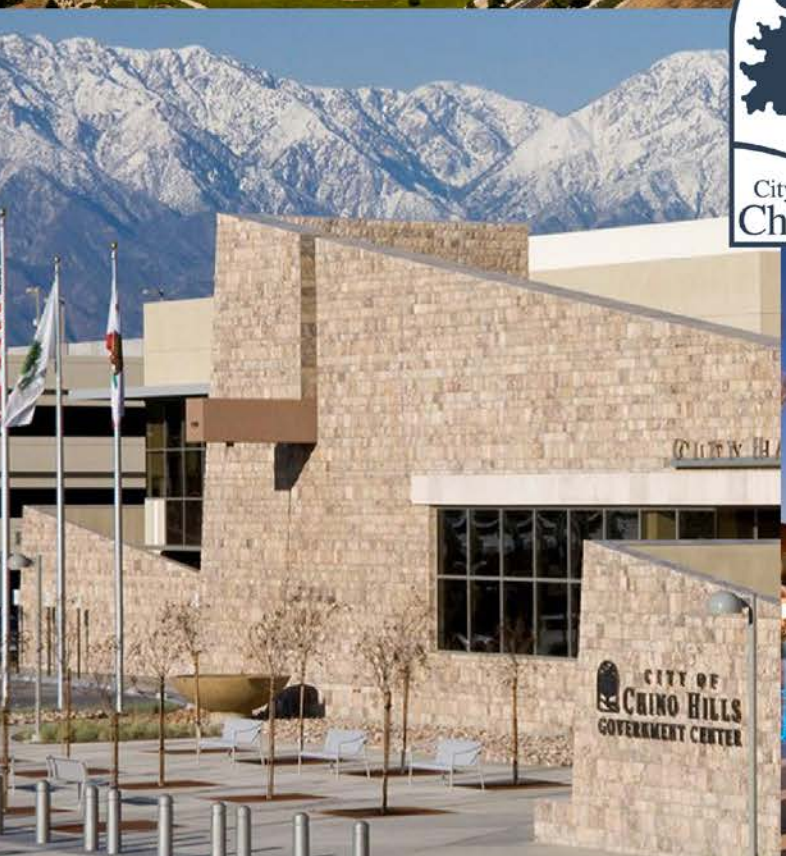
State Clearinghouse No.: 2013051082
Final EIR (Certified): February 24, 2015

City of Chino Hills

Attachment A
Comments and Responses to Comments on the Draft EIR

City of Chino Hills



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Attachment A to City of Chino Hills Final Program EIR General Plan Update – Comments and Responses to Comments on the Draft EIR

Chapter 1. Introduction

1.1 Public Review Process – Draft EIR

In compliance with §15105 of the California Environmental Quality Act (CEQA), the Draft EIR was circulated for review and comment to the public, agencies, and organizations. The Draft EIR was filed with the State Clearinghouse, Office of Planning and Research, and the County of San Bernardino Clerk of the Board. The State public review period ran 45 days from July 23, 2014 to September 5, 2014, with the City public notice extending the review period to September 9, 2014.

1.2 Comments Received

Comments received during the public review period included letters from 8 public agencies and 2 interested organizations, and emails from 13 residents. These comments, together with the City's responses to the comments, are provided in the following section.

Some of the comments received resulted in minor clarifications or revisions to information contained in the General Plan Update and/or the EIR. Under CEQA Guidelines §15088.5(a)(3), new information added to an EIR does not require recirculation if it is not significant. It is only "significant" if the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. Here, none of the revisions or corrections substantially alter the analyses or findings of the EIR or deprive the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect, and consequently, so the revisions and corrections do not warrant recirculating the EIR.

1.2.1 State Transmittal Letters

Two transmittal letters from the State of California Governor's Office of Planning and Research (OPR) were received in response to the public review period, one dated September 8, 2014 and the other dated September 10, 2014. (Letters included at the end of this section.) The September 8 letter identifies the state review period closing on September 5, 2014 and states that the City has complied with the State Clearinghouse review requirements for draft environmental documents pursuant to CEQA. The September 10 letter transmits the letter from the State Department of Fish and Wildlife and notes that the letter was received after the state's September 5 public review closing date. This letter notes that CEQA does not require response to late comments. The City public notice extended the review period to September 9, 2014, and the City accepted the City of Diamond Bar's letter dated September 10, 2014. The OPR transmittal letters are sent to the City for information purposes only; no response to either of the OPR letters is required.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

September 8, 2014

RECEIVED
SEP 11 2014
CITY OF CHINO HILLS
COMMUNITY DEVELOPMENT DEPARTMENT

Jerrod Walters
City of Chino Hills
14000 City Center Drive
Chino Hills, CA 91709

Subject: General Plan Update
SCH#: 2013051082

Dear Jerrod Walters:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on September 5, 2014, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

September 10, 2014

RECEIVED
SEP 15 2014
CITY OF CHINO HILLS
COMMUNITY DEVELOPMENT DEPARTMENT

Jerrod Walters
City of Chino Hills
14000 City Center Drive
Chino Hills, CA 91709

Subject: General Plan Update
SCH#: 2013051082

Dear Jerrod Walters:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on September 5, 2014. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2013051082) when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Attachment A – Comments and Responses to Comments on the Draft EIR

Chapter 2. Comments and Responses

Comments received during the public review period include comment letters from the following eight public agencies and two interested organizations.

Agencies and Organizations

A. City of Diamond Bar
B. Santa Ana Watershed Project Authority
C. City of Chino
D. Omnitrans
E. County of San Bernardino Department of Public Works
F. Chino Valley Inland Fire District
G. State Department of Fish and Wildlife
H. State of California Department of Parks and Recreation
I. Wildlife Corridor Conservation Authority
J. Shute Mihaly & Weinberger (on behalf of Hills for Everyone)

Email comments were received from the following 12 Chino Hills residents and 1 City of Brea resident.

Residents

Last Name	First Name
K. Gayou	Judith & Anthony
L. Casteel	Dana
M. Master	Dave
N. Friel	Elizabeth
O. Griffen	Gail
P. Genis	Joanne
Q. Goodwin	Chrisanne
R. Lamb	Melissa
S. McCarthy	Gary & Mary
T. Cleri	Judith
U. Ramquist	Melodi
V. Lamb	Dana
W. Thompson	Duane

All correspondence from those agencies, organizations, and residents commenting on the EIR is reproduced on the following pages. The individual comments on each letter or email have been consecutively numbered for ease of reference. Following each comment letter are responses to each numbered comment. A response is provided for each comment applicable to the EIR or General Plan Update. Added or modified text is underlined (example), while deleted text will have a strike out (~~example~~) through the text. Further, to the extent Planning Commission recommendation on January 20, 2015 modified a prior staff response or recommendation, those revisions are noted in textual notes added with the word "Note:" followed by an explanation.

A. City of Diamond Bar

City of Diamond Bar

21810 Copley Drive • Diamond Bar, CA 91765-4178

(909) 839-7000 • Fax (909) 861-3117
www.DiamondBarCA.gov

September 10, 2014

Via US Mail and
e-mail to jwalters@chinohills.org

RECEIVED
SEP 15 2014
CITY OF CHINO HILLS
COMMUNITY DEVELOPMENT DEPARTMENT

Jerrod Walters, Senior Planner
City of Chino Hills
14000 City Center Drive
Chino Hills, CA 91709

RE: CITY OF CHINO HILLS DRAFT 2014 GENERAL PLAN UPDATE AND DEIR

Dear Mr. Walters:

Thank you for the opportunity to provide comments on the City of Chino Hills General Plan Update and associated DEIR.

Carol Herrera
Mayor

Steve Tye
Mayor Pro Tem

Ling-Ling Chang
Council Member

Nancy A. Lyons
Council Member

Jack Tanaka
Council Member

General Observations

1. Overall, we find the draft documents to be very well crafted, and will serve as useful source material as we embark on our own General Plan Update in the near future. In particular, we appreciate the Policy and Action language addressing the need to be proactive with respect to Tres Hermanos. Because Tres Hermanos is located with both of our communities (approximately 700 acres in Diamond Bar and approximately 1,700 acres in Chino Hills), we would like to partner with Chino Hills to the extent feasible to ensure that our planning efforts are coordinated and mutually beneficial, and so that the impacts and mitigation measures associated with the future land uses within this vast area could be evaluated more comprehensively. As such, we suggest that General Plan Action LU-2.4.4 be revised to include the opportunity to work collaboratively with Diamond Bar in a Specific Plan or other master planning process. **A-1**

2. In both the Draft General Plan Update and DEIR, Tonner Canyon Road is identified as a future potential corridor, and further states that development of this road is uncertain (GP pages 2-7 & 2-8; DEIR Sections 4.14.4, 6.1, 6.2). Please note that as Diamond Bar prepares its own General Plan Update, we do not foresee Tonner Canyon Road as is part of our future roadway system, and would not promote a Tonner Canyon Road corridor. **A-2**

T:\Outside Agency Communications\Chino Hills General Plan Update DEIR 9-10-14.docx

Mr. Jerrod Walters
September 10, 2014
Page 2

3. While Diamond Bar has had similar experiences with HCD in regards to being compelled to rezone land in order to meet our default density obligations, which led to our rezoning 16.7 acres of very high density residential land directly south of Diamond Ranch High School (within Tres Hermanos), we will seek opportunities to meet our RHNA obligations by other means, including opportunities to master plan Tres Hermanos in a way that accomplishes a more balanced arrangement of land uses.

   Said another way, Diamond Bar shares the Chino Hills Planning Commission's concern about concentrating RHNA default density zoned land in Tres Hermanos (General Plan page ES-5), and concurs with the sentiments expressed in Action LU-2.4.4. As such, the land along Grand Avenue at the Chino Hills/Diamond Bar boundary (in Tres Hermanos) proposed to be designated and rezoned for Very High Density, Mixed Use and Commercial in General Plan Figures 1-1 (General Plan Land Use Map) and 2-3 (Proposed Zoning Map) poses a concern to Diamond Bar. This concern is exacerbated by the fact that within this cluster of designations, the Very High Density Residential land use and zoning designations are placed directly adjacent to single-family residences in Diamond Bar (and removed as far as possible from existing development in Chino Hills). If Chino Hills is in a situation where it sees the need to use this area as a placeholder to satisfy HCD while it seeks more appropriate land use alternatives, Diamond Bar must go on record and state its opposition to this proposed allocation of land use and zoning designations where the Very High Density Residential designation is placed in closest proximity to single-family housing stock. **A-3**

Transportation/Traffic

The following comments are based on the Traffic Impact Study (TIS), included as Appendix I of the DEIR, and serves as the technical background report for Chapter 4.14 (Transportation/Traffic) of the DEIR.

1. TIS Page 12 and Figure 2: It is indicated that "ten (10) study intersections were pre-selected for analysis," representing "the most critical arterial and highway junctions within the city's transportation system which will be impacted by future traffic growth."

   - The TIS analyses should include all locations that could potentially be significantly impacted by the proposed GP Update. For example, why were the intersections of Grand Ave/Chino Hills Pkwy and Eucalyptus Ave/Chino Hills Pkwy excluded from the evaluations? **A-4**

   - If any locations outside the City limits may be impacted by the GP Update, those must be addressed in the TIS and DEIR, as well.

   - Existing conditions/future assumptions related to Tonner Canyon, Soquel Canyon, and Carbon Canyon need to be included in the TIS.

Mr. Jerrod Walters
September 10, 2014
Page 3

2. The TIS sections "Future Transportation System & Traffic Conditions," beginning on TIS page 23, and "Traffic Impact Assessment," starting on TIS page 36, detail the methodologies, assumptions, analyses findings, etc. related to the traffic/transportation evaluations. The following comments include both procedural and technical notes, which could lead for further questions/comments once they are addressed. **A-5**

   - The project is the GP Update. There needs to be evaluation of the traffic/transportation impacts of the project (GP Update) on existing and future conditions (e.g., "Existing + Project" conditions, "Future with and without Project" conditions). **A-5.1**

   - From a traffic/transportation perspective the analyses of the project (GP Update), requires documentation of current developments that exist, and the potential added developments that could occur under the GP Update. The potential traffic increases (or even decreases) linked to the net difference of existing developments and potential future developments under the GP Update, is what would define the "project" in these GP Update traffic/transportation analyses. **A-5.2**

   - The TIS currently analyzes general traffic growth factors and 13 potential projects as a basis for evaluating future traffic conditions. This methodology, however, does not address the specific, potential traffic impacts resulting from the GP Update, which is required in the DEIR. For example, DEIR page 2-7, Figure 2-2 provides the General Plan Land Use map, which shows a potential, significant development both north and south of Grand Avenue, just east of the City of Diamond Bar. The potential impacts of this development are not evaluated in the TIS and/or DEIR. This is one specific example, but due to the analysis methodology applied in the TIS, potential development impacts throughout the study area are not addressed. **A-5.3**

   - TIS pages 23-24 describe "Anticipated/Programmed Transportation Improvements," which appears to primarily (or perhaps entirely) focus on improvements included in the City of Chino Hills CIP. From a General Plan perspective the TIS must also include consideration of regional transportation improvements that could affect/influence future traffic and transportation projections (i.e., future SR-57/60 improvements, etc.) **A-5.4**

Again, thank you for the opportunity to review the Draft Chino Hills 2014 General Plan Update and DEIR.

Sincerely,

Greg Gubman, AICP
Community Development Director

Response to Comments from Greg Grubman, AICP, Community Development Director, City Of Diamond Bar, Dated September 10, 2014

A-1 This comment requests that General Plan Action LU-2.4.4, which states "Require development of the Tres Hermanos area to be planned through the Specific Plan or other master planning process acceptable to the City" include collaboration with Diamond Bar. This comment addresses the General Plan Update rather than the EIR. However, this comment is acknowledged, and the following Action is recommended for addition to the General Plan Update and is forwarded to the Planning Commission and City Council for review and consideration.

> Action LU-2.4.5: Coordinate with the City of Diamond Bar, where appropriate, regarding plans for the future development of Tres Hermanos.

A-2 This comment states that Diamond Bar does not foresee Tonner Canyon Road as part of its future roadway system. Section 4.14.4 of the EIR summarizes the City of Chino Hills Roadway Plan, which retains a potential Tonner Canyon Road alignment that is identified in the City of Chino Hills existing General Plan. The Chino Hills Roadway Plan recognizes the uncertain nature of a Tonner Canyon Road and makes no statement regarding potential regional connections. This comment addresses the General Plan Update rather than the EIR. However, this comment is acknowledged and is forwarded to the Planning Commission and City Council for review and consideration.

A-3 This comment states the City of Diamond Bar's opposition to the placement of multifamily residences on Tres Hermanos property in close proximity to single-family homes within its city. The General Plan Update proposes to change an approximately 55-acre area within Tres Hermanos to Very High Density Residential, Mixed Use and Commercial. The EIR does not identify this change as creating significant adverse impacts to surrounding uses. As discussed in Section 14.4.7 of the EIR, with the inclusion of signal retiming (Mitigation Measure TR-7) and other identified improvements, traffic volumes on Grand Avenue west of Chino Hills Parkway would not be significantly impacted by proposed General Plan build-out, inclusive of the 55-acre Tres Hermanos site. This 55-acre area is located on relatively flat land, and as illustrated in EIR Figure 4-2, Vegetation Communities in Chino Hills, the area is largely covered with ruderal grasslands. This comment addresses the General Plan Update rather than the EIR. However, this comment is acknowledged and is forwarded to the Planning Commission and the City Council for review and consideration.

A-4 This comment states that the General Plan Update Traffic Impact Study (TIS) should include all locations that could potentially be significantly impacted by the proposed General Plan Update, and asks why the intersections of Grand Avenue/Chino Hills Parkway and Eucalyptus Avenue/Chino Hills Parkway were excluded. Grand Ave/Chino Hills Parkway was analyzed in the Traffic Impact Study, designated as Study Location #12. The decision to not include Eucalyptus Avenue/Chino Hills Parkway is consistent with the City of Chino Hills' goal to target the most critical intersections in the City. Critical intersections were identified based on a screening process between the City and the TIS consultant. Eucalyptus Avenue is not a multi-lane highway access road and does not cross into any neighboring jurisdictions or serve major subregional traffic volumes; rather, the roadway is currently built as an undivided two-lane collector an terminates at both ends within the City.

As a program-level planning document, the City's General Plan Update is intended to plan for the adequate sizing and design of roadways and intersections to accommodate the traffic anticipated

to be generated by the land uses proposed by the Project, and the City of Chino Hills only has jurisdiction over the planning of roadways and intersections within its incorporated jurisdiction. However, the study did include an analysis of regionally significant/serving facilities designated within the San Bernardino County Congestion Management Plan (CMP), and applied the findings to the assessment of cumulative impacts and the mobility needs of the surrounding region. The cumulative impact analysis for regionally significant (CMP) roadways and intersections was conducted pursuant to the requirements of CEQA and the City's local procedures. This analysis as presented in the TIS and the EIR adequately addressed the projected citywide traffic generation and impacts of future-contemplated developments within proximity to each facility.

Existing and future assumptions relative to Tonner Canyon and Soquel Canyon Roads are discussed in Section 4.14.4 of the EIR. Because future plans for Tonner Canyon Road are uncertain, the TIS does not assign traffic to the currently unknown roadway. Soquel Canyon Road will provide a future connection to Peyton Drive, providing an internal east-west route within the City and potential relief to existing east-west City roadways. However, because the timing of the Soquel Canyon Road extension is unknown, no traffic has been assigned to that roadway. Carbon Canyon Road is projected to stay in its existing configuration because a future widening plan is currently infeasible. Therefore, the analysis of additional intersections is unwarranted and no additional information or analysis within the TIS or EIR is required in response to this comment.

A-5 This comment addresses the Traffic Impact Study, specifically "Future Transportation System & Traffic Conditions," beginning on TIS page 23, and "Traffic Impact Assessment," starting on TIS page 36.

A-5-1 Future With and Without "Project" conditions are addressed in the TIS (page 6) under the context of 15-Year Future and 25-Year Buildout conditions. Understanding the long-term nature of the proposed General Plan Update as well as the fluid and unpredictable nature of development build-out, analyzing an Existing Plus Project scenario would be highly speculative and would not provide accurate information regarding potential traffic impacts. As part of its standard development entitlement process, the City of Chino Hills requires project-specific traffic impact studies that include existing plus project, future with, and future without project conditions. Therefore, additional analysis within the TIS in response to this comment is unwarranted, and no additional information or analysis within the EIR is required in response to this comment.

A-5-2 Table 2 summarizes the list, size, and estimated traffic generation of citywide development projects at the time the TIS was prepared, April/May of 2013. Existing development and the traffic it generates are considered part of the baseline from which the TIS projects potential impacts from General Plan build-out. Therefore, additional analysis within the TIS in response to this comment is unwarranted, and no additional information or analysis within the EIR is required in response to this comment.

A-5-3 The TIS included developments projected by the City to be built under the 15-year and 25-year General Plan horizon time frames. The methodology that incorporates all currently proposed projects plus expected General Plan build-out is standard traffic study practice and the practice consistently applied by the City of Chino Hills. Therefore, additional analysis within the TIS in response to this comment is unwarranted, and no additional information or analysis within the EIR is required in response to this comment.

A-5-4 The TIS included an analysis of regionally significant arterials and intersections, including the following:

- Grand Avenue (City of Diamond Bar to City of Chino)
- Carbon Canyon Road (Chino Hills Parkway to City of Chino)
- Signalized intersection of Chino Hills Parkway and Ramona Avenue
- Signalized intersection of Chino Hills Parkway and Grand Avenue
- Grand Avenue from Los Angeles County Line (City of Diamond Bar) to SR-71 (City of Chino)
- Carbon Canyon Road/Chino Hills Parkway from Orange County Line (City of Brea) to East City Limits (City of Chino)

Beyond these future roadway and intersection improvements, no other significant or relevant transportation improvements (including those on the CMP network) were identified as significantly influencing future Chino Hills traffic conditions. From an operational perspective, there is no evidence that the 57/60 confluence improvements or the Grand Avenue interchange reconstruction would have any significant effect on the distribution or trip attraction of future developments in the City of Chino Hills, or the inter-city trips between the cities of Chino Hills and Diamond Bar. Based on the information provided by this comment, additional analysis within the Traffic Impact Study is unwarranted, and no additional information or analysis within the EIR is required in response to this comment.

B. Santa Ana Watershed Project Authority

Santa Ana Watershed Project Authority

One Water One Watershed

OWOW Is Awarded "Top 25" Innovations In American Government By Harvard's Kennedy School

SAWPA

Philip L. Anthony
Commission Chair

Celeste Cantú
General Manager

Orange County Water District

Western Municipal Water District

Eastern Municipal Water District

San Bernardino Valley Municipal Water District

Inland Empire Utilities Agency

August 25, 2014

Mr. Jerrod Walters
Associate Planner
City of Chino Hills
14000 City Center Drive
Chino Hills, CA 91709

Re: City of Chino Hills 2014 General Plan Update

Dear Mr. Walters,

We appreciate the opportunity to provide comments to the City of Chino Hills 2014 General Plan Update. We are hopeful that you find these comments helpful from the Santa Ana Watershed Project Authority, SAWPA, the owner and operator of the Inland Empire Brine Line.

The Inland Empire Brine Line, formerly known as the Santa Ana Regional Interceptor (SARI Line), provides a cost-effective, sustainable means of disposal of non-reclaimable wastes for utilities and industry within the Santa Ana River Watershed. It allows utilities and industries to locate in the Inland Empire that normally would need to locate near a sanitation plant that is capable of discharging the treated brine. On page 4-255 of the Draft Program EIR, we noted that the Inland Empire Brine Line is referred to by its old moniker. Please update it to refer to the new name. B-1

SAWPA would also like to bring to your attention the location of the collection stations which can be helpful for industry and utilities within the City boundaries. The stations located closest to Chino Hills are operated by the Inland Empire Utilities Agency at 16400 El Prado Road, Chino CA 91708 and Western Municipal Water District/City of Corona at 2205 Railroad Street, Corona CA 92880. The following map, which shows the location of the Brine Line, can also be a useful tool to the City as you make zoning decisions: http://www.sawpa.net/saritoc/flex/saritoc.html. B-2

If you have any questions regarding these comments please contact Ian Achimore at (951) 354-4233 or iachimore@sawpa.org.

Sincerely,

Celeste Cantú
General Manager

Received 8/28/14

Celebrating Over 40 Years of Innovation, Vision, and Watershed Leadership

11615 Sterling Avenue, Riverside, CA 92503 • 951.354.4220

Response to Comments from Celest Cantú, General Manager, Santa Ana Watershed Project Authority (SAWPA), Dated August 25, 2014

B-1 This comment indicates that the Santa Ana Regional Interceptor (SARI Line) is now known as the Inland Empire Brine Line. SAWPA requests that the EIR be updated to reflect the new name. Section 4.15.2 of the EIR which contains the reference is modified as follows:

> The brine pipeline (known Inland Empire Brine Line ~~Santa Ana River Interceptor or SARI line)~~ has been in operation since 1975.

This change to the EIR is editorial in nature and does not provide new environmental information that could result in new or increased environmental impacts, and consequently, does not warrant additional analysis within the EIR.

B-2 This comment identifies the location of collection stations at 16400 El Prado Road in Chino and at 2205 Railroad Street in Corona. This comment is informational in nature and does not warrant additional analysis within the EIR. However, this information is acknowledged and is forwarded to the Planning Commission and the City Council for review and consideration.

C. City of Chino

DENNIS R. YATES
Mayor

GLENN DUNCAN
Mayor Pro Tem

EARL C. ELROD
TOM HAUGHEY
EUNICE M. ULLOA
Council Members

MATTHEW C. BALLANTYNE
City Manager

CITY of CHINO

RECEIVED
SEP 09 2014
CITY OF CHINO HILLS
COMMUNITY DEVELOPMENT DEPARTMENT

September 8, 2014

Jerrod Walters, Senior Planner
City of Chino Hills
14000 City Center Drive
Chino Hills, CA 91709

RE: City of Chino Hills 2014 General Plan Update

Dear Mr. Walters,

Thank you for the opportunity to review and comment on the proposed City of Chino Hills 2014 General Plan Update. City of Chino staff has reviewed the proposed update and associated Draft Environmental Impact Report (SCH# 2013051082) and has the following comments:

The following are Public Works' comments on the Traffic Impact Study:

1) Page 10 – Chino Hills Parkway: First sentence - "...oriented generally east-west through the City of Chino Hills from north city limit to the south city limit". This statement is confusing and doesn't appear to be accurate, as Chino Hills Parkway continues through the City's eastern boundary. **C-1**

2) Page 23 – The Future Transportation System & Traffic Conditions section should consider the impacts associated with multi-jurisdictional projects such as the Pine Avenue Extension Project. **C-2**

3) Page 23 – How was a 1% growth rate factor annually derived for build-out conditions? **C-3**

4) Page 27 – Cumulative projects: Were any future projects outside the City of Chino Hills city limits taken into consideration? **C-4**

5) Page 43 – Soquel Canyon Parkway at Butterfield Ranch Road: Is it advisable to change from conventional phasing to split-phased operation at different times of day? It seems it could cause issues with drivers anticipating a particular operation. **C-5**

6) The Traffic Impact Study should mention that the City of Chino Hills will be participating in a multi-jurisdictional effort with neighboring cities (e.g. Chino) to identify fair share contribution funding sources attributable to and paid from private **C-6**

13220 Central Avenue, Chino, California 91710
Mailing Address: P.O. Box 667, Chino, California 91708-0667
(909) 334-3250 • (909) 334-3720 Fax
Web Site: www.cityofchino.org

Mr. Jerrod Walters
Page 2
September 8, 2014

and public development to supplement other funding sources necessary to maintain and implement improvements at shared intersections.

7) Were PCE factors applied to Traffic counts for trucks? **C-7**

8) Did the study utilize SANBAG CMP guidelines for Traffic Study LOS calculations, ie: default values including Saturation flow rates, minimum green time, actual pedestrian crossing times, etc.? **C-8**

The following are Public Works' comments on the General Plan Update document:

9) Chapter 2, Circulation Element, Page 2-9: Action C-1.1.1 appears to conflict with C-1.1.2, in that C-1.1.1 requires LOS D and C-1.1.2 requires LOS E. Please clarify the relationship between these two actions. **C-9**

Thank you again for the opportunity to review and comment on the proposed project. Should you have any questions, please feel free to contact me at (909) 334-3329.

Sincerely,

Mike Kellison, AICP
Senior Planner
Community Development Department

Cc: Public Works Department File

Response to Comments from Mike Kellison, AICP, Senior Planner, Community Development Department, City Of Chino, Dated September 8, 2014

C-1 This comment states that the Traffic Impact Study (EIR Appendix I) reference to Chino Hills Parkway being "...oriented generally east-west through the City of Chino Hills from north city limit to the south city limit" is confusing and does not appear to be accurate, as Chino Hills Parkway continues through the City's eastern boundary. This comment is noted, and the TIS is corrected to reflect Chino Hills Parkway's extension through the City's eastern boundary. This change to the EIR is editorial in nature and does not provide new environmental information that could result in new or increased environmental impacts. Consequently, it does not warrant additional information or analysis within the EIR.

C-2 This comment states that the TIS should consider the impacts of multi-jurisdictional projects such as the Pine Avenue Extension. The EIR traffic analysis included all projects deemed significant to current and future Chino Hills traffic flows. The Pine Avenue Extension was not included because its timing and potential effect on Chino Hills' traffic are uncertain. The City of Chino comment does not provide supporting data that indicates how the Pine Avenue Extension or other multi-jurisdictional projects would have a significant effect on Chino Hills' traffic. Absent such information, additional analysis within the TIS is unwarranted, and no additional information or analysis within the EIR is required in response to this comment.

C-3 This comment asks how a 1% growth rate factor annually was derived for build-out conditions. The TIS applied a 1% growth factor based on the ambient annual traffic growth rate developed by comparing socioeconomic projections from the Southern California Association of Governments (SCAG) and the San Bernardino Association of Governments (SANBAG) for the build-out and horizon years. The growth rate is corroborated by the SCAG/SANBAG data, which was calculated to be 0.78% and 0.61%, respectively, which the TIS rounded up to 1% to reflect a potential worst case growth rate. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

C-4 This comment asks if any future projects outside the City of Chino Hills were considered in the cumulative setting. The TIS included developments projected by the City, and located within the boundaries of Chino Hills, to be built under the 15-year and 25-year horizon time frames. These are the projects expected to primarily impact City of Chino Hills roads and intersections. However the TIS did include an analysis of regionally significant/serving facilities designated within the San Bernardino County Congestion Management Plan (CMP), and applied the findings to the assessment of cumulative impacts and the mobility needs of the surrounding region. The cumulative impact analysis conducted for regionally significant (CMP) roadways and intersection pursuant to the requirements of CEQA and the City's local procedures adequately included the projected citywide traffic generation and impacts of future-contemplated developments within proximity to each facility. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

C-5 This comment asks if it is advisable to change from conventional phasing to split-phased operation at different times of day for Soquel Canyon Parkway at Butterfield Ranch Road. Mitigation Measure TR-1 states that, relative to improvements to Soquel Canyon Parkway at Butterfield Ranch Road, the signal shall be modified to include a split phase for the

northwest/southeast left-turn movements. This mitigation measure is further clarified within the EIR, which explains that the City would need to observe and record more data at this intersection, including turning movement patterns all throughout the day (not just during the peak hours) to identify the full range of times when the left-turning traffic on Butterfield Ranch Road and Los Serranos Country Club Drive is heavy enough to justify the split phase, and/or conversely identify the times when these movements drop off to a small enough amount that the signal should be programmed to revert to normal phasing operations. The City Engineer would have ultimate discretion on how to best implement and design for these signal modification improvements. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

C-6 This comment states that the TIS should mention that the City of Chino Hills will be participating in a multi-jurisdictional effort with neighboring cities (e.g., Chino) to identify fair share contribution funding sources attributable to and paid from private and public development to supplement other funding sources necessary to maintain and implement improvements at shared intersections. The TIS and associated traffic discussion within the EIR identifies mitigation measures for roadway and intersection improvements within the City of Chino Hills. As discussed in Section 4.14.3 of the EIR, Goal C-2 of the proposed General Plan Update provides the directive to support regional transportation policies that link Chino Hills to neighboring cities. This goal addresses the City of Chino's comment relative to participating in multi-jurisdictional efforts. Consequently, this comment does not warrant additional information or analysis within the EIR.

