl colonies were noted along the coast of Orange County from the 1970s to the early 1990s (including Seal Beach, Bolsa Chica, Huntington Beach, Newport Beach, and Irvine), with nesting also observed in southeastern Orange County in 1973 (Wiley 1975; Collins and Landry 1977; UCI 1995; CNDDB 2001; CSULB 2001).[122] However, by 1985 less than 10 pairs of owls remained countywide,

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119 Eggs were collected from: Anaheim on 5/9/1886 and 5/19/1887 (FMNH 2001); an unspecified locality in Orange County on 5/2/1895 (4 sets) (SBMNH 2001); Anaheim Landing on 4/14/18; Newport Beach on 4/8/31; Buena Park on 5/8/35 and 5/7/38; Sunset Beach on 5/2/38; and near Cypress on 4/28/45 (WFVZ 2001). A burrowing owl nest with 6 eggs was photographed at Balboa Beach in April 1920 (LMDBL 2001). Robertson (1929, 1930) observed parents hunting for 6 young near Buena Park many times in June 1927, a brood of 4 young in 1928, and road-killed owls near Buena Park and Cypress. T. Howell (1964) reported on 2 owls taken from a burrow with 5 young birds at Los Alamitos in May 1958.

120 Breeding season collection records include from: Santiago Springs on 8/14/1903 (NMNH 2001); Seal Beach on 3/30/08 (LACM 2001); Corona del Mar in August 1957 (CSULB 2001), and Irvine on 8/21/68 (UCSC 2001). Burrowing owls were reported to inhabit Upper Newport Bay from 1940-1955 (J. Johnson 1990).

121 J. Bath, Professor of Zoology at California State Polytechnic University, Pomona, compiled historical data for burrowing owls in Orange County (pers. comm., 2003). In the City of Costa Mesa: 6 pairs regularly nested in the earthen sides of Fairview Channel east of Placentia Avenue since 1957 - only 1 pair is nesting in 2003 (impact: unknown, but possibly pesticides from the adjacent Costa Mesa Golf Course); 3 pairs were regularly observed in squirrel burrows in the cliff of the Upper Newport Bay nearest the present Yorktown Lane between 1955 and 1972. Owls were last seen here in September 1972 – at that time the cliff was heavily used for rifle target practice by teenagers (impact: hunting with rifle/target practice) (J. Bath, pers. comm., 2003). In the City of Newport Beach: 2 pairs were nesting between 1955 and 1962 in the walls of a ravine opposite 2161 Mesa Drive, at that time the "Santa Ana Heights" neighbourhood of unincorporated Orange County. They were last seen in June 1962 (impact: grading of land for horse ranch expansion); 5 pairs regularly nested in a large ravine, known locally as "Fossil Gorge" in the Upper Newport Bay between 1955 and 1963. The ravine, now covered, was at the intersection of the present Eastbluff Drive and Backbay Drive (impact: grading for development); 1 paired nested in a burrow in an ancient Indian midden adjacent to Jamboree Road (now Backbay Drive) in the Upper Newport Bay between 1955 and 1964. Last seen in October 1964 (probable impact: some form of human harassment due to its high visibility from the road) (J. Bath, pers. comm., 2003). In the City of Santa Ana: 3 pairs were seen nesting regularly between 1956 and 1958 on a vacant lot at the northeast intersection of Main Street and Warner Avenue - last seen in October 1958 (impact: grading for development); 2 pairs were seen regularly between 1956 and 1959 on a vacant lot at the northwest intersection of Main Street and Warner Avenue - last seen in May 1959 (impact: grading for development); 2 pairs were seen nesting regularly between 1956 and 1958 along the west side of Warner Avenue between Garnsey Street and Flower Street opposite Washington Elementary School (impact: grading for development); 2 pairs were seen nesting regularly between 1956and 1959 along the edges of a large agricultural field at the northwest corner of the intersection of Bristol Street and Warner Avenue (impact: grading for development) (J. Bath, pers. comm., 2003).

122 Twenty artificial nesting burrows were actively used by owls at Seal Beach Naval Weapons Station in 1975 (Collins and Landry 1977). Ten breeding pairs of owls were detected at Seal Beach in 1977; 2 birds were documented there in April 1980; and owls reportedly occupied the site in 1983 (CSULB 2001; CNDDB 2001). 1 adult owl at a burrow was observed in the vicinity of Bolsa Chica Ecological Reserve, northwest of Huntington Beach, on 1/3/93 (threats there included oil extraction operations, non-native predators, and development) (CNDDB 2001). A single owl was seen at Huntington Beach in May 1985 (CSULB 2001). 2-4 pairs of owls were observed at Upper Newport Bay Ecological Reserve, Newport Beach from 1980-1981, but none were observed in 1983 (this population is thought to be extirpated due to development and dredging to create Least Tern habitat). There is a non-breeding season record from Irvine in November 1981; a colony of 3-5 pairs of owls was observed northeast of UC Irvine in 1980 and 1981, but their status was unknown in 1988 (the area was under constant development pressure); 1 pair at a burrow site plus 3 other individual owls were observed at U. C. Irvine in April 1990 (the site was threatened by campus development) (CSULB 2001; CNDDB 2001). Historically, breeding occurred on the U. C. Irvine campus, including at the U. C. Irvine Ecological Preserve, but there have been no observations on the Preserve since 1990 and suitable habitat on campus for nesting has been cleared for faculty housing and construction (UCI 1995). Nesting was observed in southeastern Orange County in spring 1973 (Wiley 1975). There also is a non-breeding season record from Santa Ana in November 1974 (CSULB 2001).

outside of the population at the Naval Weapons Station, Seal Beach (P. Bloom, pers. comm., 2002).[123] Extensive raptor nest surveys throughout the county have confirmed that breeding burrowing owls have since been nearly extirpated from Orange County (DeSante and Ruhlen 1995; P. Bloom, pers. comm., 2002). Now, the last remaining pairs of breeding owls in Orange County are located at Seal Beach, where numbers were down to 3 pairs or less in 2001 (4-5 pairs nested there between 1990-2000) (P. Bloom, pers. comm., 2002), and Fairview Channel in the City of Costa Mesa, where only 1 nesting pair remains (down from 6 pairs that regularly nested there since 1957) (J. Bath, pers. comm., 2003).

San Diego County

The burrowing owl was once widespread and quite common in coastal San Diego County. Van Dyke (1888) claimed that in the late 1860s in San Diego, "burrowing owls stood on every little knoll." Emerson (1884) found the burrowing owl "not uncommon" in the Poway Valley in the 1880s, and Sharp (1907) noted it "common everywhere" around Escondido, based on 16 years of observations from 1891 to 1897. Historical records confirmed breeding at: Poway in 1884 and 1885; National City in 1895 and 1910; Escondido on numerous occasions from 1902 to 1931; La Presa before 1907; Point Loma in 1917, 1920, and 1922; near Santee in 1920 and 1921; Rancho Santa Fe in 1932; San Pasqual in 1902, 1906, 1907, 1910, and 1916; Oceanside in 1931; San Diego on numerous occasions from 1862 to 1936; and Crown Point in 1936. Probable breeding was documented at: San Diego in 1893 and 1894; Jacumba in 1894; San Onofre from 1904-1906; Chula Vista and San Luis Rey in 1908; Lemon Grove in 1914; Escondido in 1920; La Puerta Valley in 1922; and La Jolla in 1935 (Emerson 1884; Dixon 1906; Sharp 1907; Unitt 1984; AMNH 2001; CMNH 2001; FMNH 2001; MVZ 2001; NMNH 2001; SBMNH 2001; UCLA 2001; WFVZ 2001; CAS 2002a).[124] Breeding was confirmed at Twin Oaks between 1889 and 1894, at Witch Creek in 1906, and in the Santa Margarita Mountains in 1931. These observations as well as a specimen collected during breeding season at Oak Grove in 1892 suggest the species had occurred in the foothill zone of San Diego County as well (F. Merriam 1896; Unitt 1984; AMNH 2001; WFVZ 2001).[125]

Burrowing owls apparently persisted in urban areas of San Diego into the 1930s (Abbott 1930a). Abbott (1930) noted owls had been driven away from downtown, but subsisted "wherever there is any extent of vacant land," and were "common" between downtown and Mission Hills.[126] Further declines were noted in San Diego County in the 1970s (Remsen 1978). Usually only a single pair at a time was seen at a locality, with a maximum of 5 birds observed at North Island Naval Air Station, Coronado, in May 1978 (Unitt 1984).[127] Other localities still inhabited in the late 1970s included San Marcos, near Palomar Airport in Carlsbad, Mission Bay, Lower Otay Lake, and the Tijuana River Valley (Unitt 1984). Camp Pendleton had a small population of about 8 pairs of owls in 1972, but between 1975 and 2000 there have never been more than 2 pairs there and usually

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[123] Seal Beach Naval Weapons Station was apparently used as a release area for owls relocated from land used for development projects (D. Cooper, pers. comm., 2002).

[124] Eggs were collected from: Poway in April 1884 and on 4/5/1885 (Emerson 1884; WFVZ 2001; FMNH 2001); National City on 5/17/1895 and 5/1/10 (MVZ 2001; WFVZ 2001); Escondido on 4/25/02, 5/6/02, 4/5/03, 4/12/04, 4/26/04, 6/3/05, 4/22/06, 5/2/13, 6/6/17, 6/8/17, 5/1/19, 5/10/24, and 4/15/31 (MVZ 2001; WFVZ 2001; AMNH 2001); Crown Point on 5/2/36 (NMNH 2001); Point Loma on 5/2/17, 4/18/20, 5/1/20, and 5/1/22 (WFVZ 2001); near Santee on 5/13/20 and 4/16/21 (WFVZ 2001); Rancho Santa Fe on 5/12/32 (WFVZ 2001); San Pasqual on 4/20/02, 4/22/06, 4/21/07, 3/18/10, and 4/20/16 (WFVZ 2001); Oceanside on 4/12/31 and 4/15/31 (WFVZ 2001); and San Diego on 4/3/1862, 6/22/1880, 5/11/1881, 4/5/1894, 5/13/1894, 4/23/1897, 5/19/12, 4/28/15, 4/27/20, 5/7/20, 4/9/31, 5/2/32, and 4/18/36 (AMNH 2001; SBMNH 2001; NMNH 2001; WFVZ 2001; CAS 2002a). Two juvenile bird specimens taken by Sharp (1907) at La Presa on August 28 still had some down. Unitt (1984) noted 41 historical collection records of eggs, from April 5 to June 8. Breeding season collection records of birds include: from San Diego on 3/30/1893, 6/28/1893, 7/27/1893, and 5/23/1894 (AMNH 2001; CMNH 2002); from Jacumba on 5/24/1894 (NMNH 2001); from Chula Vista on 5/31 and 6/2, 1908 (AMNH 2001) and San Luis Rey on 7/10/08 (UCLA 2001) and 7/12/08 (2 birds) (CAS 2002a); from Lemon Grove on 8/28/14 (UCLA 2001); from Bernardo Mountain south of Escondido on 4/28/20; from La Puerta Valley on 3/12/22 (MVZ 2001); and from La Jolla on 4/10/35 (NMNH 2001). Dixon (1906) saw 2 owl pairs in San Onofre from 1904-1906, but noted the species was "not common" there.

[125] Eggs were collected from the Santa Margarita Mountains on 4/11/31 (WFVZ 2001). Two juveniles were collected from Witch Creek on 8/22/06; single birds were also collected there in 11/1894 and on 5/30 and 8/24, 1904 (AMNH 2001). Burrowing owls nested at Twin Oaks between 1889 and 1894. F. Merriam (1896) once saw 9 owls sitting around one burrow. A bird was collected at Oak Grove on 4/11/1892 (Unitt 1984).

[126] Abbott (1930) observed owls from 1921 to 1930 in the heart of the business district, and in culvert drains of El Cajon Blvd. before it was paved. Owls were also heard throughout April 1930 at Monte Vista Ranch, 15 miles east of San Diego (Abbott 1930b).

[127] R. Stanley (pers. comm., 2001) observed a colony of burrowing owls (somewhere between 5-10 birds) during 1975-1978, while stationed on North Island.

just 1 pair inhabiting the entire 196 square mile reservation (P. Bloom, pers. comm., 2002). By the 1980s, owls were an "uncommon and declining resident" with only 7 definite breeding locations and 7 probable breeding locations remaining in San Diego County in 1984 (Unitt 1984).[128] Their range still included the entire coastal lowland of San Diego County, but urbanization had "greatly restricted the extent of suitable habitat" (Unitt 1984).

The burrowing owl is now on the verge of extirpation in San Diego County. As of 2001, only 6 confirmed breeding locations, 1 probable breeding location, and 1 possible breeding location remained in the County (P. Unitt, pers. comm., 2001).[129] A single individual recorded near Upper Otay Lake (brought to the attention of P. Unitt by a bulldozer operator) was probably the last in that area, and only a single pair nested near Lake Henshaw in 2001. Only North Island, Ream Field (Imperial Beach), and Otay Mesa are left as sites of populations with even short-term viability. Most or all of the Otay Mesa habitat is slated for development, and at the other 2 colonies the owls are discouraged because they prey on Least Terns (P. Unitt, pers. comm., 2001).[130]

Southern California Islands

Grinnell (1915) noted that the species "occurs regularly on several of the Santa Barbara group of islands," and Dawson (1923) described the burrowing owl as "one of the characteristic birds of the Santa Barbara Islands." Although there have been observations of owls on all the islands off southern California, probable breeding records from all the islands except for San Miguel and Anacapa Islands, and apparent documented breeding on Santa Catalina, the resident status of the species has been controversial.[131]

Northern Channel Islands

Wintering owls are currently found on the northern Channel Islands but there are no breeding owls there (Jones and Collins 2003; B. Latta, pers. comm., 2003).

San Miguel Island

Local ranchers told Willett (1910) there were "a few" owls on San Miguel Island, but he observed none during June surveys. Owls were reportedly "numerous" in 1939 (Jones and Collins 2003). Not enough data are available prior to 1973 to assess its status earlier in the century (Jones and Collins 2003). Burrowing owls are currently an uncommon winter visitor to San Miguel Island and breeding at the present time is unlikely (Jones and Collins 2003).

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128 There was confirmed nesting reported during the 1980s in the Tijuana River Valley near the coast, at North Island Naval Air Station, and at Fiesta Island in Mission Bay; and reports of frequent owl sightings at southern "Delta Beach," on Coronado Island (CNDDB 2001).

129 Recent CNDDB observations include: 2 burrows, containing at least 8 birds, on Otay Mesa, on 7/26/93 (this site was threatened by extension of the Otay Mesa border crossing facility, but Caltrans was possibly to provide artificial burrows); an unknown number of birds and burrows at Kearny Mesa, in September/October 1993 (this site was threatened by development); and 1 adult owl along Black Mountain Road, east of Del Mar, on 3/4/99 (this site was threatened by residential development) (CNDDB 2001).

130 San Diego County Least Tern colonies have a long history of anti-predator measures conducted by U. S. D. A. Wildlife Services (formerly Animal Damage Control). The activities of this federal agency have contributed more to the recent extirpation pulse of burrowing owls along the San Diego coast than any other known form of mortality (P. Bloom, pers. comm., 2002).

131 There have potentially been several extirpations and immigrations on the islands. Lynch and Johnson (1974) characterized extirpations from the islands as "presumed," since to their knowledge owls had never been proved to nest on any of the California Islands. Hunt and Hunt (1974) believed that since the burrowing owl is a notoriously wide-ranging visitor and vagrant, and may be an opportunistic invader of unoccupied areas, these extirpations and immigrations were likely to have been entirely natural events unaffected by man. However, Garcelon and Roemer (1990) enumerated poisoning and persecution of ground squirrels in the 1950s and 1960s, historical shooting, egg collecting, nest destruction, and trapping of bald eagles on the Channel Islands, activities which may also have negatively impacted or extirpated burrowing owls. One problem of evaluating burrowing owl status on the islands has been that they are a species easily overlooked by a short survey, and because of their mostly nocturnal habits, they are not easily observed except around known roosting or nesting burrows, and therefore definitive evidence of breeding is difficult to obtain (Jones and Collins 2003).

Santa Rosa Island

Streator (1888) mentioned that owls were "not very common" on July 3, 1892. Pemberton (1928) believed the species "should be present" on Santa Rosa Island. Although he did not see owls, he was told the species was there and given an accurate description by residents - ranchers in 1927 said that it bred there. There is one breeding season collection record from East Point on 3/13/50 (MVZ 2001). A ranch foreman told Diamond (1969) on July 12, 1968 that he saw burrowing owls "about two months ago." The burrowing owl is currently an uncommon to infrequent winter visitor, and possibly a former breeding resident (Jones and Collins 2003).

Santa Cruz Island

Linton (1908a) reported owls to be "fairly common in suitable localities" on Santa Cruz Island. The burrowing owl is currently an uncommon winter visitor, with no indication of breeding, now or in the past (Jones and Collins 2003).

Anacapa Island

A. Howell (1917) reported owls were seen several times on Anacapa Island. All historical records but 1 (July 1967, 2-3 owls) are from October 1 to April 12 (Jones and Collins 2003). Burrowing owls apparently still inhabit Anacapa Island (Schoenherr et al. 1999; L. Dye, pers. comm., 2003), although a recent National Park Service project to poison invasive rats on the island reportedly killed 4 owls (FFA 2002).

Southern Channel Islands

Burrowing owls are thought to currently breed only on Santa Barbara and Santa Catalina Islands and appear to be only a transient or winter visitor on the other Channel Islands (Jones and Collins 2003).

Santa Barbara Island

A. Howell (1917) remarked that the species "seems to be lacking on Santa Barbara Island." Despite active searches (Jones and Diamond 1976), burrowing owls were not found on this island until March 1927, when Pemberton (1928) located 2 birds on the southern part of the island. Owls were absent during surveys in 1939, scarce or absent in 1950 and 1958, and common from 1954 to 1957 (Sumner unpublished report, as cited in Jones and Diamond 1976; Jones and Diamond 1976). These sightings represent 1 extirpation event and 2 invasions of burrowing owls on the island (Hunt and Hunt 1974).

Diamond (1969) found 6 pairs present during the summer of 1968, and Hunt and Hunt (1974) found at least 3 and possibly 6 pairs resident there May through July 1972. Owls were seen almost daily and regularly flushed from burrows in 1968, 1972, and 1973. One or 2 pairs were seen in 1974, and 2 pairs were seen in 1975 and 1976 (Jones and Diamond 1976), however Murray et al. (1983) reported burrows but no owls found from 1975 to 1979. Drost and McCluskey (1992) reported on a small population of approximately 20 burrowing owls extirpated by barn owls in 1984 and again in 1987, following crashes in the deer mouse population. Drost and McCluskey (1992) estimated a population of 20-25 birds on the island from 1982-1987, with direct counts of from 13-18 birds in mid-winter roosts. Owls have bred on the island in most or all recent years (Jones and Collins 2003).

San Nicolas Island

Streator (1888) first recorded the species on San Nicholas Island in autumn of 1886. According to A. Howell (1917), Keeler (1907) also recorded the species there, and there is a record of uncertain breeding significance for 1945 (Jones and Diamond 1976). In 1963, W. Townsend (pers. comm., as cited in Jones and Diamond 1976) found a year-round population and defended burrow. The claim by Lynch and Johnson (1974) that W. Townsend noted no evidence of breeding apparently contradicts personal communication by W. Townsend (Jones and Diamond 1976). Despite 36 visits and over 1000 hours of field observations by Jones, Schreiber (1970), Diamond, and others in 1968, 1973, 1974, and 1975, the sole records were single sightings in

October 1974 and September and November 1975. Several individuals were seen between January and May 1976, but all these owls had left the island by mid-May. One extirpation of the species from San Nicolas Island between 1963 and 1968 can be assumed conservatively (Jones and Diamond 1976).

A few recent summer records (from May to August) suggest that owls may now be breeding in small numbers (Jones and Collins 2003). An alternative explanation is that the recent intensive survey effort on this island is turning up a few mid-summer strays that may have been overlooked in the past (Jones and Collins 2003).

Santa Catalina Island

Grinnell (1898), who saw a single owl on a hilltop in the interior of Santa Catalina Island in December 1897, was told that the species became "quite numerous" on the island at times. A. Howell (1917) saw a single owl several times in April 1911. Birds were collected from the island during breeding season in 1940 and 1941 (FMNH 2001; LACM 2001).[132] According to Jones and Diamond (1976), breeding had been documented on the island. A maximum of 4 owls were seen on July 21, 1978 (Jones and Collins 2003). Burrowing owls were located during a survey of raptors on Santa Catalina Island between February and June 1994, and are still thought to be uncommon resident breeders on the island (CIC 2002; Jones and Collins 2003). Recent Breeding Bird Surveys suggest that numbers have declined on the island since the 1970s, but no direct comparisons are possible (Jones and Collins 2003). Some current and former breeding sites are Fisherman's Cove, Upper Buffalo Reservation, the vicinity of Little Harbor, and Middle Canyon (Jones and Collins 2003).

San Clemente Island

Breninger (1904), Keeler (1907), and Linton (1908c) all collected specimens here and referred to the species as "resident," and A. Howell (1917) noted that owls could be found in some numbers on certain parts of San Clemente Island. There is a breeding season collection record from the island on 3/24/18 (DMNH 2001). A nest with 2 or more small young was found during the summer of 1975 (Jones and Collins 2003), and according to Jones and Diamond (1976), breeding had been documented on the island. The burrowing owl is currently a regular winter visitor in small numbers, and has bred at least once recently (Jones and Collins 2003). With one exception, all modern records have been from September through April, with a maximum of 7 owls seen on November 10, 1996 (Jones and Collins 2003).

<u>Western Riverside County</u>

Historical records confirmed breeding at Riverside from 1878 to 1890 and at Norco in 1927; and indicated probable breeding in Riverside in 1892 and 1893, at San Jacinto Lake in 1895, at Lake Elsinore in 1907, at the base of the San Jacinto Mountains in 1908, and near Moreno in 1941 (Bailey 1917; AMNH 2001; MVZ 2001; NMNH 2001; UWBM 2001; WFVZ 2001; CAS 2002a).[133] Single nesting pairs documented in La Sierra and Norco in the 1980s were extirpated by the early 1990s (J. Bath, pers. comm., 2003).[134] Significant breeding colonies were documented at the San Jacinto Wildlife Area, near Lakeview, and at Lake Perris State Recreation Area ("SRA") in the 1980s (CNDDB 2001; LACM 2001).[135]

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[132] There are collection records from an unknown location on 3/8/41 (LACM 2001), from Haypress Canyon on 3/1/40 (FMNH 2001), and from Little Harbor on 2/29/40 (FMNH 2001).

[133] Eggs were collected at Riverside on 4/28/1878 (WFVZ 2001), 5/13/1882 (NMNH 2001), 4/16/1886 (WFVZ 2001), 4/13/1887 (WFVZ 2001), 5/8/1888 (UWBM 2001), and 4/14/1890 (UWBM 2001); and an immature bird was collected from Norco on 5/22/27 (MLZ 2001). Breeding season bird collection records include: Riverside in April 1893 (NMNH), 11/18/1887, 12/24/1891 (2 birds), on 4/8/1892, and 4/13/1892 (MVZ 2001); San Jacinto Lake on 6/25/1895 (AMNH 2001); Lake Elsinore in summer 1907 (Bailey 1917); the base of the San Jacinto Mts., at Cabazon on 5/23/08; Bannly (Banning?) on 6/12/08; Valle Vista on 9/2/08 and 9/4/08 (MVZ 2001); and 2 miles north and 2 miles west of Moreno on 3/9/41 (CAS 2002a).

[134] In the City of La Sierra 1 pair was seen nesting between Collett Elementary School and Collett Park between 3/02/1985 through 8/1987 (impact: grading for development) and in the City of Norco 1 pair was seen regularly since 1982 at an open field at the northwest intersection of California Avenue and Seventh Street - last seen in 1992 (impact: burrows became over-grown with rye grass) (J. Bath, pers. comm., 2003).

[135] A colony of "many" owls was observed in 1980 at Lake Perris State Recreation Area (CNDDB 2001). Sightings in 1982 at the San Jacinto Wildlife Area include: an active burrow with 2 adults and 5 fledged young, 2 miles north of Lakeview; an active burrow with 2 birds, 1.5 miles north-northeast of Lakeview; 2 birds one-half mile north of Lakeview, on May 26 and May 28; 2 adults and 4 fledged young approximately 2-4 miles

The U. C. Riverside database developed for the Western Riverside County Multi-Species Habitat Conservation Plan ("MSHCP") includes approximately 82 records of burrowing owls within the past 10 years in the area. The Western Riverside MSHCP documents that owls have been detected east of the Jurupa Mountains, along the Santa Ana River, at Lake Mathews, at Good Hope, Alberhill, Murrieta, March Air Reserve Base, the Lake Perris/Mystic Lake area, the Badlands, within the vicinity of Beaumont and Banning, San Jacinto, Valle Vista, between the San Jacinto River and Lakeview Mountains, west of Hemet, the area around Diamond Valley Lake, east and south of Lake Skinner, along Santa Gertrudis Creek and Tucalota Creek, in Long Canyon, and along De Portola Road (Dudek and Associates 2002). Historically, there were a large number of owl locations concentrated within the Moreno Valley area, however due to urban development, the number currently within this area is unknown (Dudek and Associates 2002).

Through 2001, there were small breeding populations of burrowing owls remaining in southwestern Riverside County in the vicinity of Perris, Lakeview, and Temecula, and a colony (15 adults and 10 juveniles in 1999) near the Pechanga Indian Reservation (CNDDB 2001).[136] California State Parks Inland Empire District staff conducted thorough burrowing owl surveys in suitable habitat at Lake Perris SRA and San Jacinto Wildlife Area ("SJWA") during the nesting season of 2002 (La Claire 2002). At Lake Perris SRA, a total of 12 owls and 7 sites were recorded, and at SJWA 32 owls and 10 sites were observed (La Claire 2002). Owls are currently nesting at March Air Force Base in artificial nest boxes, however portions of this base are now decommissioned and no agency or entity has responsibility for protecting or maintaining these nest boxes (P. Bloom, pers. comm., 2001). Most remaining owl colonies in western Riverside County are very small, highly fragmented, unprotected, and on the brink of extirpation through 2002 (P. Bloom, D. Cooper, pers. comm., 2002).

<u>Southwestern San Bernardino County</u>

Historical records confirmed breeding near Highlands in 1896 and 1897, near Chino in 1916, and at San Bernardino in 1883, 1885, 1886 and 1899; and indicated probable breeding at Redlands in 1902-03, near Oak Glen in 1910, near Chino in 1915 and 1926, and near San Bernardino in 1883, 1886, 1892, and 1928 (Hartzell 1888; Stephens 1902; Willett 1912; Van Rossem 1914; CHAS 2001; CMNH 2001; FMNH 2001; MVZ 2001; NMNH 2001; WFVZ 2001; CAS 2002a).[137] Egg collector H. Edwards reported owls to be "fairly common"

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north of Lakeview; an active burrow with 1-2 birds, 2.6 miles north of Lakeview, from September through early October; and up to 4 birds 2.8 miles north of Lakeview, during July (CNDDB 2001). Owls were also seen at Riverside on 8/31/1982 (LACM 2001), and near Romoland (2 burrows and 2 owls) on 10/7/89 (CNDDB 2001).

136 Recent CNDDB sightings in the vicinity of Perris include: 4 occupied burrow sites in 1997, located within a 2 mile stretch of the Perris Valley Drain, 1 mile east of Perris (2 burrows being used by 2 adults and at least 1 juvenile were seen during surveys May 19-27, 1997; 2 adults were observed at a burrow site during surveys May 19-27, 1997; 2 adults and at least 1 young were observed at one burrow and 2 adults and at least 4 young at a second burrow) (these owls were threatened by the pending excavation of the Perris Valley Drain and were to be passively relocated); 2 adults at a burrow off Goetz Road, 3.5 miles south of Perris, on 3/30/99; and 2 adults and 4+ juveniles at a nearby burrow on 5/10/99 (CNDDB 2001). Surveys at the Lake Perris State Recreation Area found 15 owls occupying 9 burrows in June 2000, 4 owls occupying at least 3 burrows in July 2001, and 12 owls at 7 burrows from May through July 2002 (California Department of Parks and Recreation, unpublished data).

Recent CNDDB sightings in the vicinity of Lakeview include: 2 adults and 2 active burrows approximately 2 miles southeast of Lakeview, in 1992 (these owls were threatened primarily by construction of a flood control dam, secondarily, by an increasing rural population); and 1 adult with 2 fledged juveniles near the junction of Hwy. 74 and Warren Road, San Jacinto Valley, on 10/7/98 (by 10/9/98 this site had been disked, and the owls had not been seen there since – their remaining habitat was threatened by disking and mowing and future development) (CNDDB 2001).

Recent CNDDB sightings in the vicinity of Temecula include: 1 owl at a burrow at Temecula, on 11/2/94 (owls here were threatened by development, grading and disking, roads, dumping, and burning); 2 adults at a burrow 1 mile south of Lake Skinner, from 3/11/98 through 4/27/98 (this site was threatened by a proposed residential subdivision); 1 adult at a burrow 1 mile southwest of Skunk Hollow, on 5/8/99 (this site was threatened by grading and disking and existing and planned development); 1 adult at a burrow on the south side of Wilson Valley, 3 miles north of Aguanga, from March to June 1999; and a large colony of 25 owls (15 adults, 10 juveniles) at Redhawk Golfcourse, just north of Pechanga Indian Reservation, on 7/1/99 (CNDDB 2001).