C-7 This comment asks if PCE (passenger car equivalent) factors were applied to traffic counts for trucks. The TIS did not apply PCE factors because the General Plan Update does not propose significant truck terminals, generators, or routes. Level of Service (LOS) calculations were based on a baseline of 2% trucks on all movements and use HCM (Highway Capacity Manual) methods to adjust flow for PCE. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

C-8 This comment asks if the TIS utilized SANBAG CMP guidelines for LOS calculations, i.e., default values including saturation flow rates, minimum green time, actual pedestrian crossing times, etc. The TIS followed SANBAG CMP guidelines for LOS and impact thresholds for CMP intersections and roadway segments with the City of Chino Hills, including those along Chino Hills Parkway and Grand Avenue. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

C-9 This comment references the proposed General Plan Update, identifying an apparent conflict between Circulation Element Actions C-1.1.1 and C-1.1.2. This comment addresses the General Plan Update rather than the EIR. However, to respond to this comment, these actions are stated below.

> Action C-1.1.1: Achieve and maintain a minimum Level of Service D on all roadway links and at all roadway intersections, with the exception of intersections within one-half mile of the SR-71 Freeway, where a minimum Level of Service E shall be maintained. [Existing Objective 1]

Action C-1.1.2: Maintain San Bernardino County Congestion Management Program (CMP) highway system roadway links and intersections at Level of Service E. [Existing Objective 2]

These actions reflect existing and proposed City of Chino Hills LOS thresholds, which are LOS D for all City roadways, except within one-half mile of SR-71 and on CMP roadways in which case the LOS is E. These thresholds are consistent with existing City of Chino Hills policies and CMP policies. There is no conflict between the two above-listed actions. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

D OmniTrans

OmniTrans
Connecting Our Community.

1700 W. Fifth St.
San Bernardino, CA 92411
909-379-7100
www.omnitrans.org

August 29, 2014

Mr. Jerrod Walters, Senior Planner
City of Chino Hills
14000 City Center Drive
Chino Hills, CA 91709

communitydevelopment@chinohills.org

Subject: Comments on EIR for the City of Chino Hills 2014 General Plan Update (SCH# 2013051082)

Dear Mr. Walters,

Thank you for addressing Omnitrans' interests in a robust public transportation system within the City of Chino Hills within the 2014 General Plan Update. The new additions to the Circulation Element policies provide a good framework for planning for integrated transportation and land uses in the City.

Since the writing of the General Plan Update, two changes to Omnitrans' service in Chino Hills have been implemented, which should be noted in the document. Beginning August 25th, the OmniGo route 365 will have a new tripper connecting Butterfield Ranch and Chino Hills High School. Also, effective September 2, OmniLink general public dial-a-ride service will be discontinued. The Omnitrans Board of Directors approved this change to eliminate the duplication between OmniLink service, the existing OmniGo service, and the existing Access service. More information is available at www.omnitrans.org. **D-1**

Omnitrans looks forward to continuing to work with the City of Chino Hills to help accomplish your City's goals for mobility and quality of life. For additional information, feel free to contact me at (909) 379-7256 or Anna.Jaiswal@Omnitrans.org.

Respectfully,

Anna Jaiswal

Anna Jaiswal
Development Planning Manager

Response to Comment from Anna Jaiswal, Development Planning Manager, OmniTrans, Dated August 29, 2014

D-1 This comment identifies two recent changes to OmniTrans' service in Chino Hills:

- OmniGo route 365 has a new tripper connecting Butterfield Ranch and Chino Hills High School.
- OmniLink general public dial-a-ride service is discontinued.

Relevant Sections of the EIR and the General Plan Update are modified to reflect this change, including Section 3.4 of the EIR as follows:

> OmniTrans is the largest public transit provider in San Bernardino County, serving over 15 million passengers each year throughout 16 cities and unincorporated areas. In Chino Hills, OmniTrans provides bus service from Chino Hills Parkway and Pipeline Avenue to the TransCenter in the City of Montclair and extends service to Chino Hills locations such as Ayala, Townsend Junior High and Chino Hills High Schools, the Chino Campus of Chaffey College, Chino Spectrum, and City Hall. ~~OmniTrans also operates a demand-response transportation system known as OmniLink, which provides curb-to-curb service for the general public.~~

This change to the EIR is editorial in nature and does not provide new environmental information that could result in new or increased environmental impacts. Consequently, it does not warrant additional information or analysis within the EIR.

E. County of San Bernardino, Department of Public Works

DEPARTMENT OF PUBLIC WORKS
FLOOD CONTROL • ENVIRONMENTAL & CONSTRUCTION • OPERATIONS
SOLID WASTE MANAGEMENT • SURVEYOR • TRANSPORTATION

COUNTY OF SAN BERNARDINO

825 East Third Street • San Bernardino, CA 92415-0835 • (909) 387-8104
Fax (909) 387-8130

GERRY NEWCOMBE
Director of Public Works

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SEP 10 2014
CITY OF CHINO HILLS
COMMUNITY DEVELOPMENT DEPARTMENT

September 9, 2014

File: 10(ENV)-4.01

Jerrod Walters, Senior Planner
City of Chino Hills
14000 City Center Drive
Chino Hills, CA. 91709

RE: CEQA – NOTICE OF AVAILABILITY AND COMPLETION OF DRAFT ENVIRONMENTAL IMPACT REPORT FOR CITY OF CHINO HILLS 2014 GENERAL PLAN UPDATE

Dear Mr. Walters:

Thank you for giving the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. **We received this request on July 25, 2014,** and pursuant to our review, the following comments are provided:

Environmental Management Division (Brandy Wood, Ecological Resource Specialist, 909-387-7971):

1. ES-1 states that "As Chino Hills moves forward, remaining undeveloped lands are expected to develop and the City will approach build-out." Furthermore, Chapter 4, Section 4.4.6, Cumulative Impacts, states that the cumulative impacts to biological resources would be less than significant. There are 28 planned developments proposed within this General Plan Update EIR, while the impacts will be assessed with each development, the cumulative impacts to the surrounding habitats and species could be significant. We are concerned that cumulative impacts to biological resources are not adequately addressed. **E-1**

Water Resources Division (Mary Lou Mermilliod, PWE III, 909-387-8213): **E-2**

1. Prior to any activity on Flood Control District right-of-way, a permit shall be obtained from the District. Other on-site or off-site improvements may be required which cannot be determined at this time.

2. Other Federal or State approvals may also be required. Information regarding this item can be obtained from the Flood Control District's Operations Division, Permit Section.

3. We recommend that the City of Chino Hills establish adequate provisions for intercepting and conducting the accumulated drainage around or through the site in a manner that will not adversely affect adjacent or downstream properties.

GREGORY C. DEVEREAUX
Chief Executive Officer

Board of Supervisors
ROBERT A. LOVINGOOD ..... First District
JANICE RUTHERFORD ..... Second District
JOSIE GONZALES ..... Fifth District
JAMES RAMOS ..... Third District
GARY C. OVITT ..... Fourth District

4. We recommend that the most current FEMA regulations, for construction with established floodplains, be enforced by the City.

Environmental Management Division (Nancy Sansonetti, Senior Planner, 909-387-1866): **E-3**

1. The City of Chino Hills General Plan Update does not propose increased Land Use densities beyond what is contained in the current General Plan. In addition, much of the land in Chino Hills designated for development has already been built out. Therefore, impacts to County interests/services such as waste disposal, utilities, public safety and fire and transportation corridors are expected to be less than significant. If, in the future as stated in the Draft Update, increased interest in developing additional multi-family housing land uses is seen, additional impacts that may be realized with the increased population and intensity of land use would have to be evaluated under CEQA and the County would need to be consulted for additional impacts to any County services/facilities.

Should you have any questions, please contact the individual who provided the specific comment, as listed above.

Sincerely,

NIDHAM ARAM ALRAYES, MSCE, P.E., QSD/P
Public Works Engineer III
Environmental Management

NAA:PE:nh/CEQAComments_ChinoHills_DEIR-CH2014GeneralPlanUpdate

Response to Comments from Nidham Aram Alrayes, MSCE, P.E., QSD/P, Public Works Engineer III, Environmental Management, County Of San Bernardino, Department Of Public Works, Dated September 9, 2014

E-1 This comment states concerns that the cumulative impacts to biological resources are not adequately addressed. Section 4.4 of the EIR assesses potential impacts from the General Plan Update to biological resources. Also, the comment indicates that there are 28 planned developments proposed within this General Plan Update EIR, and expresses the concern that the cumulative biological impacts of these planned developments will be significant. To address the latter concern first, these 28 planned developments are either completely built out or nearly built out. There are no new proposed planned developments, only the conversion of these mostly built out communities to a different regulatory scheme that will be administratively simpler but will cause no physical changes to land use and, consequently, no environmental impacts (see General Plan Update, page 1-6, which explains that conversion of Planned Developments to applicable zoning standards). Second, the EIR explains that the Land Use Plan of the General Plan Update designates undeveloped natural landscapes within the City for Agriculture/Ranches uses or for Open Space, and that consequently, there is very limited potential for land development to affect habitat that supports a special status species.

Conservation Element Action CN-1.2.2 discourages new development in areas that contain sensitive, rare, or endangered species, oak woodlands, chaparral, and riparian habitats, which further reduces potential impacts. Any land owner engaged in modification of the natural landscape is obligated to comply with federal and state regulations to protect candidate, sensitive, or special status species. Whenever special status species could be impacted, consultation/coordination with the pertinent state and federal resource agencies would be undertaken to determine the level of impact significance and appropriate avoidance or mitigation measures. Such measures may include alternative designs and/or offsetting and compensating measures such as habitat replacement on and off-site. The EIR finds that implementation of Conservation Element Action CN-1.2.2 and continued compliance with federal and state regulations to protect special status species, along with continued administration of the City's local CEQA procedures, are expected to avoid significant impacts to biological resources.

Relative to cumulative impacts to biological resources, the EIR finds that no significant impacts have been identified, and no mitigation measures are required beyond the City's existing CEQA procedures, adherence to Conservation Element policies and actions, and compliance with existing state and federal regulatory frameworks to protect biological resources. Impacts that could occur throughout the City have been considered, and there is no indication that the General Plan Update could have a significant impact on biological resources outside of the City or on regional resources that occur within and beyond the City. While there will likely be some adverse impacts to biological resources as a result of conversion of undeveloped land to various types of land uses permitted by the proposed Land Use Element, cumulative impacts would be less than significant. This comment from the County of San Bernardino does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

E-2 This comment makes statements regarding storm drainage, including future permits from the County Flood Control District and other state and federal agencies, provisions for intercepting

and conducting accumulated drainage, and enforcement of current FEMA regulations. Section 4.9 of the EIR addresses hydrology, including current FEMA mapping and flood inundation hazards within the City. Policies of the General Plan Update that explicitly address flooding are identified and considered in the EIR, including Goal S-2 to Protect the Community from Flooding. The EIR finds that, by restricting development in areas prone to flood hazard, the General Plan Update would not expose people or structures to significant loss from flooding. The EIR also proposes Mitigation Measure HWQ-2, which states:

> HWQ-2 All local or private project drainage facilities to be constructed shall be evaluated on an individual basis by the City Engineering Department. The Department shall also determine the amount of responsibility for costs of improvements by the developers for local or private project facilities on private property based upon the impacts on drainage created by the development.

This comment from the County of San Bernardino does not address the EIR or the General Plan Update, but rather provides general comment regarding flood control procedures. This comment is acknowledged, but it does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

E-3 This comment states that because the General Plan Update does not propose increased land use densities beyond those of the current General Plan, and much of the City is already developed, impacts to County interests and services are expected to be less than significant. This comment also states that in the future, additional multifamily development would need to be evaluated under CEQA and the County would need to be consulted. As discussed throughout the EIR, including Sections 4.3.8, 4.4.5, and 4.5.5, for all development proposals subject to the City's discretionary land use approval process, an environmental review of that proposal would be conducted in accordance with the City's Lead Agency obligations under CEQA. This environmental review would include consultation with responsible agencies, including the County of San Bernardino as appropriate. This comment is acknowledged, but it does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

F. Chino Valley Fire District

Chino Valley Fire District

14011 City Center Drive
Chino Hills, CA 91709
(909) 902-5260 Administration
(909) 902-5280 Fire Prevention
(909) 902-5250 Fax
Chinovalleyfire.org

Board of Directors
John DeMonaco
President
Ed Gray
Vice President
Sarah Evinger
Brian Johsz
Mike Kreeger

Fire Chief
Tim Shackelford

September 9, 2014

RECEIVED
SEP 09 2014
CITY OF CHINO HILLS
COMMUNITY DEVELOPMENT DEPARTMENT

Jerrod Walters, Senior Planner
City of Chino Hills
14000 City Center Drive
Chino Hills, CA 91709

Dear Mr. Walters:

The Chino Valley Fire District has had an opportunity to review both the draft General Plan Update and the EIR General Plan Update as it pertains to the Fire District. The section reviewed in the General Plan was Chapter 5, the Safety Element, beginning on page 5-20. The section reviewed in the EIR General Plan was Chapter 4, Environmental Setting, Impacts and Mitigation Measures pertaining to Public Services beginning on page 4-193. It is our hope that we reviewed all sections that impact Fire District services, however, if we have missed an area, please let us know as we would like to ensure we capture all Fire Disrict related services.

We have submitted two tables outlining our recommended changes. One table includes recommended changes for the General Plan and a separate table includes recommended changes for the EIR General Plan. Each table includes a description of the recommended changes and also lists a correction number that corresponds with redlined changes we have added to each document. The document with the corresponding correction numbers and redlined changes is also attached to each table for easy reference. F-1

During our review of the EIR General Plan, we noticed that page 4-201 states that there is no funding source identified for the construction or operation of future stations identified in the document. However, it has been our understanding that based on a Fire District Special Board Meeting held on March 23, 2005 with Fire District personnel and City Manager Doug LaBelle and Judy Lancaster, the City discussed and identified funding for future facilities. We have attached the minutes of that meeting for your reference.

If you have any questions, or need additional information or clarification, please contact me at (909) 902-5260.

Sincerely,

Tim Shackelford
Fire Chief

Attachments: General Plan Update Proposed Changes
EIR General Plan Update Proposed Changes

cc: Joann Lombardo

Special Districts Leadership Foundation - District of Distinction Since 2008

General Plan Update
Proposed Changes

Page	Correction #	Change
5-20	1	**Change sentence to read:** Vegetation (highly combustible chaparral and similar plant communities that contain high concentrations of volatile oils);
5-25	2	**Change sentence to read:** The Chino Valley Fire District (CVIFD) provides fire suppression, fire prevention and paramedic services as a fire authority for the City. The CVIFD also provides fire services to the City of Chino and its sphere of influence. The CVIFD operates seven fire stations, a training facility, and administrative offices.
5-27	3a	**Change sentence to read:** The building houses the offices of the Fire Chief, Deputy Chief, Fire Marshal, Fire Prevention and Administrative Staff.
	3b	**Change Address for Station 61:** 5078 Schaefer Ave., Chino, CA 91710
	3c	**Move excerpt from station 66 description to station 61 description:** Currently, the station houses a Paramedic Engine Company staffed with four personnel, one Paramedic Truck Company staffed with four personnel and one Battalion Chief.
	3d	**Add Station 67 to facilities table**: Station 67 – 5980 Riverside Drive, Chino 91710 **Description:** The station houses a paramedic engine staffed with four personnel.
	3e	**Add:** The CVIFD participates in the State of California Master Mutual Aid System. In addition, CVIFD has cooperative agreements with other local fire agencies.
	3f	**Change Training Center Address to:** 5092 Schaefer Avenue, Chino, CA 91710

earthquake-induced fire is a widespread fire following an earthquake. The Safety Element updates policies intended to reduce risks from fire hazards.

a. Wildland Fires

Open space and canyon areas in Chino Hills are covered with chaparral, coastal sage scrub, deciduous woodlands, and grasslands. Introduced vegetation includes landscaping plants and agricultural species. The chaparral and coastal sage plant communities are highly combustible due to volatile oils contained in the plant tissues.

Wildfires in the City pose a high threat to natural resources, structures, and human safety. The high risk posed by fires is due to the combined effects of:

- Climate (dry summers with Santa Ana wind conditions);
- Steep, rugged terrain (limiting accessibility to fire-fighting vehicles and personnel);
- Vegetation (highly ~~flammable~~ combustible chaparral and similar plant communities that contain high concentrations of volatile oils);
- Development patterns (wildland and urban areas intermixed in the foothills and near canyon bottoms where development is located adjacent to highly flammable vegetation.

Approximately 75% of Chino Hills is located within the City's designated Fire Hazard District. Lands within the district include Chino Hills State Park, the Tres Hermanos area, the Carbon Canyon area, and the southern portion of the City generally west of Butterfield Ranch Road and south of Soquel Canyon Drive.

To reduce wildfire risk, the City adopts a Fire Hazard Overlay Zone, and has established and enforces policies that are carried over in the Safety Element Goals, Policies, and Actions section (beginning on page 5-27) of this Safety Element.

b. Urban Fires

Urban fires are often caused by human activities, such as faulty electrical wiring, improper storage or handling of hazardous materials, industrial accidents, or the careless handling of matches or other fire-producing items.

To reduce the risk of urban fire, the City has adopted the California Fire Code, which regulates and governs the safeguarding of life and property from fire and explosion hazards, from hazardous materials arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises. The California Fire Code also requires early detection and attenuation devices such as smoke alarms and fire sprinklers.

c. Earthquake-Induced Fires

With the numerous faults in and around Chino Hills, there is a risk of earthquake-induced fire in the community. These types of fires typically start in urban areas, where an earthquake causes a gas line to break, an electrical power line to be downed, or an open flame to catch fire. At the same time, an earthquake can cause damage to the water distribution and emergency communication systems, making fire suppression difficult.

Commonly affected are unanchored gas heaters or gas-fired hot water heaters, which tend to tip over and damage rigid gas line connections during strong ground shaking. Given the residential setting of Chino Hills, damaged gas line connections, overturned appliances, and damaged electrical circuitry will be the most likely causes of earthquake-induced fires in the City.

To reduce the risk of earthquake-induced fires, the City adopts the California Fire Code, which includes numerous regulations to reduce fire risks. These regulations include installation of earthquake-resistant water pumps and the clearing of vegetation under power lines. In addition, the City EOP describes the City's planned response to earthquakes, earthquake-induced fires, and other emergencies.

6. Hazardous Materials

The *California Health and Safety Code* defines a hazardous material as any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant potential hazard to human health and safety or to the environment if released into the work-place or environment. The State of California (Title 22) further defines a hazardous material as a substance that exhibits any of the following properties.

- Toxic – capable of producing injury, illness, or damage to humans, domestic livestock, or wildlife through ingestion, inhalation, or absorption through any body surface;
- Ignitable/Flammable – capable of being set afire, or of bursting into flame spontaneously or by interaction with another substance or material, and/or capable of burning with great rapidity;
- Reactive – having properties of explosivity or of chemical activity which can be a hazard to human health or the environment; or
- Corrosive – having the ability to destroy living tissue or steel surfaces by chemical action.

An extremely hazardous material is defined by Title 22 as a substance that is:

- Acutely toxic – having the ability to cause injury, illness, or damage to humans, animals, or other living organisms by a single exposure of a duration measured in seconds, minutes, hours or days, or in the case of oral ingestion, by a single dose;
- Chronically toxic – having the ability to cause injury, illness or damage to humans, animals or other living organisms by prolonged or repeated exposure or consumption over a period of days, weeks, months, or years;
- Carcinogenic – capable of producing cancer;
- Bioaccumulative – a toxic substance that concentrates in living organisms through direct assimilation or food chain accumulation;
- Persistent in the environment – a toxic substance that resists natural degradation or detoxification; or
- Water reactive – having properties of explosivity or of violent chemical activity when in contact with water which can be a hazard to human health or the environment.

Releases of hazardous materials can occur during a natural disaster, such as during an earthquake. Improperly stored containers of hazardous substances may overturn or break, pipelines may rupture, and storage tanks may fail. Containers may also explode if subjected to high temperatures, such as those generated by a fire. If two or more reactive chemicals come in contact as a result of a spill, the hazard may be compounded.

The *California Fire Code* includes a set of criteria designed to minimize the risk of an accident and to be followed when storing, using, or handling hazardous materials. These requirements include secondary containment of substances, segregation of chemicals to reduce reactivity during a release, sprinkler and alarm systems, monitoring, venting and auto shutoff equipment, and treatment requirements for toxic gas releases. Examples of hazardous materials include oil, paints, thinners, cleaning solvents, compressed gas, radioactive materials, refined petroleum products, and pesticides.

Within the City, identified potential sources of hazardous materials include Aerojet Chino Hills Facility, gas lines, chlorine stations, and oil and gas wells. The Safety Element updates policies intended to reduce risks from hazardous materials.

a. Aerojet

The Aerojet Chino Hills Facility consists of about 800 acres located in an undeveloped area in the southwestern portion of the City. It was a

Goals of the EOP are to: (1) Provide effective life safety measures and reduce property loss; (2) Provide for the rapid resumption of impacted businesses and community services; and (3) Provide accurate documentation and records required for cost recovery efforts. In support of these goals, the EOP outlines procedures for mass evacuation and shelter. The identified shelters in the City are supported by the American Red Cross (ARC). Personnel from the Community Services Department have been trained in shelter management and are prepared to manage shelters. All of the City's recreation centers and schools have been designated as ARC shelters.

2. Geologic Hazard Overlay District

The Geologic Hazard Overlay district is created to provide greater public safety by establishing review procedures and setbacks for areas that are subject to potential geologic problems such as ground shaking, earthquake faults, liquefaction, and landsliding. The Geologic Hazard Overlay district applies to Chino Hills fault hazards, and areas prone to landslides, liquefaction hazards, and other geologic hazards. These geologic hazard areas are delineated in Figure 5-1 – Active and Potentially Active Faults (page 5-5), Figure 5-2 – Seismic Hazards Fault Rupture (page 5-8), Figure 5-3 – Liquefaction Susceptibility Seismically-Induced Landslide Hazard Zones (page 5-10), Figure 5-4 – Canyons in the City of Chino Hills (page 5-11), Figure 5-5 – Landslide Susceptibility (page 5-12), and Figure 5-6 – Expansive Soils (page 5-14).

3. Flood Hazard Overlay District

The Flood Hazard Overlay district is created to provide greater public safety by establishing review procedures and setbacks for areas that are subject to potential flooding problems such as storm flooding and inundation areas. These flood hazard areas are delineated in Figure 5-7 – Flooding and Inundation Zones (page 5-16) and Figure 5-8 – FEMA Flood Map (page 5-17).

4. Fire Hazard Overlay District

The City of Chino Hills Fire Hazard Overlay Map identifies areas in the City subject to wildland fire hazards and areas not subject to wildland fire hazard (Figure 5-10 – Fire Hazard Overlay District). The map classifies areas subject to wildland fires as the Fire Hazard District, which comprises land subject to a very high to an extreme fire hazard risk.

Within the Fire Hazard Overlay district, the City establishes standards to protect structures and City residents from the potential hazards associated with wildland fires. The standards permit fire-fighting vehicles to have adequate access into areas between fire hazardous areas or "fuel modified" areas and the development perimeter, so that a wildland fire can be contained at the development perimeter and prevented from spreading to structures.

2 a. Fire Suppression Capabilities

~~The City contracts with the CVIFD) for~~ fire suppression, fire prevention, and paramedic services. The CVIFD also provides fire services to the City of Chino and its sphere of influence. The CVIFD operates six fire stations, a training facility, and administrative offices. A description of these facilities is provided in Table 5-1 (page 5-27).

seven

as a fire authority for the City.

The Chino Valley Fire District (CVFD) provides

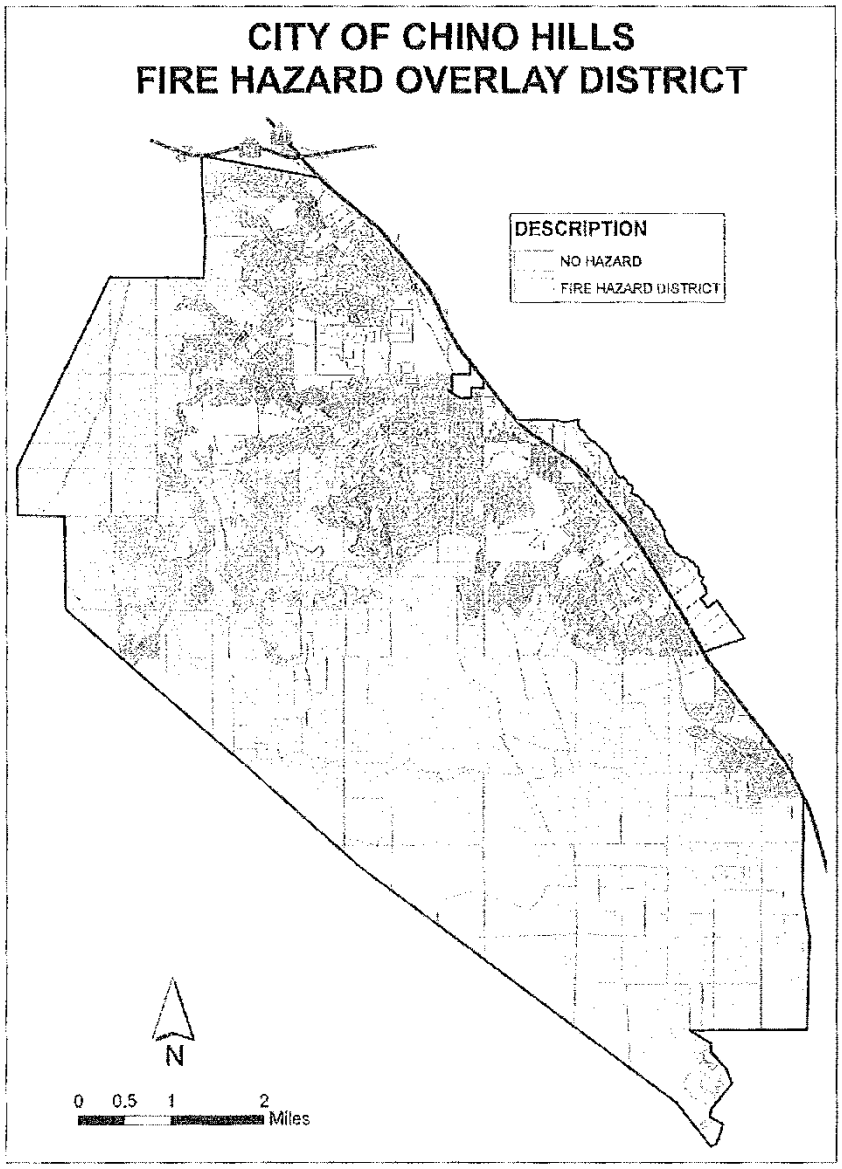


Figure 5-10 – Fire Hazard Overlay District

3

Table 5-1 - Chino Valley Independent Fire District Facilities

Facility Name	Location	Description
Fire Administration	14011 City Center Dr. Chino Hills	The building houses the offices of the Fire Chief, Deputy Chief, Fire Marshal, Fire Prevention & ~~Support~~ Staff Administrative 6a
Station 61 3b	~~19251 Central Ave. Chino~~ 5070 Schaefer Ave Chino, CA	The station covers the central portion of the Fire District service area. Currently, the station houses a Paramedic Engine Company staffed with four personnel.
Station 62	5551 Butterfield Ranch Rd. Chino Hills	Currently, the station houses a Paramedic Engine Company staffed with four personnel
Station 63	7550 Kimball Ave. Chino	The station serves the airport and the expanding Chino "Preserve" development in the eastern Chino area. The station houses a paramedic engine staffed with four personnel.
Station 64	16231 Canon Lane Chino Hills	The station houses a paramedic Engine, staffed with four personnel.
Station 65	12220 Ramona Ave. Chino	The station houses a Paramedic Engine Company staffed with four personnel. It provides service to the northern end of Chino.
Station 66	13707 Peyton Ave. Chino Hills 3F	The station currently houses one Paramedic Engine Company staffed with four personnel, one Paramedic Truck Company staffed with four personnel and one Battalion Chief. This station primarily responds to calls in the northwest portion of the Fire District. 3C
Training Facility	~~4040 Eucalyptus Chino~~ 5092 Schaefer Ave Chino, CA	The Training Facility serves as a centralized location to conduct training for all Fire District personnel.

The CVIFD participates in the State of California Master Mutual Aid System. 3E In addition, CVIFD has cooperative agreements with other local fire agencies

3D

5. Emergency Medical Services

The CVIFD provides advanced life support (ALS) care to Chino Hills, as well as the City of Chino and its sphere of influence. CVIFD paramedic facilities are identified in Table 5-1 above. Private ambulance companies also provide emergency transport to Chino Hills.

Nearby hospital facilities that provide emergency medical care on-site include Chino Valley Medical Center in Chino, Placentia-Linda Hospital in Placentia, Montclair Hospital in Montclair, Pomona Valley Hospital in Pomona, San Antonio Community Hospital in Upland, and Citrus Valley Medical Center in West Covina.

6. Police Services

Law enforcement services in the City are provided by the Chino Hills Police/Sheriff's Department through a contract with the County of San Bernardino Sherriff-Corona Department.

The Police/Sheriff's Department operates out of the Chino Hills Police Station, located at 14077 Peyton Drive in Chino Hills. Police efforts in the City are supported by a Neighborhood Watch program, which is a cooperative effort between the City, the Police/Sheriff's Department, community members, and Homeowners' Associations, where appropriate. Overall, Chino Hills has a low crime rate when compared to the County, the state, and the nation.

G. Safety Element Goals, Policies, and Actions

The following goals, policies, and actions support the City of Chino Hills Safety Plan and its vision to protect the community from unreasonable risks caused by natural and human-made hazards:

Goal S-1: Protect the Community from Geologic Hazards [New]

Policy S-1.1: Regulate development in high-risk seismic, landslide and liquefaction hazard areas to avoid exposure to hazards. [Existing Policy 1-2.5 modified]

Action S-1.1.1: Observe prudent land use planning in the Fault Hazard Zone delineated for the Chino Fault, restricting high occupancy and emergency operation facilities and limiting residential development. [Existing Policy 1-2.3]

Station 67 5980 Riverside Dr. Chino

Description: The station houses a paramedic Engine staffed with four personnel.

munitions assembly and test facility that operated from 1954 until the facility closed in November 1995. Aerojet has been working with the California Department of Toxic Substances Control (DTSC) to identify and remediate areas of the property and adjacent properties on which ballistics, toxics, or other hazardous materials are expected to occur. The most current update of Aerojet clean-up activities is provided in the "Draft Updated Conceptual Site Model (CSM) For Munitions and Explosives Of Concern, Aerojet Chino Hills Property, Chino Hills, California."[26]

The purposes of the updated CSM include:

1. Evaluate Project Area (Aerojet property and surrounding affected properties) conditions and natural constraints that may influence munitions and explosives of concern (MEC).
2. Assist in identifying and evaluating the potential sources and distributions of MEC within the Project Area;
3. Evaluate the existing sweep area designations according to previous function and land use to assess the potential presence (or absence) of residual MEC in each of these areas; and
4. Review previous ordnance sweep results to evaluate the efficiency of various geophysical equipment types used in Project Area sweeps.

The City continues to monitor remediation activities at the Aerojet Project Area.

b. Gas Lines

Four high-pressure natural gas transmission pipelines operated by Southern California Gas (SCG) Company extend across the City of Chino Hills. Two of these pipes are 36 inches in diameter, and two are 30 inches in diameter. These pipes are fitted with automatically controlled valves so that, in the event of an emergency, the damaged section of pipe is shut off immediately and the pressure is diverted around the break. The natural gas distribution system, which includes the pipes that connect individual houses and structures to the street mains, is not fitted with automatic shut-off valves. However, all pipes in residential areas are controlled with a valve or a series of valves. In the event of an emergency, the SCG can isolate the area by closing these valves. Once the gas has been turned off, crews can make any needed repairs to the lines.

Within the City, SCG has implemented retrofit programs that replaced older copper pipes with flexible polyethylene pipe for gas mains, and increased use of seismically designed devices, such as mechanical couplings and flexible connections for piping. All new pipes installed in the City during the past two decades are made of plastic and less susceptible to failure.

c. Chlorination Storage

The City has a chlorination storage center located within the City limits. The station is located north of Eucalyptus Avenue and west of the Chino Valley Freeway, and the storage center is located on Eucalyptus Avenue. The storage center currently stores approximately 500 to 750 pounds of chlorine tablets used to treat pumped well water prior to its introduction into the City's domestic water system.

Chlorine can be utilized in a liquid, solid, or gaseous state when used for water purification. The gas is noncombustible, but as a strong oxidizer it can react explosively if mixed with some common substances such as fuel gas, ammonia, or turpentine. If inhaled, chlorine can irritate the eyes and nose and mouth tissues, and cause headaches, nausea and vomiting, dizziness, and other respiratory symptoms. The tablet form of chlorine that is currently stored at the storage center is less susceptible than a liquid form to a

[26] Draft Updated Conceptual Site Model For Munitions And Explosives Of Concern, Aerojet Chino Hills Property, Chino Hills, California", prepared for Aerojet-General Corporation by AMEC and dated September 20, 2012; available at the City of Chino Hills Community Development Department.

chlorine release or dispersion that could occur during a strong seismic event or other disaster.

d. Oil and Gas Wells

Petroleum and natural gas have been produced from oil fields in the eastern Puente Hills since the late 1880s. The Chino-Soquel oil field is located in the rugged area around Soquel Canyon, to the east of Sleepy Hollow.

There are still several active oil producing wells within the city as well as many plugged oil and gas wells. Most wells plugged after the late 1970s were abandoned to current standards. Wells abandoned prior to that time were likely not abandoned to current California Division of Oil, Gas and Geothermal Resources (CDOGGR) regulations. If development is planned for an area known to have plugged and/or abandoned oil wells, the City is required to submit building permit applications to the Long Beach office of the CDOGGR for inspection and proper abandonment. Corrective action typically includes requiring the property owner to have all wells slurry filled to minimize future problems. Oilfield-related hazards that may require remediation and mitigation include venting of gases, petroleum-saturated soils, and soils contaminated with diesel, heavy metals or other hazardous substances.

7. Airport Safety

Chino Airport is located at 7000 Merrill Avenue in Chino, just east of the City of Chino Hills. It is a general aviation airport that serves private, business, and corporate tenants from Southern California. The Chino Airport Comprehensive Land Use Plan (CACLUP) establishes three safety zones, each with a specific set of land use guidelines. Safety Zone 1 restricts residential and industrial development; Safety Zone 2 restricts uses that would result in more than 50 persons per assembly area being present; Safety Zone 3 places no restrictions on residential or other uses.

Portions of Safety Zone 2 and Safety Zone 3 cross into an area of the City that is located east of Fairfield Ranch Road, south of Kimball Avenue and north of Pine Avenue (Figure 5-9 - Chino Airport Safety Zones.) Within the Safety Zone 2 area of the City, most of the area is undeveloped and designated as Open Space in the Chino Hills Land Use Plan.

Within the Safety Zone 3 area of Chino Hills, most of the area is undeveloped and designated as Open Space in the Chino Hills Land Use Plan. The two exceptions are the Big League Dreams Sports Park, which is designated as Commercial Recreation within the Chino Hills Land Use Plan, and a small sliver of medium-density housing designated as Medium Density Residential within the Chino Hills Land Use Plan.

Existing development within Chino Hills and the Chino Hills Land Use Plan are consistent with the CACLUP Safety Zones.

F. Safety Plan

This section of the Safety Element discusses the programs and services the City has in place to reduce risks from natural and human-made hazards to the community.

1. Emergency Operations Plan

The City of Chino Hills EOP, updated August 1, 2008, addresses the City's planned response to emergencies associated with natural disasters and technological incidents, including peacetime and wartime nuclear defense operations. It provides guidance on the response to such emergencies as earthquakes, hazardous materials emergencies, flooding, and wildfires. The EOP does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies. Instead, the operational concepts reflected in the EOP focus on potential large-scale disasters that can generate unique situations requiring unusual emergency responses.

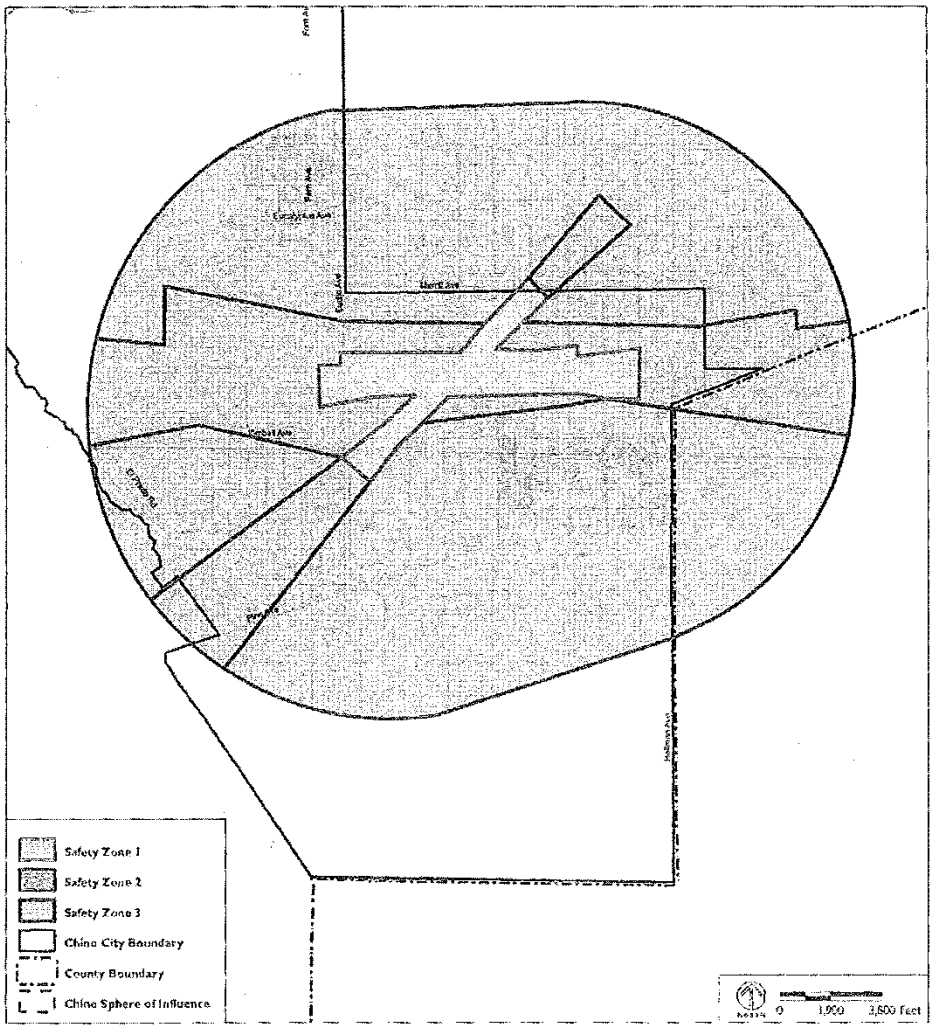


Figure 5-9- Chino Airport Safety Zones

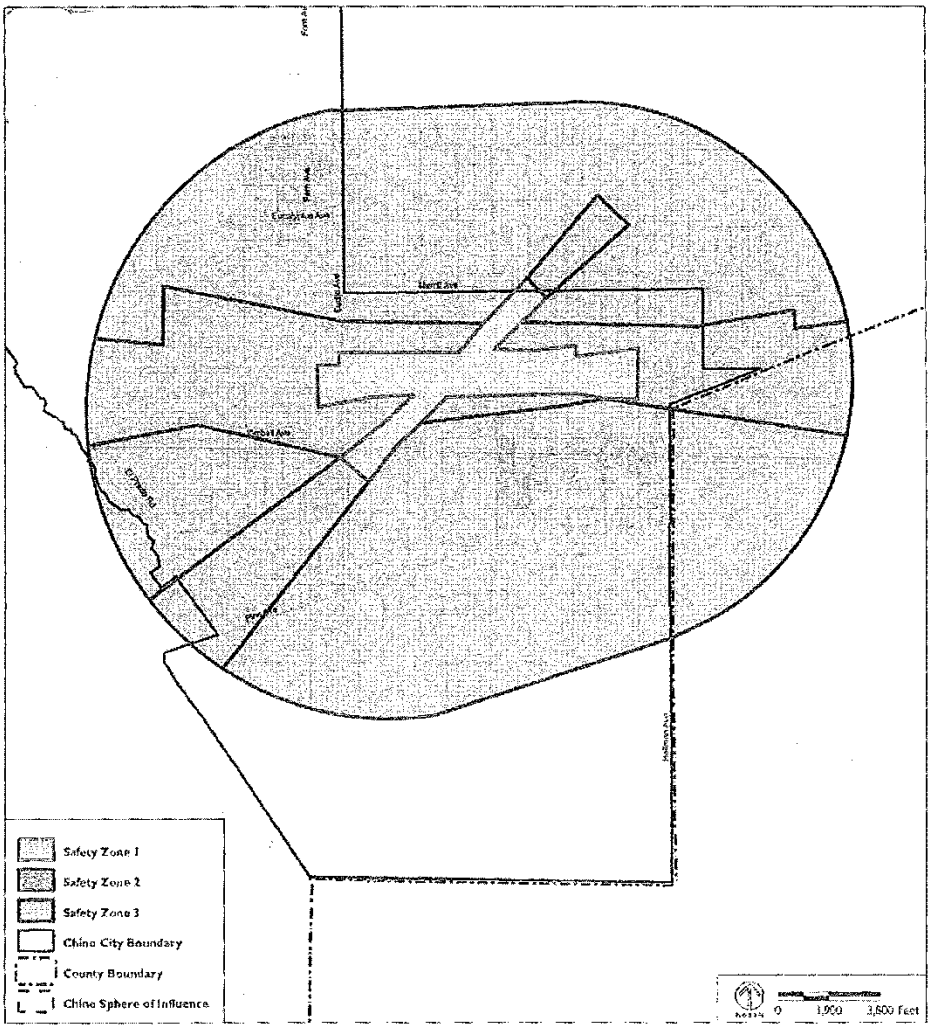


Figure 5-9- Chino Airport Safety Zones

individual projects in the General Plan area to ensure that all new development will be adequately protected from flooding prior to completion of the backbone system. [Existing Policy 3-3.4]

Action S-2.2.5: Maintain a schedule for funding of all flood control backbone facilities, including phasing. [Existing Policy 3-3.5]

Action S-2.2.6: Require property owners to install and maintain storm drains on their properties as necessary to address drainage related to their property. [Existing Policy 3-3.6]

Action S-2.2.7: Strengthen storm drain maintenance district to prevent local flooding, and to prevent mud and debris flows from overtaxing storm drains during strong storms. [Existing Policy 3-3.7]

Action S-2.2.8: Require measures to be undertaken to control runoff from construction sites. [Existing Policy 3-3.8, modified]

Action S-2.2.9: Require prompt revegetation and/or construction of newly graded sites to control erosion. [Existing Policy 3-4.2]

Action S-2.2.10: Limit grading operations during the rainy season. [Existing Policy 3-4.3]

Action S-2.2.11: Review individual project designs to ensure the stability of slopes adjacent to flood control facilities, which could be blocked due to slope failures. [Existing Policy 3-4.4]

Goal S-3: Achieve Adequate Emergency Service [New]

Policy S-3.1: Ensure that new development has sufficient fire protection, police, and emergency medical services available. [New]

Action S-3.1.1: Require the review of development proposals to determine impacts on emergency services and ensure developments meet appropriate safety standards. [New]

Action S-3.1.2: Provide police services that are responsive to citizens' needs to ensure a safe and secure environment for people and property in the community. [New]

Goal S-4: Minimize the Risk from Fire Hazards [New]

Policy S-4.1: Maintain the water distribution system to deliver the fire flow requirements set in the City adopted Fire Code. [Existing Policy 4.1.2 modified]

Action S-4.1.1: Ensure adequate fire flow capabilities in the Los Serranos and Carbon Canyon areas, and other sections of the City where deficiencies may occur. [Existing Policy 4.1.1, modified]

Action S-4.1.2: Replace and upgrade old cast-iron pipelines and/or inadequately sized water mains when street improvements are made. [Existing Policy 4.1.2, modified]

Action S-4.1.3: Provide for redundant emergency distribution pipelines in areas of potential ground failure or where deemed necessary by the Fire District and City. [Existing Policy 4.1.3, modified]

Policy S-4.2: Continue to reduce fire risk through City development and operation policies. [New]

Action S-4.2.1: Continue to implement and enforce fuel modification zones. [Existing Objective 4-4, modified]

Action S-4.2.2: Encourage residents to plant and maintain fire-retardant slope cover to reduce the risk of brush fire in areas adjacent to canyons. [Existing Policy 4-4.3, modified]

Action S-4.2.3: Maintain stringent site design and maintenance standards for areas with high fire hazard potential. [Existing Policy 4-4.3, modified]

Action S-4.2.4: Continue to provide for public education programs to enhance public awareness of fire safety, including the storage of flammable materials, use of fire-retardant

building materials, and vegetation management in the perimeter of structures. [Existing Policy 4-5.1]

Action S-4.2.5: Encourage the Fire District to review its agreement to coordinate for mutual aid and fire services with fire agencies from adjacent cities and counties. [Existing Policy 4-5.3]

Action S-4.2.6: Work with the Fire District to enforce all existing codes and ordinances regarding fire protection, building inspection, and vegetation management. [Existing Policy 4-5.4]

Action S-4.2.7: Maintain evacuation plans for areas in greatest danger of fire. [Existing Policy 4-6.2, modified]

Goal S-5: Minimize the Risk from Hazardous Materials [New]

Policy S-5.1: Minimize risk to life and property from production, use, and storage of hazardous materials and waste. [New]

Action S-5.1.1: Continue to enforce fire and building code provisions regarding secondary containment; segregation of chemicals to reduce reactivity during a release; sprinkler and alarm systems; and monitoring, venting, and automatic shut-off systems on all new developments. [Existing Objective 5-1, modified]

Action S-5.1.2: Continue to require businesses that use, store, or generate hazardous materials to annually notify the San Bernardino County Department of Environmental Health Services or appropriate County agency, and to comply with applicable regulations. [Existing Policy 5-1.1, modified]

Policy S-5.2: Control the transportation of toxic, explosive, and other hazardous materials. [Existing Objective 5-2 modified]

Action S-5.2.1: Require business owners to follow designated hazardous materials transportation routes. [Existing Objective 5-2, modified]

Action S-5.2.2: Coordinate with adjacent jurisdictions to maintain regional objectives for hazardous materials management. [Existing Policy 5-2.1]

Action S-5.2.3: Regulate and limit the transport of vehicles carrying hazardous materials through the City. [Existing Policy 5-2.3]

Action S-5.2.4: Support annual checks for leaks of high pressure fuel and natural gas transmission lines. [Existing Policy 5-2.4]

Policy S-5.3: Monitor and enforce regulations to ensure adequate clean-up of hazardous materials and waste. [New]

Action S-5.3.1: Require all new developments occurring within areas previously utilized for oil production to mitigate any hazards associated with the oil fields. [Existing Objective 5-3]

Action S-5.3.2: Confirm that oil and gas wells in areas proposed for development are abandoned to current standards set by the state. [Existing Policy 5-3.1]

Action S-5.3.3: Confirm that existing toxics are contained, removed, and/or remediated as required by applicable federal and state standards. [New]

Goal S-6: Maintain Plans for Emergency Response [Existing Objective 6-1 modified]

Policy S-6.1: Maintain and update the City Emergency Operations Plan (EOP), as required, to respond to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. [New, from City EOP]

Action S-6.1.1: Provide for effective life safety measures and reduce property loss. [New, from City EOP]

Action S-6.1.2: Provide for the rapid resumption of impacted businesses and community services. [New, from City EOP]

Action S-6.1.3: Provide for accurate documentation and records required for cost

EIR General Plan Update
Proposed Changes

Page	Correction #	Change
4-193	1	**Paragraph should read:** Fire protection and emergency medical services for the City are provided by the CVIFD. CVIFD serves an approximately 80-square mile area that includes the cities of Chino Hills and Chino and surrounding unincorporated areas. Services provided by CVIFD include fire suppression, emergency medical, rescue, and hazardous materials emergency response.
	2	**Sentence should read:** Four additional stations are located within the nearby City of Chino.
	3	**Change station 61 address to:** 5078 Schaefer Ave. Chino 91710
	4	**Move excerpt from station 66 description to station 61 description:** Currently, the station houses a Paramedic Engine Company staffed with four personnel, one Paramedic Truck Company staffed with four personnel and one Battalion Chief.
	5	**Add station 67 to facilities list:** Station 67 – 5980 Riverside Dr. Chino 91710 Description: The station houses a paramedic engine staffed with four personnel.
	6	**Change Training Center address to:** 5092 Schaefer Ave. Chino 91710
	7	**Change sentence to read:** The building houses the offices of the Fire Chief, Deputy Chief, Fire Marshal, Fire Prevention and Administrative Staff.
4-194	8	**Paragraph should read:** Within the City's 3 stations are 12 CVIFD personnel on duty 24 hours per day, with 4 personnel assigned to each station. These personnel are supplemented by 21 other on-duty personnel located in 4 fire stations in the City of Chino. A minimum of two of the four personnel assigned to each of the fire stations are paramedics, resulting in a minimum of 6 paramedics on duty in Chino Hills at any given time.
	9	**Sentence should read:** In 2012, CVIFD fire stations responded to 9,178 calls within the District.
4-201	10	**Sentence should read:** To equip and staff these stations, the Master Plan identifies one engine and four firefighter/paramedic personnel per station consistent with

		the current service delivery model.
	11	**Comment:** Our understanding based on a Special Board Meeting dated 3/23/2005 with Fire and City personnel (LaBelle and Lancaster), the City had identified funding for further facilities. The minutes state that $15, 396,000 and the need is $16, 896,000, leaving a shortfall of $1,500,000. City Manager LaBelle stated that he felt the City would be able to meet all of their obligations, with the possible exception of the $1.5 million for Administration, through the existing Development Impact Fee program and Community Facility's District authorization. (See attached minutes dated 3/23/2005)

4.12 Public Services

This section of the EIR discusses existing public services available in the City of Chino Hills (City), and summarizes the potential impacts to existing public services and the need for new or expanded services due to build-out of the proposed General Plan Update. The adequacy of the City's existing public services (e.g., fire, police, schools, parks, and other public facilities) is also assessed. Mitigation measures are proposed to ensure adequacy of funding and timely development of new fire stations and provision of additional police and fire resources, in response to long-term growth. Technical information referenced in this section was obtained from staff and websites for the City of Chino Hills, the Chino Valley Independent Fire District (CVIFD), the San Bernardino County Sheriff's Department (SBCSD), and the Chino Valley Unified School District (CVUSD).

4.12.1 Existing Conditions

The City comprises approximately 45 square miles and had a 2012 population of 76,240 persons.[91] The existing conditions for public services are discussed topically below.

1. Fire Protection

(1) Fire protection and emergency medical services for the City are provided by the CVIFD, ~~by contract~~. CVIFD serves an approximately 80-square-mile area that includes the cities of Chino Hills and Chino, and surrounding unincorporated areas. Services provided by CVIFD include fire suppression, emergency medical, rescue, and hazardous materials ~~regulation enforcement~~. emergency response.

Within the City limits, three fire stations are manned and operated by CVIFD. ~~Three~~ (2) Four additional (6) stations are located within the nearby City of Chino. The CVIFD has an administrative office facility within the City of Chino Hills Civic Center, and a training facility in the City of Chino. A description of these facilities is provided in Table 4-39 below.

Table 4-39 – Existing City of Chino Hills Fire Stations by Location and Major Equipment and Personnel

Facility Name	Location	Description
Fire Administration	14011 City Center Dr. Chino Hills	The building houses the offices of the Fire Chief, Deputy Chief, Fire Marshal, Fire Prevention & ~~Support~~ Staff Administrative (7)
Station 61 (3)	~~13251 Central Ave. Chino~~ 5078 Schaefer Ave Chino	The station covers the central portion of the Fire District service area. Currently, the station houses a Paramedic Engine Company staffed with four personnel.
Station 62	5551 Butterfield Ranch Rd. Chino Hills	Currently, the station houses a Paramedic Engine Company staffed with four personnel
Station 63	7550 Kimball Ave. Chino	The station serves the airport and the expanding Chino "Preserve" development in the eastern Chino area. The station houses a paramedic engine staffed with four personnel.
Station 64	16231 Canon Lane Chino Hills	The station houses a paramedic Engine, staffed with four personnel.
Station 65	12220 Ramona Ave. Chino	The station houses a Paramedic Engine Company staffed with four personnel. It provides service to the northern end of Chino.
Station 66	13707 Peyton Ave. Chino Hills.	The station currently houses one Paramedic Engine Company staffed with four personnel, one Paramedic Truck Company staffed with four personnel and one Battalion Chief. This station primarily responds to calls in the northwest portion of the Fire District.
Training Facility	~~4040 Eucalyptus Chino~~ 5092 Schaefer Chino (4)	The Training Facility serves as a centralized location to conduct training for all Fire District personnel.

move (4)

Station 67 - 5980 Riverside Dr. Chino
Description: The station houses Engine staffed with four personnel.

[91] Population estimated by multiplying the California Department of Finance's (May 2013) vacancy rate and number of persons per household by the number of housing units in the City.

Within the City's 3 stations are 12 CVIFD personnel on duty 24 hours per day, with 4 personnel assigned to each station. These personnel are supplemented by 21 other on-duty personnel located in 4 fire stations in the City of Chino. ~~The CVIFD cross trains firefighting personnel as paramedics.~~ Two of the four personnel assigned to each of the fire stations are paramedics, resulting in a minimum of 6 paramedics on duty in Chino Hills at any given time.

(8) add A minimum of

With a current population of 76,240, the current ratio of firefighters to residents in the City is 0.16 firefighters per resident, and the current ratio of paramedics to residents is 0.08 paramedics per resident. In 2012, CVIFD fire stations responded to 9,178 calls within the ~~City.~~ Average response times were 6:46 minutes for paramedic services and 7:44 minutes for fire protection services.[92]

(9) istrict

2. Police Protection

Police protection for the City is provided by the Chino Hills Police Department, which is contracted with the San Bernardino County Sheriff's Department. The Police Department is located at 14077 Peyton Drive within the Chino Hills Civic Center.

Currently, the Police Department has 52 sworn personnel, which includes 38 deputies, 4 detectives, 8 sergeants, 1 lieutenant, and 1 captain. The Department also has 15 civilian personnel. The Department has a preferred service ratio of 1 deputy per 2,000 residents. With a current City population of 76,240 residents, the Police Department currently achieves this ratio.[93]

In 2012, the Police Department handled 36,694 calls for service, and obtained an average response time for all emergency calls of 3:30 minutes. This response time exceeds the Department's goal of responding to all calls for service in less than 7:30 minutes.

Police Department requests for more officers are based on service needs. During the past two decades since the City's incorporation, officers have been added annually based on professional judgment rather than a formulaic approach with sworn officers per capita. It is the standard practice of the City to continue to increase staffing levels as growth continues.

The Police Department currently provides School Resource Officers to the City's schools under a Memorandum of Understanding between the City and CVUSD.

3. Schools

CVUSD provides primary and secondary public education to the cities of Chino Hills and Chino. Current ratios of students per teacher for elementary, middle and high schools in the district are listed below.[94]

- Elementary: Grades K, 2, 3 - 31:1, Grades 1, 4, 5, 6 - 32:1
- Junior High School: Grades 7, 8 - 34:1
- High School: Grades 9, 10, 11, 12 - 35:1

As shown in Table 4-40, there are 2 public high schools, 2 junior high schools, and 11 elementary schools. In addition, there is 1 private high school, 1 private elementary through junior highschool, and 1 elementary school within the City.

[92] Information regarding existing CVIFD facilities and staffing provided by Paul Segalla, Fire Chief, September 30, 2013.

[93] Information regarding police services in Chino Hills was provided by Robert Guillen, Captain. San Bernardino County Sheriff's, August 23, 2013.

[94] Information regarding CVUSD school services was provided by Gregory J. Stachura, Assistant Superintendent, Facilities, Planning & Operations, CVUSD, August 29, 2013

Table 4-40 – Educational Facilities in Chino Hills

Site	Name	Type	Grade Levels
1	Ayala High School	Public	9-12
2	Butterfield Ranch Elementary	Public	K-6
3	Canyon Hills Junior High School	Public	7-8
4	Chaparral Elementary	Public	K-6
5	Chino Hills High School	Public	9-12
6	Country Springs Elementary	Public	K-6
7	Eagle Canyon Elementary	Public	K-6
8	Glenmeade Elementary	Public	K-6
9	Hidden Trails Elementary	Public	K-6
10	Gerald Litel Elementary	Public	K-6
11	Alternate Education Center (formally Los Serranos Elementary)	Public	K-6
12	Oak Ridge Elementary	Public	K-6
13	Rolling Ridge Elementary	Public	K-6
14	Townsend Junior High School	Public	7-8
15	Wickman Elementary	Public	K-6
16	Boys Republic High School	Private	9-12
17	Chino Hills Christian School	Private	K-6
18	Loving Savior of the Hills Lutheran Church	Private	Pre K-8

4. Parks

Parks and recreation facilities in the City include 40 parks with a total of approximately 300 acres of parkland. Facilities within the parks include natural open spaces, community buildings, lakes, streams, sports courts and fields, passive areas, playgrounds, a skate park, an equestrian center, and equestrian staging areas. Figure 4-18 presents a map that identifies the location of each park, and Table 4-41 describes the size and features of each park and recreation facility within the City.