137 Eggs were collected from: an unspecified location in San Bernardino County in April 1887 (Hartzell 1888); east Highlands on 4/11/1896 and 4/3/1897 (Willett 1912; WFVZ 2001); San Bernardino on 4/28 and 4/29/1883 (Stephens 1902) and 5/2/1899 (WFVZ 2001); and near Chino (2 sets) on 4/16/16 (WFVZ 2001). An owl chick was collected from San Bernardino on 5/08/1885 (NMNH 2001). Breeding season collections and observations of birds include: San Bernardino on 4/20/1883, 3/18/1886, 5/31/1886 (2 birds), and 4/28/20 (CHAS 2001; CMNH 2002; CAS 2002a); Redlands (5 birds) between 12/31/02 and 2/14/03 (FMNH 2001); between Oak Glen and Beaumont in summer of 1910 (Van Rossem 1914); Los Serranos Country Club near Chino on 5/4/26 (MVZ 2001); Reche Canyon, 4 miles south of San Bernardino on 6/11/28 (MVZ 2001); and 3 miles south of Chino on 3/3/15 (FMNH 2001).

near Chino in 1916, noting a colony of several dozen pairs and collecting 2 egg sets (WFVZ 2001). Scattered observations around San Bernardino County include a breeding colony observed near Lockhart in the 1970s, and probable breeding at Joshua Tree National Monument in 1961 and in the Lucerne Valley in 1981 (CNDDB 2001; CSULB 2001; UCSB 2001).[138]

Small numbers of breeding owls in Redlands, Colton, Rancho Cucamonga, and Chino Hills have been extirpated recently (J. Bath, pers. comm., 2003).[139] Remaining breeding owl populations in western San Bernardino County in the vicinity of San Bernardino, Chino, and Ontario continue to decline due to impacts by development and human harassment (CNDDB 2001; J. Bath, pers. comm., 2003).[140] As of 2003, an estimated 56+ owl pairs remain in Chino and an estimated 40+ pairs remain in Ontario; all of these owls live in habitat

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[138] 3 pairs of owls (1 pair with at least 2 young) and a burrow with 4 immature owls were seen in the Harper Lake Marsh area, northeast of Lockhart, in 1978 (CNDDB 2001). Single owls were collected from Joshua Tree National Monument in May 1961 (CSULB 2001) and from Lucerne Valley on 8/3/1981 (UCSB 2001).

[139] In the City of Redlands, 2 pairs were seen nesting at southwest corner of the intersection between California Street and Lugonia Avenue during the 1985-1991 seasons (impact: grading for development) (J. Bath, pers. comm., 2003).

In the City of Colton, within the "Agua Mansa District," approximately ¼ mile east of Pepper Avenue and approximately 1/8 mile north of Slover Avenue, 2 owl pairs were observed occupying abandoned coyote dens on August 31, 1991. This unusual site was vegetated by plant species consistent with the Delhi Sands segregate of the Riversidian form of Coastal Sage Shrub, and was also occupied by Delhi Sands Flower Loving Fly (***Rhaphiomidas terminatus abdominalis***) habitat. Grading of site by Union Pacific (?) Railroad, in part, triggered the listing of this fly on Sept. 23, 1993. Impact: grading of railroad easement for unknown reason. Another owl pair was seen nesting in Colton on 6/19/2002 in a rock outcropping between Pellister Road and La Cadena Lake, but these owls have not been seen since (impact: disturbance due to adjacent grading for development) (J. Bath, pers. comm., 2003).

In the City of Rancho Cucamonga, 3 pairs were seen occupying burrows in earthen flood control ditch at southwest corner of the intersection between Haven Avenue and Fourth Street between 1992 and 1999, but not since (impact: modification of earthen flood control channel and grading of adjacent land) (J. Bath, pers. comm., 2003).

In the City of Chino Hills, 1 pair nested between 1992 and 2002 on San Antonio Channel approximately 200 meters north of Grand Avenue – owls were last seen December 6, 2002 (impact: disturbance due to adjacent grading for development) (J. Bath, pers. comm., 2003).

[140] In San Bernardino, an undetermined number of owls utilized a burrow site at Norton Air Force Base in 1983 (this site may be threatened by development due to base closure); 2 adults, 4 juveniles, and 4 burrows with signs of recent activity were observed in West Colton on 8/15/98 (this site was threatened by proposed development); and 2 adults were observed at a burrow site between south Fontana and Crestmore, on 8/20/98 (threats to these owls include disking and proposed development) (CNDDB 2001).

In the City of Chino: 1 pair was seen at the Agricultural Department grounds of Don Antonio Lugo High School between 4/03/1984 and 5/22/1988 (probable impact: increased student activity); 3 pairs nested at the southeastern corner of Chino Avenue and 12th Street (Hottinger Family Meats Company at 5437 Central Avenue) from 3/22/1982 to 8/03/1990, and 1 juvenile was found dead by road kill 5/13/1991 on Chino Avenue at the northern edge of this location (probable impacts: disturbance of habitat by freight trucks using site to turn around; trapping of squirrels – on several occasions a man was seen attempting to trap ground squirrels at the site by using a wooden crate); 1 pair nested at the rear corporate yard of a company at 13445 12th Street during the 1994 nesting season (impact: nest abandonment due to harassment - an employee was observed throwing rocks at the owls); 1 pair nested regularly in drainage pipe on the back lot of a shopping center opposite the U.S. Post Office on Walnut Avenue during the 1991 and 1992 nesting seasons - there was a sudden (after one week) disappearance of the owls and squirrels (suspected impact: grading and use of rodenticide - a man was observed placing a rodenticide into adjacent squirrel burrows); 1 pair was seen regularly nesting at 14622 Ramona Avenue (now the Caliber Collision Center) between 1982 and 1991 (impact: grading for development); 2 pairs were seen at 4201 Eucalyptus Avenue adjacent to San Antonio Channel between 10/05/1977 and 3/22/1986 (impact: grading for development); 1 pair was seen to nest 3/22/1982 to 12/26/1991 at the vacant dairy at the southwest corner of the intersection of Edison Avenue and Cypress Channel (impact: grading for development); 2 pairs were seen to nest 3/22/1982 to 12/26/1984 in a vacant lot at the northeast corner of the intersection of Edison Avenue and San Antonio Avenue (impact: grading for development); 1 pair nested regularly on the eastern bank of San Antonio Channel at the Inland Empire Utilities Agency's Waste Water Reclamation Facility at 14950 Telephone Avenue - the owls were last seen on 6/11/1996; 11 pairs occupied burrows since March 1976 in back lot corporate yards in the large area bounded by Chino Avenue (to the north), Benson Avenue (to the east), Schaefer Avenue (to the south), and 12th Street (to the west), declined due to grading of back lot corporate yards - 3 pairs continued nesting at 13382 Benson Avenue (front yard of Rapid Industrial Plastics Company, Inc.) until the nesting season of 1991 (impact: corporate workers plugged burrows with wire, bottles, and other objects during their lunch hour, landscaper of property plugged burrows with gravel and grass cuttings); 4 pairs were observed nesting on a vacant lot on 12th Street approximately 60 meters north of the County of San Bernardino County Junior Fair Grounds since 1988, declining to 2 pairs – a development proponent's consultant installed one-way doors on the burrows of these pairs (impact: grading for development, use of one-way doors); 1 pair was observed in a corporate graveled parking lot on 12th Street approximately 120 meters north of the County of San Bernardino County Junior Fair Grounds until 1993 (impact: a man was seen shooting at the owls and attempting to trap the owls with a wooden crate); 2 pairs were observed nesting on the grass parking lot of the County of San Bernardino County Junior Fair Grounds between 1983 and 1994 (impact: burrow destruction due to increased vehicular use) (J. Bath, pers. comm., 2003). Four active owl burrows with evidence of long-term use and 6 owls (including 3 juveniles) were observed along the southern bank of San Antonio Channel "Chino Creek," west of Chino State Prison, on 9/14/86, 3 adult owls were also seen here on 1/30/88 (CNDDB 2001); owls abandoned the site when the San Bernardino County Department of Transportation and Flood Control ceased weed abatement and tumbleweed (*Amaranthus albus*) overgrew the burrows (J. Bath, pers. comm., 2003).

In the City of Ontario, 3 pairs were seen occupying burrows until 2002 along fence line adjacent to Hwy. 15 (Ontario Freeway), approximately 460 yards north of Jurupa Avenue (impact: grading for development) (J. Bath, pers. comm., 2003).

An adult owl was observed northeast of Baldy Mesa from March 23 to June 10, 1989 (CNDDB 2001; USBLM 2002), but owls are unlikely to breed there (D. Cooper, pers. comm., 2002).

threatened by development (J. Bath, pers. comm., 2003).[141] Most remaining owl colonies in western San Bernardino County are small, highly fragmented, unprotected, and now on the brink of extirpation (P. Bloom, pers. comm., 2002).

G. IMPERIAL VALLEY

The majority (71%) of the state burrowing owl population, an estimated 5,600 to 6,570 nesting pairs, inhabits the Imperial Valley (DeSante and Ruhlen 1995; DeSante et al. in press). Burrowing owls in the Imperial Valley are commensal with the round-tailed ground squirrel (*Spermophilus tereticaudus*) and now occur almost exclusively in un-lined earthen banks along irrigation ditches. Historically, burrowing owls within the Imperial Valley were present in low densities, similar to populations in the undisturbed deserts surrounding the valley (DeSante et al. 1997; Rosenberg and Haley 2003). Along with the intensification of agriculture in the 1900s, the burrowing owl population in the Valley grew to one of the largest and most dense populations in California. Coulombe (1971) estimated 3.3 pairs/km^2 within an 8-km^2 area of the Imperial Valley during the 1966-67 breeding season. Coulombe (1971) also estimated that 20-25% of the Imperial Valley breeding owl population remains during the winter, with probable immigration from the north and emigration to the south. Even though there is winter immigration, Imperial Valley owls are thought to be reproductively isolated from owls in other areas (Rosenberg and Haley 2003).

Historical records confirmed breeding at Silsbee in 1909, at Toros in 1928, at an undisclosed location in the Imperial Valley in 1931, near Westmoreland and east of El Centro in 1934, at Greeson Slough in the 1960s, at Salton Sea National Wildlife Refuge in the 1980s, and at Palo Verde in 1984; and indicated probable breeding at Calipatria in 1922 and 1988, at Westmoreland in 1956, and at Seeley in 1977 (Coulombe 1971; CNDDB 2001; CSULB 2001; LACM 2001; MVZ 2001; SBCM 2001; UCLA 2001; UCSB 2001; WFVZ 2001).[142] Coulombe (1971) observed owls commonly during the 1960s along canal banks throughout the year, calling them a "conspicuous feature" of irrigated farmlands. Population studies conducted by Coulombe (1971) southwest of El Centro revealed owl densities ranging from 1 to 16.3 owls per mile along Greeson Slough and the New River. Coulombe (1971) was able to locate and band 19 owls from one-half mile of continuous habitat along the Dahlia Drain Canal, near El Centro, and estimated a density of 20-25 owls per square mile there from 1966-1967. There are insufficient data to determine if this population declined from the mid-1980s to the early 1990s (DeSante and Ruhlen 1995). Recent owl observations have been recorded near El Centro and at

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[141] In the City of Chino: there are approximately 30+ owl pairs in Chino's sphere of influence area known as "Subarea 2" currently under pre-annexation planning (General Plan Amendment EIR, SCH # 2000121036), with development recently approved on 3/25/2003 (2,447 acres are planned for 8,064 homes, commercial, and public facilities); there are 7 owl pairs on approximately 717 acres of "surplus real property" of the California Institute For Men that is being sold by the Department of General Services ("DGS") for the development of a 100-acre college campus, up to 2,200 residential homes, an elementary school, recreational parks, and a business center - an environmental impact report is expected to be circulated in 2003; 8 owl pairs reside on an additional 2,500 acres DGS is studying whether or not to sell for development; 14 pairs were documented nesting in 1980 on grass turf at the airport entrance of the Chino Airport, owned and operated by the County of San Bernardino – this population has declined to 6 pairs last seen on 2/15/2003 (impact: reduction of foraging habitat by grading, increase in airport pedestrian activity on turf) and is threatened by proposed urbanization under the Airport Master Plan revision; 9 pairs were seen on the banks of Cypress Channel between Chino Avenue and Edison Avenue since 1974 - these have declined to only 2 pairs seen on 3/21/2003 (impact: loss of adjacent foraging habitat by grading; plugging of nests by field crews of the County of San Bernardino Department of Transportation and Flood Control); and 3 pairs are currently nesting at the water detention basins of the Martin Verhoeven Dairy at 6718 Eucalyptus Avenue - this site is zoned for eventual residential development (J. Bath, pers. comm., 2003).

In the City of Ontario, approximately 40+ pairs of owls occurring on the 8,200 acres of the City of Ontario's Annexation Area No. 163 (formerly known as Ontario's Sphere of Influence of the San Bernardino's Agricultural Preserve) are threatened by future development (J. Bath, pers. comm., 2003).

[142] Confirmed breeding observations include eggs collected at: Silsbee on 4/5/09 and 4/6/09 (MVZ 2001); Toros in the Salton Sink on 4/1/28 (WFVZ 2001); an unidentified locale in the Imperial Valley on 5/26/31 (WFVZ 2001); 3.5 miles northeast of Westmoreland on 4/18/34 (SBCM 2001); 7 miles east of El Centro on 5/30/34 (SBCM 2001); and Palo Verde in April 1984 (WFVZ 2001). Coulombe (1971) documented extensive nesting along Greason Slough in the 1960s - at least 20 owls were seen along 1 to 1½ miles of irrigation canals near Vendel Road and Bannister Road, at the south end of the Salton Sea NWR. Probable breeding observations include birds collected at: Calipatria on 4/3/1922 (LACM 2001); Westmoreland (2 females) in February 1956 (CSULB 2001); Seeley on 8/06/1977 (UCLA 2001); Salton Sea Beach on 3/19/1983 (UCSB 2001); and at least a dozen owls and their burrows reported along Gentry Road, southwest of Calipatria, in 1988 (CNDDB 2001).

Calipatria (CNDDB 2001; LACM 2001).[143] Rosenberg and Haley (2003) estimated a current owl density of 8.3 pairs/km^2 at the southern rim of the Salton Sea in the Imperial Valley, one of the highest densities of burrowing owls reported.

H. COACHELLA VALLEY

Breeding populations of the burrowing owl historically resided in the Coachella Valley, which encompasses the central 15% of Riverside County, the northeastern 5% of San Diego County, and the central-northern 5% of Imperial County (DeSante et al. 1996).

Forty historical locations have been recorded for burrowing owls in the Coachella Valley (CVAG 2001), including confirmed breeding at Thermal and Indio in the 1920s (SBCM 2001).[144] The majority (36 of 40) of these observations were during the spring and summer months, which probably indicated resident birds, potentially on breeding territories (CVAG 2001). However, an influx of wintering burrowing owls may occur in the Coachella Valley, and the known location information for this species does not allow a determination of wintering birds, as the month of observation is not consistently reported (4 of the known locations report only the year of observation).

Prior to urban development, burrowing owls were regularly observed in empty lots along Washington Avenue in Bermuda Dunes and around the Palm Springs Airport (CVAG 2001). Surveys in the early 1990s found no owl pairs in the Coachella Valley despite the fact that small populations existed there in the 1980s, and breeding owls have apparently been extirpated from the Coachella Valley (DeSante et al. 1996).

There is some belief that some owls may still occur along roads and levees in agricultural areas at the eastern end of the Coachella Valley, within lands covered by the Coachella Valley Multi-Species Habitat Conservation Plan, and there are a handful of recent breeding season observations of owls in the Coachella Valley (USFWS 1995; CNDDB 2001; LACM 2001).[145] However, biologists from CDFG and the Coachella Valley Water District who routinely visit the agricultural drains and associated levees around the Salton Sea reported only 1 recent burrowing owl observation in the Coachella Valley (CVAG 2001).

I. SOUTHERN DESERT RANGE

The range of the burrowing owl in southern desert areas encompasses the eastern 85% of Inyo County (excluding the Panamint Range); the southeastern 30% of Kern County; all but the southwestern 15% of San Bernardino County; the northeastern 30% of Los Angeles County; the eastern 50% of Riverside County (excluding the Coachella Valley); the eastern 50% of San Diego County; and 50% of Imperial County (excluding the Imperial Valley) (DeSante et al. 1996).

Burrowing owls in the southern desert range are in small, scattered populations, and have historically never been common (DeSante et al. 1996). Grinnell and Swarth (1913) believed burrowing owls were "very rare or entirely absent on the desert side of the [Peninsular] range." Garrett and Dunn (1981) gave an overview of the owl's distribution in southern California deserts: "It is quite scarce on the northern deserts from the e [east] Mojave Desert north through Inyo Co…While it is largely resident in the region there is some winter

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143 Eight owls were seen along the Eucalyptus Lateral 2 Canal, 3 miles southwest of El Centro, on 12/11/90 (CNDDB 2001), and birds were collected from Calipatria on 6/18/1995 and 6/16/1999 (LACM 2001).

144 Eggs were collected at Indio on 3/20/27 and at Thermal on 4/21/29 (SBCM 2001). There are historical breeding season records from Indio on 3/2/42 and at an unspecified location in the Coachella Valley on 5/9/81 (LACM 2001). There are historical photographs from the Coachella Valley of 2 adult owls near a burrow at Thermal in August 1955, 2 birds south of Mecca in May 1955, and nest holes at Mecca in May 1955 (CAS 2002b).

145 Recent breeding season observations include 1 owl at Willow Hole on May 9-10, 1995 (USFWS 1995); 1 owl at Mecca on 8/2/96 (LACM 2001); and 1 owl near a burrow site near the Coachella Canal, northeast of Thermal, on 4/7/2000 (CNDDB 2001).

movement of more northerly birds into the southern and coastal parts of the region…Open desert scrub is widely but sparsely inhabited."

Displacement of owls due to development in the Coachella Valley may have slightly increased owl numbers in southern desert areas, as they became merely uncommon rather than rare (Weathers 1983). Breeding bird surveys between 1980 and 1989 indicated increasing numbers of owls in the lower Sonoran deserts and lower Colorado River Valley in southeastern California (Haug et al. 1993). It is thought that the burrowing owl may have expanded into the lower Colorado River Valley with the expansion of agriculture because this species was not reported from the valley in the early part of the century (Grinnell 1914; K. Rosenberg et al. 1991). Owls are now considered a fairly common resident in the valley (Rosenberg et al. 1991; D. DeSante, pers. comm., 2003), with a decrease in abundance in the northern areas of the valley in winter (Rosenberg et al. 1991).

DeSante et al. (1996) did not survey the southern desert range of the burrowing owl, and there is virtually no published literature on the distribution or seasonal movements of owls in the Mojave Desert (Campbell 1999). Campbell (1999) compiled 53 records (only 13 of which have specific locales and dates, with probable or confirmed breeding at 5 locales) of burrowing owls within the West Mojave Plan Area ("WMPA"), which are thought to represent a small sample of the locations where owls have recently been or are currently present. Although no focused owl surveys have been done, Campbell (1999) indicated that the species is currently "uncommon, local or patchy in occurrence, and currently in slow decline," and believes the total breeding population within the WMPA could be in the range of a few hundred pairs.[146] S. Myers, (pers. comm., 2002) believes that that owls are "locally rare to uncommon" and declining in the West Mojave, noting they have disappeared from a number of locations due to urban development.

Inyo County

There are historical records of breeding populations in the Owens Valley, Death Valley, and the Panamint Mountains and confirmed breeding at Bishop in 1939 (Fisher 1893; Grinnell 1923; Gilman 1934; Wauer 1962, 1964; MVZ 2001; NMNH 2001; SDMNH 2001).[147] Pettingill (1981) reported burrowing owls nesting at Death Valley National Monument and residing all year in the Owens Valley, from Bishop southward. Garrett and Dunn (1981) reported the species "quite scarce" on the northern deserts from the East Mojave Desert north through Inyo County. There are records of breeding owls at China Lake Naval Air Weapons Station ("NAWS") from 1978 to 1984 (USBLM 2002),[148] and there apparently was a small colony of about 6 pairs of owls there in the mid-1980s (P. Bloom, pers. comm., 2002). Burrowing owls still occur at China Lake NAWS, but the Base management plan offers no detailed information and does not provide any specific

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[146] The 9.4 million-acre West Mojave Plan Area encompasses most of California's western Mojave Desert. It extends from Olancha in Inyo County on the north to the San Gabriel and San Bernardino Mountains on the south, and from the Antelope Valley on the west to the Mojave National Preserve on the east. Although most of this area coincides with the southern desert range excluded from surveys by DeSante et al. (1996), there is some overlap with areas in eastern Los Angeles County and southwestern San Bernardino County that are covered in Section VI.F on southwestern California.

[147] Eggs were collected from Bishop on 6/30/39 (SDMNH 2001). In the Owens Valley, eggs were collected from Laws on 4/23/16 (MVZ 2001); and birds were collected during breeding season from the Owens Valley on 6/26/1891 (NMNH 2001), from Laws on 4/23/16 and 7/7/17 (MVZ 2001), from 2.5 miles southeast of Lone Pine on 6/12/17 (MVZ 2001), and from 2 miles north of Independence on 6/30/17 (MVZ 2001).

Grinnell (1923) concluded that burrowing owls were "native in, and doubtless breed 'at large' in" Death Valley, based on his 1917 study of the area. Gilman (1934) observed a burrowing owl in Death Valley from 1933 to 1934 and Wauer (1962) recorded the species there throughout the year, indicating that it was a permanent resident, and known to nest.

In the Panamint Mountains, Fisher (1893) found a nesting pair at Bennett Well; a single owl was collected from Emigrant Canyon, on 6/8/17 (MVZ 2001); and Wauer (1964), who noted that the owl was known to nest in valley alluvial fans of the eastern slope of the Panamint Range, found a single bird at its burrow on the Johnson Canyon fan in October 1961 and observed a single bird with no sign of a burrow or breeding near Harrisburg Flat in July 1959.

[148] Historical observations at China Lake Naval Weapons Center include: "especially high" numbers in 1978 in valleys in the Mojave "B" ranges; 12 sightings in March 1979; 1 owl seen in October 1979; 1 owl at Haiwee Spring on 7/7/80; 2-3 adults and 3 juveniles at the NWC Golf Course on 8/24/80; 1 owl at the sewage treatment plant on 6/9/81; a family group of 4 owls at Amity Spring in June 1982; 1 owl at Mesquite Spring in June 1982; 2+ owls near Mirror Lake in March 1984; 1 owl near Mirror Lake on 5/15/84; and 2 owls at an unspecified location on 8/13/84 (USBLM 2002).

conservation measures since owl is not a listed species (China Lake NAWS 2002). There is a recent breeding season observation east of the White Mountains in 1994 (CNDDB 2001).[149]

Southeastern Kern County

Historical records confirmed breeding at the Desert Tortoise Natural Area, northeast of California City in the 1970s, and indicated probable breeding at Mohave in 1918 (Berry 1973; MVZ 2001).[150] Burrowing owls have been observed regularly within the last decade at the Desert Tortoise Natural Area (M. Conner, pers. comm., 2002). Campbell (1999) compiled 23 records of burrowing owls within the 301,000-acre Edwards Air Force Base ("AFB"); all of these have no specific locale or date. Although there have been no focused surveys, burrowing owls have been seen nesting since 1999 in as many as 6 sites simultaneously on the western half of the Base, where more typical owl habitat exists; preliminary data suggest that there are far fewer owls on the eastern half of the Base (R. Montijo, pers. comm., 2003). The Base management plan does not provide any specific conservation measures since owl is not a listed species (Edwards AFB 2001), but the known nest sites and owls are under no immediate threat from development or other activities and the population appears to be stable (S. Myers, pers. comm., 2002; R. Montijo, pers. comm., 2003). There are also 2 known nest sites immediately to the west and south of the Base, where human encroachment and activity appears to be a problem (R. Montijo, pers. comm., 2003).

San Bernardino County

Garrett and Dunn (1981) reported the burrowing owl "quite scarce" in the East Mojave Desert, but "rather common in agricultural areas" within the Colorado River Valley.[151] Burrowing owls were noted to breed in the Kingston Range, in northeast San Bernardino County, with observed owl densities of 1.4 birds/100 acres during summer surveys (Stone and Sumida 1983). There are historical reports of owls nesting at the train yards and the sewage plant in Barstow (USBLM 2002) and a burrow with up to 4 owls was observed at the train yards throughout the summer of 2002 (Rado 2002). There are recent breeding season records near Goffs (D. Cooper, pers. comm., 2002) and Victorville in the Mojave Desert (CNDDB 2001; USBLM 2002).[152] Burrowing owls still occur at Twentynine Palms Marine Corps Air Ground Combat Center ("MCAGCC"), but the management plan for the MCAGCC offers no detailed information and does not provide any specific conservation measures since the owl is not a listed species (MCAGCC 1996). Burrowing owls can still be found around Victorville (perhaps 10-15 pairs may remain), Apple Valley, Hesperia, and Lucerne Valley, but are declining due to rapid urban development (S. Myers, pers. comm., 2002). There is a report of a resident burrowing owl near El Mirage in 1991 (BWS 1991).

Northeastern Los Angeles County

There are historical nesting records from the Antelope Valley, in northeastern Los Angeles County (Daggett 1904; MVZ 2001; UCSB 2001).[153] It is conservatively estimated that a minimum of 10 breeding territories have been active in Antelope Valley most years between 1970-2000 (P. Bloom, pers. comm., 2002) and small numbers of breeding owls persist around Lancaster and Palmdale, however burrowing owls in northeastern Los Angeles County are declining and threatened by development pressure (CNDDB 2001; D. Cooper, S. Myers, pers. comm., 2002).[154]

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149 A single bird was observed southwest of Deep Springs College, east of the White Mountains, on 5/29/94 (CNDDB 2001).

150 A single owl was collected from Mohave on 3/15/18 (MVZ 2001), and Berry (1973) recorded breeding at the Desert Tortoise Natural Area, northeast of California City.

151 In the East Mojave, there is a non-breeding season collection record from 2 miles northeast of Kelso, on 1/3/38 (MVZ 2001). Along the Colorado River, it was reported in 1986 that a minimum of 5 owls were observed on the Fort Mojave Indian Reservation, approximately 5 miles north of Needles (CNDDB 2001).

152 A burrowing owl was seen roosting at a burrow site at Victorville on 4/3/97 (USBLM 2002).

153 Breeding season records of owls in the Antelope Valley include: Fairmont on 7/27/04 (MVZ 2001); Antelope Valley in June 1971; and Pearblossom on 6/11 and 6/12, 1972 (UCSB 2001). There are reportedly historical reports of owls nesting at the Poppy Preserve in Antelope Valley.

154 Recent CNDDB observations in Antelope Valley include: 10 fledglings seen 5 miles southwest of Rosamond, on 6/28/93; a fledged juvenile bird at Ave. B and 95th Street West, on 6/10/99; a family of owls at a burrow near Ave. B and 270th Street West in 1999 (1 owl in April and May, a female and young on June 6, and 2 adults and 6 juveniles on June 27); a burrow with fledged young near Ave. C and 250th Street West, on

Eastern Riverside County

Garrett and Dunn (1981) reported the burrowing owl to be “rather common in agricultural areas” within the Colorado River Valley.[155] Burrowing owls nested in Deep Canyon (south of Palm Desert), from the floor of the Coachella Valley to the base of the Santa Rosa Mountains (Ting and Jennings 1976; Weathers 1983). Other than reports of owls nesting in the Blythe area,[156] recent breeding season observations in eastern Riverside County could not be located.

Eastern San Diego County

Burrowing owls once nested in the Borrego Valley and probably in the Borrego Badlands in eastern San Diego County (Unitt 1984). A couple of pairs historically observed in the Borrego Springs area were apparently extirpated by the 1980s (Unitt 1984), but small numbers of owls are still likely to occur in the Anza-Borrego Desert (Unitt 2002). Recent breeding season observations in eastern San Diego County could not be located.

Imperial County (excluding the Imperial Valley)

Burrowing owls are reported to be common in agricultural areas within the lower Colorado River Valley (Garrett and Dunn 1981; Monson and Phillips 1981; Rosenberg et al. 1991; D. DeSante, pers. comm., 2003). Recent breeding season observations in eastern Imperial County could not be located.

6/11/99; an occupied burrow near 256th Street West and Ave. D, on 3/26/99; and an adult bird and presumed nesting near 110 Street West and Ave. B, on 5/19/99 (CNDDB 2001). 1 adult owl was observed at a burrow site in the Anaverde Valley, southwest of Palmdale, on 10/7/2000 (CNDDB 2001).

155 Two adults were presumed to be breeding at a site 4.5 miles northwest of Blythe, along the Colorado River, in 1974 (CNDDB 2001).

156 Burrowing owls are reported to be “scarce,” in the Blythe area, with at best 12-14 pairs in the summer and 2 wintering pairs (R. Higson, pers. comm., 2002).

VII. POPULATION TRENDS

The western burrowing owl has declined significantly throughout its range in North America (Haug et al. 1993; DeSante et al. 1997; James and Espie 1997). The species was listed as endangered in 1995 in all the provinces in Canada in which it breeds (Haug et al. 1993) and is listed as threatened in Mexico (AGFD 1995). In the United States, it is listed as a federal Species of Special Concern. The majority of the mid-western and western states within the owl's range have listed the species: it is listed as endangered in Minnesota and Iowa (James and Ethier 1989; Marti and Marks 1989), threatened in Colorado (Anderson et al. 2001), and as a state Species of Special Concern in Kansas, Nebraska, Oklahoma, South Dakota, North Dakota, Montana, Idaho, Utah, Washington, Oregon, and California (Sheffield 1997a). It is estimated that California supports the largest remaining breeding and wintering populations of the species (James and Ethier 1989; DeSante et al. 1993; Anderson et al. 2001).

J. Barclay (pers. comm., 2001, using data from DeSante and Ruhlen 1995) estimates that breeding owls have been extirpated from approximately 8% of their former range in California during the last 10-15 years. Surveys by DeSante and Ruhlen (1995) and information in this petition document that breeding owls have been entirely eliminated from 5 counties (Napa, Marin, San Francisco, Santa Cruz, and Ventura) and the Coachella Valley, and likely have been extirpated from Humboldt and Mendocino Counties, southwestern Solano County, and western Contra Costa County as well. DeSante and Ruhlen (1995) documented that breeding owls are now near extirpation in 6 other counties (Sonoma, San Mateo, Monterey, western San Luis Obispo, Santa Barbara, and Orange) and information in this petition indicates the species is near extirpation in southern Los Angeles, western San Bernardino, western Riverside, and San Diego Counties as well. Excluding consideration of desert areas where the species has never been common, breeding owls have apparently been extirpated from at least 6,460 square miles, or 10.2% of their former range in California, and are trending toward extirpation in at least an additional 16,475 square miles, or 26.1% (see Appendix 2).[157]

From the 1980s to the mid-1990s, the California breeding owl population was estimated to be declining in abundance at a rate of 8% per year (DeSante and Ruhlen 1995; DeSante et al. 1996). The winter abundance of burrowing owls in California has also declined significantly since the 1970s, with Christmas Bird Count abundance data showing a mean decline of 1.2 % per year from 1959-1988 (James and Ethier 1989; Sauer et al. 1996).