A new Chino Hills Community Center was recently constructed at 14250 Peyton Drive. The Community Center is approximately 17,000 square feet and includes:

- Fitness/dance room
- Exercise room
- Game room
- Conference rooms
- Multi-use areas
- Multi-purpose room that can accommodate banquets for over 280 people
- Courtyard and entry
- Meandering walking path along Peyton Drive
- Outdoor gazebo

Primary funding for the Community Center is through a 4th District Supervisor contribution and Community Facilities Districts funding. The Chino Hills Community Foundation, a nonprofit formed to raise funding for community improvements, raised additional money for the Community Center through a brick purchase program whereby persons or groups purchase a brick that then gets engraved with the contributor's name and installed in the front entry walkway of the Center. Funds raised through this program were used to fund the interior furnishings for the new Community Center.

5. Other Public Facilities

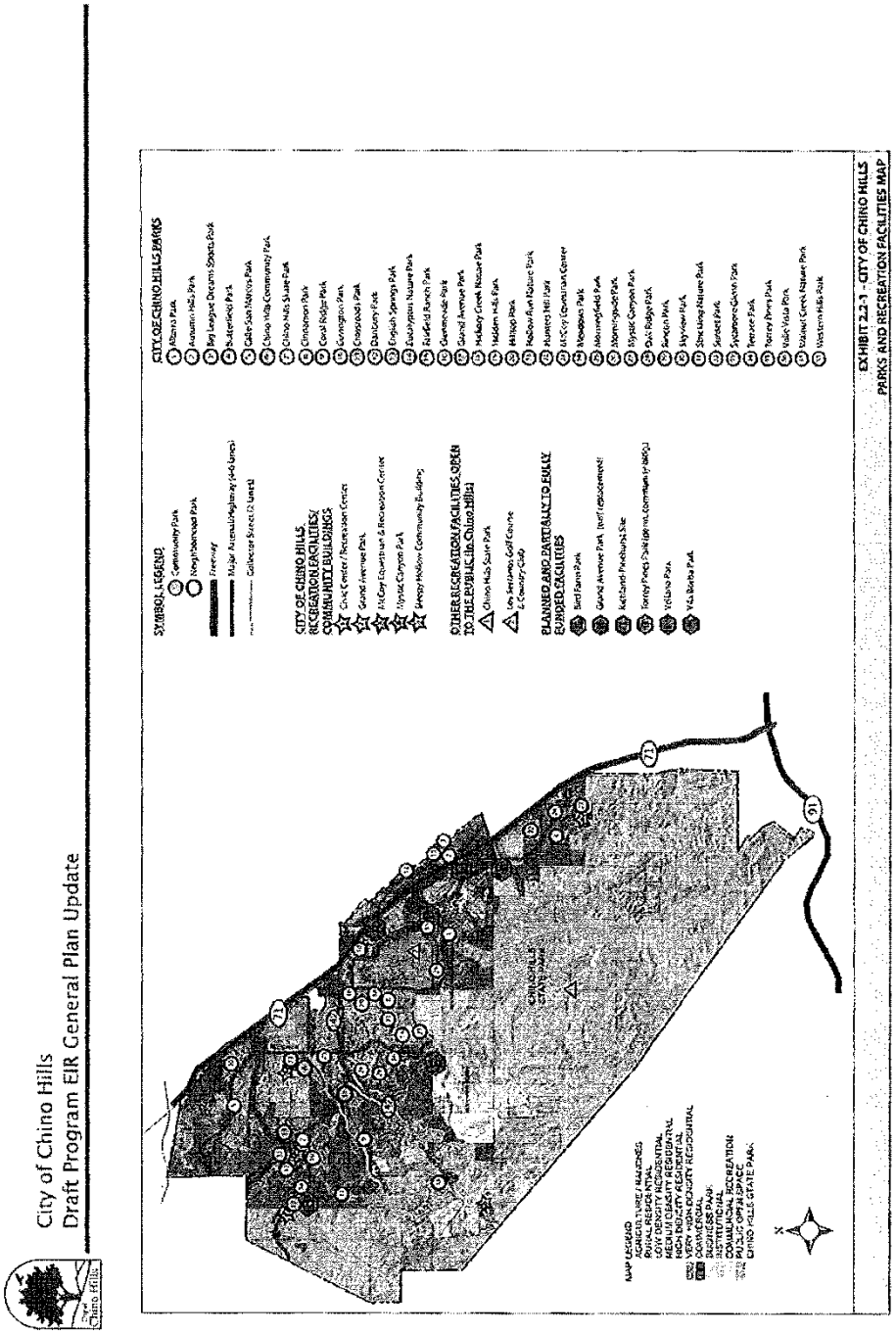
The Chino Hills Civic Center serves as the governmental core for the City. This area includes City Hall, CVIFD administrative offices, the Police Department building, and the James S. Thalman Chino Hills Public Library, which is a branch of the San Bernardino County library system.

4.12.2 Regulatory Framework

1. Fire

Chino Valley Independent Fire District Master Plan

The Master Plan, adopted July 11, 2012, outlines CVIFD current organization and existing services, and identifies future facility needs. It defines the Mission Statement for the CVIFD as follows: to protect the lives and property of the community from detrimental effects of fires, medical emergencies and other hazardous conditions.



Source: City of Chino Hills Parks, Recreation & Open Space Master Plan Update, 2007

Figure 4-18 – Existing Recreational Facilities in Chino Hills

Chapter 4. Environmental Setting, Impacts, and Mitigation Measures

Section 4.12 – Public Services
page 4-196

Table 4-41 – Inventory of Existing Recreational Facilities in Chino Hills

#	Name	Street	Location	Acres	Amenities
1	Alterra	4921 Soquel Canyon Pkwy.	Soquel Canyon Pkwy. & Slate Dr.	3.7	Restrooms, tot lot, picnic tables, BBQ, 1 half-court basketball, gazebo area
2	Autumn Hill	2119 Civic Center Drive	Chino Hills Pkwy. & Civic Center Dr.	1.2	Picnic tables, par course
3	Big League Dreams Sports Park	16333 Fairfield Ranch Rd.	Fairfield Ranch Rd. & Danbury	34	For information call 909-597-9389
4	Butterfield	17671 Mystic Canyon Rd.	Mystic Canyon Dr. & Butterfield Ranch Road	13.5	Restrooms, tot lot, gazebo area*, 1 full-court basketball
5	Calle San Marcos	2659 Norte Vista Dr.	Norte Vista & Eagle Canyon	3.2	Tot lot, 1 full-court basketball, volleyball, picnic tables
6	Chino Hills Community Park	3280 Eucalyptus Dr.	Peyton Dr. & Eucalyptus Dr.	33	Snack bar, restrooms, picnic tables, BBQ, 6 lighted multi-use athletic fields
7	Chino Hills Skate Park	16333 Fairfield Ranch Rd.	Fairfield Ranch Rd. & Danbury	7,150sq	Pools, rails, ramps.
8	Chino Hills State Park		Entrance at Elinvar and Sapphire	13,000	For information call 909-780-6222
9	Cinnamon	15580 Linden Ln.	S. Willow Ln. & E. Linden Ct.	4.2	Tot lot, picnic tables, volleyball
10	Founders Recreation Community Building	2000 Founders Avenue	Founders Dr. & Civic Center Drive		Community Building 5 community rooms, kitchen, & restrooms
11	Coral Ridge	1999 Avenida Cabrillo	Eucalyptus & Avenida Cabrillo	6.3	Restrooms, tot lot, picnic tables (2 covered), 1 half-court basketball, four lighted
12	Covington	15138 Monterey Ave.	Monterey Ave. & Brookview Ct.	0.53	Tot lot, picnic tables
13	Crossroads	2785 Chino Hills Pkwy.	Chino Hills Pkwy. & Eucalyptus (Park)	12.8	Restrooms, tot lot, picnic tables, 1 full-court basketball, par course, 2 tennis
14	Danbury Park	15701 Fairfield Ranch Rd.	Fairfield Ranch Rd. & Danbury	5.7	2 tot lots, gazebo area, 1 full-court basketball, BBQ, picnic tables
15	English Springs Park	2201 Grand Avenue	Grand Avenue & Chino Hills Pkwy.	8.2	Restrooms, tot lot, picnic tables, 2 half-court basketball, volleyball, BBQ, 3 gazebo areas
16	Eucalyptus Nature Park	3565 Valley Vista Dr.	Shantung Ave. & Valley Vista Dr.	7.5	Par course, paved trail
17	Fairfield Ranch	16333 Fairfield Ranch Rd.	Fairfield Ranch Rd. & Stanfield Ct.	5.5	Restrooms, tot lot, gazebo area, 1 full-court basketball, baseball field, BBQ,
18	Glenmeade	15055 Oakwood Ln.	Glenwood Way, & Oakwood Av.	3.2	Tot lot, volleyball, picnic tables, BBQ
19	Grand Avenue Park	1301 Grand Avenue	Grand Ave. & Pleasant Hill	12	Community Bldg. (2 rooms) , snack bar, restrooms, age specific playgrounds,
20	Hickory Creek Nature Park	15445 Hickory Creek Ln.	Hickory Ln. & Rolling Ridge Dr.	7.4	Par course, paved trail
21	Hidden Hills	2000 Rancho Hills Dr.	Rancho Hills & Avenida Hacienda	3.6	Restrooms, tot lot, picnic tables, 2 half-court basketball, BBQ
22	Hilltop	15234 Pine Ln.	Pine Ct., North of Glenridge Drive	6.4	tot lot, picnic tables
23	Hollow Run Nature Park	15959 Peyton Dr.	Peyton Dr., North of Autumn Ave.	12.7	Picnic tables, paved trail
24	Hunters Hill	6070 Natalie Rd.	Hunters Hill Rd. & Natalie Dr.	5	Playground, Restrooms, 2 half-court basketball, baseball/soccer fields, picnic
25	McCoy Equestrian Center	14676 Peyton Dr.	Peyton Dr.	20	2 lighted arenas, restrooms, community center
26	Meadows Park	6266 Butterfield Ranch Rd.	Along Butterfield Ranch Road	9.5	Trail and benches

#	Name	Street	Location	Acres	Amenities
27	Morningfield Park	13250 Lost Trail Dr.	Morningfield and Lost Trail	0.5	Tot lot, picnic tables, BBQ
28	Morningside	15259 Morningside Dr.	Frost Ave. & Montrose Ct.	3.5	Picnic Tables
29	Mystic Canyon	6424 Mystic Canyon Dr.	Mystic Canyon Dr. & Via La Cresta	2.6	Community Bldg., tot lot, 2 half-court basketball
30	Oakridge	15444 Valle Vista Dr.	Valle Vista Dr., West of Oakview Ln.	3.7	Tot lot, picnic tables, soccer/football fields, trailhead
31	Overlook	2861 Woodview Rd.	Peyton Dr. & Woodview Rd.	1.5	Picnic tables, BBQ
32	Rincon	16202 Pinehurst Dr.	Elinvar Dr. & Soquel Canyon Pkwy.	6	Restrooms, tot lot, 1 half-court court basketball, picnic tables, BBQ
33	Skyview	3200 Olympic View Dr.	Olympic View Dr., East of Peyton Dr.	5.1	Tot lot, picnic tables, 1 half-court basketball, volleyball
34	Sleepy Hollow Community Building	16801 Rosemary Ln.	Carbon Cyn Road, Rosemary Ln.		1 community room, 1 conference room, restrooms
35	Strickling Nature Park	3670 Aspen Ln.	Aspen Ln., North of Valle Vista Ln.	13.1	Tot lot, 54 foot slide, paved trail
36	Sunset	1510 Rancho Hills Dr.	Rancho Hills & Vista Dorada	3.5	Restrooms, tot lot, picnic tables, BBQ
37	Sycamore Glenn	1952 Sycamore Glenn	Sycamore Glenn & Deerbrook Ln.	0.5	Tot lot, picnic tables
38	Terrace	1531 Morning Terrace Dr.	Morning Terrace Dr. & East Pleasant Hill Dr.	2.1	Tot lot, picnic tables, 2 half-court basketball
39	Torrey Pines	5011 Torrey Pines Dr.	Torrey Pines Dr. & Country Club Dr.	1.5	Restrooms, horse staging area, gazebo area
40	Valle Vista	15636 Valle Vista Dr.	Valle Vista Dr., West of Peyton Dr.	1.7	Tot lot, picnic tables, BBQ
41	Vellano	16321 Aviano Ln.	Woodview Rd. & Aviano Ln.	3.75	Restrooms, tot lot, picnic tables, 1 full-court basketball, tennis courts, BBQ, gazebo area
42	Crossroads	14877 Eucalyptus	Chino Hills Pkwy. & Eucalyptus (Concerts)		Restrooms, par course
43	Walnut Creek Nature Park	14214 Walnut Creek Dr.	Walnut Creek Dr. & Village Center Dr.	4.1	Trail
44	Western Hills	16230 Canon Ln.	Carbon Canyon Rd. & Canon Ln.	1.3	Tot lot, picnic tables horse staging area

2. **Police**

California Penal Code

The *California Penal Code* establishes the basis for the application of criminal law in California.

Chino Hills Municipal Code

The Municipal Code establishes regulations related to arrests and citations, penalties, and health and safety.

3. **Schools**

Assembly Bill 2926

To assist in providing facilities to serve students generated by new development projects, the state passed Assembly Bill 2926 (AB 2926) in 1986. This bill allows school districts to collect standardized impact fees from developers of new residential and commercial/industrial building space prior to issuance of building permits. Part of this bill establishes these standard fees as a sufficient mitigation measure to offset impacts on public school facilities in the CEQA process. Development impact fees were also referenced in the 1987 Leroy Greene Lease-Purchase Act, which required school districts to contribute a matching share of project costs for construction, modernization, or reconstruction.

4. **Parks**

Quimby Act

Originally passed in 1975, the Quimby Act (*California Government Code* §66477) allows cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. This act allows local agencies to establish ordinances requiring developers of residential subdivisions to provide impact fees for land and/or recreational facilities. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. In 1982, the act was substantially amended, further defining acceptable uses of or restrictions on Quimby funds, providing acreage/ population standards and formulas for determining the exaction, and indicating that the exactions must be closely tied to a project's impacts. Local ordinances must now include definite standards for determining the proportion of the subdivision to be dedicated and the amount of the fee to be paid. The City has a Quimby Fund as well as a Parks Facilities Fee to fund parks construction.

Community Facilities District

The Community Facilities Act (more commonly known as Mello-Roos) was enacted by the California Legislature in 1982. The Act enabled Community Facilities Districts (CFDs) to be established by local government agencies as a means of obtaining community funding. Counties, cities, special districts, joint powers authorities, and school districts use these financing districts to pay for public works and some public services such as community centers and parks. The City has ten CFDs that provide funding for such projects.

Parks, Recreation, and Open Space Master Plan for the City of Chino Hills

The Parks, Recreation & Open Space Master Plan is the City's implementation program for acquisition, development, and use of future park and recreation facilities and programs.

Trails Element or Trails Master Plan

The Trails Master Plan is the City's guide for the planning, development, maintenance, and use of the City's trails network.

Chapter 16.18 of the Municipal Code - Recreation and Open Space District

The recreation and open space (OS) district is established to provide public open space areas for active and passive recreational use. This zone district applies to public open space lands that have been acquired in fee ownership by the City

or other public agency, and includes public recreational facilities and passive parks, as well as the Chino Hills State Park.

4.12.3 Project Components Relevant to Public Services

The City's existing Parks, Recreation and Open Space Element of the General Plan was updated and adopted in 2008. It is considered to be sufficient to address the City's long-range needs. A new update is not being proposed at this time and is not included in the General Plan Update project. Because the City is nearing build-out, the need for new educational facilities has not been identified by CVUSD or the City, and consequently the General Plan Update does not contain policies specific to planning for future school sites. Policies of the General Plan Update relevant to Public Services address fire and police services and are included in the Safety Element.

1. Proposed Safety Element Update Goals, Policies and Actions

Pursuant to §65302(g) of the *California Government Code*, the Safety Element addresses fire and police services. Within the proposed General Plan Update Safety Element, the following goals, policies, and actions would apply to fire and police services. The goals, policies, and actions listed below are new provisions that do not appear in the City's existing General Plan Safety Element.

Goal S-3: Achieve Adequate Emergency Service [New]

Policy S-3.1: Ensure that new development has sufficient fire protection, police, and emergency medical services available. [New]

Action S-3.1.1: Require the review of development proposals to determine impacts on emergency services and ensure developments meet appropriate safety standards. [New]

Action S-3.1.2: Provide police services that are responsive to citizens' needs to ensure a safe and secure environment for people and property in the community. [New]

4.12.4 Thresholds of Significance

Significant impacts relative to public services are evaluated in this section based on Appendix G of the CEQA Guidelines, as follows:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of these public services: Fire protection? Police protection? Schools? Parks? Other public facilities?

4.12.5 Project Impacts

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of these public services: Fire protection? Police protection? Schools? Parks? Other public facilities?

Impact Discussion

Growth projections for the proposed General Plan Update were prepared by the City of Chino Hills Community Development Department. These projections indicate that the City population will grow from a current population of 76,240 to a

build-out population of 94,895, which is an increase of 18,655 persons or 24%. The change to General Plan build-out will be incremental, based on economic and market factors, and will result in public service demand increases over the next 20 years.

Fire Protection

CVIFD indicates its desired ratio is 0.93 firefighters per resident and 0.47 paramedics per resident, and desired response time is within 6:00 minutes for 90% of the calls.[95] To accommodate build-out development under the City's existing General Plan, CVIFD estimates that two additional stations in Chino Hills will be needed with the possibility of an additional one station near the western boundary of the City depending on development in the Tres Hermanos area along Grand Avenue.

Sites for two of future fire stations were identified by CVIFD in its 2012 Master Plan. These sites are Woodview Avenue and Pipeline, and Eucalyptus west of Chino Hills Parkway. The potential third fire station along Grand Avenue is not identified in the Master Plan. To equip and staff these stations, the Master Plan identifies one engine and four firefighter/paramedic personnel per station, (10) consistent with the current delivery model. As discussed previously in this EIR, the differences between the proposed General Plan Update and the existing General Plan are very moderate and include an increase of 780 residential units to meet the City's RHNA obligation, and a decrease of 269,000 non-residential square feet due to the redesignation of a currently designated commercial property to the new Mixed Use land use designation. Consequently, CVIFD's projection for two or three new fire stations, equipment, and staffing would remain unchanged under the proposed General Plan Update.

Mitigation Measure PS-1 is recommended for inclusion in the General Plan Update to ensure that the need for new fire stations is considered during the review for new development in the vicinity of the proposed locations of the stations at Woodview Avenue and Pipeline, Eucalyptus west of Chino Hills Parkway, and possibly Grand Avenue. Because no funding source for the construction or operation of the stations is currently identified, Mitigation Measure PS-2 will require coordination of future fire facilities with funding sources. This measure would direct the City to work with CVIFD to plan for environmental impacts associated with development of a new fire station. Environmental impacts would be analyzed during the site-specific planning and design phase of each new station, including identification of mitigation measures that may be warranted to avoid significant impacts. (11) *see attached comment

Mitigation Measures

PS-1 The City shall coordinate with the Chino Valley Independent Fire District (CVIFD) during the development review process for properties in the vicinity of the stations proposed at Woodview Avenue and Pipeline, Eucalyptus west of Chino Hills Parkway, and possibly Grand Avenue. If CVIFD demonstrates through the project planning and environmental review process that a fire station site is needed, City staff shall work with CVIFD and the project developer to identify and secure an appropriate site.

PS-2 The City shall work with Chino Valley Independent Fire District (CVIFD) to evaluate future facility needs and identify potential funding sources for identified facilities and personnel. This information shall be incorporated as deemed

[95] Information regarding future CVIFD facilities and staffing provided by Paul Segalla, Fire Chief, September 30, 2013.

COPY 1B

CHINO VALLEY INDEPENDENT FIRE DISTRICT
Special Meeting of the Board of Directors
Workshop

MINUTES
March 23, 2005

ROLL CALL

Board Members Present: Espinosa, Gray, Revane, Watson, Williams

Board Members Absent: None.

OPEN SESSION

President Gray called the Open Session to order.

FLAG SALUTE

President Gray.

PUBLIC COMMUNICATIONS

None.

NEW BUSINESS

1. FIRE DISTRICT FUTURE FACILITY NEEDS FUNDING WORKSHOP. Purpose is to discuss funding for future facility needs and equipment.

   Fire Chief Benson introduced City Manager Doug LaBelle and Finance Director Judy Lancaster from the City of Chino Hills. He also introduced City Manager Glen Rojas, Assistant City Manager Pat Griffin, and Public Works Director Pat Glover from the City of Chino. He also introduced Mike Whipple, a Financial Consultant, who was recommended by the Fire District's auditors. Fire Chief Benson thanked all participants for attending the workshop and for participating in working together to identifying future fire facilities funding.

   Fire Chief Benson reviewed the role of the Fire District and the roles of both Cities for facilities funding. He stated that the Fire District provides operations, maintenance and replacement and the Cities provide infrastructure.

Special Board Meeting
March 23, 2005
Page 2

Fire Chief Benson provided an overview of the Fire District's Master Plan cost projections for facilities and equipment and stated that the Master Plan provides a guide for growth and development to meet current and future service needs. Also, the Fire District has a Long-Range Financial Plan, which ensures financial viability for the Master Plan.

Fire Chief Benson presented a PowerPoint, which identified the facilities and equipment funding needs for both the City of Chino and City of Chino Hills. The funding needs identified, based on 2005 dollars, are $20,030,000 for the City of Chino and $16,896,000 for the City of Chino Hills at build-out. However, the District-wide need for the next four years is $20.4 million. $15,920,000 for the City of Chino and $4,500,000 for the City of Chino Hills. The $4,500,000 for the City of Chino Hills is for the new Administration Facility. The $15,920,000 for the City of Chino is for the Preserve Fire Station and Engine; Station 7 (Chino Hills Parkway/Central Ave) and Engine; relocation of Station 61 to Ross and Riverside; a Training Center; and the Fleet Maintenance Facility.

City Manager Doug LaBelle from the City of Chino Hills reviewed available City funding. The projected funding sources total $15,396,000 and the need is $16,896,000, leaving a shortfall of $1,500,000. City Manager LaBelle stated that he felt the City would be able to meet all of their obligations, with the possible exception of the $1.5 million for Administration, through the existing Development Impact Fee program and Community Facility's District authorization.

City Manager Glen Rojas and Assistant City Manager Pat Griffin from the City of Chino reviewed available City projected funding sources as $7,887,284 and the need as $20,030,000, leaving a shortfall of $12,142,716. City Manager Rojas noted that the City has revised fees to insure that new development projects, such as the Preserve, provide adequate funding to pay for the required infrastructure. The difficulty arises in securing adequate funding sources for the existing infrastructure needs.

Mike Whipple, Financial Consultant, reviewed options for funding such as bonds, community facilities districts, special benefit assessments for fire facilities and certificates of participation. Mike Whipple also answered several questions.

President Gray stated that this was the first step in working together towards identifying future facility funding needs and stated that the purpose of this workshop was to provide information and identify the next step.

After some discussion and consensus, the Board President assigned the Fire District Finance Committee members to serve as an ad hoc committee to meet with members of both Cities separately and report back to the Fire Board.

2

Special Board Meeting
March 23, 2005
Page 3

RECOMMENDATION: It is recommended that the Board of Directors receive and file this information and provide any direction to staff.

BOARD COMMENTS

None.

ADJOURNMENT

President Gray adjourned the meeting at 5:20 p.m. to the Regular Board Meeting to be held on Wednesday, April 13, 2005, 6:00 p.m., at the District Headquarters Office located at 2005 Grand Avenue, Chino Hills, CA.

APPROVED AND ADOPTED THIS 13th DAY OF APRIL 2005.

Sandra Delgado, Clerk of the Board

Ed Gray, President

3

Response to Comments from Tim Shackleford, Fire Chief, Chino Valley Fire District, Dated September 9, 2014

F-1 This comment introduces two tables outlining the Fire District's recommended changes to the General Plan Update and EIR. The recommended changes to the General Plan Update, listed in page 2 of the Fire District letter above, provide suggested language and information to clarify and correct information presented in the General Plan Update. All these changes are recommended for addition to the General Plan Update and are forwarded to the Planning Commission and the City Council for review and consideration. The recommended changes to the EIR Update, listed in pages 14 to 15 of the Fire District letter above, provide suggested language and information to clarify and correct information presented in the General Plan Update. Numbers 1 through 10 of changes are incorporated into the EIR.

Number 11 of the Fire District suggested changes state that based on a March 23, 2005 meeting with Fire and City personnel, the City had identified potential Community Facility District (CFD) funding sources for Fire District facilities. Following that March 2005 meeting, the CFD funding sources were allocated to other City facilities, including the construction of the Fire District headquarters at the City of Chino Hills civic center. At this time, no additional funding sources for future Fire District facilities within the City are identified. Mitigation Measure PS-2 is included in the EIR to provide direction to the City to work with the Fire District to evaluate and identify potential funding sources for future district facility needs. Information provided in this comment from the Fire District is incorporated into the EIR as appropriate. This information does not identify new or increased environmental impacts, and consequently, additional analysis within the EIR is not required.

G. Department of Fish and Wildlife

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov.

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

September 8, 2014

RECEIVED
SEP 16 2014
CITY OF CHINO HILLS
COMMUNITY DEVELOPMENT DEPARTMENT

Jerrod Walters
City of Chino Hills
14000 City Center Drive
Chino Hills, CA 91709

Subject: City of Chino Hills 2014 General Plan Update
Draft Environmental Impact Report
State Clearinghouse No. 2013051082

Dear Mr. Walters,

The California Department of Fish and Wildlife (Department) has reviewed the Draft Environmental Impact Report (DEIR) for City of Chino Hills 2014 General Plan Update (Project) prepared by the City of Chino Hills (Lead Agency). The Department is providing comments on the DEIR as the State agency which has statutory and common law responsibilities with regard to fish and wildlife resources and habitats. California's fish and wildlife resources, including their habitats, are held in trust for the people of the State by the Department (Fish and Game Code §711.7). The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitats necessary for biologically sustainable populations of those species (Fish and Game Code §1802). The Department's fish and wildlife management functions are implemented through its administration and enforcement of the Fish and Game Code (Fish and Game Code §702). The Department is a trustee agency for fish and wildlife under the California Environmental Quality Act (CEQA; see CEQA Guidelines, Title 14 California Code of Regulations §15386(a)). The Department is providing these comments in furtherance of these statutory responsibilities, as well as its common law role as trustee for the public's fish and wildlife.

Project Location

The City of Chino Hills is located within southwest San Bernardino County, California. The City is generally bounded by Interstate 60 to the north, Highway 71 to the east, the Santa Ana River to the south and Los Angeles County to the west.

Project Description

The Chino Hills General Plan Update consists of revisions to the existing General Plan, which was originally adopted in 1994. The updated Plan contains revisions to the Land Use Element, the Circulation Element, the Conservation Element, the Safety Element, the Noise Element, and an optional Economic Development Element. The Housing Element was updated in November 2013 in compliance with state and regional

Conserving California's Wildlife Since 1870

Draft Environmental Impact Report
City of Chino Hills 2014 General Plan Update
SCH No. 2013051082
Page 2 of 6

mandates. The General Plan Update designates the Puente Hills Area Agriculture/Ranches, which would allow for very low density residential and small-scale agricultural and ranch lifestyle uses. Approximately 41% of the City is currently developed. Land designated in the Land Use Element for Agriculture/Ranches, Very Low Density Residential, and Public and Private Open Space contains 637 acres of riparian habitats located mainly in the western perimeter, and approximately 2,801 acres of sensitive natural communities located primarily in the western and southeastern perimeters of the City.

Biological Resources and Impacts

The CEQA document should contain sufficient, specific, and current biological information on the existing habitat and species at the Project site; measures to minimize and avoid sensitive biological resources; and mitigation measures to offset the loss of native flora and fauna and State waters. The CEQA document should not defer impact analysis and mitigation measures to future regulatory discretionary actions, such as a Lake or Streambed Alteration Agreement. **G-1**

If state or federal endangered or threatened species have the potential to occur on the Project, site species specific surveys should be conducted using methods approved by the Department or assume the presence of the species throughout the project site. The CEQA document should include recent survey data (CEQA Guidelines Section 15125(a)). The CEQA document should also address species of special concern and federal critical habitat. To assist with review, an accompanying map showing the areas of impact should be included in the subsequent CEQA document. Additional maps detailing the location of endangered, threatened, or special of special concern should also be included in the subsequent CEQA document.

Project Specific Comments and Recommendations **G-2**

- General Plan Update, Page 35 Action LU-1.1.13: *In areas adjacent to Chino Hills State Park, require substantial open space buffers between the proposed development and the Park. [New].* Please add the exact location of the buffer areas, with a map showing the distance of the buffer zone between the proposed development and the park in the Final EIR.

- General Plan Update, Page 35 Action LU-1.1.14: *Discourage development intrusions on biological resources. [New].* Please provide more information on how the General Plans to discourage development intrusions on biological resources in the Final EIR.

Draft Environmental Impact Report
City of Chino Hills 2014 General Plan Update
SCH No. 2013051082
Page 3 of 6

- General Plan Update, Page 88 Action CN-1.1.7: *Use existing trees and additional tree planting to blend new development and manufactured slopes with the natural setting, especially in highly visible locations. [Existing Policy 1-6, modified]*. The Department encourages the use of native plants. Research illustrates the importance of native plants in residential yards/gardens and common areas in providing important habitat for wildlife in increasingly urban landscapes. A list of native trees suitable for this purpose should be provided on the CEQA document.

- General Plan Update, Page 88 Action CN-1.1.8: *Preserve existing significant trees where feasible, and extensively plant new trees consistent with City tree policies. [New].* As stated above, the Department encourages the use of native plant species.