Although the burrowing owl was once considered to be "probably one of the most common birds in California" (Baird 1870), and was subsequently described as "abundant" (Keeler 1891), "common" (Grinnell 1915; Dawson 1923), or "fairly common" (Grinnell and Wythe 1927) range-wide in California, the species has been in continuous decline throughout the state since at least the 1940s (Grinnell and Miller 1944; Zarn 1974a; Arbib 1976; Remsen 1978). Localized declines of owl populations were noted by the early 1900s, for example in the Fresno area (Miller 1903; Tyler 1913a), in the region of Los Angeles (Willett 1912), and in Orange County (Robertson 1931).

Statewide, burrowing owl declines have accelerated greatly in the last 20 years (James and Ethier 1989; Trulio 1997; DeSante and Ruhlen 1995; DeSante et al. 1996; DeSante, et al. in press), Significant declines documented statewide (DeSante and Ruhlen 1995), in central California (DeSante et al. 1997), and in localized urban areas (e.g. Trulio 1998a) show an annual population loss of approximately 8% per year. The Institute for Bird Populations completed an extensive three-year study (1991-1993) of burrowing owl populations throughout the species' breeding range in California, exclusive of the Great Basin, desert areas, and the Channel

[157] Even including the large sparsely populated desert areas, breeding owls have been extirpated from 6.2% of their former range and are trending toward extirpation in an additional 15.9%.

Islands, where the species has never been common (DeSante and Ruhlen 1995; DeSante et al. 1996).[158] Based on the 1,995 breeding pairs of burrowing owls located by this survey, it was estimated that between 7,884 and 10,370 breeding pairs of burrowing owls existed statewide during 1991 to 1993 (DeSante and Ruhlen 1995; DeSante et al. 1996).[159] Although numerical survey data from earlier years with which to compare these estimates do not exist, early descriptions compared with current levels indicate the present abundance of burrowing owls in California is but a fraction of the historical level.

The current distribution of California's burrowing owl population is extremely heterogeneous and clumped. It is estimated that over 71% of the state's breeding owls, outside of the Great Basin and desert regions, inhabit the Imperial Valley, a very compact geographic area comprising only 2.5% the state's land mass (DeSante and Ruhlen 1995). DeSante and Ruhlen (1995) estimated 14% of California's owls reside in the southern Central Valley, and 11% breed in the central and northern Central Valley and southern San Francisco Bay Area combined. Only 2% of the state's breeding owls occur in the remainder of central and southern California west of the deserts, in small and extremely fragmented populations. Aside from the Imperial Valley population and the sparsely populated Great Basin and desert areas, only an estimated 2,731 breeding pairs of burrowing owls remain throughout the rest of California, and nearly half of these owls are concentrated in the southern portion of the Central Valley (DeSante and Ruhlen 1995).

Throughout the statewide census area, nearly 60% of the breeding groups of owls known to have existed during the 1980s had disappeared by the early 1990s (DeSante and Ruhlen 1995). This documented decrease in the numbers of breeding groups of owls during the decade of the 1980s was particularly heavy in the Central Valley (about 50% loss) and was astronomical in the heavily urbanized central-western and southwestern areas of California (about 70% loss) (DeSante and Ruhlen 1995). In the Central Valley alone, the fact that about half of the previously known breeding groups of owls disappeared within a decade suggests serious cause for concern for the future of this species in California.

A burrowing owl population survey was conducted focusing on central California in 1991 (DeSante et al. 1997).[160] Within the survey area, 83 breeding groups totaling 362 pairs of owls were previously known. In 1991, only 64 breeding groups totaling 318 pairs were found in a census of this area, despite the expenditure of 2,111 person hours searching 6,195 square kilometers for owls. Even using conservatively adjusted population estimates, the number of breeding groups in this region decreased 23-52%, and breeding pairs decreased 12-27% from 1986 to 1991. This is decrease of at least 4.6% per year for breeding groups and 2.4% per year for breeding pairs of owls. DeSante et al. (1997) re-surveyed the central California region in 1992 and 1993. Owl breeding groups in this region decreased a further 16.7% from 1991-92 and remained constant from 1992-93. The number of breeding pairs increased by 3.1% from 1991-92 (presumably because of excellent breeding success in 1991), but decreased by 5.2% from 1992-93.

DeSante et al. (1997) found the rate of population decline to be the greatest in the Outer Coast region (comprised of coastal Sonoma, Marin, San Francisco, coastal San Mateo, and Santa Cruz Counties). No owls were found in these areas during surveys in 1991. Only 103 owl pairs were located in the Bay Area region (comprised of interior Sonoma, Napa, western Contra Costa, Alameda, and Santa Clara Counties), and 233 pairs were located in the Central Valley region (comprised of Yolo, Sacramento, Solano, eastern Contra Costa, San Joaquin, Stanislaus, Merced, and the western portions of El Dorado, Amador, Calaveras, Tuolumne, and Mariposa Counties). Using conservative population estimates based on these surveys, DeSante et al. (1997)

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[158] In this survey, DeSante and Ruhlen (1995) censused virtually all 5-km by 5-km blocks where burrowing owls were recorded as breeding birds during the decade of the 1980s, as well as a stratified random sample of nearly 500 additional 5-km by 5-km blocks. A total of 6,856 person-hours were spent surveying for burrowing owls during the 3 years of the census on 16,035 square kilometers of the California census area.

[159] See Appendix 3 (DeSante et al. 1996) for an explanation of the methodology used for the survey and the statewide population estimate.

[160] The central California survey region was bounded by Sonoma, Napa, Yolo, Sacramento, and El Dorado Counties inclusive on the north; Santa Cruz, Santa Clara, Merced, and Mariposa Counties inclusive on the south; by the 610-m contour line in the Sierra Nevada Mountains on the east; and by the Pacific Ocean on the west.

concluded there were 153 pairs in the Bay Area region (plus an additional small population of about 10 pairs in the Livermore area), and 720 pairs in the Central Valley region. No breeding pairs remain in the Outer Coast region. The number of owl pairs per breeding group also decreased, mostly in the San Francisco Bay Area, but also in the portions of the Central Valley included in the survey by DeSante et al. (1997).

Recent demographic studies of 4 of the largest remaining owl populations in California (Imperial Valley, Carrizo Plain, Lemoore NAS, and San Jose area) suggest variable population trends over 5 years, with each population experiencing good and bad years for survival and reproduction (D. K. Rosenberg et al., unpublished data; Gervais 2002, Ronan 2002, Rosenberg and Haley 2003). There appears there may be a meta-population dynamic linking at least populations among the Carrizo Plain, the San Jose area, and the Central Valley around Lemoore; owls banded at Naval Air Station Lemoore have been recovered as breeders at the Carrizo Plain and the San Jose area. In addition, the number of breeding pairs in the Central Valley (Naval Air Station Lemoore) and the Imperial Valley study sites remained nearly constant between 1997 and 2000, despite dramatic fluctuations in productivity and survival (Gervais 2002, Rosenberg and Haley 2003).

Because of its isolation, the apparently stable Imperial Valley owl population cannot be counted upon as a source population to augment the very small and declining populations inhabiting southwestern California and other areas of the state. Potential dispersal from the Imperial Valley population to declining populations elsewhere in the state may be limited by unsuitable intervening habitat and by the dispersal characteristics of the resident Imperial Valley population itself (DeSante and Ruhlen 1995; DeSante et al. in press). Imperial Valley owls may be reproductively isolated from other breeding owls in California except possibly a few desert-breeding pairs (Rosenberg and Haley 2003). The loss of breeding owls from any region in California is particularly significant because there are no known locations in the state where a breeding population of burrowing owls has been eliminated and subsequently been reestablished.

VIII. NATURE, DEGREE, AND IMMEDIACY OF THREAT

The burrowing owl is a species in crisis throughout most of its range in California. DeSante and Ruhlen (1995) estimated that at least 50% of the state's owl population was lost in the previous decade in both urban and agricultural areas of the state. This rate of decline was a loss of approximately 8% of the population per year. Breeding burrowing owls have recently been extirpated from 5 counties and nearly eliminated from 6 entire counties as well as portions of 4 others. Owls throughout the vast majority of the state persist in small fragmented populations or as individual pairs. The largest remaining owl populations face a host of direct and indirect threats.

The declines of burrowing owl populations are linked to land use trends throughout the state. Dramatic human population growth and urban development characterize the areas of greatest owl population losses. Direct habitat losses to urban conversion is the primary cause of decline, compounded by habitat quality reduction due to surface disturbances and elimination of burrowing rodents. The development pressures extirpating the state's burrowing owl population continue unabated.

Burrowing owls have continued to decline in California despite their habitat flexibility. Although owls have adapted to human-altered landscapes, essential habitat attributes must be present to support the species. Essential habitat attributes are the presence of suitable nesting habitat and adequate foraging habitat near or adjacent to nesting habitat. Suitable nesting habitat consists of burrows, semi-fossorial animals, short grass, and perches. Foraging habitat may be long or short grass and must support adequate populations of small rodents and large insects and other owl prey species.

The primary factors affecting the viability of the California burrowing owl population include:

- Loss of nesting and foraging habitat to human uses such as urbanization, which results in direct mortality and lower population numbers as available habitat decreases.
- Destruction of nests during urban development and agricultural activities by surface disturbances such as disking, blading, grading, and over covering, which may result in direct mortality of adults and young and may reduce the habitat quality and carrying capacity.
- Elimination of burrowing rodents, through means which may result in direct owl mortality, as well as ultimately making an area unsuitable for owls, thereby reducing available habitat.
- Relocation of owls out of occupied habitat to accommodate urban development, which rarely results in successful breeding at the relocation sites, and crowds remaining owls onto smaller and smaller patches of habitat.
- Predation of young birds by non-native and feral animals, which significantly reduces nesting success and productivity.
- Mortality due to vehicle collisions and other anthropogenic causes.

A. URBAN DEVELOPMENT

Over 85% of burrowing owls in California are found on agricultural land in the Imperial and Central Valleys (DeSante and Ruhlen 1995), the most rapidly urbanizing areas of the state, according to California Department of Finance ("CDF") population growth statistics (CDF 1993, 1994, 2001). These areas are threatened in the short and long-term by human population growth and rapid development, which is converting open fields and agricultural lands to residential and commercial uses. Unfortunately, the flat open grasslands preferred as habitat by burrowing owls are prime development sites and owls currently have little protection from powerful economic development pressures. By the year 2040, it is projected that 5 million acres of agricultural land in California, or 17% of today's farmland base, will be lost due to urban expansion (Medvitz and Sokolow 1995).

Loss of nesting and foraging habitat for owls is the biggest consequence of urban development (Zarn 1974; Konrad and Gilmer 1984; Barclay et al. 1998). If owls are not detected during studies required by the California Environmental Quality Act, they can be directly killed when their burrows are bulldozed. A significant indirect effect of urbanization is reduced reproductive success where construction occurs at a site without destroying the nests. A study in Florida showed fledging rates for remaining burrowing owls at sites where construction occurred were significantly less than at sites next to construction or with no construction (Millsap and Bear 1988).

Imperial County is an area of extremely rapid human population growth. In 1993, Imperial County had the highest human population growth rate of California's 58 counties and it ranked 6th in population growth in 2000, with virtually all growth concentrated in the Imperial Valley (CDF 1994, 2001). With an annual growth rate of 2.9 to 3.6 % (Medvitz and Sokolow 1995; CDF 2001), Imperial County's human population is projected to increase from 150,000 currently to 504,000 by 2040, an increase of 335% (CDF 2001). The California Department of Conservation ("CDOC") Farmland Conversion Report (CDOC 1994, 2000) documented the conversion of at least 3,544 acres in Imperial County from agricultural to urban and built-up land from 1990 to 1998 (with only 36% of lands mapped).

The Central Valley is also rapidly urbanizing. The CDOC Farmland Conversion Report (CDOC 1994, 2000) recorded 74,006 acres of land converted from agricultural to urban and built-up uses from 1990 to 1998 in all the Central Valley counties. The Association of Bay Area Governments ("ABAG") projects the population of the Central Valley is projected to double by 2020 (CDF 1993).

In the southern Central Valley, Madera, Kings, Tulare, Kern, and Fresno Counties ranked 2nd, 4th, 5th, 8th, and 10th in the state, respectively, in population growth rate as of 1993, with an average growth rate of over 3% (CDF 1994). Kings and Madera Counties ranked 4th and 7th in population growth in 2000, with 3.0% and 2.9% growth rates that year, and Kern County also had growth rate greater than 2% (CDF 2001). Development projects such as the proposed U. C. Merced campus at Lake Yosemite in Merced County, which will develop 10,300 acres of open space grassland with known nesting populations of owls in the next 20 years, threaten remaining large owl populations. The Tejon Ranch Company has approvals for a massive 1,460-acre industrial development in southern Kern County within the range of the owl, and has plans for a 23,000-unit residential development, resort development, golf courses, and more. Eventually all 270,00 acres of Tejon Ranch Company's agricultural and ranching land in southern Kern and northern Los Angeles Counties may be at risk of development.

Human population growth has also exploded in the northern and central portions of the Central Valley, where numerous sites occupied by burrowing owls within the past few years are threatened by commercial and residential development (CNDDB 2001; CDFG 2002a). Placer County was the fastest growing county in the state in 2000, with a 3.5% growth rate (CDF 2001). San Joaquin and Yolo Counties ranked 8th and 10th in growth in 2000, with 2.7% and 2.5% growth rates, and Sacramento County had a growth rate greater than 2% that year (CDF 2001). According to California Department of Fish and Game ("CDFG") documents, from 1995-2001, at least 9,000 acres of occupied owl habitat and over 15,000 acres of potential owl habitat in San Joaquin County were lost to development; an unknown amount of occupied habitat and over 13,000 acres of potential habitat were lost in Sacramento County, and at least 460 acres of occupied habitat and over 600 acres of potential habitat were lost in Solano County during the same time period (CDFG 2002a).[161]

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161 The actual amount is likely significantly higher, since the list of projects with potential impacts to owls is not comprehensive, and many sites considered potential habitat may have actually been occupied habitat.

Proposed development projects in Yolo and Solano Counties threaten significant owl populations there.[162] Recent development projects in eastern Alameda and Contra Costa Counties have impacted owl colonies and several proposed projects would impact occupied owl habitat.[163]

Remaining owl populations on private lands in the Bay Area face enormous development pressure, which has been particularly severe in the southern San Francisco Bay Area. For example, in Santa Clara County, over 90% of the agricultural land was abandoned during the past century, and for the most part urbanized, with over half the valley floor now developed (Bell et al. 1994). In Santa Clara County, the conversion of rural/agricultural lands to urban uses has resulted in a 60% decline in the owl population in that County in 10 years (DeSante and Ruhlen 1995; L. Trulio, pers. comm., 2001).[164] The burrowing owl population at the Oakland Airport, formerly one of the largest in the Bay Area, has now been significantly reduced and is threatened by further airport expansion.[165] Many of the remnant owl populations in Alameda and Contra Costa Counties have also been severely impacted and face future development threats.[166] Ongoing development projects threaten most of the remaining owls on private lands in Santa Clara County with imminent extirpation (L. Trulio, pers. comm., 2002).[167] The human population of Santa Clara County is projected to increase 47% by

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162 Burrowing owls have been documented at the Mace Ranch Park site in Davis since at least 1997, when agricultural cultivation ceased and before development began (PHBA 2002). A 1,000 home development with a school, shopping center, and park has been built at this site, with nesting owls occupying a 33-acre parcel surrounded by development. Burrowing owls continue to occupy the site even though it was disked annually from 1998 to 2000 during the nesting season. Weed abatement activities at this site during May 2000 may have resulted in the take of at least 1 burrowing owl and the destruction of at least 1 nest site (CDFG 2002a). At least 3 productive nests and 15 juveniles were observed here during summer 2000 (CNDDB 2001). The Davis City Council approved converting 5 of these acres to playing fields in September 2002, despite acknowledgement in the EIR of "potentially significant direct and indirect impacts on burrowing owls and burrowing owl habitat," and warnings by biologists that the remaining habitat patch after development will be too small to support owls (PHBA 2002). In 1998, the University of California, Davis transferred a site previously deemed an Open Space Reserve for burrowing owls to developers, for conversion to student housing. At Montezuma Marsh in Solano County, occupied owl habitat is to be buried in several feet of toxic dredge sediments as part of a "restoration" project. The Montezuma project is expected to directly impact 7 pairs of owls (CDFG 2002a).

163 In eastern Alameda County, the recent Mountain House Golf Course and PG&E projects directly impacted 4 pairs of owls, and the East Altamont Energy Center impacted an estimated 7-8 pairs (CDFG 2002a). In eastern Contra Costa County, the recent Equilon project in Byron and the Williamson Ranch Plaza project in Antioch each directly impacted 2 pairs of owls, and the Denova project in Concord directly impacted 1 pair (CDFG 2002a). Grading and disking for development threaten remnant owl populations in Antioch, Brentwood, and Oakley. The proposed expansion of Los Vaqueros Reservoir threatens occupied owl habitat there. A proposed golf course development threatens owl populations at Altamont Pass.

164 A number of recent development projects in San Jose (including Cisco, Novell, AMD, Agilent, Agnews Developmental Center, Agnews East, Pacific Bowie, FRIT, VTA, Mission College, 3Com, Santa Clara University, Sobrato, and Errante) directly impacted an estimated 42 pairs of owls (CDFG 2002a). The owl population at Mission College dropped recently from 60 owls to less than a dozen. In 1990, the college decided to lease about 70 of its 100 acres of open space to developers to build a shopping mall. As of 1998, only 12 of the original 16 pairs remained, and as of 2001, only 8 pairs remained. There may only be enough remaining habitat to support about 8 pairs in the long run (L. Trulio, pers. comm., 2002). The first week of February 2001, the college placed one-way doors over 92 squirrel holes so burrowing owls could no longer use them as shelter.

Development in the City of Morgan Hill has apparently recently extirpated the breeding owl population there, before a promised owl habitat conservation program could be implemented (J. Barclay, pers. comm.). The recent Cisco, Townsend Milpitas, and Caltrans projects in Milpitas directly impacted 4 pairs of owls (CDFG 2002a).

165 The Oakland Airport, which is undergoing a major expansion project, was ordered as a result of a lawsuit in 2001 to conduct a new Environmental Impact Report (EIR) for the project, because planners had ignored CDFG concerns about the impacts of the expansion on the burrowing owl population. CDFG indicated the mitigation proposed in the draft EIR for the burrowing owls "is not adequate for their protection and does not follow the Department's guidelines for the species." Among other things, CDFG questioned the adequacy of the draft EIR's proposed one-to-one replacement ratio for destroyed owl burrows, it requested more information about the location and size of the mitigation area, and it asked the airport to explain how it planned to permanently protect the mitigation site from conversion to other uses. The final EIR did not provide for new or modified mitigation measures in response to the CDFG comments, nor did it contain any new standards for replacement of burrows destroyed by construction. Also absent was any explanation, as requested by CDFG, why the number of acres proposed for the replacement habitat would be sufficient, how the replacement habitat will be protected, or where it will be specifically located. In spite of the fact that the airport had been alerted to some significant problems by the agency with technical expertise in species conservation, the mitigation measures proposed in the final EIR are essentially identical to those proposed in the draft EIR. CDFG subsequently made an agreement that will allow the airport to relocate many owls and "mitigate" with conservation land purchased in Byron, in eastern Contra Costa County.

166 The recent Port of Oakland Project directly impacted 6 pairs of owls and the recent Evershine, ESS, and Applied Materials projects in Fremont, and the Denova project in Concord each directly impacted a pairs of owls (CDFG 2002a). The proposed Catellus development in Fremont threatens a population of burrowing owls.

167 The City of San Jose expects to destroy over 2000 acres of owl habitat over the next 20 years (plus potentially an additional 1,250 acres intended as mitigation land, which was scrapped when the City's owl plan was abandoned). The proposed Cisco "campus" in Coyote Valley will develop 150 acres of open space that currently supports 3 families of burrowing owls (16 to 22 adults and chicks were located there in 1998), and will leave a remaining open space too small to support owls. The proposed Metcalf Energy Center will destroy 10 acres of grassland containing a burrow that was occupied in February 1999.

2040 (ABAG 1999). According to the CDFG, Central Coast Region, at least 84 owl pairs, approximately one-half of the Bay Area population (DeSante et al. 1997), have been directly impacted by development activities in the past 3 years, within the southern and eastern portions of the Bay Area (Contra Costa, Alameda, and Santa Clara Counties) (CDFG 2002a). The Association of Bay Area Governments ("ABAG") projects the population of the San Francisco Bay Area will have increased by 1.4 million people (22%) from 1995 to 2020 (ABAG 1999).

In southern California, planned developments in western Riverside and San Bernardino Counties threaten many of the significant breeding colonies remaining there.[168]

The ongoing closure of military bases and their conversion to commercial and residential development is a major threat that could reduce or extirpate significant owl populations. Large owl populations reside at Lemoore Naval Air Station in Kings County and Moffett Airfield in Santa Clara County; populations also occur at other bases such as Alameda Naval Air Station in Alameda County and southern San Diego County Naval Bases. If these sites are closed and their grasslands developed, their owl populations could be lost. For example, NASA plans to develop 500 acres of land (1,930 housing units) at Moffett Field in Mountain View, Santa Clara County, with only 81 acres protected as a burrowing owl preserve. The EIR will be approved in 2002, with construction through 2017. The potential closure and development of the Sacramento Army Depot and Norton Air Force Base in western San Bernardino County threaten burrowing owl colonies.

B. THREATS TO IMPERIAL VALLEY AND SOUTHERN CENTRAL VALLEY OWL POPULATIONS

The vast majority of California's breeding burrowing owls reside in the Imperial Valley (71%) and the southern Central Valley (14%) (DeSante and Ruhlen 1995). DeSante et al. (in press) note that "given the rapid development of much of the grassland and desert regions of California, the apparent extirpation of the species in the Coachella Valley immediately north of the Imperial Valley, the reduction in numbers in other parts of California, and the lack of a state-wide conservation strategy, the importance of the Imperial Valley population may increase."

The Imperial Valley owl population (which may be reproductively isolated from other populations) faces ongoing threats to its habitat and numbers, including habitat loss to development (as discussed in Section VIII.A above), cement lining of earthen canals or burying of conveyance structures, levee maintenance and repair operations including ground squirrel eradication, mowing, high exposure to agricultural poisons, a low-calcium diet, and relatively low reproductive success (DeSante et al. in press).

Because of the large numbers of owls that reside within the agricultural matrix of the Central and Imperial Valleys, changes in agricultural practices, particularly regarding water distribution and conveyance

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168 A 2,028 acre urban development is proposed adjacent to the cities of Temecula and Murrieta in western Riverside County. Three public agencies and 9 private entities applied in July 2000 for a Habitat Conservation Plan and 30-year Incidental Take Permit for 19 urban development projects in this area. The burrowing owl is one of the covered species for the HCP. 554 acres of burrowing owl habitat would be destroyed by the project, with 61 acres of habitat conserved as "mitigation." Pacific Bay Properties applied in December 1999 for a 30-year Incidental Take Permit for a 2,000 home development within the Rancho Bella Vista Community Specific Plan Area, between state route 79 and Lake Skinner Reservoir, in western Riverside County.

In San Bernardino County, the City of Chino General Plan authorizes low to high-density housing development on most of the agricultural land around the Chino Airport, including the majority of occupied owl locations in the vicinity of Chino (J. Bath, pers. comm., 2003). In one case consultants installed one-way door devices on burrows to eliminate the owls before the CEQA process started, so that the project can go through with a Negative Declaration instead of an EIR; in another case the city issued a grading permit before public CEQA hearings were held (J. Bath, pers. comm., 2003). The Department of General Services is selling for development 717 acres of surplus state property in the City of Chino with one of the largest stable colonies of burrowing owls known in the Prado Basin area (J. Bath, pers. comm., 2003). The City of Ontario General Plan proposes to convert 8,200 acres of existing agricultural grasslands, and develop 31,000 homes, with only a mere 50 acres of raptor habitat provided as "mitigation" (G. Stewart, D. Guthrie, pers. comm., 1997). This plan, when combined with the 2,447-acre plan of the City of Chino, will impact the largest burrowing owl population in the Inland Empire (J. Bath, pers. comm., 2003).

(e.g., Clemings 1996), have the potential to quickly affect California's burrowing owl population (Anderson et al. 2001; Rosenberg and Haley 2003). Almost all of the owls in the Imperial Valley, and many owls in the southern Central Valley nest within or along water ditches, canals, and earthen drains.[169] Habitat destruction in the form of altered water conveyance structure is a major risk for owl populations in the Imperial Valley (Gervais et al. 2003). The state of California is currently lining up a series of water transfers from agricultural to urban areas, including a massive transfer from the Imperial Valley to San Diego. Part of this transfer involves efficiency improvements to Imperial Valley waterworks, including lining many of the earthen canals where burrowing owls live with concrete, converting open drains into pipeline drains (burrowing owls inhabit the inside banks of the drains), and fallowing large acreages of agricultural land which currently serve as foraging habitat. These activities could permanently eliminate owl burrows (CH2MHILL 2001) and reduce foraging habitat.

The main factor controlling owl abundance in the Imperial Valley seems to be availability of burrow sites (Coulombe 1971). Although 1,000 miles of canal banks were present in 1971, only a fraction of them are suitable habitat for owls at any given time. Canals that supply water are not suitable for nesting due to periodic rises in water level and the potential for flooding. About one-third of the canal mileage is drainage canals, which are subject to dredging every few years, which destroys established burrow sites. Coulombe (1971) and Rosenberg and Haley (2003) documented owl nests destroyed by dredging of drains and grading of roads in the Imperial Valley. Coulombe (1971) counted 13 pairs of owls along 4 miles of canal in 1966, but could find no owls 1 month later, after the canal was dredged. Flooding, caused by the overflow of delivery ditches, has caused nest destruction and killed young (Rosenberg and Haley 2003). The development of tall vegetation along the banks of canals or drains can also prevent owls from nesting (Rosenberg and Haley 2003). Thus, the only suitable habitat in the agricultural matrix is areas where agriculture is not in progress (Coulombe 1971).

Despite the high densities of burrowing owls in the Imperial Valley, reproductive success there is relatively low compared to other populations in California, with an average of only 2.5 young per nest (Rosenberg and Haley 2003). Imperial Valley owls produce smaller average clutch sizes relative to other California populations, but at least in some years owl productivity there was not limited by egg-laying (J. Gervais, pers. comm., 2003). Burrowing owls elsewhere in the state produce up to 11 eggs but owls only average 6 eggs in the Imperial Valley, and clutch sizes there have never exceeded 8 eggs; of those, few individuals fledge (Rosenberg and Haley 2003). This reduced productivity may be due to close nesting; e.g., in Oregon, nests closer to 110 meters to neighboring nests had lower reproductive success (Green and Anthony 1989). However, lack of calcium-rich vertebrate prey has been shown to reduce reproductive success of burrowing owls in the Imperial Valley. Year-round cultivation and flood irrigation presumably maintains very low rodent populations, thus rodents represented only 0.2% of the total prey found in burrowing owl stomachs in one study in the Imperial Valley, while in other locations, rodents and other vertebrate prey represented 8-52% of the diet (York et al. 2002). Small clutch sizes in the Imperial Valley have been attributed to the scarcity of rodents and other calcium-rich food items in the diet; in fact, owl productivity increased when the diet was supplemented with rodents (Haley 2002; York et al. 2002).

With 71% of the state's burrowing owl population occupying only 2.5% of the state, the Imperial Valley represents a single population of extreme importance. The size of this population is an inadvertent but fortunate by-product of agricultural land use. Should management or land use change even slightly, the most significant population of owls in California could be reduced or lost.

C. DESTRUCTION OF BURROWING RODENTS

Numerous researchers have identified elimination of burrowing rodents through control programs as the primary factor in the recent and historical decline of burrowing owl populations (Anderson et al. 2001).

[169] Most (92%) of the owls in the Imperial Valley nest within 15 meters of irrigation canal banks (DeSante et al. 1996).

Farmers and ranchers, with help from the federal government, have long practiced all-out warfare against burrowing rodents. For example, persecution of the prairie dog has reduced them to just 2% of their original numbers (Trulio 1998a). Widespread ground squirrel control programs were begun in as early as 1869, when the state legislature authorized the payment of bounties on squirrels (Gordon 1996), and are currently carried out on more than 9.9 million acres in California (Marsh 1987). In some primarily agricultural counties, the ground squirrel population has been reduced and maintained at perhaps 10-20% of the carrying capacity. Ground squirrels are still considered vermin and are the victims of ongoing eradication campaigns. Individual landowners and managers on grazing, vineyard, and crop production lands conduct extensive rodent control programs involving shooting, poisoning with acute toxicants, anticoagulants, and fumigants, trapping, and sealing burrows (Butts 1973; Salmon et al. 1982; Rosenberg et al. 1998a). Burrowing owls have been incidentally poisoned and their burrows destroyed during eradication programs aimed at rodent colonies (Zarn 1974b; Remsen 1978; Collins 1979; Gordon 1996; P. Bloom, pers. comm., 2002).

Acute toxicants used to eliminate squirrels have included zinc phosphide, strychnine, and sodium flouroacetate (Compound 1080 - which is no longer registered for use in California). These poisons may adversely affect burrowing owls. In Kings County, anticoagulants and fumigants are usually used (Rosenberg et al. 1998a). Anticoagulants include chlorophacinone, diphacinone, Fumarin, Pival, and warfarin. More effective second generation anticoagulants such as brodifacoum, difenacoum, and flocoumafen are also used to kill rodents, primarily in bait forms (Rosenberg et al. 1998a). Primary poisoning and secondary consumption through the ingestion of poisoned rodents are possible for burrowing owls. In an experiment where mice killed by anticoagulants were fed to Northern saw-whet (*Aegolius acadicus*), great horned (*Bubo virginianus*), and barn owls (*Tyto alba*), all the owls exposed to diphacinone and brodifacoum showed symptoms of poisoning and death resulted, while 1 of 6 died from ingesting bromadiolone-killed rats (Medenhall and Pank 1980). Barn owls also showed significant mortality when fed rodents killed by Flocoumafen and brodifacoum (Newton et al. 1994; Wyllie 1995). Fumigants used on ground squirrel burrows include aluminum phosphide, carbon bisulfide, and methyl bromide, with unknown, but potentially harmful effects on owls.

Healthy colonies of burrowing rodents are an essential attribute for burrowing owl habitat. Periodic elimination of ground squirrels inhibits the persistence of owls, which rely on squirrels for nest burrows (DeSante et al. 1996). Ground squirrels also benefit burrowing owls in the form of burrow maintenance between nesting seasons and shared alarm calling behavior (Trulio 1994). In agricultural areas such as the Central Valley and the Imperial Valley, rodenticides are often used on levees to control numbers of ground squirrels, which can undermine levees through their digging. Exposures to rodenticides and direct killing of owls by gassing (Zarn 1974a) could be problematic in areas like the Imperial Valley, where a large proportion of owls nest on or near levees.