- General Plan Update, Page 88 Action CN-1.2.1: *Preserve natural open spaces that act as wildlife corridors. [Existing Policy 1-1, modified]*. Please provide a map showing the natural open spaces that act as wildlife corridors within the City limits in the Final EIR.

- General Plan Update, Page 88 Action CN-1.2.2: *Discourage new development in areas that contain sensitive, rare, or endangered species, oak woodlands, chaparral, and riparian habitats. [Existing Objective 2-1]*. The Department would like to see additional information added to the final EIR regarding the plans to "discourage" new development.

- Draft EIR Page 62 Action LU-2.4.3: *Establish minimum lot sizes for clustering in the Agriculture/ Ranches areas consistent with the Rural Residential development standards, in Rural Residential areas consistent with the Low Density Residential development standards. [New]* Please include in the final EIR what the minimum lot sizes will be for clustering in the Agriculture/Ranches areas along with a map.

- Draft EIR, Page 114, Biotic Resources Overlay District. The Department recommends that a map of the conservation easements and mitigation areas that have been set aside be the city to be added to the CEQA document.

California Endangered Species Act (CESA) **G-3**

The Department is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to the CESA. The Department recommends that a CESA ITP be obtained if the Project has the potential to result in "take" (California Fish and Game Code Section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to

hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the Project. CESA ITPs are issued to conserve, protect, enhance, and restore State-listed CESA species and their habitats. The Department encourages early consultation, as significant modification to the proposed project and mitigation measures may be necessary to obtain a CESA ITP. Revisions to the California Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA ITP unless the Project CEQA document addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit.

Lake and Streambed Alteration Program

The Department has regulatory authority with regard to activities occurring in streams and/or lakes that could adversely affect any fish or wildlife resource. For any activity that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of a river or stream or use material from a streambed, the project applicant (or "entity") must provide written notification to the Department pursuant to Section 1602 of the Fish and Game Code. Based on this notification and other information, the Department then determines whether a Lake and Streambed Alteration (LSA) Agreement is required. The Department's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if necessary, the environmental document should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with the Department is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to http://www.dfg.ca.gov/habcon/1600/forms.html.

The Department's website has information regarding dryland streams in "A review of Stream Processes and Forms in Dryland Watersheds," available at this location: http://www.dfg.ca.Gov/habcon/1600/1600resources.html.

Additional information can also be found in "Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants, With the MESA Field Guide - Final Project Report" available here: http://www.energy.ca.gov/2014publications/CEC-500-2014-013/index.html.

Cumulative Impacts

The Project is proposed in a densely populated region of southern California. The regional scarcity of biological resources may increase the cumulative significance of

Project activities. Cumulative effects analysis should be developed as described under CEQA Guidelines Section 15130. Please include all potential direct and indirect project related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis.

Alternatives Analysis

The CEQA document should analyze a range of fully considered and evaluated alternatives to the Project (CEQA Guidelines Section 15126.6). The analysis should include a range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources. The Department considers Rare Natural Communities as threatened habitats, having both local and regional significance. Thus, these communities should be fully avoided and otherwise protected from Project-related impacts. The CEQA document should include an evaluation of specific alternative locations with lower resource sensitivity where appropriate. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitat should be addressed.

Please note that the Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

Thank you for the opportunity to provide comments on the Draft EIR. Please contact Heather Weiche with questions regarding this letter and further coordination on project permitting needs at (909) 980-8607 or heather.weiche@wildlife.ca.gov.

Sincerely,

for Kimberly Nicol,
Regional Manager
Inland Deserts Region
California Department of Fish and Wildlife

cc: State Clearinghouse
CHOR

Response to Comments from Kimberly Nicol, Regional Manager, Inland Deserts Region, California Department of Fish and Wildlife, Dated September 8, 2014

G-1 This comment states that the CEQA document should contain sufficient, specific, and current biological information on the existing habitat and species and mitigation measures to offset impacts. A comprehensive biological resource survey was prepared in support of the General Plan Update and is included in Appendix D of the EIR. Section 4.4 of the EIR summarizes the findings of the survey, including the finding that biological resources within Chino Hills are mostly found within the designated Open Space and undeveloped Agriculture/Ranches areas. Figures 4-2 and 4-3 of the EIR map the locations of potential biological resources. The EIR also presents the proposed General Plan Update provisions that address biological resources, including Policy CN-1.2.1 to preserve and protect Chino Hills' biological resources. As discussed in Response to Comment E-1 above, Conservation Element Action CN-1.2.2 discourages new development in areas that contain sensitive, rare, or endangered species, oak woodlands, chaparral, and riparian habitats, which further reduces potential impacts. Any land owner engaged in modification of the natural landscape is obligated to comply with federal and state regulations to protect candidate, sensitive, or special status species. Whenever special status species could be impacted, consultation/coordination with the pertinent state and federal resource agencies would be undertaken to determine the level of impact significance and appropriate avoidance or mitigation measures. Such measures may include alternative designs and/or offsetting and compensating measures such as habitat replacement on and off-site. The EIR finds that implementation of the General Plan Update and continued compliance with federal and state regulations to protect special status species, along with continued administration of the City's local CEQA procedures, are expected to avoid significant impacts to biological resources. This comment from the Department of Fish and Wildlife does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

G-2 This comment provides project comments and recommendations. Each of comment and recommendation is addressed below. However none of the information provided by the Department in this comment provides new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

- *General Plan Update, Page 35 Action LU-1.1.13: In areas adjacent to China Hills State Park, require substantial open space buffers between the proposed development and the Park. Please add the exact location of the buffer areas, with a map showing the distance of the buffer zone between the proposed development and the park in the Final EIR.*

  Response: The General Plan establishes the policies to guide future development which must occur consistent with the City General Plan through the City's site plan review process. To establish the appropriate dimensions for the substantial open space buffers, site specific planning would be required. The appropriate dimensions for open space buffers will be determined at the time future development proposals adjacent to Chino Hills State Park are submitted to the City for review.

- *General Plan Update, Page 35 Action LU-1.1.14: Discourage development intrusions on biological resources. Please provide more information on how the General Plans (sic.) to discourage development intrusions on biological resources in the Final EIR.*

  Response: The General Plan establishes the policies to guide future development, which must occur consistent with the City General Plan through the City's site plan review process. As discussed in Response to Comment G-1 above, any land owner engaged in modification of the natural landscape is obligated to comply with federal and state regulations to protect candidate, sensitive, or special status species. Whenever special status species could be impacted, consultation/coordination with the pertinent state and federal resource agencies would be undertaken to determine the level of impact significance and appropriate avoidance or mitigation measures. Such measures may include alternative designs and/or offsetting and compensating measures such as habitat replacement on and off-site.

- *General Plan Update, Page 88 Action CN-1.1.7: Use existing trees and additional tree planting to blend new development and manufactured slopes with the natural setting, especially in highly visible locations. The Department encourages the use of native plants. Research illustrates the importance of native plants in residential yards/gardens and common areas in providing important habitat for wildlife in increasingly urban landscapes. A list of native trees suitable for this purpose should be provided on the CEQA document.*

  Response: The General Plan establishes the policies to guide future development, which are further implemented through City ordinances and its planning and environmental review policies. The City retains a list of appropriate native trees and plants, with site specific recommendations provided at the site planning level.

- *General Plan Update, Page 88 Action CN-1.1.8: Preserve existing significant trees where feasible, and extensively plant new trees consistent with City tree policies. As stated above, the Department encourages the use of native plant species.*

  Response: The General Plan establishes the policies to guide future development which are further implemented through City ordinances (including Chapter 16.90, Tree Preservation, of the City Municipal Code) and its planning and environmental review policies.

- *General Plan Update, Page 88 Action CN-1.2.1: Preserve natural open spaces that act as wildlife corridors. Please provide a map showing the natural open spaces that act as wildlife corridors within the City limits in the Final EIR.*

  Response: As discussed in Response to Comment G-1 above, Figures 4-2 and 4-3 of the EIR map the locations of potential biological resources and together form the City of Chino Hills Biotic Resources overlay district identified in Section F.2 of the Circulation Element Update.

- *General Plan Update, Page 88 Action ON-1.2.2: Discourage new development in areas that contain sensitive, rare, or endangered species, oak woodlands, chaparral, and riparian habitats. The Department would like to see additional information added to the final EIR regarding the plans to "discourage" new development.*

  Response: The General Plan establishes the policies to guide future development which must occur consistent with the City General Plan through the City's site plan review process. As discussed in Response to Comment G-1 above, any land owner engaged in modification of the natural landscape is obligated to comply with federal and state regulations to protect

candidate, sensitive, or special status species. Whenever special status species could be impacted, consultation/coordination with the pertinent state and federal resource agencies would be undertaken to determine the level of impact significance and appropriate avoidance or mitigation measures. Such measures may include alternative designs and/or offsetting and compensating measures such as habitat replacement on and off-site.

- *Draft EIR Page 62 Action W-2.4.3: Establish minimum lot sizes for clustering in the Agriculture/ Ranches areas consistent with the Rural Residential development standards, in Rural Residential areas consistent with the Low Density Residential development standards. Please include in the final EIR what the minimum lot sizes will be for clustering in the Agriculture/Ranches areas along with a map.*

  Response: As presented in Section 4.1.3 of the EIR, Action LU-2.4.3 of the General Plan Update states:" Establish minimum lot sizes for clustering in the Agriculture/Ranches areas consistent with the Rural Residential development standards, in Rural Residential areas consistent with the Low Density Residential development standards." The proposed General Plan Update Land Use Map that designates Agriculture/Ranches and Rural Residential Areas is included in Figure 2-2 of the EIR and the minimum lot sizes for each residential zone are provided in Section 16.10 of the Municipal Code Table 20-1.

- *Draft EIR, Page 114, Biotic Resources Overlay District, the Department recommends that a map of the conservation easements and mitigation areas that have been set aside be the city to be added to the CEQA document.*

  Response: As discussed in Response to Comment G-1 above, Figures 4-2 and 4-3 of the EIR map the locations of potential biological resources and form the City's Biotic Resource overlay. The proposed General Plan Update Land Use Map that designates Public and Private Open Spaces is included in Figure 2-2 of the EIR, which encompass existing and planned mitigation areas and conservation easements.

G-3 This comment summarizes the Department responsibility relative to the California Endangered Species Act (CESA) and notes that the Department must issue a separate CEQA document for the issuance of a CESA permit unless the Project CEQA document addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. This statement is consistent with information presented in the EIR, which finds that implementation of the General Plan Update and continued compliance with federal and state regulations to protect special status species, along with continued administration of the City's local CEQA procedures, are expected to avoid significant impacts to biological resources. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

G-4 This comment summarizes the Department responsibility relative to the Lake and Streambed Alteration Program (LSA) and notes that the Department's issuance of an LSA is a project pursuant to CEQA. This statement is consistent with information presented in the EIR, which finds that implementation of the General Plan Update and continued compliance with federal and state regulations to protect special status species, along with continued administration of the City's local CEQA procedures, are expected to avoid significant impacts to biological resources. This comment does not provide new environmental information that could result in new or increased

environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

G – 5 This comment requests that the EIR include all potential direct and indirect project impacts relative to cumulative impacts to biological resources. As discussed in Response to Comment E-5 above, relative to cumulative impacts to biological resources, the EIR finds that no significant impacts have been identified, and no mitigation measures are required beyond the City's existing CEQA procedures, adherence to Conservation Element policies and actions, and compliance with existing state and federal regulatory frameworks to protect biological resources. Impacts that could occur throughout the City have been considered, and there is no indication that the General Plan Update could have a significant impact on biological resources outside of the City or on regional resources that occur within and beyond the City. While there will likely be some adverse impacts to biological resources as a result of conversion of undeveloped land to various types of land uses permitted by the proposed Land Use Element, cumulative impacts would be less than significant. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

G-6 This comment states that the CEQA document should analyze a range of fully considered and evaluated alternatives to the Project (CEQA Guidelines §15126.6). The analysis should include a range of alternatives that avoid or otherwise minimize impacts to sensitive biological resources. As discussed in the EIR, non-residential land uses are 75% built-out, and residential land uses are 83% built-out. Given the limited area for future development, there are few build-out alternatives that are feasible and/or achieve all or most of the City's above-listed Vision Statements. However, despite these limitations, the City has carefully considered several alternative strategies to manage long-term growth and achieve its vision. Relative to biological resources, the EIR finds that no significant impacts to biological resources would occur due to the General Plan Update, and that the project and existing General Plan alternative would be highly similar relative to biological resources impacts because the existing and proposed plans have essentially the same distribution of urban and open space lands. All of the same requirements for assessment of biological resources, identification of potential impacts, and measures to mitigate significant impacts for new land development projects would apply to either alternative. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

H. Department of Parks and Recreation

State of California • Natural Resources Agency
Edmund G. Brown Jr., *Governor*
DEPARTMENT OF PARKS AND RECREATION
Lisa Ann L. Mangat, *Acting Director*
Inland Empire District
17801 Lake Perris Drive
Perris, CA 92571

September 5, 2014

Jerrod Walters
Associate Planner
City Hall
14000 City Center Drive
Chino Hills, CA 91709

Subject: Comments on the Draft Environmental Impact Report (DEIR) for the City of Chino Hills General Plan Update, SCH# 2013051082

Dear Mr. Walters:

The Inland Empire District of the Department of Parks and Recreation (State Parks) appreciates the opportunity to comment on the aforementioned project. State Parks is a trustee agency as defined by the California Environmental Quality Act (CEQA). State Parks' mission in part is to provide for the health, inspiration, and education of the people of California by preserving the state's extraordinary biodiversity and creating opportunities for high quality outdoor recreation. As the office responsible for the stewardship of Chino Hills State Park (Chino Hills SP), we have an interest and concern about contemplated alterations of land use adjacent to the park.

We oppose the Land Use Designation, Agriculture/Ranches, as written in the General Plan Update which would provide for 0.2 dwelling units per acre. An increase in the density allowed by Measure U may significantly impact Chino Hills SP. We encourage the City to revise the Land Use Designation categories to be in conformity with Measure U. **H-1**

Chino Hills SP is recognized as the cornerstone of the Puente-Chino hills Wildlife Corridor. The potential development of the Tres Hermanos property and the potential construction of Tonner Canyon Road in the vicinity of the Tres Hermanos property will impact the overall functionality of the corridor. Pressure increases on the remainder of the natural landscape when outlying wildlands are developed or separated. The General Plan and DEIR should include policies that indicate the importance of wildlife movement areas and aim for their protection. Additionally, policies should be included that intend to protect areas adjacent to protected open space areas, such as Chino Hills SP, from being over-developed. **H-2**

Chino Hills SP is valued largely for its aesthetic values. The General Plan and DEIR should include language geared toward prohibiting development on ridgelines and other areas that would be visible from within the park. **H-3**

Thank you for your serious consideration. Feel free to contact me or Enrique Arroyo at (951) 453-6848.

Sincerely,

Kelly Elliott
District Superintendent

Response to Comments from Kelly Elliot, District Superintendent, State of California Department of Parks and Recreation, Inland Empire District, Dated September 5, 2014

H-1 This comment states the Department's opposition to the Agriculture/Ranches designation, which provides for 0.2 dwelling units per acre, and questions the designation's relation to Measure U. The proposed General Plan Update does not change the Agriculture/Ranches designation or density adjacent to Chino Hills State Park from that of the existing general plan and zoning, so this is not an amendment that needs to be studied in the EIR. The Department appears to be addressing a proposed change in the Zoning Map that would delete a current note on the Map that limits density in the Agriculture/Ranches zoned area west of Chino Hills State Park to a 40-acre minimum. The General Plan Update includes the proposed deletion of this existing Zoning Map note to create consistency between the General Plan and the Zoning Map. However other provisions of the proposed General Plan Update effectively limit density in the southeastern portion of the area (reference General Plan policies LU-1.1.4, 1.15, 1.17, and 1.18). Because the General Plan designation of the area does not change, no violation of Measure U occurs. However, to clarify that the density of the area remains at 1 unit to 40 acres, the proposed General Plan Update Land Use Map and the proposed Zoning Map are revised to relabel the area Agriculture/Ranches-40 and Agriculture-Ranch-40 (R-A-40), respectively. The Final General Plan Update and Final the EIR (notably Tables 2-1 and 2-2 and Section 4.1.3) includes the proposed Agriculture/Ranches-40 designation and recalculates residential build-out based on existing development, approved plans, and in the case of undeveloped and uncommitted land, based on typical City development patterns of 62.5% of maximum site development potential. This results in an expected residential build-out of 29,026 dwelling units, a 574-unit reduction to the 29,600 DU build-out presented in the draft General Plan Update and analyzed in the EIR as indicated in Table 2-2 of the EIR. The reduction in units would reasonably result in less traffic and other impacts (such as air quality, greenhouse gas emissions, and public services) than estimated in the EIR. Consequently, this change would not result in new or increased environmental impacts from those analyzed in the EIR. Therefore, it does not warrant additional information or analysis within the EIR. (Revised EIR and General Plan sections reflecting these changes are included at the end of this section.)

Note: During the public hearing on the General Plan Update, the Planning Commission received testimony from property owners and environmental interests regarding the proposed redesignation of the southeastern portion of the City to Agriculture/Ranches 40 in both the General Plan Update and the proposed Zoning Map. As part of the public process, the Planning Commission carefully considered all concerns and determined at its January 20, 2015 meeting that the public's interest is best served at this time by retaining the designation in the General Plan and the Zoning Map currently in existence, including the current policies, procedures, and legislative intent of the current General Plan and Zoning Map. The Planning Commission voted to forward this recommendation to City Council along with a recommendation that staff be directed to research this issue and work with the property owners and the community to recommend an action to the Planning Commission to clarify the area's density. Therefore, at this time, the General Plan Update Land Use Map will not be revised to relabel the area Agriculture/Ranches-40, the Zoning Map will not be revised to relabel the area Agriculture-Ranch-40 (R-A-40), and the Zoning Map will retain the existing zoning.

H-2 This comment states that the potential development of the Tres Hermanos property and the potential construction of Tonner Canyon Road could impact the overall functionality of the Puente-Chino Hills Wildlife Corridor. This comment goes on to state that the General Plan and the

EIR should include policies that indicate the importance of wildlife movement areas, including protection of open space areas adjacent to Chino Hills State Park. Section 4.4 of the EIR contains an assessment of potential impacts to wildlife corridors, including the opportunities for local and regional wildlife movement such as to and from Chino Hills State Park and the Puente Hills area. The General Plan Update designates the land surrounding these corridors for Open Space or Agriculture/Ranches, which is the lowest density land use designation within the City. Both the Open Space designation and the Agriculture/Ranches designation allow for protection of biologically sensitive areas. The General Plan Update proposes to change an area within the Tres Hermanos area to a mix of high density residential and commercial, and recognizing the unique nature of Tres Hermanos, also contains a policy that requires the area be master planned. Regarding Tonner Canyon Road, the General Plan Update retains Tonner Canyon Road as a potential road within its Roadway Plan, recognizing the uncertain nature of a Tonner Canyon Road. The General Plan Update contains numerous provisions to protect the City's biological resources and Chino Hills State Park, including those provided under General Plan Update Goal LU-1, "Protect Chino Hills' Natural Environment", and Goal CN-1 "Preserve Chino Hills' Rural Character". Issues regarding the Tres Hermanos area, Tonner Canyon Road, and wildlife corridors are further discussed in Response to Comments I-1 through I-11 below. This comment from the State Department of Parks and Recreation addresses the General Plan Update rather than the EIR. It does not provide any new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

H-3 This comment states that the General Plan and the EIR should include language geared toward prohibiting development on ridgelines and other areas that would be visible from Chino Hills State Park. The General Plan Update includes numerous policies to protect ridgelines and areas adjacent to Chino Hills State Park, including:

- Action LU-1.1.2: Discourage new development from obstructing public views of extremely prominent ridgelines, prominent ridgelines, knolls, significant open spaces, or important visual resources as identified in the Municipal Code.
- Action LU-1.1.4: Continue to require ridgelines and natural slopes to be dedicated and maintained as open space as required by the Municipal Code.
- Action LU-1.2.1: Continue to protect City-designated extremely prominent ridgelines, prominent ridgelines, and knolls from intrusion by development.
- Action LU-1.2.2: Require buildings to be designed and to utilize materials and colors to blend with the natural terrain in hillside areas and adjacent to public open spaces, extremely prominent ridgelines, prominent ridgelines, knolls, or important visual resources as identified in the Municipal Code.
- Action CN-1.1.3: Preserve as much open space as possible along canyon roadways such as Carbon Canyon, Soquel Canyon, and the canyons adjacent to Chino Hills State Park.
- Action LU-1.1.6: Cluster development where appropriate to minimize grading, and roadway and driveway intrusions into sensitive habitat areas, open spaces, and Chino Hills State Park.
- Action LU-1.1.13: In areas adjacent to Chino Hills State Park, require substantial open space buffers between the proposed development and the Park.
- Action LU-1.2.5: Develop new development in such a way that it is not visible from the visitor center, the campgrounds, the parking areas, and the floors of Aliso, Telegraph and tributary canyons within the Chino Hills State Park.

The EIR presents these policies and finds their implementation will contribute to the protection of biological and aesthetics resources within the City. This comment does not provide any new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

I. Wildlife Corridor Conservation Authority

WILDLIFE CORRIDOR CONSERVATION AUTHORITY
570 WEST AVENUE 26, SUITE 100, LOS ANGELES, CALIFORNIA 90065
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CITY OF CHINO HILLS
COMMUNITY DEVELOPMENT DEPARTMENT

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September 5, 2014

Jerrod Walters
Senior Planner
City of Chino Hills
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Draft Environmental Impact Report for the City of Chino Hills 2014 General Plan Update (SCH# 2013051082)

Dear Mr. Walters:

The Wildlife Corridor Conservation Authority (WCCA) was created to provide for the proper planning, conservation, environmental protection and maintenance of the habitat and wildlife corridor between the Whittier-Puente Hills, Chino Hills, and the Cleveland National Forest in the Santa Ana Mountains. The City of Chino Hills contains hundreds of acres critical to this natural system. We offer the following comments on the Draft Environmental Impact Report (DEIR) for the City of Chino Hills 2014 General Plan Update.

The General Plan and DEIR are deficient for not recognizing habitat linkages and wildlife movement in and around the City, and the potentially significant adverse impacts to those resources in the City, notably in upper Tonner Canyon. The General Plan lacks policies or actions, and the DEIR lacks mitigation measures, to address the unavoidable, significant adverse impact of isolating the northern-most extent of Chino Hills core habitat area. This severing of the habitat would occur as a result of potential build-out from the proposed increase in density along Grand Avenue ("Tres Hermanos sites 1, 2, and 3"). The General Plan and DEIR are further deficient in failing to address the habitat fragmentation that would occur from the proposed extension of Tonner Canyon Road. I-1

In addition, the General Plan and DEIR are lacking for not recognizing existing, known wildlife movement areas, notably freeway crossing structures along State Route (SR) 71 (see Lyren 2001). Build-out of the General Plan could result in development of undeveloped parcels along and near SR-71, adversely affecting known wildlife movement in this area. The General Plan and DEIR do not account for this. I-2

As background, the 31-mile long Puente-Chino Hills wildlife corridor has been extensively studied because of its biological significance (e.g., see list in Table 1 in Conservation Biology Institute, 2005). The Puente-Chino Hills represent a continuous series of undeveloped open spaces

consisting of both private and public lands, extending west from CA Route 91 in Orange and Riverside Counties to I-605 in Los Angeles County (Haas and Crooks 1999). Chino Hills State Park, at over 14,100 acres is the largest anchor of the Puente-Chino Hills system; in addition, 4,000 acres have been preserved in the Puente Hills.[1] The wildlife corridor exists as a single ecosystem in which changes that affect one part may also affect all other parts. Specifically relating to the General Plan, upper Tonner Canyon, within the City of Chino Hills, has been identified as part of the "Missing Middle," a collection of key unprotected lands in the wildlife corridor (CBI 2005).

Proposed New General Plan Land Use Designations along Grand Avenue, Upper Tonner Canyon, Tres Hermanos Property I-3

Figure 1-1 - General Plan Land Use Map of the General Plan, shows proposed land use designations of Very High Density Residential, Commercial, and Mixed Use on both sides of Grand Avenue in upper Tonner Canyon, on the Tres Hermanos property. The Existing General Plan Land Use map shows a smaller area designated as Commercial. This is surrounded by Agriculture/Ranches in the existing and proposed land use figures. The area with the proposed new land use designations appears to have grown over four times in size compared with the area that is designated as commercial under the existing General Plan.

Unavoidable Significant Adverse Biological Impacts from Proposed Land Use Designations Along Grand Avenue I-4

The General Plan and DEIR are deficient for neither considering nor analyzing how the proposed plan would adversely affect the maintenance of a high quality habitat linkage between the habitat north of Grand Avenue and the central core habitat of the Chino Hills located south of Grand Avenue. If the proposed plan land uses potentially contribute to the isolation of the natural lands north of Grand Avenue (upper Tonner Canyon habitat), that is a potentially unavoidable, significant adverse biological impact.

The specific area with proposed new land use designations is located precisely in the freshwater emergent wetlands of Tonner Canyon that straddle Grand Avenue. The DEIR is deficient for not addressing how the subject new land designations could directly and indirectly eliminate or damage the subject drainages, shown as supporting southern willow scrub (General Plan Figure 4-1).

This area of Upper Tonner Canyon on the Tres Hermanos property is also of regional biological significance because it has been identified as part of the "Missing Middle," a

[1] http://www.chinohillsstatepark.org/about-chino-hills-sp/wildlife-corridor

collection of unprotected land within the Puente-Chino Hills wildlife corridor (CBI 2005). Tres Hermanos is a group of properties owned by the City of Industry or its related agencies. The benefits of existing investments in protecting the Puente-Chino Hills wildlife corridor are severely threatened by proposed development projects, including new roads, housing developments, golf courses, and reservoirs. Those threats are most urgent in the "Missing Middle" (CBI 2005).

This area where the new land use designations are proposed in upper Tonner Canyon is also biologically significant for its bird species. According to Cooper (2000), the unprotected grassland along upper Tonner Canyon straddling the Los Angeles/San Bernardino county boundary is rated as a conservation priority for birds in the region owing to their large size, their unprotected status, and the large number of declining species they support. Several sensitive breeding birds are listed as known or likely to occur. According to Cooper (2000):

> The most significant open space lies within San Bernardino on an active cattle ranch, visible from Grand Ave. Extending from near State Route 60 south to the eastern edge of the Firestone Boy Scout Reserve, this area includes a freshwater marsh (at Grand Ave.) that supports the only pair of the Northern Harrier and colony of the Tricolored Blackbird known in the study area. Other raptors nesting locally, including the Golden Eagle and White-tailed Kite, regularly forage here during the breeding season, and all the characteristic grassland birds occur.

Furthermore, the sensitive wildlife species, western pond turtle, is identified directly downstream of this area proposed for new land use designations (or it slightly overlaps this area) (DEIR, Figure 4-2 - CNDDB Identified Special Status Species in Chino Hills).

Land Use Policy Impacts from New Land Use Designations Along Grand Avenue, Upper Tonner Canyon, Tres Hermanos Property I-5

From a land use perspective, we suggest that the new proposed land use designations along Grand Avenue are not consistent with the proposed General Plan. The Land Use section of the Final Environmental Impact Report (FEIR) should fully address the inconsistencies with the following measures resulting from this proposed increase in density in upper Tonner Canyon (see Table 4-6, DEIR, p. 4-17; p. 4-62):

- Policy LU-1.1: Preserve Chino Hills' Rural Character by Limiting Intrusion of Development into Natural Open Spaces.
- Action LU-1.1.6: Cluster development where appropriate to minimize grading, and roadway and driveway intrusions into sensitive habitat areas, open spaces and Chino Hills State Park.
- Action LU-1.1.14: Discourage development intrusions on biological resources.

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- Policy CN-1.2: Preserve and protect Chino Hills' biological resources.
- Action CN-1.2.1: Preserve natural open spaces that act as wildlife corridors.
- Action CN-1.2.2: Discourage new development in areas that contain sensitive, rare, or endangered species, oak woodlands, chaparral, and riparian habitats.
- Action CN-1.2.3: Preserve oak woodlands, riparian areas, and fresh water marshes to the maximum extent feasible.

Proposed Extension of Tonner Canyon Road I-6

Figure 2-1 - Roadway Plan of the General Plan shows a proposed Tonner Canyon Road "Corridor (Exact alignment and size to be determined)" across Grand Avenue and through the undeveloped portion of upper Tonner Canyon on the Tres Hermanos property. The proposed extension of Tonner Canyon Road as shown in the General Plan would further fragment the habitat in upper Tonner Canyon. The DEIR is deficient for not adequately identifying and analyzing these potentially significant biological impacts from the construction and operation of this proposed new road though upper Tonner Canyon. Those potential impacts must also be considered cumulatively with any General Plan changes to land use intensity in the subject area.

Roads are known to have disastrous impacts on wildlife movement and other ecological processes and resources. Roads or the traffic they carry can kill animals directly (roadkill), disrupt natural migration and movement patterns, interfere with species communication, change water runoff and flow patterns, and create air, water, and soil pollution (multiple sources cited in CBI 2005). One of the principal factors contributing to habitat fragmentation has been the construction of roadways (Meffe et al. 1997, as cited in Haas and Crooks 1999). Roads can create barriers for animals (e.g., mammals) attempting to move between patches, increase mortality (i.e., by collisions with vehicles), and can create deleterious edge effects. In addition, this proposed road appears to conflict with General Plan Action LU 1.1.6, which states "Cluster development where appropriate to minimize grading, and roadway and driveway intrusions into sensitive habitat areas, open spaces, and Chino Hills State Park."