D. RELOCATION OF OWLS

Burrowing owls in California are commonly discouraged from nesting at or translocated from occupied burrows, either through active or passive relocation or eviction, to accommodate urban development. Active relocation is the process of moving owls from occupied burrows to other burrows off-site, by trapping owls and temporarily holding them in enclosures on relocation sites, then releasing them at the relocation sites. Passive relocation is the process of encouraging owls to move from occupied burrows to other natural or artificial burrows, and may entail using one-way devices on burrows that force the subject owls to relocate. Eviction is forcing owls to evacuate previously occupied burrows by physically preventing them from re-occupying those burrows, without any provision of alternative burrows.[170] Such relocation activities are intended to avoid "take" (direct mortality or harm to owls) and are often encouraged by regulatory agencies such as the California Department of Fish and Game (CDFG 1995). Unfortunately, the potential for take is only part of the impacts of

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[170] The sealing or plugging of occupied burrows is illegal, as nests are protected under the California Fish and Game Code. However, unoccupied burrows, even those owls have recently used for nesting, are not necessarily protected all year.

development projects, and relocation of owls is not designed to mitigate for the habitat loss, habitat fragmentation, and reduced owl survivorship caused by development.

Many of the active relocation efforts for burrowing owls that have been monitored have failed to establish viable owl populations at the relocation sites, with owls either disappearing completely, attempting to return to the capture site (where their burrows have often been destroyed), or exhibiting low breeding success at the relocation site (Harris 1987; Delevoryas 1997; Trulio 1997). One of the reasons for this is that burrowing owls are very site tenacious and are not easily forced to move to a different burrow, especially during nesting season (Trulio 1997). Such burrow fidelity is a widely recognized trait, with owls regularly reusing burrows from one year to the next (Martin 1973; Wedgwood 1976; Green 1983). A study by Green (1983) found an average of 76% of owl burrows were reoccupied the next year. Trulio (1994) reported that over a 3-year time span at a site in northern California, 73% of nest burrows or burrows within 100 meters were reoccupied the next year.

Many active relocation efforts involve moving owls to artificial burrows. A significant problem with artificial burrows is that they require permanent maintenance to provide long-term nesting habitat, otherwise they can become buried (P. Bloom, pers. comm., 2002). Another potential problem with active relocation is that moving owls in this manner likely stresses the birds (Trulio 1997). Another failure has been the lack of requirement for long-term management of owl habitat at release sites.

Harris (1987) noted that only 1 of 8 (12.5%) previous active burrowing owl relocations in California was even remotely successful in terms of establishing breeding at the new location, with 2 of the 6 relocated owls in that instance remaining and breeding on the site for up to 3 years. Owls released during 2 spring relocations returned to the capture site within 1 month of release (Feeney 1997). Three of the relocations were done in the fall, and the timing of the other relocations was unknown (H. T. Harvey and Associates 1993).

Delevoryas (1997) reported on the failed active relocation in 1990 of 5 pairs of owls from Mission College in Santa Clara to 2 sites 31 kilometers to the south. The owls were trapped in mid-February and released in mid-March, just as breeding season was getting underway. The first season 2 of the 5 pairs (40%) bred successfully, with only 2 nestlings surviving to fledging (it is unclear if the fledglings survived to the following breeding season). Of the 10 translocated owls, 5 left the site, 1 was killed, and 4 adults plus the 2 fledglings remained at the relocation sites in 1991. By 1992 only 2 owls remained, and by 1994 only 1 owl remained. The site was not maintained for burrowing owls after the first year - the site was disked, and artificial burrows were not maintained (P. Delevoryas, pers. comm., 2003).[171]

Trulio (1997) compiled known information on active burrowing owl relocations conducted in California. Of 27 owls relocated to new burrows, 17 (63%) disappeared within a year of release and 7 (26%) flew back to their original site. Only 4 owls (14%) attempted to breed at their new locations (1 owl bred at the new site before disappearing). Only 2 owls (7%) bred successfully, and only 1 owl (4%) stayed on the site for 2 breeding seasons. In addition to the failure of 93% of these owls to successfully breed at the relocation sites, the fate of most of the relocated owls was unknown, as the majority disappeared.

In 1997 H. T. Harvey & Associates successfully translocated 8 owl pairs to a relocation site at the San Jose/Santa Clara Water Pollution Control Plant buffer lands. All but 1 pair (which may have been moved too late in the breeding season) remained on the relocation site, and successfully raised chicks to the age of

[171] Several reasons were posited for the failure of the relocation effort. The mortality of 1 adult owl was due to inadequate closing of the nesting box by researchers, allowing access to predators. At 1 relocation site, the landowner (IBM Corporation) failed to follow the agreed-upon management plan, and the foraging habitat at the site was disked and left fallow during a period when nestlings and fledglings would need the most amount of food for growth. Also, researchers fed the owls too many mice while they were held in hack aviaries at the site, and surplus mice cached by owls in the burrows likely led to increased predation.

fledging; about 11 pairs nested at this relocation site in 2002, most of which nested in artificial replacement burrows constructed in 1997 (D. Plumpton, pers. comm., 2002).

The unfortunate result of most active relocation efforts has been the loss of known occupied owl habitat to development, with very little proven nesting success at relocation sites and the ultimate fate of most translocated owls unknown. Clearly, the practice of active relocation of burrowing owls as a “mitigation” for development impacts is detrimental to preserving owl populations.

For most passive relocations conducted in California, there is no way of knowing where the evicted owls go or whether they are able to breed successfully in other areas. The current lack of knowledge on the results of passive relocation is largely due to the failure of CDFG to require studies in areas where owls are evicted. The consultants that are hired to do this work do not conduct studies (e.g., color banding or radio-tracking) that evaluate the success of passive relocation. There is no legal requirement to do this, and developers rarely have any interest in the fate of the owls beyond moving them out of the way of development projects. For example, in the City of Chino, consultants are putting one-way door devices on burrows to eliminate owls before the CEQA process starts, so that projects can go through with a Negative Declaration instead of an EIR (J. Bath, pers. comm., 2002).

However, if the process of passive relocation is properly refined and used appropriately, it has the potential to be an important conservation tool, for example when applied to permanently protected lands such as large military reservations, used to discourage nesting in close proximity to airport runways, or used to avoid take for temporary disturbances (such as pipelines, paving, etc.) by moving owls short distances (J. Barclay, P. Bloom, pers. comm., 2002). Passive relocation of owls can work if the birds are moved short distances (i.e. under 5 miles) and the habitat they are moved to is managed for them. Burrowing owls should never be translocated or forced to move to unprotected private property. Predators must also be taken into consideration - if owls are moved from an urban area where they have only been exposed to feral cats, Red-tailed Hawks and Northern Harriers, they will probably do poorly if moved to an area with coyotes or red foxes (P. Delevoryas, pers. comm., 2003).

There have also been several failed reintroduction attempts (long distance movement to formerly occupied parts of their range) of burrowing owls. DeSmet (1997) reported that of 169 young and 85 adults captured in South Dakota and released into temporary aviaries and artificial burrows in Manitoba, Canada, only 1 of these birds (0.4%), a juvenile, was seen the next year. Martell et al. (1994) reintroduced 104 fledgling owls from South Dakota to hack sites in Minnesota, distances of 450 and 600 kilometers away. None of these birds were seen after the summer they were released. After a decade of owl family relocations from Washington State to British Columbia (Dyer 1988; Dyer pers. comm. as cited in Trulio 1997) the program has not successfully established a self-sustaining population.

The mixed results of active relocation, the failure of reintroduction efforts, and the misuse of passive relocation techniques indicates that it is imperative to protect remaining occupied burrowing owl habitat and owl populations in situ. Unfortunately, the CDFG is informally encouraging translocation of owls from occupied habitat in rapidly urbanizing areas (e.g. in Santa Clara County). The practice of translocating owls as “mitigation” eliminates occupied habitat without adequate mitigation for the true impacts of development. As a relatively adaptable species, all that burrowing owls must be afforded in order to survive is habitat, and if that habitat is systematically removed for the convenience of development, owls will predictably disappear.

E. AGRICULTURAL PRACTICES

Although agricultural environments can support very high densities of burrowing owls (Rosenberg and Haley 2003), they may also pose threats to owl populations through pesticide exposure, destruction of nest burrows by farm equipment, seasonal food scarcity exacerbated by farming practices, or extermination of burrowing mammals (Desmond et al. 2000). Although intensive agricultural practices can have impacts on the productivity of burrowing owls, current agricultural practices in California are not thought to be a significant threat to the persistence of viable breeding owl populations, as evidenced by the apparent coexistence of high concentrations of burrowing owls with agricultural operations in the Imperial Valley and southern Central Valley. The California Endangered Species Act includes an agricultural exemption (California Fish and Game Code §2087(a)) allowing for "accidental take of candidate, threatened, or endangered species resulting from acts that occur on a farm or a ranch in the course of otherwise lawful routine and ongoing agricultural activities."

The dramatic alteration of 98% of the original prairie habitat in the United States has been linked to the reduction in western burrowing owl populations (Evans 1982; Sheffield 1997a; Trulio 1998a). As long ago as the 1930s it was recognized that intensive cultivation of grasslands and native prairies was a major factor in declining burrowing owl populations (Bent 1938). Conversion of pastures to cropland (Grant 1965; Konrad and Gilmer 1984; Ratcliff 1986), and cultivation of grasslands (Grant 1965; Faanes and Lingle 1995) limit burrowing owl populations through the destruction of nesting habitat.

Although many of the state's remaining burrowing owls survive in the margins of agricultural areas, such as along roadside embankments and earthen irrigation canals and drains, intensive agriculture can be detrimental to the survival of burrowing owls. The apparent strong selection of irrigation canals for nesting by burrowing owls in agricultural areas may not indicate that this habitat is preferred over habitat well removed from the canals, but rather because of the intensive agriculture and disking and plowing of fields, the levees may provide the only available nesting habitat (DeSante and Ruhlen 1995). Ninety percent of California's burrowing owls are concentrated in wide, flat lowland valleys, basin bottoms, and coastal plains – terrain where the majority of agricultural development has occurred and is expected to continue to occur. Intensive agriculture has been shown to result in the loss of burrows, loss of foraging habitat, creation of sub-optimal nesting habitat, and increased vulnerability to predation, and may also reduce the chance that unpaired owls will be able to find mates (Haug and Oliphant 1987; Haug et al. 1993). Because burrowing owls in agricultural systems spend a large proportion of their time foraging in fields (Rosenberg and Haley 2003), heavy pesticide use (discussed in Section VIII.F below) will also remain a potential threat to these populations.

Disking, Plowing, and Mowing

One obvious impact of intensive agriculture is disking and plowing of owl burrows. Disking or tilling of the land destroys burrows and potentially the owls in these burrows. Mowing is a preferable alternative, but tractors used to pull mowers, and occasionally the mowers, can cause mortality.[172] The use of large-tired mowers when mowing grasslands can reduce the risk of nest damage and restricted use of mowing when young chicks emerge (May-June) prevents destruction of young (Rosenberg et al. 1998a). In addition, fields which may be needed as foraging habitat can be disked and left fallow, reducing the prey base during a period when nestlings and fledglings would need the most amount of food for growth.

Grazing

Livestock grazing can have positive benefits for burrowing owl habitat, as many researchers have noted that burrowing owls prefer grasslands grazed by cattle or rodents (Anderson et al. 2001). Grazed areas may attract ground squirrels, increasing burrow availability, and also provide habitat with low vegetation height and reduced ground cover, allowing owls to stand near the burrow entrance and effectively watch for approaching predators (Coulombe 1971; Green and Anthony 1989; Trulio 1994). One of the largest populations of burrowing owls in the San Joaquin Valley was found in grassland on private land that was heavily grazed, although not to the point of exposure of bare soil (Rosenberg et al. 1998a). However, heavily grazed pastures tend to have a very low relative abundance of prey; thus heavy grazing in burrowing owl foraging areas may be

[172] Mowers used at Lemoore Naval Air Station have crushed a small number of burrows and in one incident, owl chicks were killed when they were flushed away from the burrow rather than into it as the mower passed overhead (J. Gervais, pers. comm., 2003).

detrimental to the species (Dechant et al. 1999). The major negative impact of livestock grazing is control of ground squirrels in the name of enhancing livestock production (see Section VIII.C above, discussing destruction of burrowing rodents). Range management practices associated with grazing potentially affect population densities of prey species for burrowing owls, such as California vole (*Microtus californicus*), western harvest mouse, and deer mouse; these species do poorly in heavily grazed pastures, as they need a minimum build-up of thatch to achieve moderate population densities (Holmgren and Collins 1999). Grazing can positively affect owls if it is effectively managed and monitored (Rosenberg et al. 1998a), but the complete effects of grazing on burrowing owl habitat and populations are unknown (Anderson et al. 2001).

Other Agricultural Impacts

Many owls nesting along the California Aqueduct in the Central Valley face threats from maintenance and repair of embankments. Heavy irrigation has been known to drown both squirrels and owls (Miller 1903). Robertson (1931) noted instances of burrowing owls drowning in irrigation pipes (where they were forced to nest for lack of nesting holes) in western Orange County. The federal government and private landowners undertake extensive eradication programs to rid agricultural lands of predators and "pest" species. Although not targeted, burrowing owls are occasionally taken in leg hold traps (ADC 1993, 1994, 1995). Burrowing owl mortality from entanglement in barbed-wire fencing has also been documented (Lohoefener and Ely 1978). Deliberate destruction and filling in of owl nest burrows has been noted recently along irrigation canals in agricultural areas in Arizona, specifically in Tucson, Phoenix, and Yuma (Brown and Mannan 2002), and similar vandalism may be occurring in agricultural areas in California. None of these impacts are likely to pose population-level threats to owls.

F. PESTICIDES

Use of insecticides and rodenticides in burrowing owl habitat can reduce the food supply and the number of burrowing mammals, and may also be toxic to owls (Ratcliff 1986; James and Fox 1987; James et al. 1990; Baril 1993; PMRA 1995; Hjertaas 1997; Sheffield 1997b). Burrowing owls have been reported to ingest poisoned rodents and to forage on the ground for insects in areas littered with poison grains (Butts 1973; James et al. 1990).

The largest breeding concentrations of burrowing owls are located in the Imperial Valley and in the southern San Joaquin Valley (DeSante et al. 1997), some of the most intensively farmed lands in the U. S. (Gilmer et al. 1982; Griggs 1992). The pervasive use of agricultural chemicals, including organochlorine, organophosphorus, and carbamate pesticides, and the existence of trace elements such as selenium, can potentially impact individual owls in these areas. Owls can be exposed by direct contact, ingestion from preening feathers, and through their diet, which includes insects, small vertebrates, crayfish from irrigation ditches, and potentially contaminated fish carrion (Gervais et al. 1997). Burrowing owls are known to scavenge dead rodents and other prey items, making them highly susceptible to secondary poisoning (Sheffield 1997b). Even low levels of chronic pesticide exposure may be detrimental to burrowing owls when combined with other stressors, although documentation of persistent pesticides in a biotic system does not infer the origin of contamination or its potential effects (Gervais and Anthony in press). It is unclear whether owls selectively use agricultural fields and whether they will do so following pesticide application, when large pulses of dead and dying invertebrate prey may suddenly be available (Gervais 2002). Studies at Lemoore NAS by Gervais (2002) and Gervais et al. (2003) did not find selection or avoidance by owls of fields recently treated with pesticides, and no owls appeared to have died following use of treated fields.

Burrowing owl populations in the San Joaquin Valley (Lemoore Naval Air Station), the Imperial Valley (Salton Sea National Wildlife Refuge), and Carrizo Plain Natural Area were sampled for contaminants in 1996 (Gervais et al. 1997). These sample sites were chosen to be representative of the general agricultural practices in the area. Gervais et al. (1997) found that burrowing owl eggs from Lemoore contained high concentrations of DDE, ranging from 1.5 to 33 ppm wet weight. Feathers from owls nesting at Lemoore that were also contaminated with DDE indicated recent local exposure. Eggs from Salton Sea NWR and Carrizo Plain contained up to 0.38 and 3.4 ppm DDE, respectively. Eggs collected near Pixley in Tulare County in 1998 also contained traces of DDE (Rosenberg et al. 1998b). Although the burrowing owls in this study did reproduce successfully, the contaminant loads may make them much more vulnerable to unrelated stresses, such as exposure to other toxicants or weather. Some owl populations maintain substantial body burdens of persistent pesticides that may inhibit reproduction (Gervais et al. 2000).

In a follow-up study from 1998 to 2001, Gervais and Anthony (in press) sampled burrowing owl eggs at Lemoore NAS, and found levels of DDE varying over 4 levels of magnitude, but only 2 eggs with DDE levels worthy of serious concern (J. Gervais, pers. comm., 2003). DDE levels were not by themselves associated with reproductive failure, but contaminant concentrations in combination with low rodent abundance in the diet were related to reduced productivity (Gervais and Anthony in press). Variation within and among egg contaminants within years suggested that egg contaminant patterns may be the result of immigrating owls from more contaminated sites, and to a lesser extent, to varying patterns in prey availability.

Despite a long-standing ban on the use of DDT, its degradation product DDE remains a threat to wildlife in the San Joaquin Valley (Anderson et al. 2001). DDE has been documented in the eggs of terns (*Sterna* spp.), egrets (*Egretta thula*, snowy egret and *Ardea alba*, great egret), and herons (*Ardea herodias*, great blue heron and *Nicticorax nicticorax*, black crowned night heron) in San Francisco Bay (Ohlendorf and Fleming 1988; Ohlendorf and Marois 1990; Hothem et al. 1995), of herons and egrets in the Imperial Valley (Ohlendorf and Marois 1990), and of prairie falcons in Pinnacles National Monument, where it was associated with impaired reproduction (Jarman et al. 1996).

Gervais et al. (1997) also compared current eggshell thickness to burrowing owl eggs from 45 nests from central and southern California collected prior to 1937, and found that eggshell thickness in 1996 had declined over 20%. Eggs from Lemoore in the San Joaquin Valley were significantly thinner than those from the Salton Sea NWR or Carrizo Plain. Chemicals such as dicofol, used as a miticide on cotton and citrus crops, can cause eggshell thinning and toxicity in at least some captive raptors (Schwarzbach 1991), including the screech owl (*Otus* spp.) (Rohm and Haas Co. 1991). However, the effects of dicofol on captive birds have never been documented in the field and dicofol is apparently not a risk to wild bird populations although it is possible that individual birds are occasionally impaired (J. Gervais, pers. comm., 2003). Large amounts of difocol are used in the Imperial Valley and southern Central Valley: the average annual application of difocol was over 7,000 pounds in Imperial County from 1990-1999 (CDPR 2001), 175,000 pounds in Fresno County from 1993-1995, and 67,000 pounds in Kings County from 1993-1995 (CDPR, as cited in Anderson et al. 2001). Dicofol was never detected in the eggs of owls at Lemoore NAS, despite the wide use of the chemical there (Gervais and Anthony in press).

Exposure to the organophosphorus pesticide chloropyrifos was detected at Lemoore by footwash samples (Gervais et al. 1997) even though none was reported used within 1 kilometer of the study site prior to the sampling. Although organophosphorus compounds do not bioaccumulate and have relatively low environmental persistence, they pose some threat to owls through direct mortality. For example, organophosphorus insecticide exposure was documented to cause red-tailed hawk mortality in California orchards (Hooper et al. 1999). Large amounts of chloropyrifos are used in the Imperial Valley and southern Central Valley: from 1993-1995, an annual average of 110,000 pounds was applied in Imperial County, 497,000 pounds was applied in Fresno County, and 229,000 pounds was applied in Kings County (CDPR, as cited in Anderson et al. 2001**).** Organochloride residues have been found in adult and juvenile burrowing owls in Saskatchewan, but no effect on reproduction was noted (Haug and Oliphant 1987).

Carbamate compounds such as carbofuran and aldicarb, which share similar chemical and toxicological properties with organophosphorus pesticides, have also caused wildlife mortality (Mineau et al. 1999). Available evidence indicates that carbamate insecticides such as carbofuran and carbaryl negatively impact burrowing owl populations (PMRA 1995; Sheffield 1997a, 1997b). Carbofuran, an insecticide, has caused a significant negative impact on survival and reproductive success of owls when sprayed over nest burrows (James and Fox 1987). The impact was believed to be due to direct toxicity, but indirect mortality as a result of contaminated prey may also be significant (Haug et al. 1993). Carbofuran is highly toxic to many birds, with one granule being sufficient to kill a small bird. Bird kills have occurred when birds ingested carbofuran granules, which resemble grain seeds in size and shape, or when predatory or scavenging birds have ingested small birds or mammals that have eaten carbofuran pellets (USEPA 1991). Red-shouldered hawks (*Buteo lineatus*) have been poisoned after eating prey from carbofuran-treated fields (Smith 1992), and Eastern screech owls (*Otus asio*) showed mortality from secondary poisoning when fed rodents killed by carbofuran (Sheffield 1997b). To protect birds, the EPA initiated a ban on all granular formulations of carbofuran in 1994, however there is no ban on liquid formulations of carbofuran. Of particular danger to burrowing owls are uses of this chemical in corn and alfalfa fields (Anderson et al. 2001). Large amounts of carbofuran and aldicarb are used in the Imperial Valley and southern Central Valley: an annual average of over 47,000 pounds of carbofuran was applied to forage crops in Imperial County from 1990-1999 (CDPR 2001); from 1993-1995 an annual average of over 7,900 pounds of aldicarb was applied in Imperial County, 55,000 pounds was applied in Fresno County, and 63,000 pounds was applied in Kings County (CDPR, as cited in Anderson et al. 2001).

Chemicals used for rodent control or as pesticides could adversely affect the reproductive success, survivorship, and prey base available to owls as they rear their offspring in agricultural areas (Peakall 1970; Henny et al. 1984; James and Fox 1987; Wiemeyer et al. 1989). Rodenticides and herbicides are often used to control numbers of ground squirrels and plant growth on levees. This is problematic in areas where a large proportion of owls nest in levee banks, such as in the Imperial Valley. In pastures where strychnine-coated grain is used to control ground squirrels, weights of breeding burrowing owls were found to be significantly lower than on control pastures and owls had slightly decreased breeding success compared to control owls (James et al. 1990), suggesting a sub-lethal effect or that less was food available. Anti-coagulants (such as brodifacoum) and other types of rodenticides (such as strychnine) have been shown to cause mortality in many different owl species, with the ingestion of as little as one poisoned prey item (Sheffield 1997b). The National Park Service has aerially dropped grain pellets laced with broadifacoum 3 times since 2001 on Anacapa Island in southern California to control invasive black rats (*Rattus rattus*), killing 4 burrowing owls on the island (FFA 2002).

The burrowing owl's habit of feeding on aquatic organisms from agricultural drainage ditches makes it vulnerable to selenium, a naturally occurring element that is leached from soils through irrigation. Selenium has caused considerable damage to other bird species in the Central Valley (Ohlendorf et al. 1986, 1987, 1988). A number of pesticides deserve attention and further research as potentially negatively affecting burrowing owls, including Aldicarb, Chloropyrifos, Def, Diazinon, Dicofocl, Endosulfan, Lindane, Metam sodium, Methidathion, and Paraquat dicholoride (Rosenberg et al. 1998a).

Although agricultural contaminants can impact owls, studies of reproduction and survival in agricultural areas found no population-level effects of pesticides on owls (Gervais et al. 1997; Gervais 2002; Gervais et al. 2003; Gervais and Anthony in press). Because owls are central-place foragers, pesticide risks may be mitigated by avoiding pesticide applications near nest burrows and by maintaining a 500-600 meter buffer zone to prevent most primary and secondary poisonings (Gervais et al. 2003).

G. PREDATION

Introduced predators and changes in concentrations of natural predators due to anthropogenic ecosystem changes have impacted burrowing owls and continue to be a threat. As habitats have been altered and top predators exterminated, subsequent increases in mesocarnivores such as foxes, coyotes, and badgers may be taking a large toll on burrowing owls (Sheffield 1997a; Wellicome 1997). On Santa Barbara Island, California, a small population of approximately 20 burrowing owls was extirpated by barn owls in 1984 and again in 1987 following crashes in the deer mouse (*Peromyscus maniculatus elusus*) population (Drost and McCluskey 1992). In healthy burrowing owl populations natural predation is probably not a significant threat, but it may cause a significant decrease in viability for fragmented and remnant owl populations, especially when combined with other impacts, such as development, persecution of burrowing rodents, pesticides, or predation by nonnative species.

Predation by introduced red foxes (*Vulpes vulpes*) and feral cats is a serious problem for the burrowing owl, and urbanization has increased predation upon owls by domestic dogs (*Canis familiaris*) and domestic cats (*Felis domesticus*) (Coulombe 1971; Martin 1973; Green and Anthony 1989). Domestic cats accounted for 6 (30%) of the known owl deaths at a Florida study site (Millsap and Bear 1988). Feral cats are reported to be killing burrowing owls at Shoreline Park in Mountain View, Santa Clara County (P. Delevoryas, pers. comm., 2002). Dogs can also damage owl habitat: Thomsen (1971) estimated that dogs caused 20% of the observed damage to burrows at a study site in Oakland.

H. DISEASE

Diseases and parasites have not been documented to have direct impacts on burrowing owl populations. However, burrowing owls in California may be vulnerable to the West Nile virus (*Flavivirus* spp.). Since 1999, West Nile virus has been identified in more than in 138 species of birds found dead in the United States, including 7 species of owls (CDC 2002). This mosquito-borne virus is rapidly spreading westward across the United States (and is expected to take hold in California by summer of 2003) and has recently begun killing numerous raptors in the Midwest, including red-tailed hawks and great horned owls by the thousands, as well as black vultures (*Coragyps atratus*) and bald eagles (*Haliaeetus leucocephalus*) (Rappole et al. 2000; Russell 2002). Epizootics of sylvatic plague (*Yersinia pestis*) that affect rodent colonies could negatively impact and even eliminate burrowing owl populations indirectly by reducing available habitat (Dechant et al. 1999). Regarding parasites, fleas (*Echidnophaga gallinacea*) are frequently mentioned in the literature as common inhabitants of owl burrows and some birds have been known to carry lice (*Colpocephalum pectinatum*) (Thomsen 1971)

I. SMALL POPULATION SIZES

Small population size is a significant concern for California's burrowing owl population, since owls persist only in small fragmented and remnant colonies or small numbers of breeding pairs throughout the majority of their range in California. Although there is no good information on what population size of owls is vulnerable to local extinction, the viability of small populations partially depends upon the likelihood of immigration. A small effective population size predisposes small owl populations to a higher risk of extinction.

It is a widely recognized ecological principle that, in general, small isolated or fragmented populations are more vulnerable to extinction than large ones (Pimm 1991; Noss and Cooperrider 1994). Noss and Cooperrider (1994) identified four major factors that predispose small populations to extinction: (1) environmental variation and natural catastrophes like unusually harsh weather, fires, or other unpredictable environmental phenomena; (2) chance variation in age and sex ratios or other population parameters (demographic stochasticity); (3) genetic deterioration resulting in inbreeding depression and genetic drift (random changes in gene frequencies); and (4) disruption of metapopulation dynamics (i.e., some species are distributed as systems of local populations linked by occasional dispersal, which wards off demographic or genetic deterioration).

Many remaining owl populations in California are presumed to be reproductively isolated populations, making them more vulnerable to localized extirpations, absent the possibility of significant immigration of breeding owls from other areas (DeSante et al. 1997). Owls in the Imperial Valley are thought to be reproductively isolated from other populations to the west and thus not available as a source population to augment the very small and declining populations inhabiting southwestern California and other areas of the state (DeSante et al. 1997). However, from recent banding studies conducted on fledglings at Lemoore NAS, there is some evidence that some burrowing owls are capable of dispersing widely and recruiting successfully into other populations (Gervais 2002).[173] Additionally, recent genetic analyses of burrowing owls from 3 demographic study sites (Lemoore NAS, Carrizo Plains, and the Imperial Valley) failed to identify population differentiation or evidence for genetic inbreeding or population isolation (Korfanta 2001).

Small owl populations have an increased likelihood of extirpation due to natural or anthropogenic impacts, can suffer from reproductive isolation and inbreeding, and are susceptible to increased predation. Stochastic environmental factors such as drought or prey reduction are more likely to eliminate small populations of burrowing owls (Trulio, unpubl. data, as cited in Buchanan 1997; DeSante and Ruhlen, unpubl. data). A population of burrowing owls studied in Davis, California showed higher genetic similarity than a collection of geographically separated owls, suggesting that some inbreeding was occurring in this wild population, likely as a result of small population size due to population subdivision (B. Johnson 1997a, 1997b).

The persistence of burrowing owl colonies in Saskatchewan was strongly correlated with higher habitat continuity, less patch edge, and more neighboring colonies (Warnock 1996, 1997; Warnock and James 1997). Fragmentation of remaining grassland habitat has been shown to increase populations of burrowing owl predators in Canada (Wellicome and Haug 1995; Warnock 1997) and may allow predators to find owl nests easily (James et al. 1997; Warnock and James 1997). In fragmented landscapes, burrowing owls may forage greater distances within larger home ranges and spend more time away from the nest, making them more vulnerable to predators (Haug 1985). In Saskatchewan, crowding of owls into smaller habitat patches may increase nest abandonment through events such as depredation (both intra- and inter-specific), foraging interference, and aggression (Warnock and James 1997). Fragmented agricultural landscapes may also increase vehicle collisions with owls (Clayton and Schmutz 1997).

Johnson (1997a) reported on the extinction of a small population of burrowing owls in less time than a population viability model predicted. Even large burrowing owl populations can decline at rapid rates. Owl numbers in Canada have been declining at a staggering rate of 16% per year nationwide since the early 1980s, and in excess of 20% per year in the Prairie Provinces (Saskatchewan, Alberta, and British Columbia) (Haug et al. 1993; Shyry et al. 2001; Wellicome and Holroyd 2001). In Nebraska, a population of burrowing owls in one area fell by 63% between 1990 and 1996 (Desmond et al. 2000).

J. OTHER ANTHROPOGENIC FACTORS

Fire Control

In many urban areas with burrowing owl habitat, open fields are disked for weed control to reduce the threat of fires. Disking or tilling of the land destroys burrows and potentially the owls in these burrows (Trulio 1998b). Mowing is a viable alternative that does not destroy birds or burrows. Several Bay Area entities, such as Moffett Federal Airfield and the cities of Palo Alto and Mountain View, have changed from disking to mowing on their lands to prevent the destruction of owls. The City of San Jose passed an ordinance in April 2001 prohibiting disking, with some exceptions (J. Barclay, pers. comm., 2002).[174] The Santa Clara Valley Fire Marshall's Office is currently reviewing its weed abatement policy. However, most cities within the range of the owl have no such ordinances or policies. Private landowners throughout California are still permitted to disk their lands, and 91% of remaining burrowing owls are on private land (DeSante et al. 1996).

[173] Gervais (2002) found evidence that owls fledged at NAS Lemoore recruited into other breeding populations in the San Jose area and Carrizo Plain National Monument, up to 160 km away.

[174] These exemptions are for: property less than 2 acres, land used for the production of agricultural products, fire breaks up to 30 feet wide, 400 acres of water pollution control plant lands used to dispose of reclaimed water, and lands identified by a qualified ornithologist as having little or no potential as burrowing owl nesting habitat.

Vehicle Strikes

The propensity of burrowing owls for nesting in roadside banks makes them particularly vulnerable to being hit by vehicles. Vehicular strikes are often a significant source of burrowing owl mortality (Konrad and Gilmer 1984; Haug and Oliphant 1987; Millsap and Bear 1988; Haug et al. 1993; Kemper 1996; Clayton and Schmutz 1997), because owls have a relatively high tolerance for vehicular disturbance (Coulombe 1971; Plumpton and Lutz 1993) and often fly low to the ground (Anderson et al. 2001). Vehicle collisions are the primary mortality factor for adult owls in some fragmented environments (Clayton and Schmutz 1997). Vehicle strikes of owls were once common in Orange County before the near-extirpation of the species, including strikes of several banded birds in the early 1970s (P. Bloom, pers. comm., 2002). Vehicle caused mortality is a concern for the owl population at the Carrizo Plain Natural Area (Rosenberg 1999) and has been documented frequently at Lemoore Naval Air Station (J. Gervais, pers. comm., 2003).

Naive juveniles are particularly vulnerable when feeding on road-kills or on insects attracted by warm pavement at night. Rosenberg (1999) noted that as chicks at Carrizo Plain became capable of flight, they commonly began to hunt as a family group, frequently on roads. The risk of vehicle collision is likely greater in developed areas with dense human population or along areas where owls nest predominately near roads (Anderson et al. 2001). Higher post-fledging mortality due to vehicle collisions was noted to occur in agricultural landscapes with more than 90% of the land area under cultivation compared to an un-fragmented rangeland with less than 20% cultivation (Clayton and Schmutz 1997; Paige 1998). Off-road vehicle activity is also a threat to owl habitat as their burrows can be crushed and their nest sites disturbed (CVAG 2001).

Aircraft Strikes

Although burrowing owls are an unlikely species for bird air strikes, there have been documented deaths from collisions along runways (Rosenberg et al. 1998a). Powerful jets have the ability to “inhale” birds from some distance away (Rosenberg et al. 1998a). Another potential cause of mortality in and around airports is the powerful “wake turbulence” from aircraft wings (J. Barclay, pers. comm., 2002). Several colonies of burrowing owls at airports nest in close proximity to runways, such as at Oakland Airport in Alameda County, Moffett Airfield and San Jose International Airport in Santa Clara County, Lemoore Naval Air Station in Kings County, and North Island Naval Air Station in San Diego County. Military aircraft are especially prone to strikes because they frequently fly at high speeds and at low altitudes where birds are most active. Lemoore NAS and North Island NAS reported 130 and 132 aircraft/bird collision incidents, respectively, from 1981 to 1998 (BASH 2002). China Lake NAWS reported 27 such incidents from 1981 to 1992 (NAWS China Lake 2002). It is unclear whether any of these strikes involved owls. A study of bird-aircraft strikes at 11 naval bases in California and Arizona reported raptors composed 4.4% of known bird-strikes from 1981 to 1991 (Kuenzi and Morrison 1998). Lemoore Naval Air Station has a management plan that reduces the number of owls near the airfields by altering habitat and blocking burrows adjacent to runways (Rosenberg et al. 1998a), and although large numbers of owls nested along runways and taxiways there, aircraft strikes appeared to be very rare (J. Gervais, pers. comm., 2003). San Jose Airport has also approved a burrowing owl management plan that manages owls away from the center of runways (J. Barclay, pers. comm., 2002).

Electrified Fences

Electrified security fences killed more than 3,000 protected birds, including 144 burrowing owls, at 13 California state prisons from 1993 to 1998 (USFWS 1998). The highest kill was 102 burrowing owls from 1993-1997 on the electrified fence at Calipatria State Prison, Imperial County, prior to modifications by the California Department of Corrections (CDC) (CDFG 2002a; York et al. 2002). Protective netting, expected to cut the number of bird deaths by 90%, was installed in 1998 at 13 of the state’s then 25 prisons with electrified fences. However, roughly half the remaining prison fences are presumably still killing owls. The CDC is already retrofitting many other existing prisons with electrified fences, but no further installation of protective netting is planned. The proliferation of prisons in rural areas with electric fences can be expected to kill burrowing owls in those areas. A 50-year CDC Electric Fence Habitat Conservation Plan currently being prepared presumes that 15-17 owls will be killed per year (850 owls total), with only 72 acres of protected land proposed as mitigation (CDFG 2002a).

Wind Turbines

Turbines at wind energy facilities at Altamont Pass in eastern Alameda and Contra Costa Counties and the Montezuma Hills in Solano County kill large numbers of raptors through collision or electrocution, including burrowing owls (Estep 1989; Howell 1997). Six years of raptor mortality studies in the early 1990s determined that a mean of 2.8 raptors were killed annually per 100 turbines at study sites in both areas (Howell 1997). Burrowing owl mortality is reportedly a "common occurrence" at the Altamont Pass wind facilities (G. Hunt, pers. comm., 2003). There are other major developed wind resource areas at Tehachapi Pass in Kern County and San Gorgonio Pass in Riverside County, but it is unknown if there is owl mortality at these locations.

Shooting

Shooting has been a significant source of burrowing owl mortality in former times (Grinnell and Miller 1944). Between the 1860s up until the 1970s, collectors shot literally thousands of burrowing owls - these specimens now reside in museums and collections. Although shooting for collecting purposes is no longer a problem, shooting by vandals is still an issue (e.g. Zarn 1974). Shooting caused 66% of the known mortality at a study of burrowing owl sites in Oklahoma (Butts 1973). Wedgwood (1978) discussed 3 burrowing owl colonies in Canada destroyed by shooting, Evans (1982) identified shooting as a problem in Sonoma County, a Boy Scout shot 4 owls at Laguna Niguel in Orange County (P. Bloom, pers. comm., 2002), and a small colony at Upper Newport Bay was apparently extirpated by shooting in the 1970s (J. Bath, pers. comm., 2003). Shooting remains a likely cause of at least limited mortality in the Mojave Desert (Campbell 1999) and in Santa Clara County (C. Breon, pers. comm., 2003).

Vandalism

Thomsen (1971) estimated that 65% of the damage to burrows at her owl study site at the Oakland Airport was caused by humans, and cited plugging of burrows as a possible cause of loss of eggs and young. Some of the recent owl declines in the Cypress Channel owl population in Chino have been due to plugging of burrows (J. Bath, pers. comm., 2003).[175] Illegal trash dumping has also been observed to impact burrowing owls (CVAG 2001; J. Bath, pers. comm., 2003). Remsen (1978) reported on an owl burrow deliberately destroyed by vandals. J. Bath (pers. comm., 2003) has documented several instances of human harassment that likely contributed to localized extirpations of owls in western San Bernardino County (see footnote 140 on page 47). Human harassment of burrowing owls and vandalism of burrows will likely increase with urbanization.

Other Mortality

Burrowing owls have been found dead apparently trapped in pipes and PVC mining claim posts (Brattstrom 1995; CNDDB 2001).[176] Falconers flying their birds at rabbits once commonly killed burrowing owls in southern California (P. Bloom, pers. comm., 2002). There is a long history of anti-predator measures at Least Tern colonies in San Diego County, conducted by the Wildlife Services Agency (formerly Animal Damage Control), under the U. S. Department of Agriculture. The activities of this federal agency have contributed more to the recent extirpation pulse of burrowing owls along the San Diego coast than any other known form of mortality (P. Bloom, pers. comm., 2002). Owls in southern California observed preying on Least Tern chicks have been shot and killed (even owls breeding nearby with young), with no attempt made to capture or relocate the owls (P. Delevoryas, pers. comm., 2003).

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[175] Field crews with the San Bernardino Department of Transportation and Flood Control have been plugging burrows known to have been formerly occupied during nesting season, claiming to have an agreement to do so with the California Department of Fish and Game (J. Bath, pers. comm., 2003, conversation with Ken Miller of SBDTFC).

[176] Five adult owls were found dead in a pipe at 3-Com Corp. in Santa Clara, in Santa Clara County, on 8/31/91 (CNDDB 2001); and burrowing owls were found dead in PVC mining claim posts in the Hackberry and Castle Mountains in San Bernardino County in January 1990 (Brattstrom 1995).

IX. INADEQUACY OF EXISTING MANAGEMENT EFFORTS

Federal, state, and local regulatory mechanisms have failed to protect the burrowing owl and its habitat in California. Although numerous federal, state, and local agencies manage burrowing owls and their habitat, they have failed to adequately protect or compensate for the loss of owl habitats (Anderson et al. 2001). Grasslands are not specifically protected by law and are rarely protected by state, federal or municipal reserve systems. Protections for other endangered, threatened and rare grassland species may serve to protect some fraction of owl habitats in some parts of California. However, there is no specific habitat protection for burrowing owl habitat, and in parts of the state where listed species do not exist, owl habitat cannot currently be protected. Because no recovery plans currently exist for the burrowing owl, management of owls has generally been incidental or as a byproduct of other management purposes (i.e. mowing at airports) and taken the form of local impact mitigation included in environmental impact assessment documents. This mitigation often includes the translocation of owls and localized extirpation of breeding colonies. Burrowing owl management has been limited to project-by-project responses to development impacts and is inadequate for the long-term maintenance of the species in significant parts of its range in California. Without statewide protection of burrowing owls and their habitat, the predictable outcome of present trends is the extirpation of the species throughout most of its range in California.

A. FEDERAL REGULATORY MECHANISMS

1. Federal Designation as a Species of Special Concern Under the Endangered Species Act

The U.S. Fish and Wildlife Service listed the western burrowing owl under the Endangered Species Act ("ESA") as a federal Category 2 Candidate Species in 1994 (USDI 1994). This designation was changed to a "Migratory Nongame Species of Management Concern" in 1995 (OMBM 1995), and it was subsequently re-classified as a Species of Special Concern ("SSC") in 1996. In 1996 the Category 2 designation was discontinued. None of these designations provide formal protection to the species. Neither the protections of Section 9 of the ESA (prohibiting "take" of the species) nor the protections of Section 7 (requiring all federal agencies to ensure that their activities do not jeopardize the continued existence of the species) apply to SSC species. SSC species will not have critical habitat designated, nor will they receive recovery plans.

The stated purpose of the SSC designation is to allow landowners and other project proponents to plan early for the protection of species that are not yet listed but are likely to become listed in the future. Some Habitat Conservation Plans, completed under Section 10 of the ESA by project proponents in order to obtain a permit for take of species that would otherwise be prohibited under Section 9, do contain some mitigation for SSC species. In addition, the U. S. Fish and Wildlife Service does encourage federal agencies to consider SSC species during Section 7 consultation. However, these informal protections are implemented only at the discretion of the landowner and do not provide sufficient protection for the burrowing owl. As noted above, 91% of the burrowing owls remaining in the state are located on private lands (DeSante et al. 1996) and the threats to these populations are not subject to any federal regulation.

2. Federal Listing of Other Species Within the Range of the Burrowing Owl

Listing under the federal ESA for other species that overlap with the burrowing owl in habitat and range could conceivably provide some protection to the species. Suitable habitat for burrowing owls overlaps somewhat with habitat for federally listed species and species of concern such as the San Joaquin kit fox (*Vulpes macrotis mutica*), blunt-nosed leopard lizard (*Gambelia sila*), listed and special-status kangaroo rats (*Dipodomys ingens, D. nitratoides nitratoides, D. n. exilis, D. n. brevinasus*), San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), San Joaquin pocket mouse (*Perognathus inornatus inornatus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), desert tortoise, and Mohave ground squirrel (*Spermophilus mohavensis*). The primary way in which the burrowing owl could benefit from the listing of these species is through protection of owl nesting and foraging habitat shared with these species. Many, if not all, of these species have continued to decline since listing, raising questions as to whether federal listing has adequately protected these species themselves, let alone species that merely overlap somewhat in range. Additionally, the vast majority of remaining burrowing owls live in the margins of agricultural areas, which are not protected habitat for any listed species.

3. Habitat Conservation Plans

There are a number of federal Habitat Conservation Plans ("HCP"s) in California under which the western burrowing owl is a covered species. However, the burrowing owl is not a federally listed species, and since HCPs are not required to benefit non-listed species, they are not a mechanism adequate to protect burrowing owls.

The HCP provisions of the ESA were intended to provide a net benefit to threatened and endangered species, in return for providing landowners with regulatory certainty and permits to impact or otherwise "take" listed species and their habitats. In theory, HCPs can help protect and restore habitat, including habitat for non-listed species covered under the plan. Unfortunately, most HCPs fail to live up to this promise, and simply function as exemptions from the ESA's species and habitat protection policies. Arguably, a few HCPs make the best of difficult situations on private lands, and may even help species' recovery to some extent. However, since HCPs are not required to have a net benefit to listed species or contribute to their recovery, there is considerable reason to be skeptical of the ability of HCPs to protect populations and habitat for covered non-listed species such as the burrowing owl.

A nationwide study of HCPs by the National Center for Ecological Analysis & Synthesis and the American Institute of Biological Sciences (Kareiva et al. 1999) found that most HCPs contribute to habitat losses for the targeted species, fail to meet recovery goals, and suffer from poor planning and plan evaluation. Among the failures of HCPs discussed by Kareiva et al. (1999): nearly 30% of HCPs "take" 100% of the focal species' populations or habitat in the permit area; about 50% of HCPs allow 50% or more of the species' populations or habitat in the plan area to be "taken"; 43% of the time, HCPs failed to provide sufficient mitigation measures; 23% of the time, species and their habitats will be "taken" before mitigation measures have been implemented and found effective - most HCPs fail to reduce allowed "take" levels or use other more conservative approaches in the face of inadequate information or uncertainties; 33% of HCPs failed to secure up-front funding to ensure that mitigation actually occurs; and 81% of HCPs studied will have irreversible impacts.

Not surprisingly, Kareiva et al. (1999) found that HCPs which fail to adequately conserve species also tend to lack rigorous impact assessments and planning. The Kareiva et al. (1999) study found that: 75% of the time, impacts to species were not adequately studied by HCPs; 42% to 49% of the time, HCPs failed to quantify how much of a species' habitat and population, respectively, will be "taken"; most HCPs used low quality data to evaluate their mitigation measures; and 25% of the time, sufficient information did not exist to determine how HCPs would affect the species' viability.

These inadequacies should be kept in mind while reviewing HCPs approved in California. Of the approximately one dozen approved HCPs (of more than 100 acres) that specifically cover the burrowing owl, none are in the Imperial Valley, where 71% of state's breeding owl population resides. There are also no approved HCPs covering the northern Central Valley, where 6.4% of the state owl population lives, nor in the Bay Area or central western California, areas containing 1.8%, and 0.5% of the state's owl population, respectively.

There are 6 approved HCPs covering over 163,000 acres within the range of the owl in the southern Central Valley, where 15% of the state population lives. These include ARCO Western Energy HCP (120,320 acres), Nuevo-Torch HCP (21,800 acres), Kern Water Bank HCP (19,900 acres), Seneca and Enron Oil and Gas HCP (650 acres), and Corrections Corporation of America HCP (425 acres), all in Kern County and portions of Tulare and Kings Counties. The Kern Water Bank HCP mentions no specific protections or mitigations for the burrowing owl.

Three approved HCPs cover about 55,000 acres within the range of the owl in the middle Central Valley, where 2.5% of the state population exists. These are the Natomas Basin, City of Sacramento HCP (53,342 acres), Natomas Basin Metro Air Park HCP (1,981 acres), and the Tiechert Vernalis Project HCP, Phases 1&2 (300 acres). These are all 50-year plans.

Most of the remaining approved HCPs are in San Diego County, including the San Diego MSCP, encompassing a 582,243 acre planning area, Fieldstone/La Coasta HCP (1,955 acres), and San Diego Gas & Electric HCP (124 to 400 acres). The Fieldstone/La Coasta HCP will conserve 55 acres on-site and “take” 280 acres of potential owl habitat. Only 31% of the existing grasslands and 45% of the presumed potential owl habitat will be conserved under the San Diego MSCP, which will impact 8 known owl breeding locations and conserve 12 known historic locations. Unfortunately, only 1 protected owl population within the San Diego MSCP (at Otay Mesa) has any long-term viability (P. Unitt, pers. comm., 2001).

The Lake Mathews HCP (5,993 acres) and North Peak Development Project HCP (997 acres) fall within the range of the owl in Riverside County. The Lake Matthews HCP protects 710 acres off-site in Metropolitan mitigation bank lands, and “takes” 344 of 3,046 acres (11%) of the occupied owl habitat on the site. The North Peak Development Project HCP protects 31 acres on-site and 100 acres off-site, and “takes” 147 acres of potential owl habitat.

There are a few pending HCPs that specifically cover the burrowing owl, including the Pleasant Valley, City of Coalinga HCP (250 acres) in Fresno County, and Assessment District 161 HCP, covering 19 projects (3,094 acres) and Pacific Bay Properties HCP (798 acres) in Riverside County. The Pacific Bay Properties HCP would impact 87 acres and preserve 108 acres of potential owl habitat. The Western Riverside County Multiple Species HCP (1,260,000 acres) covers the burrowing owl as well as 141 other species, but will only conserve 9% of remaining agricultural lands, 27.5% of remaining grasslands, and 54% of remaining coastal sage scrub habitat, and will not adequately protect the owl. In fact, only 50% of 12 known populations in Western Riverside County would be protected in the most optimistic circumstances if the plan is approved as currently written (see below). As these HCPs are not yet in place, they cannot be counted on to provide even minimal protection to the burrowing owl. There are a few approved HCPs that do not specifically cover the burrowing owl but may overlap its habitat, including the San Joaquin County HCP, Metro Bakersfield HCP, and Stephen's Kangaroo Rat HCP, but there is no guarantee that these HCPs will protect the burrowing owl. The Kern County Valley Floor HCP (1,990,400 acres) is being developed in the southern San Joaquin Valley within the range of the burrowing owl, but again the owl is not a covered species in that plan.

Roughly 85% of the state’s remaining owls have no coverage under approved or pending HCPs. Of the 15% that may have coverage, the HCPs allow for varying levels of development and destruction of occupied or potential burrowing owl habitat, with appropriate “mitigations.” Although some owl habitat is theoretically protected for the 20-50 year life of these plans (assuming there are no problems with monitoring, funding, etc.), the overall result of these HCPs is a net loss of burrowing owl habitat.

For example, burrowing owls are known to occur throughout the entire 21,800 acres covered by the Nuevo-Torch HCP in Kern County. The plan estimates 13% of this habitat (1,700 acres) will be “disturbed” by oil and gas activities authorized by the plan. Potential threats identified are that owls will be “directly injured or killed by land clearing and compaction, by vehicle strikes resulting from increased project related traffic, through inadvertent entrapment in collapsed dens or burrows, by oil spills, and by wildfires…started during construction activities…may be subject to harassment resulting from increased levels of disturbance, vehicle use, and through the implementation of certain mitigation measures, such as excavation of burrows." Note that the mitigation measure allowing excavation of burrows, which will be "excavated by hand and refilled to prevent reoccupation," sanctions destruction of owl habitat. While this mitigation avoids direct "take" of owls, it does not adequately mitigate for the habitat loss.

The Nuevo-Torch HCP acknowledges significant impacts to burrowing owls: "oil and gas activities involving ground disturbance may impact the species. Destruction of the burrows may result in a net reduction of burrowing habitat used by these animals for shelter, reproduction, and escape cover. Animals may be displaced into adjacent areas resulting in increased predation, exposure, or stress through disorientation and loss of shelter."

The Natomas Basin site in Sacramento has an estimated 247 miles of canals and ditches and associated agricultural fields that are potential burrowing owl habitat, and 2,187 acres of "enhanced upland reserve habitat" would be established for the owl. However, mitigation measures include not disturbing occupied burrows during the nesting season unless juveniles are determined to be able to survive on their own, and maintaining a 300 foot buffer around occupied burrows during construction (relocation will take place if that is not "feasible"). Thus, the HCP permits urban encroachment to within 300 feet of burrows, and allows for relocation.

The Metro Air Park development HCP establishes 2% of the project area as habitat reserve land, only ¼ of which would be potentially suitable habitat for the burrowing owl. If burrowing owls are found during surveys on the other 98% of the project area, the "mitigations" include not disturbing occupied burrows during nesting season (as already required by state Fish and Game Code) unless "approved by a biologist;" acquiring and permanently protecting a minimum of 6.5 acres of foraging habitat adjacent to occupied burrowing owl habitat per paired or unpaired bird (although it is not specified whether this will be on-site); enhancing existing or creating new burrows at a 2:1 ratio when destruction of a burrow is "unavoidable;" use of passive relocation techniques (i.e. preventing owls from reoccupying nests); and a caveat that the project sponsor "should" provide funding for long term management and monitoring. The amount of habitat protected and mitigation measures proposed do not inspire confidence that burrowing owls will persist on this site to be managed and monitored.

The Tiechert Vernalis HCP goes one step further, conceding that the preservation and persistence of the burrowing owl is "not a priority," and offers no mitigation for loss of burrowing owl habitat. The plan advocates destroying ground squirrels and their burrows and planting vegetation taller than 36", so as not to attract burrowing owls to the site. If no burrowing owls, California red-legged frogs, California tiger salamanders, or San Joaquin kit foxes are found during surveys, plowing or disking of the land is authorized. If owls are found, they will not be disturbed during breeding season unless "approved by a biologist," and passive relocation (i.e. preventing owls from reoccupying nests) is the preferred option. The stated intent of this HCP is to remove burrowing owls from the project site and destroy burrowing owl habitat.

An HCP being prepared for the West Mojave planning area, which covers 9.5 million acres, has proposed to include the burrowing owl as a covered species. The target species of the West Mojave HCP are the desert tortoise and the Mojave ground squirrel. The plan would allow take of burrowing owls throughout much of the planning area where owls do not co-occur with the target species, such as in urbanized areas. The only potential protection for burrowing owls in the plan is through land acquisition and creation of a small, unspecified owl conservation area near the Antelope Valley Poppy Preserve. One problem with the plan is that there are no surveys or baseline data to determine how many owls are in the area or how many will be taken through activities allowed under the plan (M. Connor, pers. comm., 2002).

The Western Riverside MSHCP, with preparation nearing the final stages, intends to conserve only 6 of the 12 core populations of burrowing owls at Lake Skinner area, Diamond Valley Lake area, the playa west of Hemet, Mystic Lake, Lake Mathews, and along the Santa Ana River, with sufficiently large blocks of habitat to maintain viable populations. Only 16 of the 38 precise point locations for burrowing owls (and of 82 overall locations in the region from the past 10 years) fall within the proposed assembled reserve. Additionally, only 21% of the primary habitat for burrowing owls throughout western Riverside county (agriculture, grassland, playa, and vernal pool habitats) is proposed for inclusion within the assembled reserve, and reserve lands are to be purchased from willing sellers only and thus protection is not assured. The plan also relies heavily on presumed successful translocation of burrowing owls into the reserve areas from development sites.

A draft HCP is currently being prepared for the Imperial Irrigation District ("IID") Water Conservation and Transfer Project. The proposed project would involve IID conserving and transferring the right to use up to 300,000 acre-feet per year of Colorado River water to San Diego County Water Authority, Coachella Valley Water District, and/or the Metropolitan Water District. The IID plans to line a small percentage of their earthen irrigation canals with concrete.[177] The HCP also covers operations and maintenance activities along IID drains and canals. IID cleans 20% of its canals and ditches each year, through chaining, disking, side scraping, and use of Roundup, Rodeo, and Direx. The Draft HCP specifies avoidance and mitigation measures for burrowing owls, but has been criticized for having vague adaptive management provisions and guidelines and for failing to address the potential impacts of pesticides on owls.[178]

4. Conservation Banks

The U. S. Fish and Wildlife Service acknowledges a small number of conservation banks in California where land can be purchased by developers, essentially as "mitigation" credits for habitat destruction elsewhere. The ideal is to allow for larger habitat areas protected in banks that are more efficient and cost effective to manage instead of small, isolated properties. However, the conservation bank approach for burrowing owls implicitly endorses extirpation of owls from areas of high development by not requiring on-site conservation measures, ensuring that owls will eventually be eradicated from urban areas. Additionally, the small number of conservation banks with owl habitat, their extremely small size, and the rising cost of purchasing suitable land for habitat make this approach incapable of protecting significant populations of owls. So far the only conservation bank formally identified by the Fish and Wildlife Service with suitable habitat for burrowing owls in California is a small area (251 acres) at Dolan Ranch in Colusa County. It is unclear how many, if any, breeding owls occur there.

B. STATE REGULATORY MECHANISMS

1. State Designation as a Species of Special Concern Under the California Endangered Species Act

The burrowing owl was designated as a state Species of Special Concern ("SSC") by the California Department of Fish and Game in 1979. The practical benefit of this designation to the burrowing owl has been

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177 There are 1,667 miles of IID canals in the Imperial Valley; about 70% of these are lined, and about 537 miles are earthen channels. While up to 100% of currently unlined canals will be available to line (537 miles) under the HCP, only 1.74 miles of canal (0.1% of the entire system) are currently proposed for lining. The estimated abundance of owls along canals in the Imperial Valley is 4.7 pairs/mile; lining 1.74 miles would likely displace 16 owls. The IID expects to construct about 72 miles of lateral canals that would potentially provide suitable owl habitat. It is estimated that about 4 owls could be displaced per year because of drain and canal rerouting (this is not a permanent habitat loss, as the owls can relocate to the new canals) and maintenance.

178 The Draft HCP proposes to implement a worker and farmer education program; minimize the potential for operations and maintenance activities to injure individual owls by avoidance of burrows that do not compromise the integrity of the channel embankment and lining; filling or impacting burrows from October through February after surveying by a biologist to ensure an owl is not present in the burrow; careful management of grading spoils; and replacement of impacted burrows by a two-to-one ratio in appropriate areas (regardless of whether the burrow was currently in use). The IID will also conduct a 12-15 year demographic study of the Imperial Valley burrowing owl population.

According to the Western Environmental Law Center (WELC 2002), the Draft HCP fails to adequately identify, evaluate, and provide mitigation for the increased concentrations of toxic chemicals, including pesticides, which will occur in agricultural runoff in the drains and canals within the IID service area. The HCP does not address the extent to which herbicides will be sprayed directly on occupied burrows, the potential direct toxicity impacts on owls, or indirect impacts from contact with water or prey with elevated levels of pollutants.

minimal. Such status may call attention to the species and prompt more information to be collected about the loss of its habitat in Environmental Impact Reports and other documents, but it has not halted the habitat loss or other factors causing the decline of the species.

The inadequacy of the SSC designation to protect burrowing owls is vividly demonstrated by the current status of the species in Santa Clara County. Because occupied habitat in Santa Clara County is so minimal, it may already be too late to preserve suitable mitigation sites (adequate breeding and foraging habitat for viable long-term survival of healthy breeding colonies) within the county, due to the fast pace of development project approval and construction. CDFG's current mitigation policy for the area is to evict owls from Santa Clara County and preserve habitat in Byron in Contra Costa County. There are no supporting data that the loss of owls in Santa Clara County will be compensated for in Byron, which is approximately 50 miles away, outside the Bay Area.

2. California Environmental Quality Act

The environmental review process under the California Environmental Quality Act ("CEQA") should theoretically provide some protection to burrowing owls. CEQA declares that it is the policy of the state to "[p]revent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities." (California Public Resources Code, Section 21001(c)). When the CEQA process is triggered, it requires full disclosure of the potential impacts of proposed projects. The operative document for major projects is usually the Environmental Impact Report (EIR).

Theoretically, besides ensuring environmental protection through procedural and informational means, CEQA also has substantive mandates for environmental protection. The most important of these is the provision requiring public agencies to deny approval of a project with significant impacts when feasible alternatives or feasible mitigation measures can substantially lessen such effects. In practice, this mandate is rarely implemented, especially with regard to the burrowing owl. Project proponents and approving agencies almost universally dismiss alternatives that would protect burrowing owls and other wildlife as "infeasible".

CEQA requires a full public disclosure of the potential environmental impacts of proposed projects. The public agency with primary authority or jurisdiction over the project is designated as the lead agency and is responsible for conducting a review of the project and consulting with other agencies concerned with resources affected by the project. Section 15065 of the CEQA guidelines require a finding of significance if a project has the potential to "reduce the number or restrict the range of a rare or endangered plant or animal." Species that are eligible for listing as rare, threatened, or endangered but are not so listed are given the same protection as those species that are officially listed with the state.

Once significant impacts are identified, the lead agency has the option to require mitigation for effects through changes in the project, claim a categorical exemption, or to decide that overriding considerations make mitigation infeasible. In the latter case, projects may be approved that cause significant environmental damage, such as destruction of sensitive species. Protection of listed species through CEQA is therefore at the discretion of the lead agency involved. CEQA provides that when overriding social and economic considerations can be demonstrated, project proposals may go forward, even in cases where the continued existence of the species may be threatened, or where adverse impacts are not mitigated to the point of insignificance.

For example, Trulio (1998a) documented the utter failure of the CEQA process to protect burrowing owl habitat in Santa Clara County. Surveys by Trulio (1998a) of 123 of 215 known owl occupancy sites in Santa Clara County (H. T. Harvey and Associates 1994) showed a steady decline in remaining owl habitat. In 10 years, 70 of 123 sites (57%) were lost to development, an average of almost 6% per year. Another 12 sites

(10%) were reduced in size or habitat quality.[179] At this rate of loss, Trulio (1998a) predicted the remaining sites on private or city owned land could be lost by 2005, despite the existence of CEQA. Trulio (1998a) noted that the following factors likely explain the failure of CEQA to protect owl habitat: lack of CEQA review, failure to identify owl habitat during CEQA review, use of Categorical Exemptions, use of Overriding Considerations, and ineffective mitigation measures. Many lead agencies declare significant impacts to owls, then approve the project despite those impacts pursuant to a Statement of Overriding Considerations which concludes that the benefits of the project outweigh the harm to the owls. This was the case when the City of Alviso, in Santa Clara County, approved its General Plan in 1998, with 18 significant, unavoidable impacts, including loss of habitat for burrowing owls.