Given the biological significance of this area and the known detrimental effects to biological resources from new roads, WCCA recommends that the proposed Tonner Canyon Road be eliminated from the General Plan. If the City chooses to retain the proposed road in the plan, then the City must provide a justification in the General Plan for proposing this corridor. At the very least, an alternative must be included and analyzed in the FEIR that does not include this new road alignment. Respectfully, the DEIR should be amended and recirculated.

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Need to Identify Habitat Linkages and Wildlife Corridors in Upper Tonner Canyon and to Address Unavoidable, Significant Adverse Biological Impacts I-7

The General Plan and DEIR will continue to be deficient unless they depict and designate the habitat linkages and wildlife corridors that could potentially be adversely impacted by build-out of the General Plan. The DEIR does not address any intra-City or City boundary habitat linkage issues. At a minimum, a Supplemental Environmental Impact Report should be prepared to address this issue and circulated for public comment. The new California Environmental Quality Act (CEQA) document must include mitigation measures that adequately demonstrate how important habitat linkages and wildlife corridors will be maintained in perpetuity.

An obvious habitat linkage area not addressed in the General Plan and DEIR is between the headwaters of Tonner Canyon northward through the Tres Hermanos property in City of Diamond Bar, under the Pomona Freeway (SR-60), into the open space drainages in the Philips Ranch development, and then to the oak woodland system preserved north of SR-60.

Any subsequent CEQA document shall remain deficient if its assessment of existing habitat linkages and wildlife corridors does not factor in property ownership, zoning and land use designation (including Tres Hermanos Site A within City of Diamond Bar[2]), status of existing entitlements, and vegetation types within an approximately 3.5-mile radius north and south of the proposed Tres Hermanos sites 1,2, and 3. This analysis should be used by the City to identify the most likely areas that can be retained as a habitat linkage. This 3.5-mile area to the north and south of Grand Avenue would cover the habitat linkage described above to the northward beyond SR-60, and would span to the southern boundary of the Boy Scouts property in Tonner Canyon to the south.

This analysis of existing habitat linkages must include a spatial recognition of these habitat linkages and wildlife corridors using one or more figures. For example, an aerial photo overlain with the cities' boundaries could clearly show existing open space, along with arrows showing habitat linkages to open space to the north and south of Grand Avenue. Existing crossings for freeways and major roads (underpasses and overpasses) and other known areas where wildlife cross major roads should be shown.

The City must demonstrate in the General Plan and FEIR how it will maintain in perpetuity a connection of habitat between the open space north of Grand Avenue to the open space

[2]According to the City of Diamond Bar Draft 2013-2021 Housing Element (November 2013), the Tres Hermanos parcel 8701-022-273, Site A, was zoned for 30 units/acre on 16.5 acres of 30 acres, totaling 490 lower income units.

south of Grand Avenue, preferably along the existing Tonner Canyon drainage. Any habitat linkage to be retained within this area of proposed new land use designations (Tres Hermanos sites 1, 2, and 3) must be wide enough with sufficient buffer to maintain its high quality ecological function. This habitat linkage must be retained within this newly zoned area, while not compromising the habitat linkage along the eastern side Grand Avenue (just east of the proposed newly zoned area).

Also, a policy must be included in the General Plan and a mitigation measure added to the FEIR which requires and clarifies permanent protection of open space, in order to maintain ecologically functional habitat linkages in the upper Tonner Canyon area. The following action is proposed for the General Plan, which should also be incorporated as a mitigation measure in the FEIR: I-8

> NEW Action CN-1.2.7: For proposed developments along Grand Avenue on the Tres Hermanos property, open space as part of any remaining habitat linkage must be protected via recordation of a conservation easement or fee title dedication to a public park or land conservation agency with demonstrated experience in managing land for permanent protection of biological resources. A homeowners association is not an appropriate entity to accept such conservation easement or dedication. Such recordation shall occur prior to vegetation clearing or construction. Such open space shall be located such that it preserves an ecologically functional north-south habitat linkage through the Tres Hermanos sites 1,2, and 3.

There will continue to be an unavoidable, significant impact if the General Plan and FEIR do not provide a mechanism for maintaining a high quality habitat linkage zone connecting the habitat areas north and south of Grand Avenue at Tres Hermanos sites 1, 2, and 3, while still protecting the eastern linkage.

Need for Wildlife Movement Studies I-9

The General Plan and DEIR are deficient for not recognizing habitat linkages, wildlife movement areas, and freeway crossing structures, particularly across SR-71 (see Lyren, 2001). The General Plan and DEIR are inadequate for failing to require a wildlife movement study for projects where there are potentially significant adverse impacts to wildlife movement. Requiring surveys of sensitive species (General Plan Action CN-1.2.6) is certainly a far cry from being an adequate level of study. An analysis of wildlife movement is is particularly important for the upper Tonner Canyon, Tres Hermanos area. This is also important for the undeveloped land around Butterfield Ranch Road and State Route 71, due to the known wildlife movement across and around SR-71 (see Lyren, 2001). In particular, a wildlife movement study should be required specifically for developments

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along SR-71. The following action should be included in the General Plan and reiterated in the FEIR as a mitigation measure:

> NEW Action CN-1.2.8: Require a wildlife movement study for any project potentially adversely affecting wildlife movement. This shall include identification of existing habitat linkages, wildlife corridors, wildlife movement in the vicinity, and crossing structures at freeways and major roadways. Require identification of potentially significant adverse impacts to wildlife movement. Require project design changes, and avoidance, minimization, and mitigation measures, where appropriate. Require wildlife movement study for all projects resulting in development of open space within 2,000 feet of SR-71.

Need to Address Biological Impacts from New or Extended Roadways I-10

Specifically, for new roads proposed through open space lands, an action should be included in the General Plan to address potentially significant impacts to wildlife movement. This is particularly important for the proposed Tonner Canyon Road through upper Tonner Canyon. This also is relevant for the other proposed roads, including the extension of Pine Avenue to the eastern City boundary, and the extension of Soquel Canyon Parkway through open space, westerly to Peyton Drive (General Plan, p. 2-8). (See coyote use in Lyren 2001 around the vicinity of Butterfield Ranch Road/SR-71, near Pine Avenue.) The following action item should be added to the General Plan and included as a mitigation measure in the FEIR:

> NEW Action CN-1.2.9. Require that applicants proposing new or extended roads complete a wildlife movement study which includes at a minimum: an assessment in and around the project site of existing wildlife movement areas, habitat linkages, wildlife corridors, and crossings at existing freeways and major roadways; an analysis of potential impacts to wildlife movement, including how the new road fragments the habitat; and recommended project design changes and avoidance, minimization, and mitigation measures to offset potentially significant adverse impacts to wildlife movement. For a new or extended roadway that is anticipated to result in a significant adverse impact to wildlife movement, require project design changes and/or avoidance, minimization, and/or mitigation measures which could include, but not be limited to: construction of wildlife crossings (e.g., underpass, overpass), fencing to guide wildlife, native plant restoration, and/or a lighting plan (to ensure that any new lighting does not deter wildlife through remaining habitat linkages).

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Protection of Open Space Near Chino Hills State Park **I-11**

Chino Hills State Park, at over 14,100 acres, is the largest habitat anchor of the Puente-Chino Hills system. The General Plan should clarify the mechanism for protection of open space near the park, to ensure that it is protected in perpetuity with a primary focus of preservation of biological resources. The following underlined text should be added to Action LU-1.1.13:

> In areas adjacent to Chino Hills State Park, require substantial open space buffers between the proposed development and the Park. <u>As part of the entitlement process, require that open space buffers be protected via recordation of a conservation easement or fee title dedication to a public park or land conservation agency with demonstrated experience in managing land for permanent protection of biological resources. A homeowners association is not an appropriate entity to accept such conservation easement or dedication. As part of the entitlement process, require establishment of funding (e.g., monitoring and enforcement fund, Community Facilities District), in an amount proportion to the acres of open space, for the accepting agency to conduct monitoring and enforcement of the open space in perpetuity. Require that such recordation and establishment of funding occur prior to vegetation clearing or construction.</u>

In addition, the General Plan should be strengthened to protect viewsheds from Chino Hills State Park, specifically by deterring development of housing on ridgelines visible to the Park. The following underlined text should be added to existing Action LU-1.2.5:

> Develop new development in such a way that it is it is not visible from the visitor center, the campgrounds, the parking areas, <u>the trails,</u> and the floors of Aliso,Telegraph and tributary canyons within the Chino Hills State Park. <u>Prohibit housing and other development on ridgelines visible to Chino Hills State Park.</u>

In addition, to avoid significant, adverse water quality impacts to the park from runoff as a result of development on adjacent ridgelines, the following underlined text should be added to Action LU-1.1.6:

> Cluster development where appropriate to minimize grading, and roadway and driveway intrusions into sensitive habitat areas, open spaces, and Chino Hills State Park. <u>Prohibit development in areas adjacent to Chino Hills State Park (for example, ridgelines), which would result in urban runoff to the watershed of the Park.</u>

We appreciate your consideration of these comments. If you have any questions, please contact Judi Tamasi of our staff by phone at (310) 589-3230, ext. 121, or by email at judi.tamasi@mrca.ca.gov.

Sincerely,

Glenn Parker
Chairperson

References

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Response to Comments from Glenn Parker, Chairperson, Wildlife Corridor Conservation Authority, Dated September 5, 2014

I-1 This comment states state that the General Plan and the EIR are deficient for not recognizing habitat linkages and wildlife movement in and around the City, and the potentially significant adverse impacts to those resources in the City, notably in upper Tonner Canyon. Section 4.4 of the EIR contains an assessment of potential impacts to wildlife corridors. This section identifies the opportunities for local and regional wildlife movement, including to and from Chino Hills State Park and the Puente Hills area. The General Plan Update designates the land surrounding these corridors for Open Space or Agriculture/Ranches, which is the lowest density land use designation within the City. Both Open Space and Agriculture/Ranches designations allow for protection of biologically sensitive areas. Further, proposed Conservation Element Action CN-1.1.4 is to preserve canyon floors in natural conditions to protect wildlife habitat, supporting wildlife movement through canyon floors.

Tres Hermanos consists of approximately 2,400 acres, 1,400 of which are within the boundaries of Chino Hills. Of the 1,400 acres within Chino Hills, approximately 1,380 acres are currently designated for Agriculture/Ranches and 20 acres for Commercial. The proposed General Plan Update would expand the Commercial area to include Very High Density Residential in compliance with the City's 5th Cycle Housing Element and Mixed Use to an approximately 55-acre Mixed Residential/Commercial area. This expanded area is located along either side of Grand Avenue on relatively flat land and would not sever or substantially alter the remaining 1,345 acres of Tres Hermanos (within Chino Hills), which would remain as Agriculture/Ranches. The Mixed Residential/Commercial area would comprise 4% of the 1,345 Tres Hermanos acres. Similarly, the General Plan Update proposes to retain a potential Tonner Canyon Road alignment that is identified in the City of Chino Hills existing General Plan. The General Plan Update recognizes the uncertain nature of a Tonner Canyon Road and makes no statement regarding potential regional connections. Neither the proposed Very High Density/Mixed Use designation nor the retention of Tonner Canyon Road as a potential future roadway would impact the overall functionality of the Puente-Chino Hills Wildlife Corridor. Further, recognizing the unique nature of Tres Hermanos, the General Plan Update creates a policy requiring the area to be master planned and, as noted previously, numerous provisions to protect the City's biological resources and Chino Hills State Park. This comment does not provide any new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

I-2 This comment states that the General Plan and the EIR are deficient for not recognizing wildlife corridors. Section 4.4.1.5 of the EIR identifies existing wildlife corridors in the City. The State Route (SR-71) crossing is outside the City limits. Trail connection to this crossing is required as part of the Vila Borba Tract 16414, which was approved by the City in 2006. The connection is a project-specific condition of approval and is not affected by the General Plan Update. This comment does not provide any new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

I-3 This comment addresses the proposed Very High Residential, Mixed Use and Commercial designation and states that the area appears to have grown. As discussed in Response to Comment I-1 above, the proposed General Plan Update expands the existing approximately 20-acre commercially designated area that is located along either side of Grand Avenue on

relatively flat land to an approximately 55-acre Mixed Residential/Commercial area. As discussed in Response to Comment I-1 above, this expanded area would not impact the overall functionality of the Puente-Chino Hills Wildlife Corridor. This comment does not provide any new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

I-4 This comment states that the General Plan and the EIR are deficient for neither considering nor analyzing how the proposed plan would adversely affect the maintenance of a high quality habitat linkage between the habitat north of Grand Avenue and the central core habitat south of Grand Avenue, known as the "Missing Middle." This comment references the proposed mixed use node on the Tres Hermanos property. As discussed in Response to Comment I-1 above, Tres Hermanos consists of approximately 2,400 acres, 1,400 of which are within the boundaries of Chino Hills. Of the 1,400 acres within Chino Hills, approximately 1,380 acres are currently designated for Agriculture/Ranches and 20 acres for Commercial. The proposed General Plan Update would expand the Commercial area to include Very High Density Residential in compliance with the City's 5th Cycle Housing Element and Mixed Use. This expanded area of development is clustered on 55 acres and still comprises less than 4% of the total Tres Hermanos land in Chino Hills. This area is located along either side of Grand Avenue on relatively flat land and would not sever or substantially alter the remaining 1,345 acres of Tres Hermanos that would remain as Agriculture/Ranches. The emergent wetland noted in Figure 4-2 of the EIR occurs along the canyon. This area as well as other biological resources in the Tres Hermanos area are protected by proposed Conservation Element policies, including Action CN-1.2.6, which requires biological resource surveys prior to development proposals. This Action item is implemented by Chapter 16.28 of the Chino Hills Municipal Code, which requires the incorporation of mitigation measures as conditions of approval to protect and preserve the habitats. This comment does not provide any new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

I-5 This comment addresses land use policy impacts from new land use designation along Grand Avenue, Upper Tonner Canyon, and Tres Hermanos. As discussed in Response to Comment I-1 above, Tres Hermanos consists of approximately 2,400 acres, 1,400 of which are within the boundaries of Chino Hills. Of the 1,400 acres within Chino Hills, approximately 1,380 acres are currently designated for Agriculture/Ranches and 20 acres for Commercial. The proposed General Plan Update would expand the Commercial area to include Very High Density Residential in compliance with the City's 5th Cycle Housing Element and Mixed Use. This expanded area of development is clustered on 55 acres and still comprises less than 4% of the total Tres Hermanos land in Chino Hills. This area is located along the either side of Grand Avenue on relatively flat land and would not sever or substantially alter the remaining 1,345 acres of Tres Hermanos which would remain as Agriculture/Ranches. Similarly, the General Plan Update proposes to retain a potential Tonner Canyon Road alignment, which is identified in the City of Chino Hills existing General Plan. The General Plan Update recognizes the uncertain nature of a Tonner Canyon Road and makes no statement regarding potential regional connections. Neither the proposed Very High Density/Mixed Use designation nor the retention of Tonner Canyon Road as a potential future roadway would impact the overall functionality of the Puente-Chino Hills Wildlife Corridor. Recognizing the unique nature of Tres Hermanos, the General Plan Update creates a policy requiring the area to be master planned and, as noted previously, establishes a Biotic Resources overlay district to protect biological resources throughout the City. Proposed policies of the Land Use and Conservation Elements are internally consistent and work together to continue to protect

Chino Hills' biological resources. This comment does not provide any new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

I-6 This comment proposes the elimination of Tonner Canyon Road due to the deleterious effects of roads and, failing that, proposes that the City include an alternative without Tonner Canyon Road and recirculate the DEIR. As discussed in Response to Comment I-1 above, the General Plan Update proposes to retain a potential Tonner Canyon Road alignment, which is identified in the City of Chino Hills existing General Plan. This is not a change in the existing General Plan so does not need to be studied in the General Plan Update EIR. Therefore, no alternatives analysis is required, nor is there a need to recirculate. The General Plan Update recognizes the uncertain nature of a Tonner Canyon Road and makes no statement regarding potential regional connections. As in the existing General Plan, the precise alignment of this roadway is unknown. Policies of the proposed General Plan Update, including Action CN-1.2.6, which requires biological resource surveys prior to development proposals, will protect the overall functionality of the Puente-Chino Hills Wildlife Corridor. This comment does not provide any new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

I-7 This comment addresses the need to identify habitat linkages and wildlife corridors in Upper Tonner Canyon. As discussed in Responses to Comments I-1 and I-5 above, Section 4.4 of the EIR contains an assessment of potential impacts to wildlife corridors. This section identifies the opportunities for local and regional wildlife movement, including to and from Chino Hills State Park and the Puente Hills area. Further, the General Plan Update designates the land surrounding these corridors for Open Space or Agriculture/Ranches, which is the lowest density land use designation within the City, and contains a series of policies to protect biologically sensitive areas, including Element Action CN-1.1.4 to preserve canyon floors in natural conditions to protect wildlife habitat, supporting wildlife movement through canyon floors. The EIR finds that, with the guiding policies of the Conservation Element to preserve wildlife corridors and related habitat, and continued implementation of the City's CEQA procedures, significant impacts to wildlife movement are not anticipated as a result of the General Plan Update. This comment does not provide any new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

I-8 This comment recommends that the following Action item is added to the General Plan Update and as a mitigation measure to the EIR: "NEW Action CN-1.2.7: For proposed developments along Grand Avenue on the Tres Hermanos property, open space as part of any remaining habitat linkage must be protected via recordation of a conservation easement or fee title dedication to a public park or land conservation agency with demonstrated experience in managing land for permanent protection of biological resources. A homeowners association is not an appropriate entity to accept such conservation easement or dedication. Such recordation shall occur prior to vegetation clearing or construction. Such open space shall be located such that it preserves an ecologically functional north-south habitat linkage through the Tres Hermanos sites 1, 2, and 3."

This recommendation is incorporated into the General Plan Update and included as an additional General Plan policy within the EIR as follows:

> Action CN-1.2.7: For proposed developments within the Tres Hermanos property, protect natural open space via recordation of a conservation easement or fee title dedication to a

> public park or land conservation agency with demonstrated experience in managing land for permanent protection of biological resources. A homeowners association is not an appropriate entity to accept such conservation easement or dedication. Such recordation shall occur prior to vegetation clearing or construction. [New]

This comment does not provide any new environmental information that could result in new or increased environmental impacts. Inclusion of the suggested action item into the General Plan Update and the EIR provides further clarification to address the Wildlife Corridor Authority's concern, and is similar to other action items, so it is not significant and does not warrant additional information or analysis within the EIR.

Note: During the public consideration of the General Plan Update, the Planning Commission considered the proposed addition of Conservation Element policy CN-1.2.7 and determined at its January 20, 2015 hearing that the public's interest is best served by not including the policy because the language could conflict with future resource agency requirements. The Planning Commission voted to forward this recommendation to City Council.

I-9 This comment states that the General Plan and the EIR are deficient for not recognizing habitat linkages, wildlife movement areas, and freeway crossing structures, particularly across SR-71. This comment is addressed previously, notably in Responses to Comments I-1 and I-2 above and does not provide new information that requires additional analysis within the EIR. This comment also recommends the following action to be included in the General Plan and reiterated in the EIR: "NEW Action CN-1.2.8: Require a wildlife movement study for any project potentially adversely affecting wildlife movement. This shall include identification of existing habitat linkages, wildlife corridors, wildlife movement in the vicinity, and crossing structures at freeways and major roadways. Require identification of potentially significant adverse impacts to wildlife movement. Require project design changes, and avoidance, minimization, and mitigation measures, where appropriate. Require wildlife movement study for all projects resulting in development of open space within 2,000 feet of SR-71."

Pursuant to the CEQA Guidelines, impacts associated with wildlife corridors are a required threshold of significance within all City environmental impact assessments. However, to address the Wildlife Corridor Authority's concern, this recommendation is incorporated into the General Plan Update and included as an additional General Plan policy within the EIR as follows:

> Action CN-1.2.8: Require a wildlife movement study for any project potentially adversely affecting wildlife movement. This shall include identification of, and if warranted mitigation to protect, existing habitat linkages, wildlife corridors, wildlife movement in the vicinity, and crossing structures at freeways and major roadways. [New]

Inclusion of the suggested action item into the General Plan Update provides further clarification to address the Wildlife Corridor Authority's concern, and is similar to other action items, so it is not significant and does not warrant additional information or analysis within the EIR.

I-10 This comment addresses the need to address biological impact for new or extended roadways and recommends inclusion of the following action in the General Plan and the EIR: "NEW Action CN-1.2.9. Require that applicants proposing new or extended roads complete a wildlife movement study which includes at a minimum: an assessment in and around the project site of existing wildlife movement areas, habitat linkages, wildlife corridors, and crossings at existing freeways and major roadways; an analysis of potential impacts to wildlife movement, including

how the new road fragments the habitat; and recommended project design changes and avoidance, minimization, and mitigation measures to offset potentially significant adverse impacts to wildlife movement. For a new or extended roadway that is anticipated to result in a significant adverse impact to wildlife movement, require project design changes and/or avoidance, minimization, and/or mitigation measures which could include, but not be limited to: construction of wildlife crossings (e.g., underpass, overpass), fencing to guide wildlife, native plant restoration, and/or a lighting plan (to ensure that any new lighting does not deter wildlife through remaining habitat linkages)."

As noted above, assessment of wildlife corridor impacts are required within all City environmental impact assessments. However, to address the Wildlife Corridor Authority's concern, this recommendation is incorporated into the General Plan Update and included as an additional General Plan policy within the EIR as follows:

> Action CN-1.2.9. Require a wildlife corridor study for any new or extended road proposal, which shall include at a minimum: an assessment in and around the project site of existing wildlife movement areas, habitat linkages, wildlife corridors, and crossings at existing freeways and major roadways; an analysis of potential impacts to wildlife movement, including how the new road fragments the habitat; and recommended project design changes and avoidance, minimization, and mitigation measures to offset potentially significant adverse impacts to wildlife movement. For a new or extended roadway that is anticipated to result in a significant adverse impact to wildlife movement, require project design changes and/or avoidance, minimization, and/or mitigation measures, which could include, but not be limited to: construction of wildlife crossings (e.g., underpass, overpass), fencing to guide wildlife, native plant restoration, and/or a lighting plan (to ensure that any new lighting does not deter wildlife through remaining habitat linkages). [New]

This comment is not significant because it does not provide any new environmental information that could result in new or increased environmental impacts. Inclusion of the suggested action item into the General Plan Update and EIR provides further clarification to address the Wildlife Corridor Authority's concern and is similar to other Action items, so it is not significant and does not warrant additional information or analysis within the EIR.

I-11 This comment addresses protection of open space near Chino Hills State Park and recommends the following underlined text be added to General Plan Update Action LU-1.1.13: "In areas adjacent to Chino Hills State Park, require substantial open space buffers between the proposed development and the Park. As part of the entitlement process, require that open space buffers be protected via recordation of a conservation easement or fee title dedication to a public park or land conservation agency with demonstrated experience in managing land for permanent protection of biological resources. A homeowners association is not an appropriate entity to accept such conservation easement or dedication. As part of the entitlement process, require establishment of funding (e.g., monitoring and enforcement fund, Community Facilities District), in an amount proportion to the acres of open space, for the accepting agency to conduct monitoring and enforcement of the open space in perpetuity, Require that such recordation and establishment of funding occur prior to vegetation clearing or construction."

This comment also adds added underlined text to Action LU-1.2.5: "Develop new development in such a way that it is it is not visible from the visitor center, the campgrounds, the parking areas, the trails, and the floors of Aliso, Telegraph and tributary canyons within the Chino Hills State Park. Prohibit housing and other development on ridgelines visible to Chino Hills State Park."

In addition, the comment recommends the following underlined text to be added to Action LU-1.1.6: "Cluster development where appropriate to minimize grading, and roadway and driveway intrusions into sensitive habitat areas, open spaces, and Chino Hills State Park. Prohibit development in areas adjacent to Chino Hills State Park (for example, ridgelines), which would result in urban runoff to the watershed of the Park."

To address the Wildlife Corridor Authority's concern, the recommended additions to the three Actions are incorporated into the General Plan Update as follows:

> Action LU-1.1.13: In areas adjacent to Chino Hills State Park, require substantial open space buffers between the proposed development and the Park. As part of the entitlement process, require that open space buffers be protected via recordation of a conservation easement or fee title dedication to a public park or land conservation agency with demonstrated experience in managing land for permanent protection of biological resources, and establish a funding source to allow the accepting agency to conduct monitoring, enforcement, and maintenance of the open space in perpetuity. A homeowners association is not an appropriate entity to accept such conservation easement or dedication. Require that such recordation and establishment of funding occur prior to vegetation clearing or construction. [New]
>
> Action LU-1.2.5: Develop new development in such a way that it is it is not visible from the visitor center, the campgrounds, the parking areas, the trails, and the floors of Aliso, Telegraph, and tributary canyons within the Chino Hills State Park. Prohibit housing and other development on ridgelines visible to Chino Hills State Park.
>
> Action LU-1.1.6: Cluster development where appropriate to minimize grading, and roadway and driveway intrusions into sensitive habitat areas, open spaces, and Chino Hills State Park. Prohibit development in areas adjacent to Chino Hills State Park (for example, ridgelines), which would result in urban runoff to the watershed of the Park.

Inclusion of the suggested text to the three Action items of the General Plan Update provides further clarification to address the Wildlife Corridor Authority's concern, and is similar to other Action items, so it is not significant and does not raise new environmental issues or warrant additional information or analysis within the EIR.

Note: During the public consideration of the General Plan Update, the Planning Commission considered the proposed added language to Land Use Element Action LU-1.1.13 regarding conservation easement or dedication, and determined at its January 20, 2015 meeting that the public's interest is best served by not including the added language because the language could conflict with future resource agency requirements. The Planning Commission voted to forward this recommendation to City Council.

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September 9, 2014

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CITY OF CHINO HILLS
COMMUNITY DEVELOPMENT DEPARTMENT

Via E-Mail and FedEx

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City of Chino Hills
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Re: Comments on City of Chino Hills Draft Program Environmental Impact Report, General Plan Update

Dear Mr. Walters:

On behalf of Hills For Everyone, we submit the following comments on the Draft Program Environmental Impact Report ("DEIR") for the General Plan Update ("General Plan Update") and Zoning Map Update ("Zoning Update") for the City of Chino Hills ("City"). These Updates propose a dramatic increase in density for approximately 3,000 acres of largely undeveloped land in the southern Chino Hills in direct violation of Measure U, which requires voter approval for this type of density increase. Hills For Everyone urges the City to protect the community's hillsides and open space, and to comply with Measure U, by maintaining the long-standing 40-acre minimum lot size for this area. J-1

The proposed approval of the General Plan and Zoning Updates also violates California Environmental Quality Act, Public Resources Code sections 21000, *et. seq.* ("CEQA") and the state Planning and Zoning Law, Government Code sections 65000 *et seq.* The DEIR for the Updates fails to acknowledge the environmental impacts of the dramatic increase in density proposed for the southern Chino Hills, to identify these impacts as significant, or to propose any mitigation for these impacts. It moreover fails to recognize the Updates' failure to meet statutory requirements for general plans. The DEIR is also legally deficient on a range of other issues, particularly its discussion of alternatives, land use conflicts, and growth-inducing impacts. J-2

Jerrod Walters
September 9, 2014
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I. The General Plan and Zoning Updates Violate Measure U. J-3

Measure U prohibits the City from increasing the maximum residential density of any land, as established in the Chino Hills General Plan or the Zoning Map, without approval by a majority vote of the electorate of the City. The Updates ignore Measure U's mandate and propose to substantially increase residential density on approximately 3,000 acres of land in the southern Chino Hills without voter approval.

The City's current General Plan ("1994 General Plan") and Zoning Map establish a 40-acre minimum lot size for southern Chino Hills. The 1994 General Plan provides that "Development is limited to a maximum of 76 dwelling units for 3,000 acres zoned 1 dwelling unit per 40 acres in the General Plan areas." 1994 General Plan, 1-20. It similarly states, "General Plan land use policy limits development in southern Chino Hills to homes and ranches on lots of at least 40 acres." *Id.,* 1-3; *see also id.* at I-1 ("In the southern portion of the city, where open range ranching still takes place, large areas of open space will also be preserved, both to maintain the citizens' desire for rural character, and to respect the location in this area of the Chino Hills State Park and . . . Prado Basin, two natural open space areas of statewide importance."). The existing Zoning Map likewise designates the southern Chino Hills area as "R-A [Agriculture-Ranch] 40 ac min. lot size." *See* DEIR, 4-13; City of Chino Zoning Map.

The General Plan Update eliminates this policy establishing 40-acre lots in the southern Chino Hills. The Zoning Update also proposes to eliminate the 40-acre minimum lot size restriction from the Zoning Map.

As a result of these changes, the permitted density in southern Chino Hills would increase dramatically. In the absence of the 40-acre minimum lot restriction, this area's General Plan and Zoning designations would allow 5-acre lots, an eightfold increase in density. DEIR 2-14 (map); Chino Hills Municipal Code, section 16.10.010.B. & Exhibit A (Table 20-1) (R-A zoning); General Plan Update ("GP Update"), 1-9 (General Plan Land Use map) (designating the Property as "Agriculture/Ranches"); 1-10 (Table 1-3) (establishing 0.2 du/ac maximum density, equivalent to 5 acre minimum lots, for this designation); DEIR, 2-7.