The burrowing owl is a species frequently overlooked during the CEQA process and often detected just prior to ground-disturbance, too late in the CEQA process to allow for adequate mitigation planning. This results in last-minute efforts to mitigate impacts to burrowing owls, such as relocation out of development areas. Trulio (1998a) noted that in her experience, when owl habitat is identified during the CEQA process, mitigation other than avoidance is nearly always proposed, meaning that owl habitat is nearly always destroyed or reduced.

Another problem is that the treatment of burrowing owls has been wildly inconsistent between regulatory agencies and between different regional branches within a single agency, such as CDFG. At best, CDFG occasionally requires mitigation for destruction of burrowing owl habitat by purchase of mitigation bank habitat at a ratio of 6.5 acres/owl pair, which is in no way based on the biological needs of the species (see the discussion below). CDFG does not even require that this habitat be in the general vicinity of the habitat-destroying project, virtually ensuring that breeding burrowing owls will continue to be systematically extirpated from the most rapidly urbanizing areas of its range. Even if mitigation banking were consistently applied and implemented, this requirement would be inadequate to protect the species from extirpation through most of its range. Many mitigations do not even approach this 6.5 acre figure, such as the Cisco Systems development in north San Jose, where CDFG protested, but declined to challenge an EIR proposing to set aside 21.7 acres of owl habitat for a colony of 16-22 owls (roughly 2 acres/pair) and destroy 130.9 acres.

The active relocation of burrowing owls has become a widespread management technique in California (Trulio 1995; Delevoryas 1997; Feeney 1997). Standard procedure for lead agencies statewide has been to declare that significant impacts could be avoided by simply moving owls out of the way of development, thereby avoiding take. Relocation does avoid direct owl mortality, but does not mitigate for habitat loss. There also has been little success at establishing long-term nesting of owls at relocation sites. There are little data supporting the premise that owls moved long distances (greater than 300 feet) or evicted from their burrows can survive or reproduce successfully (Trulio 1997), yet this continues to be the most common "mitigation" for development projects which result in the destruction or alteration of owl habitat. Rarely does mitigation require the creation or restoration of owl habitat to replace the habitat that will be destroyed, nor are there often requirements to manage for long-term viability of owls at release sites. Of owls that have been moved, the vast majority generally will disappear from or abandon the new location, often returning to the eviction site (Harris 1987; Dyer 1988; H. T. Harvey and Associates 1993; Martell et al. 1994; Delevoryas 1997; DeSmet 1997; Feeney 1997; Trulio 1997).

The movement of owls out of the way of development has resulted in a net loss of owl habitat and fails to preserve owl populations at existing locations. Translocation is an incomplete mitigation, as it may function to prevent the direct killing of birds, but birds are eventually lost as available habitat decreases. Current mitigation and other management plans do <u>not</u> function to prevent the ultimate decline of the owl population. Despite the CDFG publication of a "Draft Staff Report on Burrowing Owl Mitigation" in 1995 (discussed more fully below), the limitations with CEQA still remain.

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[179] Trulio listed sites completely developed as "lost," those diminished in size or habitat quality as "reduced," and those which could still support a pair of owls as "extant".

3. CDFG Mitigation Guidelines

In the absence of endangered species laws or state agency guidelines to protect an obviously declining species, and in an attempt to develop a consistent, logical means for avoiding direct owl mortality, defining impacts, and suggesting reasonable mitigation, the biological community formed the California Burrowing Owl Consortium ("CBOC") in 1989. The CBOC prepared a document entitled "Burrowing Owl Survey Protocol and Mitigation Guidelines" in 1993, intended to standardize determinations of owl presence and impact assessment (CBOC 1997). After submission of this document, the Department of Fish and Game subsequently prepared a "Draft Staff Report on Burrowing Owl Mitigation," which borrowed extensively from the CBOC's document (CDFG 1995).

The CBOC guidelines were intended to assist individuals (in the private or agency sectors) faced with mitigating direct impacts to burrowing owls; this document was not intended to address region-wide, long-term conservation planning for the species. The guidelines have been widely used by agency and private biologists from 1994 to the present, but have also been badly misused and misinterpreted.

In trying to determine a number that represented an impact threshold, CBOC took into account the fact that owls move, sometimes long distances (e.g., Haug and Oliphant 1990), and also nest in areas that might appear to have only a small proportion of suitable habitat. The threshold question hinged on how close development could come to a burrow without a significant impact and whether projects with a modest footprint (e.g., pipelines and transmission lines) could be declared to have significant impacts to an owl home range encompassing scores, if not hundreds of acres. Using a combination of intuited disturbance distances (a few dozen meters) and territorial considerations, biologists with the CBOC selected a 300-foot radius around an occupied burrow (6.5 acres) as the amount of habitat estimated to be a threshold where significant impacts should be considered. This area was <u>not</u> purported to be the amount of habitat needed to support a pair of burrowing owls, nor was it meant to be used as a way to manage for a sustainable population of owls.

However, in 1999, CDFG agreed to a development project in the City of Santa Clara on a site that supported 9 pairs of owls, and declared the number of owl pairs multiplied by the 6.5 acre figure was acceptable mitigation. The replacement acreage did not have to be in the vicinity of the project and it did not have to be in place for 2 years. There is now an unofficial "owl bank" for south Bay projects located in Byron in eastern Contra Costa County, re-enforcing the perception that CDFG has abandoned efforts to protect owls in the urban Bay Area. According to the CDFG, Central Coast Region, this mitigation requirement of conservation and long-term management of 6.5 acres of existing burrowing owl habitat has been applied to at least 84 owl pairs directly impacted by development activities in the past 3 years, within the southern and eastern portions of the Bay Area (Contra Costa, Alameda, and Santa Clara Counties) (CDFG 2002a). The required mitigation acreage has been purchased at 3 small mitigation banks in eastern Alameda and Contra Costa Counties (CDFG 2002a). Use of these conservation banks as acceptable mitigation preserves only a very small amount of burrowing owl habitat in exchange for the likely eventual extirpation of owl populations from the eastern and southern Bay Area.

4. California Fish and Game Codes

State protection of California's burrowing owls exists only in the form of Fish and Game Codes that protect bird nests (§3503) and birds of prey and their nests (§3503.5). Fish and Game Code §3503 states "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto," and under California Fish and Game Code §3503.5 "it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." While these code sections prohibit the actual destruction of nests or intentional killing of birds, they have provided inadequate protection for habitat. These codes do not protect unoccupied burrows or previously occupied burrows outside of the nesting season that provide potential future nesting habitat. Also, because of their subterranean habitats, burrowing owls can go undetected and be inadvertently destroyed by ground-disturbing activities such as permitted bulldozing and unregulated activities such as plowing, disking, or grading, which kill burrowing owls and destroy nests in the process. There does not seem to be any enforcement of these codes and it is unknown whether these codes have ever been used to prosecute illegal "taking" of burrowing owls or owl nests and eggs. Illegal take of burrowing owls is certainly occurring in California, with documented instances of bulldozing of burrows, shooting, vandalism and other activities, as discussed in Section VIII above. These Fish and Game Codes also fail to address the fact that "take" of owls is occurring through active and passive relocation of owls, activities that are a significant mechanism of extirpation of owls from urbanizing areas. State-sanctioned relocation efforts often result in disguised or delayed "take" of owls, as discussed in Section VIII.D above.

5. Natural Community Conservation Plans

The state "Natural Communities Conservation Planning Act" was enacted in 1991, purportedly to provide for comprehensive, regional multi-species planning. The entirely voluntary Natural Communities Conservation Planning ("NCCP") program is intended to preserve blocks of contiguous habitat large enough to sustain viable populations of listed species and to prevent the need for additional listings, while still allowing for "compatible and appropriate" economic growth and development. However, the NCCP Act, unlike the federal ESA, contains no regulatory standards for plan approval and implementation.

Only 3 NCCPs have been approved within the range of the burrowing owl, all in San Diego and Orange Counties, where there are perhaps less than a dozen breeding pairs of owls left. These NCCPs have been set up too late to capture any long-term viable nesting habitat for the species. P. Bloom has surveyed all existing and potential Orange County NCCP lands and found no nesting owls (P. Bloom, pers. comm., 2002). Similarly, the San Diego County NCCPs do not contain any viable long-term nesting habitat. While the NCCP areas constitute significant habitat preservation efforts, the burrowing owl nesting habitat that has been protected is too small and therefore of marginal significance for burrowing owl protection. On a positive note, wintering burrowing owls utilize NCCP and proposed NCCP lands on a regular basis in Orange and San Diego Counties (P. Bloom, pers. comm., 2002).

The San Diego Multi-Species Conservation Plan ("MSCP"), an NCCP that is also a federal HCP, only has the potential to protect 1 viable breeding population of owls, as discussed in the section on HCPs above. The other 2 NCCPs are the Orange County Sub-regional Plan ("SRP"), and the San Diego Gas & Electric Co. NCCP. As for the Orange County SRP, the Central-Coastal portion of the SRP has been approved, and mentions the burrowing owl as a species of concern. No direct protection or mitigation was proposed for the species as of 1996. The Notice of Preparation for the Southern portion of the SRP was released in September 2001, but does not specifically address the burrowing owl. No information is available on the Northern portion of the NRP, which is pending. The San Diego Gas & Electric Co. NCCP will modify 400 acres, identified as potential habitat for 110 species of concern, including the burrowing owl. The plan identifies the potential impacts as "direct killing, or injury to, individual animals," especially those animals that may be in nests or in burrows…in the ground." Among the flaws of the southern California NCCPs are their lack of clear standards, lack of reliable sources of funding, and failure to provide for adequate independent scientific input (Jasny 1997).

No NCCPs are approved or planned in the Imperial Valley, where 71% of the state's breeding owls reside, nor in the southern or northern Central Valley, which support 15% and 6.4% of the state owl population, respectively. A few NCCPs are pending within the southern range of the burrowing owl, including the Joint Water Agencies Sub-regional Plan, Western Riverside County MSHCP, San Bernardino Valley-wide MSHCP, and Palos Verdes Peninsula Sub-regional Plan. In the middle Central Valley, Merced County is now in the planning stages for an NCCP, and the following areas are anticipated to implement future NCCP Planning Agreements: South Placer Legacy Area, Yolo County, Solano County, and South Sacramento County.

The NCCP program is still experimental in nature and cannot be relied upon to protect or recover burrowing owl populations in California. Very few NCCPs have been approved or implemented, and significant unanswered questions remain about their biological integrity and long-term viability. Some of the problems with the NCCP process are that it is heavily weighted in favor of economic development, rather than species recovery goals; it is politically driven, rather than science driven; there are insufficient monitoring mechanisms; the voluntary nature of the program limits its effectiveness; landowner and industry representatives and their consultants dominate the planning process; and the program does not ensure adequate funding to carry out NCCP acquisition programs (Jasny 1997; Mueller 2001). Unfortunately, the NCCP process is also being used to undermine other state protections for species and to weakens citizens' and local governments' ability to obtain and/or enforce species protections through other legal mechanisms, which may provide stronger protection than the NCCP process (Mueller 2001).

6. Mitigation Banks

The California Department of Fish and Game acknowledges 43 mitigation banks in existence or in the process of being created in California, where land can be purchased by developers, essentially as "mitigation" credits for habitat destruction elsewhere. The ideal of these mitigation banks is to consolidate the acquisition of mitigation land, and credits for mitigation, into large and biologically meaningful parcels (CDFG 2002b). However, the mitigation bank approach for burrowing owls implicitly endorses extirpation of owls from areas of high development by not requiring on-site conservation measures, ensuring that owls will eventually be eradicated from urban areas.

The California Environmental Resources Evaluation System (CERES) only identifies 1 mitigation bank in California with habitat and conservation credits for burrowing owls, the 92.5 acre Springtown Reserve in Livermore, Alameda County, which is still under development (CERES 2002). The California Department of Fish and Game has unofficially sanctioned the use of several other small mitigation banks in eastern Alameda and Contra Costa Counties to "mitigate" for the loss of burrowing owl habitat to urban development in eastern and southern San Francisco Bay Area. These include the Byron Conservation Bank (120-142 acres), Brushy Creek Conservation Bank (120 acres), and the Haera Conservation Bank (299 acres plus the potential for expansion by several hundred acres). There is a also a small mitigation bank in Placer County (315 acres) with potential habitat for burrowing owls, but it is unclear how many owls are there.

The small number of mitigation banks with owl habitat, their extremely small size, and the rising cost of purchasing suitable land for habitat make this approach incapable of protecting significant populations of owls.

C. REGIONAL AND LOCAL GOVERNMENT PLANS

The lack of statewide consistency in interpreting owl protection guidelines developed for (but never formally adopted by) the California Department of Fish and Game has led to confusion, conflict, and disarray in the regulatory community and among consulting biologists. Failed conservation efforts in the San Francisco Bay Area are indicative of the limitations of attempts at regional and local owl conservation planning for non-listed species.

<u>Regional Plans</u>

Members of the CBOC met with the California Secretary of the Resources Agency in 1995 and the Director of the Department of Fish and Game in 1998 to discuss ways to enhance burrowing owl conservation in the San Francisco Bay Area other than listing the species (there was a perception that listing might lead to intentional eradication of burrows from private lands through disking). An approach involving regional conservation planning by the Department of Fish and Game and local/municipal habitat conservation was agreed upon, and the California Audubon Society introduced a bill to the California legislature in 1999. This bill would have provided funds for the Department of Fish and Game to prepare a Burrowing Owl Conservation Strategy for the Bay Area, however during legislative review this bill was amended to apply to other species and eventually was not funded.

It is worth noting that every city in the southern San Francisco Bay that was approached with the concept of cooperating on a multi-city (i.e., regional) plan opted instead for its own separate plan. The result was a different approach to similar problems of habitat loss in the same locality, and the need to reinvent the process multiple times as a result of these decisions.

County Plans

The General Plans for the 37 California counties that still have breeding burrowing owls (excluding the counties in the desert range of the species, where owls have always been sparse) were reviewed, and none of these plans mention or require any mitigation for loss of burrowing owl habitat.

The Fresno County General Plan typifies the treatment of special status species under county level planning efforts. Protection policies are couched in qualifiers, such as "where possible," and there is no guaranteed protection of sensitive habitat if it is "not practicable." For example, the plan commits to "*support efforts* to avoid the "net" loss of important wildlife habitat *where practicable*" and "ensure the conservation of large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife populations, *as long as this preservation does not threaten the economic well-being of the county*" [italics added]. The plan does not specifically mention the burrowing owl, but does discuss protecting the San Joaquin kit fox in the context of mandating that the County "shall promote effective methods of pest (e. g. ground squirrel) control on croplands bordering sensitive habitat that do not place special-status species at risk, such as the San Joaquin kit fox." Of course, effective ground squirrel control puts the long-term survival of burrowing owl populations at risk.

Under the Fresno County General Plan, if protecting wildlife habitat is deemed unfeasible, "mitigation" is required. However, compliance with existing environmental laws, such as CDFG codes, U. S. Fish and Wildlife Service regulations, and the Migratory Bird Treaty Act are considered part of the mitigations. The County acknowledges that development under the plan will destroy specific habitat types that support special-status animals, and that although implementation of its mitigation policies would somewhat reduce impacts for development within the County's jurisdiction, they would not be reduced to a less-than-significant level. The impacts of future development under the plan are deemed to be significant and unavoidable for development within the County and other city jurisdictions.

City Plans

Repeated conflicts between burrowing owls and development projects, especially in southern San Francisco Bay, have led some municipalities to consider preparing city-wide burrowing owl conservation programs for their respective jurisdictions.

The City of San Jose, in Santa Clara County, attempted the most ambitious such project in 1998 and spent 2 years developing a Burrowing Owl Habitat Conservation Strategy and Implementation Plan ("Plan"), which was fashioned after the Habitat Conservation Plan model for federally-listed species. The Plan would have provided a consistent way to evaluate impacts to burrowing owls and burrowing owl habitat from development according to their General Plan through 2020. The Plan proposed a development fee for every acre of open space land developed (although the fee was the most obvious way to fund the Plan, the Plan also contained other funding mechanisms) to create an endowment fund to maintain and monitor owl habitat. This funding mechanism would have resulted in the management of several hundred acres of burrowing owl habitat on dual-purpose land in San Jose, without the need to purchase prohibitively costly land (in the range of $1 million/acre). Development was expected to consume over 2,000 acres of owl habitat over 20 years, which would be mitigated by 1,250 managed acres of owl habitat within the City's urban service area. Unfortunately, the City Council denied the Plan in May 2000 without even bothering to read it, due to objections by the building industry over the proposed development fee, concerns by the City that it would cause undue restraint of commercial development in San Jose, and the perception that they were being held to a higher standard of mitigation than neighboring entities (as in the 6.5 acres/pair mitigation for owl habitat in Byron allowed for development in Santa Clara). Shortly after the rejection of the Plan, the City, in a self-serving interpretation of the CBOC guidelines, offered a "less than significant" free pass to a development project at Lake Cunningham Park, because it impacted less than 6.5 acres of owl habitat.

The City of Morgan Hill, in Santa Clara County, began preparing a city-wide burrowing owl habitat conservation program in 2000. The City committed in 1999 to prepare such a plan as part of the approval of a development project that affected burrowing owl habitat. Unfortunately, breeding burrowing owls may have been extirpated from Morgan Hill during the time the plan was being prepared (J. Barclay, pers. comm., 2002).

In San Bernardino County, the City of Chino General Plan authorizes low to high-density housing development on much of the agricultural land around the Chino Airport, including the majority of occupied owl locations in the vicinity of Chino (J. Bath, pers. comm., 2001). The City of Ontario General Plan proposed to convert 8,200 acres of existing agricultural grasslands, and develop 31,000 homes in an area that supports a large burrowing owl population in the Inland Empire with only a mere 50 acres of raptor habitat provided as "mitigation" (G. Stewart, D. Guthrie, pers. comm., 1997). Litigation over this plan resulted in a settlement offering some burrow owl protection measures, which are likely inadequate to protect the owls (J. Bath, pers. comm., 2003).[180]

A local management plan emphasizing on-site relocation and off-site habitat replacement (outside of the Santa Clara Valley) was recently developed for the Mission College owl population in Santa Clara County, where owls numbers have fallen from 30 pairs to 8 pairs in 5 years (Trulio 2002). This type of offsite habitat replacement is detrimental to local owl populations in the Santa Clara Valley region and the affected owls will lose most of their foraging habitat to development under this plan. The inevitable loss of the Mission College population is a perfect example of the simple relationship between habitat loss and species extirpation. (Delevoryas 1997; Trulio 1998a, 2002).

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[180] The settlement measures for the litigation on the Ontario General Plan ("Settlement") include consultation by the City of Ontario with CDFG to determine long-term suitable owl habitat and require avoidance measures (Settlement Page 3, Item 2b). Unfortunately a consultation with CDFG does not guarantee protection for the owls, as CDFG has a record of signing off on other projects in the area that have harmed owls and destroyed owl habitat. If Ontario determines that an "unconstitutional taking" would occur in protecting the owl habitat, then the alternative measure for mitigating impacts will consist of a mitigation fee (Settlement Page 4, Item 2c) of $2,000 per acre (Settlement Page 3, 1st paragraph). A land trust would be formed (Settlement Page 6, Item 5) to receive mitigation fees, with up to 25% of the mitigation fee expenditures allowed for recovery of the endangered Delhi Sands Fly ("DSF") rather than burrowing owls (Settlement Page 4, Item 2 d). Although Ontario has not surveyed for the DSF or burrowing owls, it arbitrarily claims (Settlement Page 4, Item 2d) that habitat that benefits the DSF can be expected to benefit burrowing owls. The mitigation fee of $2,000 per acre is grossly insufficient to purchase the 6.5 acres per burrowing owl nest called for in the CDFG protocol. The appraised value of land per acre in this area ranges between approximately $60,000 and $160,000, and low-end parcels in Chino are expected to rise in value after Chino approves their Subarea 2 General Plan Master on 3/25/2003. The land trust can use the mitigation funds to purchase "offsite mitigation lands," (Settlement, page 6, section 4 b [iii]), but there has been no showing that there are "offsite mitigation lands" suitable for the owls.

X. RECOMMENDED MANAGEMENT AND RECOVERY ACTIONS

This petition has documented significant local extirpations and ongoing and dramatic population declines of burrowing owls throughout the majority of their range in California, as well as the complete failure of regulatory agencies and current management efforts to reverse this trend. The factors causing burrowing owl declines and the threats to the majority of remaining owl populations can only be addressed by providing elevated legal protection to the species. Without endangered or threatened status, future management policy will continue to emphasize protecting individual birds without addressing cumulative habitat loss or other factors reducing the survivorship of owls. Ultimately, the protection of the burrowing owl in California hinges on strong habitat protection regulations.

The California Burrowing Owl Consortium has recommended management and recovery actions for the burrowing owl. These include: protecting remaining breeding pairs (especially those that are part of large breeding groups); protecting and enhancing breeding habitat; and amending management and land use plans to ensure recovery of the species.

A. LIST THE BURROWING OWL AS A STATE ENDANGERED OR THREATENED SPECIES

The western burrowing owl should be immediately listed as endangered or threatened throughout its range in California. Listing the burrowing owl will allow the California Department of Fish and Game to apply consistent protection measures for breeding owls and for essential owl habitat. Listing would also allow for the development of a statewide recovery plan and prioritization of recovery efforts.

B. PROTECT REMAINING BREEDING GROUPS AND PAIRS AND PROTECT AND ENHANCE BREEDING HABITAT

Owl populations at risk in agricultural and urban areas should be identified and guidelines developed for managing and protecting owl habitat. Nest protection and habitat management efforts in agricultural areas will differ from those in urban settings.

In agricultural areas, protecting nests is a primary goal. Although little is known about how owls use the agricultural landscape, owls have been found nesting in burrows along levees and berms, and they most likely forage in agricultural fields. Nest sites are at risk if burrows are filled or squirrels are killed to protect levees, so promoting protection and tolerance of ground squirrel populations where owls exist or might be encouraged to re-colonize is essential.

Urban owls require both nest site and foraging area protection, as both are constantly being lost to development. Protection of nest sites can be achieved more easily than preventing the loss of foraging lands. Management in urban landscapes requires incorporating owl requirements into open space planning and providing foraging habitat in areas compatible with human uses. Where several adjacent development projects are scheduled, they should be planned to maximize the amount of open habitat by clustering buildings, parking lots, and facilities to allow owls the use of contiguous foraging habitat. Cities and counties could begin a program of setting aside areas of suitable owl habitat into perpetuity, guaranteeing that owls have adequate breeding, foraging, and wintering habitat and ensuring the continuance of the species.

Cities and counties with resident and/or migratory burrowing owls within their jurisdictions should adopt weed abatement measures that are not destructive to owls or their nests. To that end, mowing rather than disking should be encouraged for both publicly and privately owned lands, and municipalities should adopt alternate methods of weed control to curb herbicide spraying.

Native grasslands should be retained and restored. Most burrowing owls now live at an artificially high population density in a narrow niche on the margins of agricultural lands. If management practices change slightly, these populations cannot be depended upon to buffer environmental perturbations. Burrowing owls should be reintroduced and their native grassland habitat restored wherever possible.

C. AMENDMENTS TO EXISTING MANAGEMENT AND LAND USE PLANS

Because the burrowing owl is a widely distributed species that occurs in patches, effective protection can likely be achieved only through large scale planning efforts. A statewide recovery plan, which would be enabled by listing the species, should be developed through the California Department of Fish and Game. This plan must address owl habitat needs in the face of current land-use trends. The statewide plan should also quantify the number of owls and amount of habitat in easily managed areas such as on public lands and on lands owned by willing private landholders. Nest protection and habitat management can more easily be implemented under these conditions. County and city general plans should then address the protection and restoration of owl habitat appropriate for their areas, while remaining consistent with the CDFG recovery plan. Environmental impact documents for projects which impact owls must then comply with local planning documents and CDFG requirements. Municipalities must be required to implement statewide burrowing owl recovery guidelines as part of the CEQA and planning process.

D. AGENCIES AND ORGANIZATIONS THAT SHOULD BE INVOLVED

The agencies and organizations that should be involved in planning and implementing burrowing owl recovery plans include: federal agencies such as the U. S. Fish and Wildlife Service, U. S. Bureau of Land Management, U. S. Army Corps of Engineers, U. S. D. A. Wildlife Services, and the USGS Biological Resources Division; state agencies such as the Department of Fish and Game, California Coastal Commission, and Department of Water Resources; and regional agencies such as the San Francisco Bay Conservation and Development Commission and the Association of Bay Area Governments. The Burrowing Owl Consortium and landowners and managers with owl populations, such as counties, cities, water districts, park districts, military bases, golf courses, airports, the Farm Bureau, and private landowners should all be involved in the development and implementation of a recovery plan.

E. BURROWING OWL MANAGEMENT IMPACTS ON OTHER SPECIES

Several other wildlife species may benefit from increased protection for burrowing owls in different parts of the burrowing owl's range in California. Increased grassland habitat protection for burrowing owls in the southern San Joaquin Valley would complement conservation efforts for the San Joaquin kit fox (*Vulpes macrotis mutica*), blunt-nosed leopard lizard (*Gambelia sila*), various listed and special-status kangaroo rats (*Dipodomys ingens, D. nitratoides nitratoides, D. n. exilis, D. n. brevinasus*), San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), San Joaquin pocket mouse (*Perognathus inornatus inornatus*), and Tulare grasshopper mouse (*Onychomys torridus tularensis*).

Increased protection of burrowing owls would also benefit Swainson's hawks (*Buteo swainsoni*), California horned larks (*Otocoris alpestris actia*), American badgers (*Taxidea taxus*), and Salinas pocket mice (*Perognathus inornatus psammophilus*) in the overlapping portions of their respective ranges. In the Mojave Desert, increased protection of burrowing owls would complement protection of desert tortoises (*Xerobates agassizi*) and Mohave ground squirrels (*Spermophilus mohavensis*). The habitat of the endangered Delhi Sands Flower Loving Fly (*Rhaphiomidas terminatus abdominalis*) in Colton, Fontana and Mira Loma overlaps with probable burrowing owl habitat.

Management and recovery of burrowing owls is not expected to significantly negatively impact other wildlife species. Increased owl numbers could impact local populations or concentrations of some prey species.

Burrowing owls are known to prey on California least terns (*Sterna antillarum brownii*), a federally endangered species, at colonies on North Island and Ream Field (Imperial Beach) in San Diego County (P. Unitt, pers. comm., 2001). Owls are hazed away from tern nests at Ocean Beach and also discouraged in the vicinity of snowy plover (*Charadrius alexandrinus nivosus*) nesting areas in the region.

F. MONITORING PROGRAMS AND STUDIES

Researchers and trained volunteers will be needed to monitor the effectiveness of any management guidelines to recover burrowing owls. The following monitoring programs and studies are critical to successful habitat management:

* Continued refinement of the statewide population estimate;
* Defined demographic parameters in stable, decreasing, and increasing populations to determine causes of declines and mechanisms to reverse declines;
* Development of realistic population goals for long-term species survival;
* Studies of dispersal, adult and juvenile survivorship, and causes of mortality in natural, agricultural, and urban environments;
* Studies of reproductive success and survivorship of birds under varying management schemes;
* Studies determining the impact of pesticides on birds in agricultural settings;
* Studies of immigration of birds into local populations from other populations in and outside the state;
* Studies determining the necessary effective population size for long-term persistence; and
* Studies of methods that are most effective at increasing existing populations.

Burrowing owl research is currently being conducted on these topics by the following researchers:

* Genetic relationship of California burrowing owls: Clark Winchell, North Island, San Diego
* Population viability, reproductive effort, dispersal, and passive relocation: Lynne Trulio, San Jose State University
* Demography study of burrowing owl populations in urban, agricultural, and grassland habitats: Daniel Rosenberg, Institute for Bird Populations
* Population monitoring, demography, and management at San Jose Airport since 1990: Jack Barclay

XI. SIGNATURE PAGE

Submitted this 7th day of April, 2003

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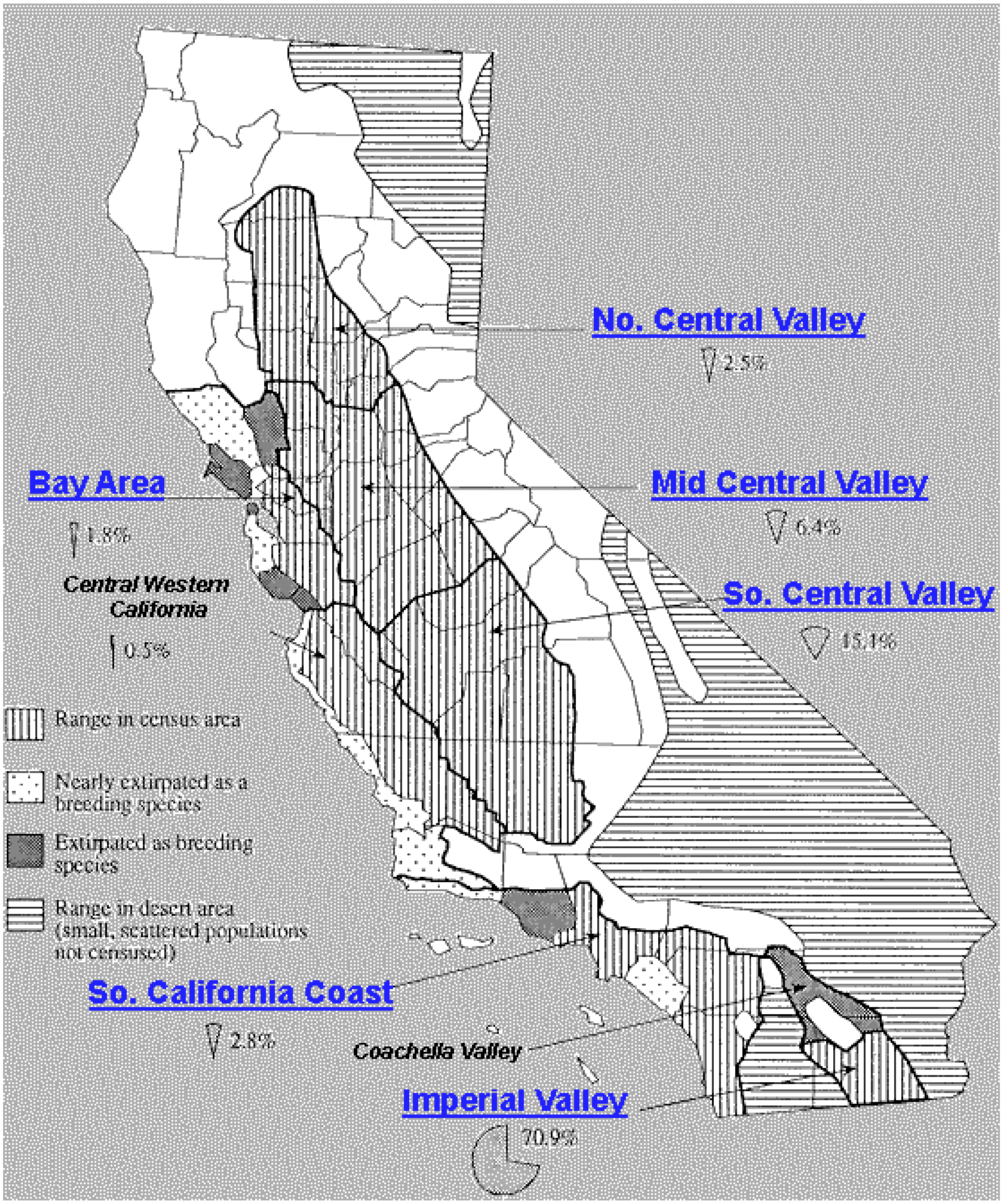
Brian Latta, Santa Cruz Predatory Bird Research Group, Santa Cruz, CA
Janet Linthicum, Santa Cruz Predatory Bird Research Group, Santa Cruz, CA
Richard Montijo, Senior Biologist, AMEC Earth and Environmental, Santa Barbara, CA
Stephen Myers, Wildlife Biologist, AMEC Earth and Environmental, Riverside, CA
Robin Panza, Section of Birds, Carnegie Museum of Natural History, Pittsburgh, PA
Glenn Stewart, Ph.D., Professor of Zoology, California State Polytechnic University, Pomona, CA
Lynne Trulio, Associate Professor, Department of Environmental Studies, San Jose State University, San Jose, CA
Philip Unitt, Collection Manager, Department of Birds and Mammals, San Diego Natural History Museum, San Diego, CA
Brian Walton, Santa Cruz Predatory Bird Research Group, Santa Cruz, CA
Dennis Warren, San Luis National Wildlife Refuge, Los Banos, CA

XII. APPENDICES

A. APPENDIX 1 – CALIFORNIA BURROWING OWL RANGE AND DISTRIBUTION MAP



State Map: Produced by John H. Barclay, using data derived from a census of burrowing owls in California 1991-1993, David F. DeSante and Eric D. Ruhlen. Institute for Bird Populations, 1995.

B. APPENDIX 2 – TABLE OF ESTIMATED DENSITY, BREEDING PAIRS, AND POPULATION TREND, BY REGION*

Region (County)	**Area Within Burrowing Owl Range (mi^2)**	**Estimated Density ($pairs/km^2$)**	**Estimated # of Breeding Owl Pairs** (Year of Estimate)	**Population Trend**
Northern Desert Range	**2,650**	**0.021-0.035**	**90-149** (1999)	**unknown**
E Siskiyou	945		32-53 (1999)	unknown
Modoc	615		21-35 (1999)	unknown
Lassen	910		31-51 (1999)	unknown
E Plumas	130		4-7 (1999)	unknown
E Sierra	50		2-3 (1999)	unknown
Northern Central Valley	**8,275**	**0-0.02**	**231-244** (1993)	**unknown**
SW Shasta	770		unknown	unknown
Tehama	2,230		unknown	unknown
Butte	1,165		unknown	unknown
Glenn	1,055		unknown	unknown
Yuba	545		unknown	unknown
W Nevada	200		unknown	unknown
Colusa	1,100		unknown	unknown
Lake	unknown, small		unknown	unknown
Sutter	605		unknown	unknown
W Placer	605		unknown	unknown
Middle Central Valley	**11,450**	**<0.01-0.03**	**594-597** (1993)	**unknown**
Yolo	1,035		30-40 (2000)[a]	50% decline since 1985[a]
Sacramento	1,015		unknown	unknown
Solano	830		unknown	unknown
E Contra Costa	400		unknown	unknown
E Alameda	165		unknown	unknown - hist. declines[b]
San Joaquin	1,435		unknown	unknown - hist. declines[c]
Stanislaus	1,520		unknown	unknown
Merced	2,010		unknown	unknown
W El Dorado	540		unknown	unknown
W Amador	330		unknown	unknown
Calaveras	720		unknown	unknown
W Tuolumne	575		unknown	unknown
W Mariposa	875		unknown	unknown
Southern Central Valley	**15,000**	**0.03-0.05**	**1,363-1,396** (1993)	**unknown**
Madera	1,500		unknown	unknown
SE San Benito	350		unknown	unknown
Fresno	4,800		unknown	unknown - hist. declines[d]
Kings	1,435		unknown	unknown
W Tulare	2,420		unknown	unknown - hist. declines[e]
NW Kern	4,495		unknown	unknown

* Density and population estimates from DeSante and Ruhlen (1995), DeSante et al. (1996), and information in this petition unless otherwise noted, except northern desert range estimates from Barclay and Cull (1999) using density values from DeSante and Ruhlen (1995) and Butts (1973). Area within burrowing owl range derived from Barclay state map in Appendix 1.

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[a] Estimate by B. Johnson (pers. comm., as cited in PHBA 2002).
[b] Declined through the 1970s (Stallcup and Greenberg 1974).
[c] Declines were noted in the Stockton area 1968-1978 (Remsen 1978).
[d] Miller (1903), Tyler (1913a), and Remsen (1978) reported declines in the Fresno area.
[e] Remsen (1978) and Beedy and Granholm (1985) noted declines.

Region (County)	**Area Within Burrowing Owl Range (mi^2)**	**Estimated Density (pairs/km^2)**	**Estimated # of Breeding Owl Pairs** (Year of Estimate)	**Population Trend**
S. F. Bay Area	**6,465**	**<0.01**	**165-170** (1993)	**50% decline since mid-1980s**
Sonoma	1,600	0	1-2 (1993)	nearly extirpated
Napa	795	0	0 (1993)	extirpated
Marin	590	0	0 (1993)	extirpated
SW Solano	45	<0.01	0? (2002)	nearly extirpated
W Contra Costa	400	<0.01	0? (2002)	nearly extirpated
Alameda	660	<0.01	unknown	declining
San Francisco	90	0	0 (1993)	extirpated
San Mateo	530	0	1-2 (2001)	nearly extirpated
Santa Clara	1,315		120-141 (1997)[f]	declining
Santa Cruz	440	0	0 (1993)	extirpated
Central Western CA	**9,895**	**<0.01**	**46** (1993)	**declining**
Monterey	3,325		~14 (1992)[g]	nearly extirpated
San Benito	1,050		unknown	unknown
Coastal San Luis Obispo	3,015	0	0 (1993)	extirpated
Santa Barbara	2,195		unknown	nearly extirpated
Carrizo Plain (Eastern SLO)	**310**		**>32-40** (2003)[h]	**apparently stable**[h]
Southwestern CA	**8,380**	**<0.01-0.11**	**263-311** (1993)	**57-85% decline since mid-1980s**
S Ventura	1,025		unknown	nearly extirpated
S Los Angeles	2,040		0? (2002)	nearly extirpated
Orange	785		≤3 (2002)	nearly extirpated
W San Diego	1,710		6-8 (2001)	nearly extirpated
Southern CA Islands	unknown, small		unknown, very few	unknown
W Riverside	1,810		unknown	declining - near extirp.?[i]
SW San Bernardino	1,010		unknown	declining - near extirp.?[i]
Imperial Valley	**1,840**	**0.08-2.37**	**6,571-6,719** (1993)	**apparently stable**
Coachella Valley	**1,530**	**0**	**0** (1993)	**extirpated**
Central Riverside	1,090	0	0 (1993)	extirpated
NE San Diego	210	0	0 (1993)	extirpated
N Imperial	230	0	0 (1993)	extirpated
Southern Desert Range	**37,450**	**unknown**	**unknown**	**unknown**
Inyo	8,580		unknown	unknown
SE Kern	2,450		unknown	unknown
San Bernardino	17,140		unknown	declining[j]
NE Los Angeles	1,220		≥10 (2000)[i]	declining[j]
E Riverside	3,620		unknown	unknown
E San Diego	2,140		unknown	unknown
Imperial	2,300		unknown	unknown
Statewide Total	**103,245**		**9,365-9,682+**	**declining 8% per year**

[f] 1997 Santa Clara countywide estimate by J. Barclay (pers. comm., 2002).

[g] 1992 survey by Roberson (1993).

[h] The owl population at Carrizo Plain, which was missed by the DeSante et al. (1996) surveys, may be larger than recent surveys (Rosenberg and DeSante 1997; Rosenberg et al. 1998b; Rosenberg 1999) indicate (J. Gervais, pers. comm., 2003).

[i] Estimate by P. Bloom (pers. comm., 2002).

[j] Estimate by S. Myers (pers. comm., 2002).

C. APPENDIX 3 - DESANTE ET AL. 1996, "THE DISTRIBUTION AND RELATIVE ABUNDANCE OF BURROWING OWLS IN CALIFORNIA: EVIDENCE FOR A DECLINING POPULATION"

Henry Dong

From: Megan Marshall <megan@sanmanproductions.com>
Sent: Monday, December 10, 2018 9:05 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: Vote YES for Marriott Residence Inn

Dear Planning Board:

Tonight you have an opportunity to deliver a quality, modern hotel and restaurant to Alameda's waterfront at Harbor Bay. We know the proposed plan will bring significant revenue to the city, provide shoreline restoration, open space, and amenities to the public, create jobs, and fill a void in high-end lodging on the island.

The proposal meets all of the zoning requirements, as well as those of all resource agencies. Time is due to create a quality project on this long-languishing property.

Please vote YES tonight for the Marriott Residence Inn at Harbor Bay.

Thank you,
Megan Marshall
900 Park Ave

Megan Marshall
Sent from my iPhone

Henry Dong

From: Thomas McGuinness <tjmcguinness@yahoo.com>
Sent: Thursday, December 06, 2018 9:09 PM
To: Henry Dong
Subject: RE: PLN18-0381 2900 Harbor Bay Parkway

Mr. Henry Dong, Planner II
Planning, Building & Transportation City of Alameda, City Hall
2263 Santa Clara Avenue, Rm. 190
Alameda, CA 94501

RE: PLN2800381 2900 Harbor Bay Parkway

I am writing to express my strong opposition to the Marriott Residence Hotel project proposed for the site. I am the owner of 22 Bannister Way in the immediately adjacent Bay Colony residential development and my property value would be negatively affected by the project. It is quite apparent that this project is trying to be fast tracked with inadequate notice and public comment and paired with a similar project to try and confuse the general public.

I object to the zoning change from Commercial Manufacturing to a hotel/restaurant use. The proposed use will be a 24/7 nuisance with traffic, noise, and odors unsuitable for a residential area. I don't think any of the studies included as exhibits adequately address the impacts of the project on the neighboring residential area.

The aesthetics of the project are objectionable, a five story 72' high structure will be a visual blight on the shoreline.
Light pollution from the site lighting and the overly tall structure proposed is objectionable.
The commercial kitchens in the hotel, restaurant, and coffee shop are upwind of the adjoining residences and the greasy food smell they will emit is objectionable. This impact is not mentioned in any of the Exhibits at all.
The on site garbage enclosures are positioned to be as close as possible to the adjoining residences, the noise from their use and the odors they will emit are objectionable. This impact is not mentioned in any of the Exhibits at al.
The traffic study by Abrams Associates included as Exhibit 5 is totally inadequate. It fails to mention that "The Harbor Bay Parkway" in the project vicinity is no longer a four lane roadway but rather a substandard 24' wide driveway (as called out as such on the civil drawings C.0.0, C.0.1 in Exhibit 1). The four lane roadway ends almost a quarter of a mile away. The study also takes credit for substantial unexplained "Pass-by Non Auto trips" in its analysis which conveniently reduce the anticipated traffic counts. What are these, the Southwest Air flights going by? Also, how do one hundred vehicles pulling into the advertised ferry parking spaces turn into only 43 AM trips? It makes no sense. In addition, there is no estimate of the amount of commercial truck traffic which will be required to service the site, making food deliveries, restaurant and coffee shop supply deliveries, beverage deliveries, hotel supply deliveries, hauling away garbage etc.

This project, if built as proposed, is going to produce substantial traffic impacts on the nearby streets as most of the traffic generated is not going to utilize the Harbor Bay Parkway, it will use Mecartney Road instead.
Emergency vehicle egress to the site is inadequate. Fire trucks (the hook and ladder) responding from the nearby fire station at Mecartney and Auginbaugh would have to maneuver through the often congested ferry terminal parking lot or the sharp right hand turn at Bay Edge Road and the stub end of Harbor Bay Parkway (the driveway). It may be feasible but it is suboptimal.
The noise study by Saxleby Acoustics include as Exhibit 7 is also totally inadequate. The community is not interested in or impacted by the noise level inside the hotel rooms. The community is interested in and impacted by the noise from the hotel, its patrons, its on site laundry, the restaurant/bar and its patrons and the numerous vehicles accessing it round the clock. Where is that study? Most of the commercial vehicles that service the site will have back up alarms and that is an awful noise to inflict on someone trying to enjoy the peace and quiet of their own home.
The motel business is intended to serve a transient population. Unfortunately that often includes an undesirable element of vagrants and hangers on. I would like to know how many calls for service from the Police Department the existing hotel operations in the Harbor Bay Business Park have been averaging.

I urge the Planning Board to reject this project.

Sincerely,

Thomas J. McGuinness

Henry Dong

From: Nancy Miranda <nmirandasf@yahoo.com>
Sent: Sunday, December 09, 2018 7:34 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: Vote YES for Marriott Residence Inn

Dear Planning Board:

Tonight you have an opportunity to deliver a quality, modern hotel and restaurant to Alameda's waterfront at Harbor Bay. We know the proposed plan will bring significant revenue to the city, provide shoreline restoration, open space, and amenities to the public, create jobs, and fill a void in high-end lodging on the island.

The proposal meets all of the zoning requirements, as well as those of all resource agencies. Time is due to create a quality project on this long-languishing property.

Please vote YES tonight for the Marriott Residence Inn at Harbor Bay.

Thank you,

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:06 AM
To: Henry Dong
Subject: FW: proposed Marriott Residence Inn

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Ann W Moxley [mailto:awmoxley@sbcglobal.net]
Sent: Friday, December 07, 2018 9:14 AM
To: Ronald Curtis <rcurtis@alamedaca.gov>; Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>; LARA WEISIGER <LWEISIGER@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>; Asheshh Saheba <asaheba@alamedaca.gov>
Subject: proposed Marriott Residence Inn

Please oppose the proposed Marriott Residence Inn at Harbor Bay Parkway. This area does not have enough business to support one more hotel/motel chain; there is already an Extended Stay, a Hampton Inn, a Home 2 Suites under construction, and a Hilton Garden Inn under proposal near business offices. These properties provide more than enough beds for the local demand.

Adding another accommodation property will detract from the area's appeal, add nothing to the community, increase traffic, strain parking resources, and possibly damage the environment. Alameda should be about responsible, sustainable development, not catering to the whim of every developer who makes empty promises of increased taxes to the city while straining the city's service base.

Ann Moxley
130 Sea Bridge Way
Alameda, CA 94502

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 8:40 AM
To: Henry Dong
Subject: FW: Environmental Report, written, by Attorney Michael Lozeau.

-----Original Message-----
From: LARA WEISIGER
Sent: Monday, December 10, 2018 8:04 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: Environmental Report, written, by Attorney Michael Lozeau.

-----Original Message-----
From: Susan [mailto:sue13dives@comcast.net]
Sent: Sunday, December 09, 2018 11:03 PM
To: LARA WEISIGER <LWEISIGER@alamedaca.gov>
Cc: ANDREW THOMAS <ATHOMAS@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>
Subject: Re: Environmental Report, written, by Attorney Michael Lozeau.

> Dear Members of the Planning Board,
>
> I am writing to request that you consider delaying your meeting tomorrow, December 10th regarding the decision on the Marriott project.
>
> Surely the Planning Board will want time to research the numerous and complex issues raised in the Environmental Report, written by Attorney Michael Lozeau. We feel it is only fair and the right thing to do that a decision is delayed until all aspects and implications of such a project have been thoroughly vetted. The Planning Board should not make a hasty decision on a project this large scale that has has such serious impact on the community without being thoroughly apprised of the legal environmental requirements.

> Making a decision without thoroughly researching the complex environmental issues has legal ramifications. This will cost the city money which is the exact opposite of what this hotel is saying they will bring to the table.
>
> The delay will allow all concerned parties to be adequately informed of the serious and far reaching environmental impact of the Marriott project.
>
> Thank you for your consideration and attention to this matter.
>
> Susan Natt
> Secretary Bay Colony HOA
>
>

Henry Dong

From: Melissa Plaisance <mcpjgp@aol.com>
Sent: Monday, December 10, 2018 9:44 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: Ask for a revised proposal for the Marriott Residence Inn

Dear Planning Board:

The proposed hotel is too high profile for the area.

Please ask for a revise proposal for a three story hotel tonight for the Marriott Residence Inn at Harbor Bay.

Thank you,

Melissa Plaisance

Melissa Plaisance
Sent from my iPhone

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 10:52 AM
To: Henry Dong
Subject: FW: delay Planning Board12/10 meeting!

From: LARA WEISIGER
Sent: Monday, December 10, 2018 10:52 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: delay Planning Board12/10 meeting!

From: Wendi L. Poulson [mailto:wlp1272@yahoo.com]
Sent: Monday, December 10, 2018 10:33 AM
To: LARA WEISIGER <LWEISIGER@alamedaca.gov>; cchen@alamedcityattorney.org; ANDREW THOMAS <ATHOMAS@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>
Subject: delay Planning Board12/10 meeting!

Per the recent environmental report provided by Atty Michael Lozeau, the meeting needs to be postponed so the Planning Board has the appropriate time to review the findings. The PB cannot make a decision on such a serious project without being fully informed of the legal environmental requirements.
Thank you

Wendi L. Poulson Tel: (415) 420-1978 email: wlp1272@yahoo.com

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:12 AM
To: Henry Dong
Subject: FW: I Support the Proposal for Marriott Residence Inn at Harbor Bay

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

-----Original Message-----
From: Sophie Raskin [mailto:sophie.raskin@gmail.com]
Sent: Monday, December 10, 2018 4:40 PM
To: ANDREW THOMAS <ATHOMAS@alamedaca.gov>
Cc: Henry Dong <HDong@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>; Becca Perata <becca@voxpopulipr.net>
Subject: I Support the Proposal for Marriott Residence Inn at Harbor Bay

Dear Planning Board:

The Marriott Residence Inn offers many benefits to Alameda residents, including generating substantial tax revenue to help with city services, shoreline improvements with bike-ped access, shared public open space, a new restaurant with a bar and a coffee house, and conference space for the community and business park - all with sweeping views of the Bay!

The City has rejected other proposals to redevelop this property and this plan meets all of the zoning and other requirements and is a much better use of the space than more office. I appreciate the developer has listened to the community and has allowed more time for review and feedback.

Please vote to move this plan forward on Monday, December 10th.

Thank you!

Sophie Raskin

Henry Dong

From: Rosemary Reilly <reilly129@sbcglobal.net>
Sent: Sunday, December 09, 2018 4:33 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: Vote YES for Marriott Residence Inn

Dear Planning Board:

I agree with the points made in Carol Robie's letter to the editor. Hope you had a chance to read it.
As the director of a local non-profit, i would like to add another point. It would be such an asset to our community to have a quality hotel to hold events and fundraisers. Alameda Boys and Girls Club and Girls, Inc. now have to leave Alameda for fundraising events due to lack of space.

It would be great to stay in our community and have the local support.
And, brings jobs and revenue to the city.

Tonight you have an opportunity to deliver a quality, modern hotel and restaurant to Alameda's waterfront at Harbor Bay. We know the proposed plan will bring significant revenue to the city, provide shoreline restoration, open space, and amenities to the public, create jobs, and fill a void in high-end lodging on the island.

The proposal meets all of the zoning requirements, as well as those of all resource agencies. Time is due to create a quality project on this long-languishing property.

Please vote YES tonight for the Marriott Residence Inn at Harbor Bay.

Thank you,

Rosemary Reilly

Sent from my iPad

Henry Dong

From: Daniel Robins <drobinsx@gmail.com>
Sent: Saturday, December 08, 2018 10:08 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: NO, to hotel on Bay Farm

All,

I urge you to vote no to a hotel on Bay Farm. It’s too big (tall), will create more traffic and increase safety risks for our children.

The plans and the impact on the community have not been properly vetted by those who it will affect.

Vote no!

Sincerely,
Daniel Robins

JOANNE ROSENDIN
DANA SACK

CHRISTOPHER J. DYAS
BARBARA A. NASH, OF COUNSEL

SACK ROSENDIN, LLP
ATTORNEYS AT LAW
1437 LEIMERT BOULEVARD, SUITE B
OAKLAND, CALIFORNIA 94602

TELEPHONE: (510) 286-2200
FACSIMILE: (510) 286-8887
WEBSITE: WWW.SACKROSENDIN.COM

December 7, 2018

Sandy Sullivan, Chair
ssullivan@alamedaca.gov

Mr.Ronald Curtis
rcurtis@alamedaca.gov

Mr. Jeffrey Cavanaugh
jcavanaugh@alamedaca.gov

Ms. Rona Rothenberg
rrothenberg@alamedaca.gov

Mr. Asheshh Saheba
asaheba@alamedaca.gov

Mr. David Mitchell
dmitchell@alamedaca.gov

Mr. Alan H. Teague
ateague@alamedaca.gov

Re: Marriott Residence Inn at Shoreline Park

Chairperson Sullivan and Commissioners:

The BCDC staff have approved, internally, without public input, and without consulting with the Commission, a complete and total violation and breach of the BCDC agreement in lieu of a permit, between BCDC and Harbor Bay Isle Associates, from November 13, 1990, 28 years ago. That agreement says, at Section 5, that it does NOT apply to any subsequent owner of the property. Notwithstanding that specific provision of the agreement, that the waiver of the requirement of a separate BCDC permit, applies only to Harbor Bay Isle Associates, staff has unilaterally and without public input, decided to extend the permit waiver to a new separate owner, with no input from the Commissioners. On Thursday, residents who think the project does not belong at this location, asked the Commissioners to consider overruling the BCDC staff regarding allowing this project to proceed without a BCDC permit.

At the time that 1990 BCDC permit agreement was entered into, BCDC relied on Planning Board Resolution No. 1203. That Planned Development Tract approval still governs any construction and development at the proposed location. Resolution No. 1203 REQUIRES that the minimum setback of buildings from the Shoreline Park would be 35 feet, and that if the building is taller than 35 feet, then the setback MUST be between 50 feet and 100 feet. In reliance on those agreements, the BCDC agreement requires only that the setback be at least 35 feet.

Now, 28 years later, a different owner and a different developer, and the City of Alameda staff, are proposing that the City and BCDC approve a 73 foot building with only the same 35 foot setback, and they are telling the Planning Board that it must do so, because it has been approved by BCDC. That's just not true. It is Resolution No. 1203 and the Development Agreement which control. They require a setback of at least fifty feet, and allow the City to require a setback of as much as 100 feet. At such a critical location, that's what it needs to be. That is up to the Planning Board to decide, not less than 50 feet and not more than 100 feet, not the developer and not City staff.

The Shoreline Park and trail is about 30 feet wide in front of the proposed building, It is a paved walking and biking trail. The developer proposes an enormous wall of a building, over 73 feet tall and more than 100 feet long, and just 35 feet from that shoreline trail.

Many many residents of the community, including HOAs representing over 2900 homes and many thousands of residents and users of the Shoreline Trail, including myself, object to this enormous breach of the trust reposed in the City to protect the City's Shoreline Park and bay access. A hotel and especially such a large one, just does not belong at this location.

Because the application does not comply with Resolution No. 1203 and the Development Agreement, please reject this application.

Very truly yours,

Dana Sack

cc: Lara Weisiger, City Clerk lweisiger@alamedaca.gov

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:18 AM
To: Henry Dong
Subject: FW: 'Please vote no' on the Proposed Marriot Residence Hotel

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Brian Schumacher [mailto:bdschumacher@gmail.com]
Sent: Sunday, December 09, 2018 9:41 PM
To: Ronald Curtis <rcurtis@alamedaca.gov>; Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>; LARA WEISIGER <LWEISIGER@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>; Asheshh Saheba <asaheba@alamedaca.gov>
Subject: 'Please vote no' on the Proposed Marriot Residence Hotel

Dear Alameda Planning Board Members,

I am writing to ask that you vote no on the hotel proposed for the Shoreline Park/Bay Trail because:

- Two new hotels are already coming, serving business travelers near Ron Cowan Parkway;
-
- As a business hotel it would afford fewer amenities to the public; and
- It will endanger migratory shorebirds and other wildlife.

This is the wrong use for bay-front land. Planners should use land wisely, and consider the long-term impact of their decisions. Residents have already questioned the developer and still oppose large scale commercial lodging at this location for all these reasons:

- The developer has stated his development is endorsed or approved by BCDC but we cannot confirm this.
- The developer states there will be a restaurant/cafe but the Marriott gave no guarantee it will operate;
- The developer stated that meeting rooms will be too small for public gatherings like weddings/events.
- There is NO GUARANTEE the parking will go to ferry commuters and the Transportation study understates how many spaces are needed for hotel guests.
- The developer describes tens of millions of dollars in taxes to the City but guests staying in this Residential hotel for more than 30 days do not pay the TOT Transient Occupancy Tax.
- VF Outdoors- the business occupying the space in front of this parcel is moving to Denver and reducing local demand for business hotels. The City Planner at public meetings could not quantify or justify building more busineess hotels, and vacant hotel rooms will not generate taxes.

- The developer said that he cannot make the profit he wants if he scales down the number of roooms or stories so his setback from the Bay Trail/Shoreline Park is only 35 feet, much less than the 63 to 100 feet that your Resolution 1203 requires.

Please vote no on this hotel project. The promises made are false- the damage to the shoreline will be permanent. There is a better place for these hotels- there are better uses for this land.

Sincerely,
Brian and Kathy Schumacher
Fernside neighborhood, Alameda

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 8:41 AM
To: Henry Dong
Subject: FW: Final Development Plan and Design Review - New Five Story 172-Room Hotel and 8000 Sq. Ft. Restaurant With Coffee Shop, located at the Esplanade site.

From: LARA WEISIGER
Sent: Monday, December 10, 2018 8:06 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: Final Development Plan and Design Review - New Five Story 172-Room Hotel and 8000 Sq. Ft. Restaurant With Coffee Shop, located at the Esplanade site.

From: Edward Sing [mailto:singtam168@att.net]
Sent: Sunday, December 09, 2018 4:52 PM
To: ANDREW THOMAS <ATHOMAS@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; LARA WEISIGER <LWEISIGER@alamedaca.gov>; Celena Chen <cchen@alamedacityattorney.org>; wilma.chan@acgov.org
Cc: Katie Edison <kedison@mac.com>; Brian Tremper <brian.g.tremper@gmail.com>; Kelly Gail Gordon <kelly8gordon@gmail.com>; Gemma Lim <gemma.lim@comcast.net>; Reyla Graber <reylagraber@aol.com>
Subject: Re: Final Development Plan and Design Review - New Five Story 172-Room Hotel and 8000 Sq. Ft. Restaurant With Coffee Shop, located at the Esplanade site.

TO: Alameda Planning Board
Alameda City Council
Alameda City Attorney
Honorable Wilma Chan, BCDC

Due to the extensive comments sent by Michael R. Lozeau of Lozeau | Drury LLP regarding many ***environmentally related issues*** that impact the approval of this proposed development located at the Esplanade site, I believe that not only the planning board, but staff and the public will not have time to review the letter and its legal implications for the city. I believe ***it would not be in the best interest of the city and our community to hear the matter on Monday, December 10, 2018 and the matter should be delayed***.

Ed Sing
Resident, Freeport Village, Harbor Bay Isle

Henry Dong

From: James Stehr <jamesstehr@sbcglobal.net>
Sent: Monday, December 10, 2018 9:00 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: Vote YES for Marriott Residence Inn

Dear Planning Board:

Tonight you have an opportunity to deliver a quality, modern hotel and restaurant to Alameda's waterfront at Harbor Bay. We know the proposed plan will bring significant revenue to the city, provide shoreline restoration, open space, and amenities to the public, create jobs, and fill a void in high-end lodging on the island.

The proposal meets all of the zoning requirements, as well as those of all resource agencies. Time is due to create a quality project on this long-languishing property.

Please vote YES tonight for the Marriott Residence Inn at Harbor Bay.

Thank you,

James A. Stehr, AIA
Architect (Ret.)

Sent from my iPhone

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:25 AM
To: Henry Dong
Subject: FW: proposed marriott Hotel Monday Dec 10 meeting

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Eva Sun [mailto:eewsn@aol.com]
Sent: Friday, December 07, 2018 8:40 PM
To: Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>; LARA WEISIGER <LWEISIGER@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>; Asheshh Saheba <asaheba@alamedaca.gov>
Subject: proposed marriott Hotel Monday Dec 10 meeting

Dear Council members,

am writing to ask that you vote no on the Proposed Marriot Residence Hotel at 2900 Harbor Bay Parkway on Monday Dec. 10th 2018. The proposed hotel at 5 stories, 172 rooms , and 275 parking spaces, is too large for that location- a bayfront parcel, directly on the Shoreline Park/Bay Trail. It is a business hotel and will not afford amenities to the public. It will endanger the wildlife, particulary migratory shorebirds. There are other locations for business hotels in the Harbor Bay Business Park. There are two hotels coming to the Business Park to serve the needs of business travelers. Home 2 Suites next to the Hampton Inn is under construction and a Hilton Garden Inn is proposed in an extremely fitting location- near business offices, at Ron Cowan Parkway.

This is the wrong use/ at an oversized scale for Bay Front Land . As planners you have a responsiblity to the community to use land wisely and consider the long term impact of your decisions. The developer has misrepresented the benefits this developement brings in his presentations at packed community meetings where residents have questioned him and voiced their opposition to the placement of a large scale, low end, Marriot Inn at this location.

Thank you for your attention to this matter.