Measure U clearly prohibits the City from approving this density increase without voter approval. In what appears to be an attempt to circumvent Measure U's requirements, the EIR characterizes the 40-acre minimum lot size established in the existing Zoning Map and General Plan as a "statement" rather than a "goal, policy, or principle." DEIR, 4-13. Measure U, however, makes no such distinctions. Rather, it flatly prohibits "*[a]ny* increase in density" above that set forth in the existing zoning and

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general plan (with limited exceptions not applicable here). *See* GP Update, 1-12 (emphasis added). Moreover, this characterization is directly at odds with the express language of the existing General Plan, which provides that "General Plan land use *policy* limits development in southern Chino Hills to homes and ranches on lots of at least 40 acres." 1994 General Plan, 1-3 (emphasis added).

In short, the City cannot eliminate the 40-acre minimum lot size for southern Chino Hills without first submitting this proposal to the City electorate. The General Plan and Zoning Updates should therefore be revised to eliminate this proposed increase in density.

The City also asserts that some of the other proposed increases in density constitute a "transfer of densities between properties" in compliance with Measure U. DEIR, 4-15. Measure. Measure U provides:

> The City Council may also redesignate non-residential property to residential property as part of a simultaneous transfer of zoning designations between residential and non-residential properties provided that the net effect of the transfer does not increase the total number of residential units allowed on the properties in the transfer.

GP Update, 1-14. This narrow exception only permits the City to redesignate *non-residential* property to residential by transferring "zoning designations" between the two properties. But the City's claimed transfer is between lands zoned residential. The City appears to have interpreted this provision as allowing a transfer of residential units among any zoning designations. *See* DEIR, 4-12. Such an approach is not supported by the language of Measure U.

II. The DEIR Lacks Essential Analysis and Mitigation and Thus Is Inadeqnate under CEQA.

The discussion of a proposed project's environmental impacts is at the core of an EIR. *See* CEQA Guidelines, § 15126.2(a) ("[a]n EIR shall identify and focus on the significant environmental effects of the proposed project"). An EIR must effectuate the fundamental purpose of CEQA: to "inform the public and responsible officials of the environmental consequences of their decisions before they are made." *Laurel Heights Improvement Assn. v. Regents of the University of California,* 6 Cal.4th 1112 at 1123 (1993). To do so, an EIR must contain facts and analysis, not just an agency's bare

conclusions. *Citizens of Goleta Valley v. Board of Supervisors*, 52 Cal.3d 553, 568 (1990). The DEIR for the Updates fails to serve these important goals.

A. The Project Description Is Incomplete and Incorrect.

CEQA defines a "project" as "the whole of an action, which has a potential for resulting in either a direct physical change" or "a reasonably foreseeable indirect change in the environment." CEQA Guidelines § 15378(a); *see also* CEQA Guidelines § 15378(c) (term "project" means the whole of the "activity which is being approved"). "An accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR." *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus,* 27 Cal.App.4th 713, 730 (1994) (quoting *County of Inyo v. City of Los Angeles* 71 Cal.App.3d 185, 193 (1977)). J-4

Here the proposed project is unclear and incomplete. For example, neither the General Plan Update nor the DEIR indicates which existing General Plan policies have been eliminated or changed. Therefore, it is very difficult, if not impossible, for members of the public to ascertain what changes are being adopted. While the General Plan Update asserts that it is correcting "mapping errors," it does not identify which parcels are affected by these "errors" and corrections.

An adequate project description would include necessarily a list of existing General Plan policies that are being eliminated, redline changes to existing policies, and identify new policies so that the public can compare the proposed Update with the existing policies. It further explain and highlight existing and proposed map changes for the General Plan and Zoning Map. If these changes are corrections of mapping errors, the EIR must identify, for each revision, the problem with the existing map designation and describe how the proposed change would resolve that problem.

The DEIR also fails to identify all proposed changes in zoning. Its treatment of the "PD" designation, in particular, is obscure. The DEIR states that new policies are being adopted "to convert PD areas to traditional zoning." DEIR, 4-12. The proposed "traditional" zoning, however, does not appear on the Proposed Zoning Map. DEIR, 3-1. The proposed General Plan policies relating to PD zoning also appear to be extremely vague, stating, for example, that "existing PD areas will be converted to a suitable zoning designation." GP Update, 1-6. If the conversion of PD zoning is part of the proposed General Plan and Zoning Updates, it must be identified with much more specificity.

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The EIR also underestimates the implications of full build-out under the proposed Updates. The development of existing Agriculture/Ranches land, for example, could result in up to 1,736 homes.[1] The DEIR, however, analyzes the impacts of just 1,207 homes. The project that must be described and analyzed in the DEIR is the Updates' full build-out, not a theoretical midrange scenario. Courts have held that, when analyzing the environmental impacts of a general plan or other planning document, the lead agency must analyze all "future development *permitted* by the [plan]. . . . Only then can the ultimate effect of the [plan] upon the physical environment be addressed." *Christward Ministry v. Superior Court of San Diego County* (1986) 184 Cal.App.3d 180, 194 (emphasis added); *see also City of Redlands v. County of San Bernardino* (2002) 96 Cal.App.4th 398, 409.

Moreover, the number of proposed residential units assumed in the DEIR appears to fluctuate significantly. Table 4-2 identifies 5,807 new units of development to be constructed pursuant to the Updates. DEIR, 4-5. Yet, in discussing public services and recreation, the DEIR assumes a lower figure of 780 units. DEIR, 4-201-206. It is also unclear how the assumptions used in the Utilities and Service Systems analysis (for example, that water demand will increase 18% by 2035) relate to the growth projected in Table 4-2, or what the basis for these assumptions is. DEIR, 4-253. The number of residential connections identified in the City's Urban Water Management Plan, for example, do not appear to correlate with the figures used in the DEIR. *Compare* UWMD, Table 2-7(e) (2034-35 estimation of 25,081 total accounts) with DEIR, Table 4-2 (Build-Out of 29,600 units). The EIR's project description is thus fails the essential requirement of stability.

Further, while the DEIR notes the elimination of the 40-acre minimum lot size restriction for the southern Chino Hills on the proposed Zoning Map (DEIR, 4-13), it fails to highlight the corresponding changes in General Plan policies or to analyze the impacts of transforming a currently undeveloped, and largely intact natural area into 3,000 acres of residential subdivisions. The DEIR does not even disclose that the Updates will substantially increase density in this area, much less analyze the resulting impacts.

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[1] 8,682 acres divided by 5 acres/unit.

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B. The DEIR Fails to Properly Analyze the General Plan and Zoning Updates' Inconsistency with Measure U, State Law, and Other Land Use Policies. J-5

As the City recognized in preparing the DEIR, an EIR must analyze the Project's consistency with applicable land use policies. The DEIR notes that a project has a significant impact if it will "[c]onflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project . . . adopted for the purpose of avoiding or mitigating an environmental effect." DEIR, 4-14. Indeed, CEQA requires that environmental impact reports analyze the consistency of a project with applicable local regulations. *See Napa Citizens for Honest Govt. v. Napa County Board of Supervisors* 91 Cal.App.4th 342, 386-87 (2001); CEQA Guidelines Appendix G, § IX (b). Had the DEIR undertaken this mandatory analysis, it would have found that the Updates conflict with Measure U and are internally inconsistent. Government Code section 65300.5 requires that a general plan must "comprise an integrated, internally consistent and compatible statement of policies for the adopting agency." A general plan "that, on its face, displays substantial contradictions and inconsistencies cannot serve as an effective plan because those subject to the plan cannot tell what it says should happen or not happen." *Concerned Citizens of Calaveras Cnty. v. Bd. of Supervisors* (1985) 166 Cal.App.3d 90, 97. The Updates cannot be approved in their form, as the EIR should have informed the public.

The DEIR, however, does not indicate that the increase in density for the southern Chino Hills conflicts with Measure U or identify this as a significant land use conflict. *See* DEIR, 4-15. Nor does the DEIR indicate that the residential unit swaps are inconsistent with Measure U, which restricts density transfers to changes in zoning designations between non-residential and residential land.

The DEIR also fails to make clear that the increased development of the City's ranchlands is inconsistent with proposed General Plan and regional policies discouraging sprawl. Proposed General Plan Update greenhouse gas policies, for example, focus almost exclusively on promoting infill and high density development in the city center. *See* DEIR, 4-122. The adoption of policies that clearly encourage growth at the edges of the City conflict with these anti-sprawl policies and render the proposed General Plan Update internally inconsistent and thus fatally flawed.

Likewise, policies in the Regional Comprehensive Plan and Guide (RCPG) mandate that the City focus growth along major transportation corridors, target growth in housing within walking distance of transit stations, protect open space and agricultural lands from development, promote infill development, preserve rural and agricultural

areas, and focus development in urban centers. *See, e.g.*, DEIR, 4-16. The proposed development of the southern Chino Hills is inconsistent with all of these goals.

In short, the Updates will clearly violate Measure U and conflict with applicable City and regional land use policies encouraging infill and discouraging the development of rural lands.

C. The DEIR For the Updates Fails to Analyze the Impacts of Developing Existing Ranchlands and Increasing Density the Southern Chino Hills. J-6

The Updates contemplate the complete transformation of the undeveloped ranch lands in Chino Hills to residential development (5 acres lots), a dramatic change to the community. Currently, the City's 8,682 acres of Agriculture/Ranches land, which constitute 29% percent of City lands, contain only 63 homes. DEIR, 2-12, 3-1, 3-4. Even accepting the DEIR's inappropriately conservative estimate of 1,207 homes under build-out for these areas, this would be a nearly 20-fold increase in residential density.

In places, the City concedes that this transformation will be substantial. The General Plan Update, for example, provides: "Most of the large ranches, while still being dry farmed and grazed, are no longer owned by farming interests and are expected to be developed over the next several years." GP Update, 4-16-17. The DEIR similarly acknowledges that under the Updates, "remaining undeveloped lands are expected to develop and the City will approach build-out." DEIR, ES-1.

The DEIR, however, gives no sense of the actual impacts of transforming nearly a third of City land from ranch land to residential development. The analysis of biological resources, for example, provides:

> Special status plants and animal species are most likely to occur in the undeveloped natural landscapes found in the . . . the annual grasslands and sage scrub areas in the southeastern part of the City . . . The Land Use Element designates those undeveloped natural landscapes for Agriculture/Ranches uses or for Public or Private Open Space, for the most part, so there is very limited potential for land development to affect habitat that supports a special status species.

DEIR, 4-63. Likewise, with regard to sensitive natural communities, such as California Walnut Woodland, Coastal Sage Scrub, Oak Woodland, and Freshwater Emergent Wetland, the DEIR provides:

> They are found primarily in the western and southeastern perimeters of the City, on land designated in the Land Use Element for Agriculture/Ranches, Very Low Density Residential, and Public and Private Open Space. There is thus very limited potential for impacts to most of the sensitive natural communities.

DEIR, 4-64. The DEIR similarly understates and minimizes impacts to wetlands and riparian areas. DEIR, 4-65. These oversights are especially egregious given that these sensitive communities border Chino Hills State Park and their development is therefore likely to lead to habitat fragmentation and loss of wildlife corridors that impact a resource of statewide importance.

Regarding visual impacts, the DEIR states summarily that the General Plan Update proposes "only limited changes to development of currently undeveloped properties." DEIR, 4-29. Such a conclusion again ignores the expected development of ranchlands throughout the City, the increase in density proposed in the southern Chino Hills, and the visual impacts on the adjacent Chino Hills State Park, a highly sensitive resource.

Similarly, the DEIR contains no meaningful analysis of impacts to agriculture. State law provides that "[a]gricultural lands near urban areas that are maintained in productive agricultural use are a significant part of California's agricultural heritage. . . . Conserving these lands is necessary due to increasing development pressures and the effects of urbanization on farmland close to cities." Pub. Resources Code, § 10201(c). While the General Plan Update states that "[m]ost of the large ranches . . . [are] still being dry farmed and grazed" (GP Update, 4-16-17), the DEIR does not identify how many acres are in active agricultural use. It therefore fails to determine or describe the baseline environmental conditions, a prerequisite for adequate analysis of impacts. Unsurprisingly, it goes on to omit analysis and mitigation for the impacts associated with loss of such agricultural lands. (The DEIR's assertion that only 1% of City land is in agricultural use (DEIR, 4-50) seems to be an understatement.)

The DEIR's conclusion that General Plan Update will not induce "substantial population growth" in the City is also at odds with the Update's express policies. *See* DEIR, 4-190. Permitting over a thousand new homes in existing ranchlands will lead to new growth in presently undeveloped areas and new impacts, such as increased risk of wildfires and increased water demand, which are glossed over in the DEIR. Such impacts may be especially severe in light of current drought conditions. The DEIR should assess the impacts of such growth in light of current conditions,

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including projected changes in water availability and increased wildfires due to drought and climate change.

In conclusion, the DEIR's determination that the Updates' land use planning, biological, aesthetic, and growth-inducing impacts are insignificant is entirely unsubstantiated, and its failure to provide any mitigation for these impacts is a violation of CEQA. Development of more than 8,000 acres of ranchland with exurban development will significantly impact existing wildlife and vegetation and adjacent sensitive open space resources. *See* Exhibit A at 1903 (concluding that "native species richness generally drops with increased exurban densities" and that "exurban development may alter ecological processes and biodiversity on adjacent and distance public lands"); Exhibit B at 2 (noting that "fragmentation of rangeland habitat has many negative and social effects including loss of remote habitat, increase in human commensal species, severing of wildlife connectivity between core habitats and increasingly difficult social environment for ranching"). It will also create significant conflicts with existing land use policies and lead to substantial growth. These impacts must be identified and fully mitigated.

D. The EIR's Analysis of Project Alternatives Is Inadequate. **J-7**

CEQA provides that "public agencies should not approve projects as proposed if there are feasible alternatives . . . which would substantially lessen the significant environmental effects of such projects." § 21002. Critically, an EIR must consider a "reasonable *range*" of alternatives "that will foster informed decisionmaking and public participation." CEQA Guidelines § 15126.6(a) (emphasis added); *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 404 ("An EIR's discussion of alternatives must contain analysis sufficient to allow informed decision making.")

The DEIR provides only *one* alternative to the Project, the "No Project" Alternative. DEIR, 5-4. This is not an adequate range of alternatives by any measure. Moreover, the analysis of the No Project alternative is itself deficient. Most critically, it fails to disclose that the Updates permit substantially increased density in over 3,000 acres of undeveloped land in the southern Chino Hills as compared to the existing General Plan. The comparison of the No project alternative to the proposed project thus omits essential information.

A reasonable and informative range of alternatives would include an alternative that would retain the existing zoning and General Plan restrictions limiting development in the southern Chino Hills to 40-acre lots. Such an alternative would be

environmentally superior to the proposed General Plan and Zoning Updates, reduce impacts associated with more intensive development of 3,000 acres of largely undeveloped land, and comply with Measure U.

III. The DEIR Must Be Revised and Recirculated. J-8

CEQA requires recirculation of an EIR when significant new information is added to the document after notice and opportunity for public review was provided. Pub. Resources Code § 21092.1; CEQA Guidelines § 15088.5. *Laurel Heights Improvements Assn. v. Regents of the University of California* (1993) 6 Cal.4th 1112, 1130 .

As this letter explains, the proposed General Plan and Zoning Updates must be modified to comply with Measure U and the DEIR must be revised to contain new information and analysis. This analysis will likely result in a changed project description and the identification of new, substantial environmental impacts or substantial increases in the severity of significant environmental impacts. Consequently, the City must revise and recirculate the EIR for public review and comment.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Gabriel M.B. Ross

List of Exhibits:

Exhibit A: Hansen AJ, Knight RL, Marzluff JM, Powell S, Brown K, et al. (2005) Effects of Exurban Development on Biodiversity: Patterns, Mechanisms and Research Needs Ecological Applications 15: 1893–1905.

Exhibit B: Cameron DR, Marty J, Holland RF (2014) Whither the Rangeland?: Protection and Conversion in California's Rangeland Ecosystems. PLoS ONE 9(8):e103468. doi:10.1371/journal.pone.0103468.

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EXHIBIT A

Ecological Applications, 15(6), 2005, pp. 1893–1905
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EFFECTS OF EXURBAN DEVELOPMENT ON BIODIVERSITY: PATTERNS, MECHANISMS, AND RESEARCH NEEDS

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Abstract. Low-density rural home development is the fastest-growing form of land use in the United States since 1950. This "exurban" development (~6–25 homes/km^2) includes urban fringe development (UFD) on the periphery of cities and rural residential development (RRD) in rural areas attractive in natural amenities. This paper synthesizes current knowledge on the effects of UFD and RRD. We present two case studies and examine the patterns of biodiversity response and the ecological mechanisms that may underlie these responses. We found that many native species have reduced survival and reproduction near homes, and native species richness often drops with increased exurban densities. Exotic species, some human-adapted native species, and species from early successional stages often increase with exurban development. These relationships are sometimes nonlinear, with sharp thresholds in biodiversity response. These effects may be manifest for several decades following exurban development, so that biodiversity is likely still responding to the wave of exurban expansion that has occurred since 1950. The location of exurban development is often nonrandom relative to biodiversity because both are influenced by biophysical factors. Consequently, the effects on biodiversity may be disproportionately large relative to the area of exurban development. RRD is more likely than UFD to occur near public lands; hence it may have a larger influence on nature reserves and wilderness species. The ecological mechanisms that may underlie these responses involve alteration of habitat, ecological processes, biotic interactions, and increased human disturbance. Research on the patterns and mechanisms of biodiversity remains underdeveloped, and comparative and experimental studies are needed. Knowledge resulting from such studies will increase our ability to understand, manage, and mitigate negative impacts on biodiversity.

Key words: biodiversity; biotic interactions; ecological mechanisms; fire; habitat fragmentation; landscape management; land cover; land use; rural residential development; urban fringe development; weeds.

Introduction

Rural America is undergoing a dramatic transition. For the first time in more than a century, more people are moving to rural areas than from rural lands (Johnson 1998). Fleeing the cities, many retirees, entrepreneurs, and others are seeking the small-town lifestyles and natural amenities of rural landscapes (Rudzitis 1999). This rural in-migration is driving large changes in land use. The typical trajectory of land use change across the United States prior to 1950 was from wild land and resource extraction uses to agriculture and to suburban and urban uses. An entirely new land use has become prevalent in many parts of the United States since 1950. Many people are choosing to live "out of town" on small "ranchettes" and in rural subdivisions. Termed exurban development, low-density housing (~6–25 homes/km^2) within a landscape dominated by native vegetation is now the fastest growing form of land use in the United States (Brown et al. 2005). Land long used for forestry or ranching is now being converted to home sites. The effects of exurban development on native species and ecological communities have only recently been the topic of ecological studies.

Since 1950, there has been a five-fold increase in the area within the conterminous United States that is occupied at exurban densities (Brown et al. 2005). The

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PLATE 1. Rural residential development in the Greater Yellowstone Ecosystem near Red Lodge, Montana, USA. The rural homes are placed near low-elevation riparian forests that are especially important for biodiversity. Photo by A. Hansen.

exurban land use type currently covers nearly 25% of the area of the lower 48 states. The most rapid gains were in the eastern deciduous forest, the southwest, the western seaboard, the Rocky Mountains, and the upper Midwest.

This exurban development is manifest in two forms. Urban fringe development is the expansion of exurban densities on the periphery of cities. This urban fringe development (UFD) is largely driven by urban dwellers seeking more rural lifestyles while still having access to urban jobs and services (Ulmann 1954, Healy and Short 1987, Raish et al. 1997). Exurban development in counties adjacent to metropolitan counties increased six fold since 1950 (Brown et al. 2005). Over time, these exurban developments often transition to suburban and urban land uses.

A second form of exurban development is occurring distant from cities. It is focused on rural areas attractive in scenery, climate, outdoor recreation and other "natural amenities" (Rasker and Hansen 2000). Rural counties not adjacent to metropolitan counties increased fivefold in exurban area since 1950 (Brown et al. 2005). This rural residential development (RRD) is common in the rural counties of the Rocky Mountain West, the Pacific Northwest, the upper Midwest, and the southeastern United States (Gersh 1996). Rather than being randomly distributed, this development is often associated with the borders of national parks and other public lands; rivers, lakes, or coastal areas; areas of moderate climate and good outdoor recreational opportunities; and towns and small cities that offer national airports, high-speed internet access, and cultural amenities (Cromartie and Wardwell 1999, McGranahan 1999, Nelson 1999; see Plate 1).

The effects of both forms of exurban development on wildlife and biodiversity are poorly known. Relative to other types of land use, exurban development is substantially understudied. Miller and Hobbs (2002) found that only 6% of the papers on human landscapes published in *Conservation Biology* dealt with exurban and urban places. The majority of these consider the general gradient from rural to urban in and around cities. While these studies typically do not cleanly separate biodiversity in exurban places relative to suburban and urban places, they do provide a context for assessing general trends in biodiversity under land use intensification. RRD has been examined in only a few recent studies, with most of them being in the Rocky Mountain West.

Understanding the effects of exurban development on biodiversity is important to public policy. With a quarter of the nation's land area in this land use type, policies on exurban development may have a substantial effect on biodiversity nationwide. The general view among conservationists and the public is that exurban development alters ecological processes and biodiversity to a greater extent than forestry and agriculture (Marzluff and Ewing 2001). Hence, many initiatives have emerged to protect "open space" from exurban development through conservation easements and other approaches. There is also the view that the effects of exurban development are proportional to home density. Thus, zoning for lower density housing is often used to protect ecological resources.

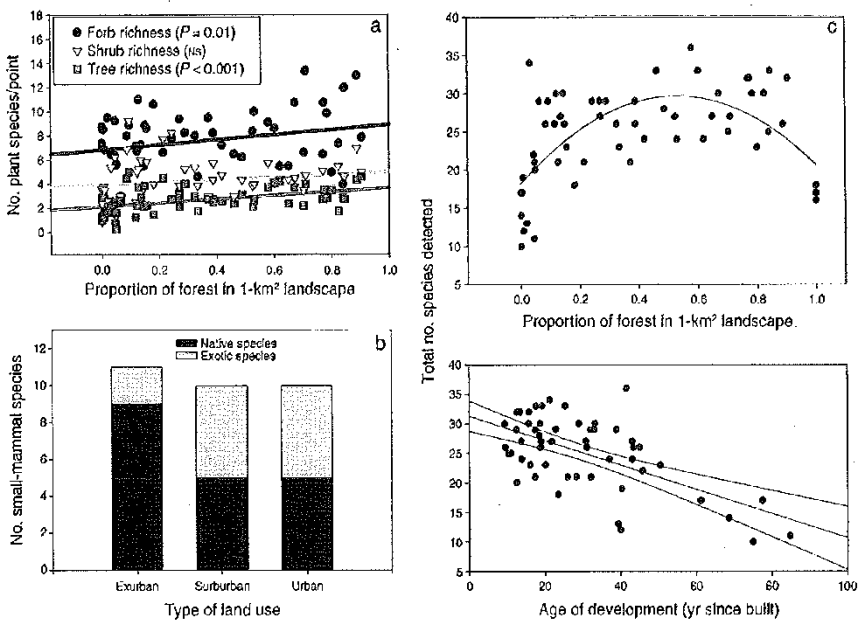


FIG. 2. Changes in biodiversity in response to urban sprawl in the Seattle metropolitan area. (a) Increases in plant species richness with increasing forest land cover. (b) Shifting composition of small mammal communities. (c) Correlation of bird species richness with amount of forest (upper panel) and age of development (lower panel). Bird data are from Donnelly (2002), Donnelly and Marzluff (2004), and Marzluff (*in press*).

shrubs. Alternatively, exotic ground cover increased significantly with development, especially with the interaction between age of development and interspersion of settled and forested remnants. The trends for plants were relatively linear. Small mammal communities changed abruptly from primarily native to mixtures of natives and exotics as landscapes were converted from exurban to suburban or urban (Fig. 2b). Bird species richness in combined samples of forest fragments and settled areas peaked at levels of settlement found in most single-family housing subdivisions (Fig. 2c). It dropped dramatically when development reached a threshold of approximately 80% developed, and when mature, second growth, coniferous forest cover occupied the entire 1-km² landscape (i.e., in relatively large forested reserves; Marzluff, *in press*). The peak in landscapes where forest and settlement are both abundant in the landscape occurs primarily because of colonization of early successional and deciduous forest species (Marzluff, *in press*). Native forest birds are predictably and linearly lost with increasing urbanization (Donnelly 2002, Donnelly and Marzluff 2004). Synanthropic birds, those ecologically associated with humans, predictably colonize landscapes as urban land cover increases. Species richness was also related to age of development, with bird species richness continuing to decrease more than 60 years after development. Average bird species richness dropped from about 35 at the time of development to below 15 by 80 years after development. This drop is accentuated by concomitant loss of forest cover with subdivision age in the sample, but additional research of similarly forested, but variously aged subdivisions confirms a general, but less extensive loss of species (Ianni 2004). Species diversity declines as subdivisions age because of losses in native mature forest birds and native birds not typically found in mature forests that colonized the openings, grasslands, ponds, and deciduous forest characteristic of new subdivisions. The loss of bird species was not explained by poor reproductive success. Nest success remained relatively high in developed study plots for all the bird guilds studied, but the numbers of active nests were greatly reduced in densely settled areas (Donnelly and Marzluff 2004). The authors concluded that the reduction in richness was primarily due to the loss of species dependent upon forest habitats,

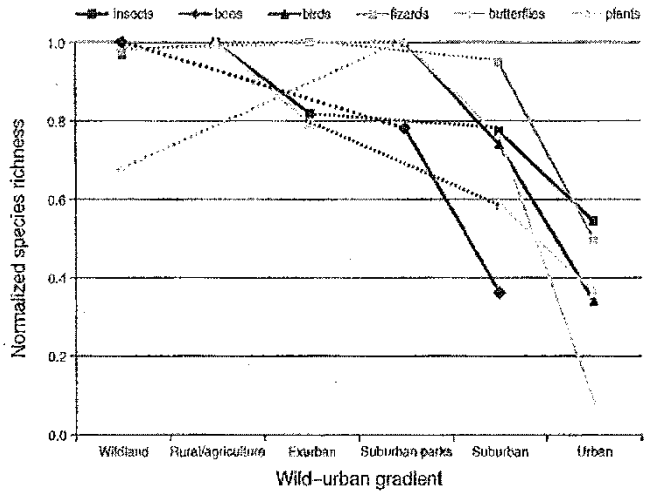


FIG. 3. Distribution of species richness across a gradient in land use for studies of various organisms. Normalized species richness is calculated as a function of the maximum number of recorded species at a point on the development gradient. Dashed lines represent unsampled portions of the gradient. Sources: insects, Denys and Schmidt (1998); bees, McIntyre and Hostetler (2001); birds, Blair (1996); lizards, Germaine et al. (1998); butterflies, Blair (1999); plants, Denys and Schmidt (1998).

rather than to increased predation levels. Reduced survival of adults and newly fledged birds is a potential factor currently being studied.

General biodiversity responses to land use intensification on the urban fringe

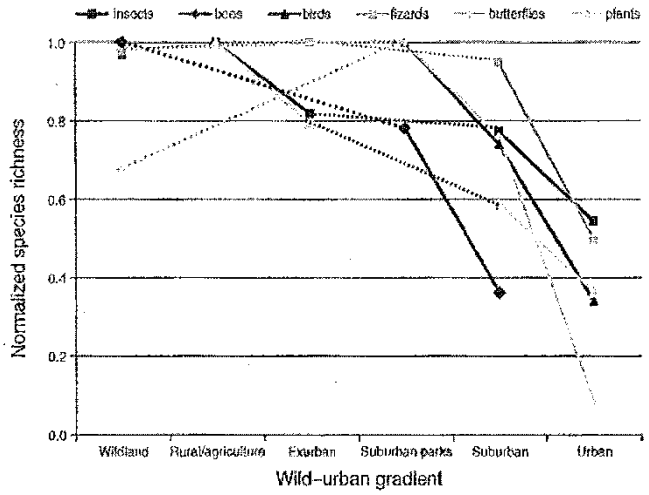
The results above are consistent with the growing body of literature finding that the quantity and pattern of urban fringe development strongly influence both native and nonnative flora and fauna. The responses at the community level are a function of species response patterns, which are in turn a function of the demographic responses of individual organisms (Marzluff and Ewing 2001).

Community patterns.—For many plant and animal communities, species richness decreases as housing density increases along the rural–urban gradient. The literature abounds with examples for arthropods (Miyashita 1998), insects (Denys and Schmidt 1998), and amphibians (Lehtinen et al. 1999) (Fig. 3). Along a gradient from wild and undeveloped parks around the outskirts of Phoenix, Arizona, to residential sites in the city, both richness and abundance of pollinator bees (*Hymenoptera: Apoidea*) decreased markedly (McIntyre and Hostetler 2001). Similar results were documented in Tucson, Arizona, for native bird guilds, as housing density best explained the decrease in species richness along the rural–urban gradient (Germaine et al.1998). For native rodents in protected grasslands in Boulder, Colorado, the capture rate exhibited a strong negative relationship with the percentage of surrounding suburbanization (Bock et al. 2002).

While native species often decrease in diversity and abundance along the rural–urban gradient, the opposite is often true for nonnative guilds. In the Tucson study, housing density best explained the increase in species richness for nonnative birds (Germaine et al. 1998). Within plant communities in Ohio, the percentage of nonnative species increased along the rural–urban gradient (Whitney 1985).