Eva Sun
BayView Harbor

Henry Dong

From: MARK SWARTZ <MARK.SWARTZ@securitiesamerica.com>
Sent: Tuesday, December 11, 2018 10:33 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: I Support the Proposal for Marriott Residence Inn at Harbor Bay

Dear Planning Board:

The Marriott Residence Inn offers many benefits to Alameda residents, including generating substantial tax revenue to help with city services, shoreline improvements with bike-ped access, shared public open space, a new restaurant with a bar and a coffee house, and conference space for the community and business park - all with sweeping views of the Bay!

The City has rejected other proposals to redevelop this property and this plan meets all of the zoning and other requirements and is a much better use of the space than more office. I appreciate the developer has listened to the community and has allowed more time for review and feedback.

Please vote to move this plan forward on Monday, December 10th.

Thank you!

Mark R. Swartz

1059 Island Dr.

Alameda, CA 94502

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:20 AM
To: Henry Dong
Subject: FW: Marriott Hotel Propasal
Attachments: alameda notes for hotel development.docx

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Leonard Szeto [mailto:leonardsz@yahoo.com]
Sent: Sunday, December 09, 2018 6:17 PM
To: NANCY McPeak <NMcPeak@alamedaca.gov>
Subject: Marriott Hotel Propasal

I am writing in reaction to the up coming meeting regarding the proposal of the large five story hotel next to the lot at the Bay Farm ferry terminal.

I had a Urban Design consultant review the information that has been given so far and he have found several factors that show that this project would be detrimental to the surrounding neighborhood.

He has given me a quick overview and I have enclosed it with this email.

Please forward this to the board so that they can take this into consideration in their decision regarding this unfortunate project.

Leonard Szeto
Freeport home owner / residence

Henry Dong

From: Twyla Szeto <twyla.szeto@gmail.com>
Sent: Thursday, December 06, 2018 8:05 PM
To: Henry Dong; Ronald Curtis; Jeffrey Cavanaugh; David Mitchell; Sandy Sullivan; Alan Teague; LARA WEISIGER; NANCY McPeak; Asheshh Saheba
Subject: Opposition for the development of Marriott Residence Inn

To Whom it may concern,

I have been an Alameda, Harbor Bay Isle, Bay Farm resident for over 21 years and am writing to express my **strong opposition** to the proposed Marriott Residence Inn Hotel on Bay Farm Island, adjacent to the Bay Farm Ferry Terminal.

Please note, I am not opposed to commercial development for our community. I am, however in favor of development that will benefit our community without imposing undue and excessive strain on local infrastructure and residents in terms of traffic, noise, safety, and aesthetics.

My concerns regarding this proposed hotel are numerous, and I am asking you to vote **AGAINST** this hotel.

My concerns are as follows:

1. **The OVER-REACHING size, inappropriate design and poor fit within the community.** This massive hotel, if approved, would sit oppressively over the existing neighborhood, which consists primarily of 2 story dwellings and an occasional 3 story structure in the business park. There are NO buildings currently on Bayfarm that exceed 3 stories, let alone 5 stories, 5.43 acres, 172 guest rooms. This proposed structure would drastically alter the coastline and skyline, and is simply too tall for this residential neighborhood. The proposed hotel is nearly TWICE as tall as the recently built McGuire-Hester building on the adjacent lot! This is not about neighbors "losing their view." If this 5 story hotel is approved, nearby neighbors would not be able to see the sky from their homes, let alone the water. This is about a building that is grotesquely out of proportion with the neighborhood in terms of scale and size, and aesthetic.

3. **Empty promises of parking.** The parking spaces are not a guarantee. If there is a conference or convention occurring, where will the ferry commuters park if the lot is occupied by the hotel guest. The commuters will have no other alternative but to park in residential areas because missing the ferry will impact their work.

4. **Noise impact.** The noise level associated with a project of this magnitude and size will pose a significant burden to the local neighborhoods. The businesses on adjacent lots are currently 9-5 operations, whereas this hotel is a 24/7 operation, resulting in 24/7 noise, from the guests to the numerous and daily delivery and service trucks, to the very real possibility of hotel union strike activity in the future, as they recently did on Hegenberger.

5. **Property value depreciation.** As a homeowner, I want to maintain the value of my home. Since the proposal of building Residence Inn, homes along Mcdonnell Street has been on the market for

over two months. One property was finally sold below the listed price. This is a new occurrence in this hot market for housing in the Bay Farm area. With lower housing cost, the city will have lower revenue because of lower home values.

6. **Safety.** The traffic study that the hotel developer provided was ONLY assessment on Harbor Bay Parkway. Harbor Bay Parkway is not the only route for delivery trucks, hotel guests, and Uber/Lyft. There will be increase traffic along Aughinbaugh Way, MeCartney Road and Island Drive. This is the main street for children to bike to school.

Much of the Bayfarm community has been alarmed at how quickly this hotel proposal has been pushed through the review process. *There has been inadequate and tardy information disseminated to the local residents*, with many people only learning about this proposed project within the past month. Some of the information put forth by the developer has been untrue. Many of our local HOAs are against this project. It is imperative that all of these concerns be closely examined before considering approving such a massive project that will undoubtedly have significant implications on the local community. We are asking for you to please vote against this hotel proposal: it is not the right project for this piece of land and neighborhood. And how was the previous hotel project denied "killed" by the State & SFBCDC even after "approval"?
Quite simply, the project is too large for the parcel, would significantly obstruct views of the bay and substantially reduce access to the shoreline.We just don't think it belongs on this piece of land as it appears to be a monstrosity on a small strip of land that all of us currently enjoy.

Please listen to your constituents and **VOTE AGAINST THIS MARRIOTT INN HOTEL.**

Thanking you in advance for seriously considering the Community of Harbor Bay Residents concerns.

Regards,

Twyla and Leonard Szeto
Freeport homeowners

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:28 AM
To: Henry Dong
Subject: FW: The Marriott Esplanade Hotel Project. Vote No.

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Chuck [mailto:wirelessquotes@yahoo.com]
Sent: Friday, December 07, 2018 7:11 AM
To: T Krysiak <tsitjk@gmail.com>; Sandy Sullivan <SSullivan@alamedaca.gov>; Ronald Curtis <rcurtis@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>; Asheshh Saheba <asaheba@alamedaca.gov>
Cc: LARA WEISIGER <LWEISIGER@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>
Subject: Re: The Marriott Esplanade Hotel Project. Vote No.

I totally agree with Tom. I was shocked to hear about building a 5 story building in this location. Please vote NO!!!

Thanks,
Chuck Thompson
257 Creedon Circle
Alameda, CA 94502

On Thursday, December 6, 2018 9:53 PM, T Krysiak <tsitjk@gmail.com> wrote:

Dear Members of the Alameda Planning Commission:

I was one of a hundred concerned Harbor Bay Isle home owners who attended both the Bob Leach West River presentation on Nov 28 and THE HBI HOA Master Board meeting of Dec 5.

Our neighborhood strongly believes that the proposed five story structure will create unwanted crime and additional unsafe traffic congestion. This Marriott project will deflate the property values of our fine neighborhood and severely obstruct the Bay's panoramic vistas of the residents .

Don’t let this developer build this huge, low end hotel project on this site. The waterfront pathway and the bay views must be fiercely defended for your Harbor Bay constituents. You are respectfully encouraged to uphold our community’s demands for safety, traffic minimization and protection of precious open space and Bay views.

Vote NO on the Esplanade Marriott Project. Thank you.

Sincerely,

Tom Krysiak
Sweet Road

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 8:40 AM
To: Henry Dong
Subject: FW: Marriott Residence Hotel on Harbor Bay Isle - VOTE NO

From: LARA WEISIGER
Sent: Monday, December 10, 2018 8:05 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: Marriott Residence Hotel on Harbor Bay Isle - VOTE NO

From: Susan Tu [mailto:susanjtu@comcast.net]
Sent: Sunday, December 09, 2018 8:13 PM
To: susanjtu@comcast.net
Subject: Marriott Residence Hotel on Harbor Bay Isle - VOTE NO

Dear Alameda Planning Board Members,
I am writing to ask that you vote **NO** on the Proposed Marriott Residence Hotel at 2900 Harbor Bay Parkway on Monday Dec. 10th 2018. The proposed hotel at 5 stories, 172 rooms , and 275 parking spaces, is **TOO** large for that location- a bayfront parcel, directly on the Shoreline Park/Bay Trail. It is a business hotel and will not afford amenities to the public. It will endanger the wildlife, particularly migratory shorebirds. There are other locations for business hotels in the Harbor Bay Business Park. There are two hotels coming to the Business Park to serve the needs of business travelers. Home 2 Suites next to the Hampton Inn is under construction and a Hilton Garden Inn is proposed in an extremely fitting location- near business offices, at Ron Cowan Parkway.

This is the wrong use/ at an oversized scale for Bay Front Land . As planners you have a responsiblity to the community to use land wisely and consider the long term impact of your decisions. The developer has misrepresented the benefits this developement brings in his presentations at packed community meetings where residents have questioned him and voiced their opposition to the placement of a large scale, low end, Marriot Inn at this location.

Developer False Promises:

- The developer has stated his development is endorsed or approved by BCDC-- not true to our knowledge and we have asked.
- The developer states there will be a restaurant/cafe. The Marriott is not committed to operating a restaurant- there is no guarantee they will find an operator. It is highly unlikely they will.
- The developer stated there would be meeting rooms-- but admitted publicly they will be too small for public gatherings such as weddings/events
- There is NO GUARANTEE the parking will go to ferry commuters. The Transportation study is flawed and understates the # of spaces needed for hotel guests.

- The developer describes tens of millions of dollars in taxes to the City -- The Transient Occupancy Tax- TOT- is only paid when rooms are occupied. And guests staying over 30 days do not pay them. This is a Residence Inn-- that is a possiblity.
- VF Outdoors- the business occupying the space in front of this parcel is moving to Denver. Is there less demand then for Business Hotels? The City Planner at public meetings could not quantify or justify building more busineess hotels. Vacant hotel rooms do not generate taxes.
- The developer is clear in public meetings that he cannot scale down the project either in # of rooms, stories, and make the profit desired. Therefore the setback from the Bay Trail/Shoreline Park is currently at 35 feet- to fit the hotel and parking. That is a violation of Planning Baord Resolution 1203. Setbacks should be between 63 and 100 feet for buildings of this size.

Please vote **NO** on this hotel project. The promises made are false- the damage to the shoreline will be permanent. There is a better place for these hotels- there are better uses for this land.

Sincerely,

Susan Tu

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:26 AM
To: Henry Dong
Subject: FW: Homeowners opinion – Marriot Residence Hotel 2900 Harbor Bay Parkway

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

-----Original Message-----
From: Wai Tu [mailto:waitu@comcast.net]
Sent: Friday, December 07, 2018 8:15 AM
To: Ronald Curtis <rcurtis@alamedaca.gov>; Jeffrey Cavanaugh <JCavanaugh@alamedaca.gov>; David Mitchell <DMitchell@alamedaca.gov>; Sandy Sullivan <SSullivan@alamedaca.gov>; Alan Teague <ateague@alamedaca.gov>; LARA WEISIGER <LWEISIGER@alamedaca.gov>; NANCY McPeak <NMcPeak@alamedaca.gov>; Asheshh Saheba <asaheba@alamedaca.gov>
Subject: Homeowners opinion – Marriot Residence Hotel 2900 Harbor Bay Parkway

Dear Board Members,

Do you live in Alameda? Even if you don't, would you want a 5 story Hotel behind your house? I live about 2.5 blocks from the Ferry "Columbia". Ever since they got a bigger boat and added to schedule run, traffic has doubled. Every public space in Columbia was filled with cars every morning Monday thru Friday. Eventually a sticker was required to park in our own neighborhood so our cars wouldn't be towed. You get the picture.

And now a 172 room hotel that seems OUT OF SCALE so close our homes. Bayfarm is such a beautiful area. I can see why Marriott would want to build here. I like Marriott. I own Marriott timeshare. But it's the wrong size at the wrong location. Are we in such dire need that we should forsake our common sense and tranquility for tax dollars? There's got to be a better solution for Alameda and Marriott.

Would you want me to vote yes if they were building behind your house?
Please vote NO to this project.

Thanks,

Wai Tu
Bay Farm Resident
waitu@comcast.net

Henry Dong

From: Tung's <cmlct@yahoo.com>
Sent: Thursday, December 06, 2018 10:43 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Cc: LARA WEISIGER
Subject: Opposed to the Marriott Residence Inn on Bay Farm Island

I am opposed to building a new Marriott Residence Inn on Bay Farm Island next to the ferry parking lot for the following reasons:

1. **Safety** - The traffic study only reviewed the impact to Harbor Bay Parkway, and did NOT include impact to the streets of the surrounding neighborhoods along Mecartney Road, Aughinbaugh Way, Robert Davey Jr. Drive and Island Drive. Traffic will certainly increase along these streets. Also, the proposed 172-room hotel includes 122 parking spaces that are to be shared with the ferry riders. That could translate into 122 EXTRA CARS going in and out of our neighborhood, especially during the morning and evening rush hours. We are lucky to live in a neighborhood where many of our kids can either walk or ride their bikes to school. With 122 extra cars rushing to park their cars in time to catch the ferry at the same time many of our kids are either walking or riding their bikes to school is a REAL SAFETY CONCERN FOR OUR KIDS. In addition, Hotel occupants will also use Uber/Lyft/taxis that may further increase traffic on Mecartney Road and other surrounding streets.
2. **Decreasing property values** - At the Community of Harbor Bay Master Board meeting last night, we were informed that potential buyers were reluctant to bid on recent Freeport community homes specifically because of the planned hotel. However, one home eventually sold for below asking price. This is real and shocking especially in this real estate market. Our community has been a very desirable neighborhood and has, until recently, seen ever increasing property values. However, property values in the Freeport community as well as other surrounding communities be adversely impacted by the building of this project.
3. **Crime** - A retired police officer spoke at the Community of Harbor Bay Master Board meeting last night and stated that crime typically increases in neighborhoods near a hotel.
4. **Quality of the hotel** - The developer presents this hotel as a “Luxury" hotel brand when, in fact, Residence Inn is NOT classified under the “Luxury” brand, but rather as a “Longer Stay” brand. The Ritz-Carlton and St. Regis are examples of their “Luxury” brand. I don’t believe a "Longer Stay" hotel with a kitchenette is the profile of a hotel that professional business people tend to stay at.
5. **Size of the hotel** - the proposed 5-story structure is not consistent with any existing buildings along the shoreline or in the entire business park. There are no structures in the entire business park (including the other existing hotels) that are greater than 3 stories. There must be some reason for that. The size and height of the structure will ruin the beauty of the shoreline.
6. **24/7 operations** - Unlike office buildings where there are no weekend occupancy and no activity outside of normal business hours, this proposed hotel will be operated 24/7. The proposed hotel will include a restaurant, bar, and conference space for weddings, meetings, or other private events that will bring extra traffic, noise, and other safety concerns to the community on a 24/7 basis. This will be a big disruption to the quiet residential neighborhoods that make Bay Farm Island a desirable place to raise families.
7. **Revenue to the City** - the City supports the approval of the proposed hotel based on the projected revenue it will generate. Has anyone considered the ongoing costs to the City

associated with this project? As the traffic study shows, with increased traffic along Harbor Bay Parkway and adjoining community streets comes increased cost to maintain them. There are also costs to maintain the public spaces surrounding the proposed hotel site not to mention sewer, police attention, etc. So residents of the City of Alameda (not just on Bay Farm) are being misled by not disclosing the actual net revenue to be generated and, more importantly, how that specific revenue will benefit the citizens of Alameda.

8. **Lack of adequate notification** - It is appalling that the developer and the City did not give residents adequate notification. Many residents just found out about this. The developer and the City said they met the 300 foot notification rule. However, there are no homes within that distance, 300 feet from the proposed site ends in the lagoon. It is deceitful that the developer hid behind this rule and not notify the homeowners on the other side of the lagoon and surrounding areas. Do we want a business owner like that in our City?

Sincerely,

Curtis Tung
22-Year Resident of Bay Farm Island

Henry Dong

From: NANCY McPeak
Sent: Tuesday, December 11, 2018 10:26 AM
To: Henry Dong
Subject: FW: CHBIOA Notification: Master Board Resolution Opposing Hotel Development on the Esplanade at HBBP
Attachments: CHBIOA Resolution Opposing Proposed Marriott Hotel.pdf

Importance: High

Nancy McPeak
City of Alameda
Community Development Department
2263 Santa Clara Avenue
Alameda, Ca 94501
510-747-6854

From: Jacqui Vasquez [mailto:JVasquez@harborbay.org]
Sent: Friday, December 07, 2018 3:17 PM
To: Community of Harbor Bay Isle <email@harborbay.org>
Cc: Charles Hodgkins (chodgkins@gmail.com) <chodgkins@gmail.com>; Jacqui Vasquez <JVasquez@harborbay.org>
Subject: CHBIOA Notification: Master Board Resolution Opposing Hotel Development on the Esplanade at HBBP
Importance: High

Dear Alameda City Council, Alameda Planning Board, and BCDC:

Attached for your consideration is a resolution by the Community of Harbor Bay Isle Owners' Association in extreme opposition to the proposed hotel development at the Esplanade at Harbor Bay Business Park, dated 12/6/2018, for your review prior to the Planning Board meeting on 12/10/18. The Community Board and its nearly 3,000 homeowners implore you to consider the points raised in the attached resolution before making your decision.

Thank you for your time and efforts.

Community of Harbor Bay Isle
Owners' Association
3195 Mecartney Road
Alameda, CA 94502

Henry Dong

From: Amarilis Viera <amarilisviera@gmail.com>
Sent: Friday, December 07, 2018 10:49 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Jeffrey Cavanaugh; Asheshh Saheba; dmithchell@alamedaca.gov; Sandy Sullivan; Alan Teague
Subject: No to Hotel on our waterfront

Dear Board,

The construction of a five story hotel next to the Bay Farm ferry is a really BAD IDEA. It could be good for you finances but is not good for the community. It will bring more traffic and parking problems. It will bring unnecessary challenges to the community including safety issues and negative impact on property value. Please vote NO.

Amarilis Viera-Simoes
301 Anderson Rd
Alameda CA 94502

Henry Dong

From: yalin wang <ynormwang@yahoo.com>
Sent: Friday, December 07, 2018 8:50 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: Oppose the Massive 5-Story Marriott Hotel at the Waterfront near Bay Farm Ferry

Dear Alameda City Planning Board Members:

I strongly oppose the plan of the massive 5-story Marriott Hotel at waterfront neat the Bay Farm Ferry.

I am a resident on the Bay Farm Island near the ferry and was surprised to learn the proposal of a 5-story hotel at the water front. Was this waterfront neighborhood planned for such a massive tall building? I learnt that the original Esplanade plan was a low retirement home. Why does the current proposed plan deviate from the original plan? Is there an **Environmental Impact Study** or **Report (EIS/R)** done for this massive hotel plan? Such a massive facility will certainly have significant negative impact to the neighborhood and Bay Farm Island communities. It will increase traffic and worsen the already congested traffic on the island, increase noise and affect public safety. Furthermore, a 5-story tall building is not in harmony with this low level home communities and the picturesque shoreline park.

The following summarizes my opinions:

1. Strongly oppose the 5-story hotel plan.
2. An EIS/R must be done for any plan.
3. No proposed plan should be approved unless the EIS/R finding is non-impact or insignificant impact and the EIS/R is approved by the city.
4. The building should be no more than 2-story, just like those office buildings along the shoreline in the vicinity.

Sincerely,

Yalin Wang
15 McDonnel Road
Alameda, CA 94502

From: Kathleen C. Woulfe <kathleencwoulfe@gmail.com>
Sent: Sunday, December 09, 2018 8:06 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak
Cc: Becca Perata
Subject: I do “Support” the Proposal for Marriott Residence Inn at Harbor Bay/Kathleen C. Woulfe

Dear Planning Board:

The Marriott Residence Inn offers many benefits to Alameda residents, including generating substantial tax revenue to help with city services, shoreline improvements with bike-ped access, shared public open space, a new restaurant with a bar and a coffee house, and conference space for the community and business park — all with amazing views of the Bay!

The City has rejected other proposals to redevelop this property. This plan does meet all of the zoning and other requirements. This is a much better use of the space.

I do appreciate that the developer has listened to the community — and has allowed more time for review and feedback.

Please vote to move this plan forward on Monday, December 10th.

See you then.

Thank you!

Best, Kathie
Sent From My iPhone.

Kathleen C. Woulfe
Non-Profit, Government & Community Relations
510.846.5000

Henry Dong

From: ERIN GARCIA
Sent: Monday, December 10, 2018 8:41 AM
To: Henry Dong
Subject: FW: NO for Marriott Residence Inn Hotel on Bay Farm Island

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From: LARA WEISIGER
Sent: Monday, December 10, 2018 8:12 AM
To: NANCY McPeak <NMcPeak@alamedaca.gov>; ERIN GARCIA <EGARCIA@alamedaca.gov>
Subject: FW: NO for Marriott Residence Inn Hotel on Bay Farm Island

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From: Agnes Wu [mailto:awu111@yahoo.com]
Sent: Thursday, December 06, 2018 11:08 PM
To: LARA WEISIGER <LWEISIGER@alamedaca.gov>
Subject: NO for Marriott Residence Inn Hotel on Bay Farm Island

Dear Members of the Alameda Planning Board,

We have been Bayfarm residents for nearly 27 years, and here to writing to express our strong opposition to the proposed Marriott Residence Inn Hotel on Bay Farm Island, adjacent to the Bay Farm ferry terminal.

Our concerns regarding this proposed hotel are numerous, and we sincerely asking you to vote AGAINST this hotel.

The concerns:

1. The size, inappropriate design and poor fit within the community: This massive hotel, if approved, would sit oppressively over the existing neighborhood. This proposed structure would drastically alter the coastline and skyline, and is simply too tall for this residential neighborhood. The proposed hotel is nearly TWICE as tall as the recently built McGuire-Hester building on the adjacent lot! This is not about neighbors "losing their view." This is about a building that is grotesquely out of proportion with the neighborhood in terms of scale and size, and aesthetic.

2. Traffic: The developer has provided one traffic study ONLY provides an assessment of traffic on Harbor Bay Parkway. The traffic report contains literally NO information regarding the impact that this hotel traffic will have on the residential streets of Bayfarm and on the Bayfarm bridge. We find this appalling and woefully inadequate. The residents of Bayfarm have a right to know this information BEFORE this project should even considered for approval. There are hundreds of children that bike and ride to school daily on these streets.

Furthermore, the developer, Mr. Leach, has stated that most of the hotel traffic will only be traveling to/from the Oakland airport. **This is not accurate**. This proposal is for an extended stay hotel, where occupants are anticipated to stay longer than 1 or 2 nights on average, resulting in guests needing to drive their cars and/or Ubers to access local amenities such as restaurants and/or to get supplies for their hotel room kitchenettes, etc. Ubers will draw traffic from all over the surrounding areas, including the main island of Alameda, which requires the use of local neighborhood roads, not the Harbor Bay Parkway. It should also be noted that Google maps and Waze routes drivers directly through the Bayfarm community, not on the Harbor Bay Parkway.

3. Parking: Their proposal states that "as many as 100 parking spaces may be vacant," however there is no guarantee. The developer has stated that parking priority will be given to hotels and conference center guests, and if parking is full, then those spaces will not be available to ferry riders to lease for the day. Not even mentioned about their own ‘employees’ parking space.

4. Noise impact. The noise level associated with a project of this magnitude and size will pose a significant burden to the local neighborhoods. The businesses on adjacent lots are currently 9-5 operations, whereas this hotel is a 24/7 operation, resulting in 24/7 noise, from the guests to the numerous and daily delivery and service trucks, to the very real possibility of hotel union strike activity in the future, as they recently did on Hegenberger.

5. Question of demand for more hotels. It is rumored that there are at least 2 other additional hotel proposals on Bayfarm, with at least one currently being built. With several local businesses planning to leave the business park, including the North Face and the Raiders, it is imperative to examine the level of demand for so many more hotels. Furthermore, the developer has stated that the 2 other hotels in the neighborhood (Hawthorne Suites and Extended Stay America) are always booked to capacity and rooms are rented for $600/night. This is not true. Both hotels have had ample vacancies during our numerous recent searches online, with rates of $189 and $125/night. We are asking the board to seriously consider whether there is demand for another 3 star hotel on Bayfarm.

Much of the Bayfarm community has been alarmed at how quickly this hotel proposal has been pushed through the review process. There has been inadequate and tardy information disseminated to the local residents, with many people only learning about this proposed project within the past month. Some of the information put forth by the developer has not been true. Many of our local HOAs are against this project. It is imperative that all of these concerns be closely examined before considering approving such a massive project that will undoubtedly have significant implications on the local community. We are asking for you to please vote against this hotel proposal: it is not the right project for this piece of land and neighborhood.

Thank you.

Sincerely,

Agnes & Robert Wu

Henry Dong

From: Yes_For_Marriott <rymb888-ymh@yahoo.com>
Sent: Friday, December 07, 2018 10:13 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: Yes For Marriott Hotel

Hello City Planner and Board Members,

Just a quick note to you to voice my vote.. YES on the new Marriott Hotel in Harbor Bay Business Park. I firmly believe this will be a good thing for the area and bring some life to an otherwise dead area at night. This has been in the works for a while with adequate due-diligence, so please approve and move forward. While I understand the many of the opposition with have their views of the bay affected, they were well aware of this when they purchased their property, and the rest of Alameda should not be penalized to save their view.

Thanks for listening

****
- Rob Yu, Harbor Bay resident
"Many people will walk in and out of your life, but only true friends will leave footprints in your heart"
****

Henry Dong

From: Yes_For_Marriott <rymb888-ymh@yahoo.com>
Sent: Monday, December 10, 2018 8:05 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: Vote YES for Marriott Residence Inn

Dear Planning Board: Tonight you have an opportunity to deliver a quality, modern hotel and restaurant to Alameda's waterfront at Harbor Bay. We know the proposed plan will bring significant revenue to the city, provide shoreline restoration, open space, and amenities to the public, create jobs, and fill a void in high-end lodging on the island. The proposal meets all of the zoning requirements, as well as those of all resource agencies. Time is due to create a quality project on this long-languishing property. Please vote YES tonight for the Marriott Residence Inn at Harbor Bay.
Thank you,

****
- Rob Yu
"Many people will walk in and out of your life, but only true friends will leave footprints in your heart"
****

Henry Dong

From: Eileen <Eileen@alamedamarina.net>
Sent: Monday, December 10, 2018 2:07 PM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; becca@voxpopulipr.net
Subject: Vote YES for Marriott Residence Inn

Dear Planning Board:

Tonight you have an opportunity to deliver a quality, modern hotel and restaurant to Alameda's waterfront at Harbor Bay. We know the proposed plan will bring significant revenue to the city, provide shoreline restoration, open space, and amenities to the public, create jobs, and fill a void in high-end lodging on the island.

The proposal meets all of the zoning requirements, as well as those of all resource agencies. Time is due to create a quality project on this long-languishing property.

Please vote YES tonight for the Marriott Residence Inn at Harbor Bay.

Thank you,

Eileen Vivian Zedd
Assistant Harbor Master
Alameda Marina
1815 Clement Ave.
Alameda, CA 94501
(510) 521-1133

Henry Dong

From: wei zhang <wei.sfo@gmail.com>
Sent: Monday, December 10, 2018 11:43 AM
To: ANDREW THOMAS; Henry Dong; NANCY McPeak; dburton@alamedaca.gov; Ronald Curtis; Jeffrey Cavanaugh; Asheshh Saheba; David Mitchell; Sandy Sullivan; Alan Teague
Subject: Fwd: No Marriott on Bay Farm, Email your city planners! Re: No Marriott Hotel

Sent from my iPhone

Begin forwarded message:

> **From:** "No Marriott Hotel" <no.marriott.hotel@gmail.com>
> **Date:** December 10, 2018 at 11:39:48 AM PST
> **To:** wei.sfo@gmail.com
> **Subject: No Marriott on Bay Farm, Email your city planners! Re: No Marriott Hotel**
>
> athomas@alamedaca.gov, hdong@alamedaca.gov, nmcpeak@alamedaca.gov, dburton@alamedaca.gov, rcurtis@alamedaca.gov, jcavanaugh@alamedaca.gov, asaheba@alamedaca.gov, dmitchell@alamedaca.gov, ssullivan@alamedaca.gov, ateague@alamedaca.gov

Community of Harbor Bay Isle
Owners' Association, Inc.
3195 Mecartney Road
Alameda, California 94502-6912
(510) 865-3363
www.harborbay.org

Resolution of the Board of Directors of The Community of Harbor Bay Isle Owners' Association to Oppose the Development of a Hotel on the Esplanade waterfront site in the Harbor Bay Business Park

Whereas the homeowners and residents of Harbor Bay Isle have voiced strong opposition to building a 5-story residence hotel on the Esplanade site adjacent to the Harbor Bay Ferry, and

Whereas this opposition has been expressed at two Standing Room Only community meetings, one hosted by the developer on November 8, and one hosted by the Community of Harbor Bay Isle Owners' Association on November 28, and

Whereas this opposition consists not only of residents living in close proximity to the Esplanade site, but includes homeowners from throughout Harbor Bay Isle, and

Whereas many residents attending the meetings stated they had not received notification from the City of Alameda regarding the project, and

Whereas the Community of Harbor Bay Isle Owners' Association Board recognizes that a 5-story residence hotel on the Esplanade site is out-of-scale with the surrounding neighborhood, and negatively impacts view corridors, shoreline access, traffic patterns, crime, and 24/7 activity,

Whereas the Planning Board Resolution #1203, dated December 1, 1981 approved the Village 5 development with the following conditions (among many others):

e.g. "The special conditions imposed for Bay Edge Road area are necessary and appropriate to assure that sensitivity to the shoreline in maintained in all development which occurs in that area." And, "Bayside and lagoon-edge lots shall not exceed 1.5 stories in height."

Whereas building a 5-story hotel on the water side of the public-access shoreline establishes an irreversible precedent for future development, and one that is not sensitive to the shoreline and adversely impacts homeowners' property values.

Now, Therefore, Be it Resolved as Follows:

The Board of the Community of Harbor Bay Isle Owners' Association, representing all 20 Homeowner Associations within the Community, stands with the Harbor Bay Isle community in opposition to the building of the Marriott Residence Hotel on the Esplanade site.

Signed,

Community of Harbor Bay Isle Owners' Association Board of Directors

Charles Hodgkins, President

Paul Beusterien, Vice President

Carol Rivano, Treasurer

Gary Lym, Secretary

Bill Pai, Director

December 6, 2018