Because of these contrasting biodiversity response patterns along the rural–urban gradient, community richness sometimes exhibits a non-linear response in which richness peaks at intermediate levels of development (McKinney 2002). Avian and butterfly richness and diversity were both higher at moderate levels of development than in natural reserves in various sites in California and Ohio (Blair 1996, 1999). Lizard abundance, richness, and evenness all peaked at intermediate levels of development in Tucson, Arizona (Germaine and Wakeling 2001). In shoreline cottage development in central Ontario, moderate levels of development supported the highest levels of small mammal diversity (Racey and Euler 1982).

A recent meta-analysis of avian community response patterns to increasing urbanization (Marzluff 2001)



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A recent meta-analysis of avian community response patterns to increasing urbanization (Marzluff 2001)

confirmed the patterns emerging from the individual studies summarized above. He found that richness decreased in 61% and evenness decreased in 56% of the studies (Marzluff 2001). Over 90% of the surveyed studies documented either an increase in exotic species or a decrease in interior habitat nesters with increasing settlement.

An important conclusion from the Seattle case study is that the biodiversity response to urbanization may continue to intensify for several decades after development (Donnelly 2002, Ianni 2004). Thus in the rapidly growing cities of the United States, the full effects of recent development are likely not yet fully manifest and native biodiversity will continue to erode for decades to come.

Species patterns.—The response patterns of individual species to the rural–urban gradient are complex and account for the variety of responses at the community level. Many species decline in abundance with increased intensity of land use. Of 21 species recorded at a nature reserve in Santa Clara County, California, only 14 of these species also occurred at a nearby recreation area, and only three of these species were also found at the most urbanized site (Blair 1996). The species found only in the nature reserves were all natives including Western Wood-pewee (*Contopus sordidulus*), Hutton's Vireo (*Vireo huttoni*), and Ash-throated Flycatcher (*Myiarchus cinerascens*). Other examples of species that are negatively correlated with development levels come from central Ontario where the masked shrew (*Sorex cinereus*), deer mouse (*Peromyscus maniculatus*), red-backed vole (*Clethrionomys gapperi*), and woodland jumping mouse (*Napeozapus insignis*) all decreased in abundance with increasing shoreline cottage development (Racey and Euler 1981).

Other species are able to tolerate and even increase under higher levels of development (Hoffman and Gottschang 1997). Higher densities of nesting Cooper's Hawks (*Accipiter cooperii*) were recorded in urban settings compared to rural settings in and around Tucson, Arizona (Boal and Mannan 1998). Schneider and Wasel (2000) found that the density of moose (*Alces alces*) in northern Alberta, Canada, increased near human settlement. Similarly, Racey and Euler (1982) observed increased capture success with increasing development level for eastern chipmunk (*Tamias striatus*), red squirrel (*Tamiasciurus hudsonicus*), and meadow vole (*Microtus pennsylvanicus*). Several other studies have documented a suite of common bird and mammal species that increase in abundance along the rural to urban gradient. Examples include the House Sparrow (*Passer domesticus*), European Starling (*Sturnus vulgaris*), American Crow (*Corvus brachyrhyncos*), Brown-headed Cowbird (*Molothrus ater*), skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), and opossum (*Didelphis virginiana*) (Odell and Knight 2001).

The relationship between species abundance and urbanization is often not linear; many species are most abundant at intermediate levels of development, as demonstrated by Blair (1996). Gray foxes (*Urocyon cinereoargenteus*) in several rural communities in New Mexico were found to be tolerant of RRD up to a threshold of 50–125 homes/km^2 (Harrison 1997). A similar nonlinear response was also documented for abundance of mule deer (*Odocoileus* spp.) in an urbanizing valley in southwest Montana (Vogel 1989). Short-tailed shrews (*Blarina brevicauda*) were documented to peak at intermediate lakeshore cottage development levels in central Ontario (Racey and Euler 1982).

The life history attributes of species that avoid or expand with urbanization are not well studied. McKinney (2002) suggested that many human-sensitive species include large mammals with low reproductive rates, birds specializing on natural habitats, and late successional plants. Species most abundant in suburbs may be edge-adapted generalists able to exploit the wider variety of habitat configurations and resources available at intermediate levels of development. Species associated with urban areas may be preadapated to human structures or able to use human-derived food or water supplies (McKinney 2002). However, more study is needed to evaluate these hypotheses.

Demographic patterns.—Patterns of reproduction, survival, and dispersal are drivers for species and community responses to exurban development, yet relatively few studies have quantified population vitality rates across the development gradient. Marzluff (2001) reviewed the literature for results of urbanization on avian breeding success. He found that most studies dealt with species that were most abundant in cities. For these species, breeding success improved with increased settlement. For other species however, research on bird nesting success indicated a negative relationship with increasing development. The abundance of human development was found to be the strongest predictor of brood parasitism by brown-headed cowbirds and reduced nest success of several species such as Yellow Warbler (*Dendroica petechia*) (Tewksbury et al. 1998).

In sum, three general patterns of species abundances emerge along the gradient from rural to urban: decreases, increases, and nonlinear responses (McKinney 2002). Species that decrease in abundance along the development gradient are termed "human sensitive" (Odell and Knight 2001) or "urban avoiders" (McKinney 2002). Species that increase are termed "human adapted" (Odell and Knight 2001) or "urban adapted" and "urban exploiters" (McKinney 2002). "Suburban adaptables" (Blair 1996) reach peak abundance at intermediate levels of development. At the community level, richness for native species generally decreases with increasing development while richness

for nonnative species generally increases with increasing development. As a result, total community diversity often peaks at intermediate levels of development, because both native and nonnative species are present in the community (Marzluff, *in press*). The life history traits of individual species, native and nonnative, likely contribute to the variety of responses at the population and community levels.

Rural Residential Development and Biodiversity

Case study: Colorado

Colorado is representative of much of the new West. Growing at three times the nation's average, it was the sixth-fastest growing state in the United States in the 1990s (Knight 1998). Importantly, this population growth is occurring on rural landscapes as well as within urban areas. Indeed, from 1990 to 1998, population in rural areas grew faster than in urban areas in over 60% of the counties in the Rocky Mountain states (Theobald 2001, Odell et al. 2003).

In much of the Mountain West, there are three principal land uses beyond city limits: protected areas, ranches, and ranchettes. Maestas et al. (2003) examined songbirds, carnivores, and plant communities on these three land uses in Larimer County, Colorado. Importantly, their data came from sites that were similar in elevation, soil type, and plant community type. They found that the density of songbirds and carnivores were more similar between ranches and protected areas (without livestock grazing) than on the ranchettes. The songbirds and carnivores that were most abundant on the ranchettes included dogs, cats, Black-billed Magpies, European Starlings, and other human-adapted species. Songbirds and carnivores that occurred on ranches and protected areas were uncommon or did not occur on land in ranchettes. Importantly, many of these songbirds are of conservation concern, whereas the birds that did best on ranchettes are common and increasing across the West (Maestas et al. 2003).

The plant communities across these three land uses were even more distinct. Native plant species were more prevalent and nonnative species were less prevalent on ranches than in either protected areas or ranchettes (Maestas et al. 2002). The greatest number of nonnative species was found on the ranchettes, with eight of 23 nonnative species being found only on the ranchette developments. In addition, percent cover of nonnative plants was highest on the ranchettes and protected areas and was significantly lower on ranches.

The effects of RRD are often manifest as a function of distance from home site and roads. In Pitkin County, Colorado, the biodiversity responses to ranchettes extended out as far as 330 m into undeveloped areas, although most effects diminished at approximately 100 m from the homes (Odell and Knight 2001). Human-adapted species, such as Brown-headed Cowbirds,

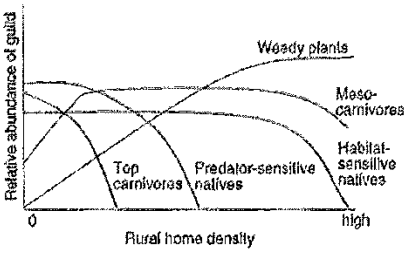

FIG. 4. Hypothesized responses of various guilds of species to rural home density.

Black-billed Magpies (*Pica pica*), and American Robins (*Turdus migratorius*), all occurred at higher densities near homes and at lower densities away from homes. Similarly, domestic dogs (*Canis familiaris*) and house cats (*Felis domesticus*) were more likely to be detected near homes than away from homes, while coyotes (*Canis latrans*) and red foxes (*Vulpes vulpes*) showed the reverse pattern (Odell and Knight 2001).

Such findings help elucidate the true ecological costs associated with RRD. Rather than simply acknowledging that rural residences perforate the landscape, one can begin to calculate the magnitude of land affected beyond the building site (Theobald et al. 1997). Assuming the depth of the house-edge effect is 100 m, and including a similar depth of road-effect (Forman 2000), Odell and Knight (2001) found that approximately one-fifth of the land area of the subdivided ranches they studied was affected by houses and roads.

General effects of RRD on biodiversity

Compared with the urban fringe, development in rural areas distant from cities generally involves the lower intensity land uses of exurban home development. The Colorado case study suggests that this low-density housing can have effects on biodiversity that are more extreme than traditional rural land uses such as such as protected areas or ranching. The relative impacts of RRD on biodiversity compared to other rural land uses such as logging, grazing, crop agriculture, and back-country recreation, however, are little studied. We can speculate that each has unique influences on biodiversity that are related to the nature of the land use. The plowing associated with crop agriculture likely alters soil communities to a greater extent than does RRD, but has fewer impacts associated with roads or with human disturbance. Similarly, logging may more greatly change forest structure and composition and disrupt soil layers. There may sometimes also be considerable overlap in impacts among these land use types. A study in south western Montana found that density of cowbirds and parasitism of native bird species were significantly associated with density of homes, area in

crops, and livestock densities within 6 km of riparian habitats (Hansen et al. 1999). Presumably this results because all three of these land use types provide supplemental foods that attract cowbirds. One way that RRD differs from the other rural land uses is its longevity. While logging and recovery typically occur in cycles, and livestock grazing and crop agriculture often have rest rotations, RRD is permanent on the order of decades or longer and its effects may intensify over this time.

The effect of land use is a function not only of land use type but also its intensity. In the case of RRD, home density is likely an important measure of intensity. A common perception is that homes scattered at low densities have little influence on biodiversity, while dense subdivisions have a large effect. Again, however, little research has examined how impacts on biodiversity vary with rural home density and development pattern.

As is the case with development intensity under UFD, we speculate that the relationship with rural home density under RRD varies among the different elements of biodiversity (Fig. 4). Top carnivores may be reduced even at low home densities as the expanding network of roads allows increased human access, hunting, and human disturbance. This may allow for an expansion of native or exotic meso predators and brood parasites. Consequently, native species vulnerable to predation and nest parasitism may undergo reduced survival and reproduction at low to medium densities of homes. Weedy plant diversity may increase at low home densities in association with roads, increase somewhat linearly with home density, then drop at high home densities as most of the land area is converted to lawns and ornamental plants. Suburban adaptables that benefit from human food sources and habitats may increase in proportion to home density. Finally, species richness of native species that require native habitats may decline only at higher home densities as the area of remaining habitat fall below key thresholds. Future research is needed to test these hypotheses and to identify key thresholds.

The effects of rural home density undoubtedly interact with the spatial distribution of homes and the behaviors of home owners. If homes are clustered, total road density is reduced and the ecological effects of each home overlap, allowing a larger proportion of the landscape to be free of these effects. Consequently, local planners often recommend clustered development to reduce ecological impacts and to reduce costs of government services (Daniels 1999). Also, home owners may reduce impacts on biodiversity by controlling weeds along roads, landscaping with native plant species, confining pets, covering compost, and managing livestock, pet foods, trash, and other artificial food sources including bird feeders to prevent access to wildlife.

A unique aspect of RRD compared with UFD is that rural homes are more likely to be placed in landscapes that include public lands with natural habitats and wilderness conditions. Typically, the sites productive for agriculture were claimed for private ownership, while less-productive mountain and desert settings remained under public control (Huston 2005). This has resulted in a high level of interspersion among private and public lands (Theobald 2000). An increasing number of people are now building homes on the edges of public lands for increased access to outdoor recreation, scenery, and solitude (Knight and Clark 1998). Consequently, the aura of impacts radiating from each home may extend hundreds of meters to kilometers within the public land boundary and alter biodiversity within this zone. Homes on the periphery of public lands may also attract wilderness species such as bears from the public lands, leading to increased mortality and declines in population sizes within the public lands (Mace and Waller 2002).

In the Greater Yellowstone Ecosystem, for example, national parks, national forests, and other public lands cover the majority (71.6%) of the land area. The private lands are largely in river valleys. These private lands have a longer growing season, better soils, and higher primary productivity than the public lands (Hansen et al. 2000). These same attributes make these settings attractive for native species. Consequently, the distribution of rural homes overlaps significantly with hotspots for birds (Hansen et al. 2002). The rural homes, livestock, and agriculture near the bird hotspots attract nest parasites and predators and result in reduced nest success of several native species (Hansen and Rotella 2002). P. H. Gude, A. J. Hansen, and D. A. Jones (*unpublished manuscript*) found that 49% of deciduous woodlands (the richest bird habitat in the area) across Greater Yellowstone are within 1 km of a home. Hence, even in this large, wilderness system, which is dominated by public lands, the effects of rural homes may extend over a substantial portion of key habitats.

We conclude that like exurban development on the urban fringe, exurban expansion in rural landscapes may have substantial negative impacts on native biodiversity. Considerable research is needed to better understand the effects of rural home density, spatial distribution, and homeowner behavior on biodiversity impacts. A particular concern about exurban development in rural areas is that it is more likely to be in close proximity to public lands and associated wilderness species.

Mechanisms Linking Exurban Development and Biodiversity

The mechanisms underlying these responses to land use are generally less well studied than the patterns described above. Case studies provide insights for some mechanisms, but adequate comparative study and ex-

perimentation is generally not available to allow for derivation of general predictive principles. Below we describe the suite of factors that have been suggested to explain biodiversity responses to exurban and urban development. These involve changes in habitats, ecological processes, interactions among species, and human-related disturbance of native species. Our goal is to encourage additional research on these mechanisms. Beyond improving scientific understanding, knowledge of these mechanisms may provide the basis for management strategies to reduce the effects of exurban development on biodiversity.

Habitat alteration

As human settlement progresses, conversion of native habitat to roads, yards, and structures tend to fragment the landscape (Soulé et al. 1998, Marzluff and Ewing 2001). Fragmentation influences biodiversity through reduction of habitat area, creation of dispersal barriers (Trombulak and Frissell 2000, Marzluff and Ewing 2001), disruption of nutrient cycling, and increases in predation, parasitism, and competition (Marzluff and Ewing 2001). In the Seattle case study, reduction in the area of forest patches was thought to explain the loss of forest-dwelling bird species. Isolation of small canyons in California by subdivisions lessened the dispersal capabilities of and resulted in decreased species diversity for chaparral-requiring birds (Soulé et al. 1988).

In addition to habitat fragmentation, residential development may change microhabitat features. For example, decreasing abundance of native plant cover with increasing urbanization was correlated with decreasing bee, bird, and lizard species richness in Arizona (Germaine et al. 1998, Germaine and Wakeling 2001, McIntyre and Hostetler 2001). In Illinois, replacement of natural sandy patches with grassy patches in a residential area resulted in decreased snapping turtle (*Chelydra serpentina*) nesting success (Kolbe and Janzen 2002). Reduced course woody debris input (Christensen et al. 1996) tied to exurban development in Wisconsin and Michigan lakes reduced growth rates of bluegill sunfish (*Lepomis macrohirus*) but did not significantly affect largemouth bass (*Micropterus salmoides*) (Schindler et al. 2000).

The nonrandom location of land use relative to biophysical gradients and biodiversity may cause the resulting habitat fragmentation resulting from human settlement to have disproportionately large effects. We described above the concentration of rural residences in productive valley bottoms in mountainous landscapes (Riebsame et al. 1996, Theobald et al. 1996, Soulé et al. 1998, Hansen et al. 2002, Seabloom et al. 2002). Other favored settings for RRD include lakeshores in the upper Midwest (Beale and Johnson 1998), coastal areas (Seabloom et al. 2002), and wetlands in the coastal states (Brady and Flather 1994). Because both humans and native species tend to concentrate in such locations (Hansen et al. 2002, Seabloom et al. 2002), the impacts of exurban development may be focused on the most critical habitats (see also Huston 2005).

Alteration of ecological processes

Less visible than habitat destruction, ecological processes such as disturbance regimes may be altered by exurban development and in turn influence habitats and biotic assemblages. In many parts of the arid west, humans have excluded fires from urbanizing landscapes to protect human property and lives. In Oklahoma, for example, such fire exclusion has led to increased juniper (*Juniperus* spp.) encroachment in suburban and rural habitats since 1950, as human population density increased (Coppedge et al. 2001). Correlated with the increase in juniper, the passerine community has also been altered. American Robin and Eastern Bluebird (*Sialia sialis*) abundance showed a unimodal trend with highest abundance at intermediate levels of juniper encroachment. Three species of potential juniper-feeders, Cedar Waxwing (*Bombycilla cedrorum*), Ruby-crowned Kinglet (*Regulus calendula*), and Yellow-rumped Warbler (*Dendroica coronata*), increased with juniper encroachment levels. Four species, Song Sparrow (*Melospiza melodia*), White-crowned Sparrow (*Zonotricha querula*), House Sparrow, and American Goldfinch (*Carduelis tristis*), declined with increased levels of juniper encroachment. In other urbanizing environments, in contrast, increased human ignitions have accelerated fire frequency and decreased later seral habitats (Keeley 2002).

Flood regimes may also be altered with urbanization with consequences for riparian communities. For example, plains cottonwood (*Populus deltoides*) establishment on the floodplain and terrace of Boulder Creek in Boulder, Colorado declined from 1937 to 1992 as stream diversion, straightening, stabilization, and clearing led to decreased channel movement, decreased peak flow and a decreased flooding frequency in the floodplain. Concurrently, species less tolerant to flooding events—including the exotics crack willow (*Salix rubens*) and Russian-olive (*Elaeagnus angustifolia*)—have encroached upon the floodplain (Auble et al. 1997).

Changes to nutrient cycles are also likely with conversion to exurban land uses. Along an urban–rural gradient in New York, nitrogen and phosphorous levels in oak forest soils increased with increasing urbanization (Pouyet et al. 1995). Increased nitrogen availability tends to simplify biotic communities and favor exotic species (Vitousek et al. 1997). Nutrient effects may be particularly manifest in aquatic systems. Natural-amenity exurban development around four Wisconsin lakes has affected water quality and altered diatom communities (Garrison and Wakeman 2000). As

once-seasonal homes along these lakeshores were converted to year-long use, the amount of impervious surface increased and consequently run-off and sediment load to the lakes also increased. Increased levels of phosphorous, iron, and aluminum were tied to a shift from benthic to mainly planktonic diatoms and an increase in diatom taxa indicative of eutrophic conditions. Water quality in the higher alkalinity lakes showed improvement as construction slowed, but the lower alkalinity lakes appeared to be more sensitive to shoreline development, and water quality did not improve in these lower alkalinity lakes.

Alteration of biotic interactions

As human settlement alters species distributions, interactions among species may be changed with consequences for species viability and ecosystem function (Daszak et al. 2000, Marzluff 2001). Best studied among these changes in biotic interactions are predator–prey relationships. As illustrated by the Colorado case study, both native and nonnative predators may become abundant near human development and inflict heavy prey heavily upon other native species. Similarly, Wilcove (1985) found that suburban woodlots in Maryland experienced significantly higher rates of nest predation than did rural woodlots, likely as a result of higher densities of nest predators such as the Blue Jay (*Cyanocitta cristata*), Common Grackle (*Quiscalus quiscula*), gray squirrel (*Sciurus carolinensis*), and raccoon. Some predators may become abundant near human dwellings due to human subsidized food supplies (Marzluff 2001). This may also result from the loss of large carnivores that are intolerant to urbanizing landscapes, and the consequential release of mesopredators that are tolerant to human influences (Soulé et al. 1988, Crooks and Soulé 1999). Herbivores are also released by the elimination of large predators in developed areas, and the increased herbivory by deer and rabbits can have a major effect on plant diversity, both in urban parks and the surrounding landscapes.

Because predator occurrence and tolerance vary geographically, biodiversity response to urbanization may vary among regions of the United States. As described above, native songbird nest success declined in Montana as cowbird density in creased with rural home density (Tewksbury et al. 1998, Hansen and Rotella 2002). In contrast, the absence of Brown-headed Cowbirds in King County, Washington, may be a factor in the lack of nest parasitism in the Seattle case study (Donnelly and Marzluff 2004).

Changes in competitive interactions induced by development are well illustrated by invasive plant interactions with native species. English Ivy (*Hedera helix*) was introduced as an ornamental plant and kills native trees through competition for light (Reichard 2000) in much of the continental United States. Similarly, Norway maple (*Acer platanoides*), a shade tree introduced to eastern deciduous forests, out-competes native maples and beeches (Webb et al. 2001).

Many examples of the spread of infectious diseases related to human settlement exist. These can be classified as (1) human facilitated dispersal or translocation of hosts and parasites, (2) supplemental feeding, and (3) disease "spill-over" from domestic to wild populations (Daszak et al. 2000). Supplemental feeding of white-tailed deer at rural home sites was found to be directly related to the maintenance of bovine tuberculosis in Michigan deer populations (Michigan Department of Natural Resources 1999). Similarly, birdfeeders were found to increase the concentration of House Finches (*Carpdacus mexicanus*) and other bird species, enhancing the spread of mycoplasmal conjunctivitis (Fisher et al. 1997, Nolan et al. 1998). Last, many examples of "spill-over" of infectious diseases to wildlife involve domestic dogs. Canine distemper virus, canine parvovirus, and sarcoptic mange (*Sarcoptes scabiei*) are three pathogens known to have spread due to domestic dog–wildlife interactions, and are suspected to have caused population declines in the endangered gray wolf (*Canis lupus*) and black-footed ferret (*Mustela nigripes*) (Daszak et al. 2000).

Human disturbance

Finally, the presence of humans and their pets around home sites can directly influence biodiversity. Human presence in yards or on trails near homes may displace some species of wildlife. Bald Eagles (*Haliaeetus leucocephalus*), for example, may decline in number in areas with increasing human recreation (Brown and Stevens 1997, Stalmaster and Kaiser 1998). Pronghorn antelope (*Antilocapra Americana*) on Antelope Island State Park in Utah retreated further from trails once they were opened for recreational use (Fairbanks and Tullous 2002). Likewise, elk (*Cervus Canadensis*) approached by humans during calving season, were repeatedly displaced resulting in elevated calf mortality (Phillips and Alldredge 2000).

Pets may also displace, injure, or kill wildlife. Pet cats are responsible for the deaths of millions of birds in the United States every year, and in Wisconsin alone, an estimated 39 million birds per year are lost to domestic cats (Coleman and Temple 1996). Pet dogs also act as predators in many ecosystems. In Florida, pet dogs have effected the distribution of the endangered key deer (*O. virginianus clavium*), and are suspected to have eliminated them from several islands in the Florida Keys. In Colorado, the flushing distance of ungulates to human hikers was increased if a pet dog was present (Miller et al. 2001). Because rural pets kill more than their suburban and urban counterparts, adverse effects on native species are potentially greatest in the undisturbed habitat near new rural residential developments (Barratt 1998).

Another direct consequence of suburban and exurban residential growth in the United States has been an increase in vehicle miles traveled per person and per household, escalating the potential for roadkill. Between 1980 and 2000, overall per capita vehicular travel in the United States increased by 48.7%, of which the fastest growing component was "home-based" travel, including shopping, recreation, and driving to school. Although mortality of animals from collision with vehicles is best documented in large mammals, few terrestrial species are immune (Trombulak and Frissell 2000). Roadkill has affected the demographics and migrations of birds, snakes, invertebrates, and amphibians, and is a major cause of mortality for moose, lynx (*Felis pardina*), wolves, and American crocodile (*Crocodilus acutus*) in various regions of the United States (Trombulak and Frissell 2000).

Conclusion

Our major conclusion is that exurban development is a pervasive and fast-growing form of land use that is substantially understudied by ecologists and has large potential to alter biodiversity. Covering about 25% of the land area of the conterminous United States in 2000 (Brown et al. 2005), area in exurban land use increased since 1974 at rates in excess of area in urban or agricultural land uses. Ecologists have traditionally focused research on wild or semi-wild lands (Miller and Hobbs 2002). The relatively few studies on exurban development are mostly done as contrasts to urban land use. Consequently, knowledge of the effects of exurban density, spatial configuration, and homeowner behavior on biodiversity, and specific mechanisms for response is poorly developed.

The relatively few studies on exurban development suggest that its impacts on biodiversity may be substantial, both in the immediate vicinity of homes and even on adjacent or even distant public lands. These impacts are summarized as follows.

1) Many native species incur reduced survival and reproduction near homes and consequently native species richness generally drops with increased exurban densities. At the same time, some exotic species and some human-adapted native species generally increase with intensity of exurban development.

2) The relationship between these elements of biodiversity and intensity of exurban development are sometimes nonlinear, with sharp thresholds were biodiversity changes abruptly with incremental increases in exurban intensity. Knowledge of these thresholds is important for managing exurban development to achieve biodiversity objectives.

3) These effects may be manifest for several decades following exurban development, so that biodiversity is likely still responding to the wave of exurban expansion that has occurred since 1950.

4) The location of exurban development is often nonrandom relative to biodiversity because both are influenced by biophysical factors such that they are concentrated in more equitable landscape settings. Consequently, the effects on biodiversity may be disproportionately large relative to the area of exurban development.

5) The effects of exurban development on biodiversity likely differ among ecosystem types. Additional research is needed to derive generalities on the types of ecosystems that are relatively vulnerable to exurban development.

6) An identifiable set of ecological mechanisms link exurban development and biodiversity. More research is needed on these mechanisms and the resulting knowledge can help with understanding, managing, and mitigating these impacts.

7) In addition to local effects, exurban development may alter ecological processes and biodiversity on adjacent and distant public lands. Consequently, exurban development in rural areas may have even more important impacts than in the urban fringe because of the elevated influence on lands dedicated to conservation and on wilderness species that are rare in human-dominated landscapes.

It is our hope that this review inspires the additional research that is needed to better understand and manage the impacts of this important type of land use.

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EXHIBIT B

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Whither the Rangeland?: Protection and Conversion in California's Rangeland Ecosystems

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Abstract

Land use change in rangeland ecosystems is pervasive throughout the western United States with widespread ecological, social and economic implications. In California, rangeland habitats have high biodiversity value, provide significant habitat connectivity and form the foundation for a number of ecosystem services. To comprehensively assess the conservation status of these habitats, we analyzed the extent and drivers of habitat loss and the degree of protection against future loss across a 13.5 M ha study area in California. We analyzed rangeland conversion between 1984 and 2008 using time series GIS data and classified resulting land uses with aerial imagery. In total, over 195,000 hectares of rangeland habitats were converted during this period. The majority of conversions were to residential and associated commercial development (49% of the area converted), but agricultural intensification was surprisingly extensive and diverse (40% across six categories). Voluntary enrollment in an agricultural tax incentive program provided widespread protection from residential and commercial conversions across 37% of the remaining rangeland habitat extent (7.5 M ha), though this program did not protect rangeland from conversion to more intensive agricultural uses. Additionally, 24% of the remaining rangeland was protected by private conservation organizations or public agencies through land or easement ownership while 38% had no protection status at all. By developing a spatial method to analyze the drivers of loss and patterns of protection, this study demonstrates a novel approach to prioritize conservation strategies and implementation locations to avert habitat conversion. We propose that this approach can be used in other ecosystem types, and can serve as a regional conservation baseline assessment to focus strategies to effect widespread, cost-effective conservation solutions.

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Introduction

The conversion of habitat from a natural state to developed human uses has fundamentally altered both the spatial configuration and function of ecosystems worldwide [1]. Compared to other ecosystems, the effects of habitat conversion on rangeland ecosystems have only received recent attention in the scientific literature [2–4]. This is despite the global vastness of rangelands, covering nearly one quarter to one third of the world's habitable land area [5], their high levels of biodiversity, and the large economic and social benefit provided by rangeland ecosystems [6,7].

Rangeland habitats (grasslands, shrublands and woodlands) have also received less attention from conservation efforts than other major habitat types. The primary global biomes that support extensive rangelands– 1) Temperate grasslands, savannas and shrublands; and 2) Mediterranean forests, woodlands, and scrub– have experienced widespread conversion to anthropogenic land uses (45.8%, 41.4% converted respectively) and have the lowest proportion of legal conservation protection among all biomes (4.6%, 5.0% respectively) [8]. This habitat conversion is driven by population growth and associated residential and commercial development, as well as agricultural production. High levels of habitat loss are especially detrimental for biodiversity in Mediterranean regions of the world that have some of the highest population densities of all global biodiversity hotspots [9].

The economic and social benefits that grazed ecosystems provide vary by societal context. Many livestock-based economies operate in a subsistence mode, including 120 million pastoralists worldwide dependent on livestock as a primary food source [10]. In the coterminous western United States, rangelands are one of the most extensive land types covering over 163 million hectares, with approximately half of the land in non-federal ownership [11]. In addition to the subsistence and market-based economic values provided by rangelands, numerous ecosystem services are provided by grassland and woodland ecosystems as well, such as habitat for native pollinators [12], carbon sequestration [13–15] and water supply [16].

Rangelands contribute to global biodiversity by providing habitat for numerous species as well as critical habitat connectivity. Many iconic, wide-ranging species rely on the habitat connectivity provided by unfragmented rangelands to complete annual migrations in diverse regions such as eastern Africa, western North America and the Mongolian steppe [17]. In many rangeland ecosystems, native or livestock grazers can play a critical role in maintaining habitat diversity [18] or habitat for

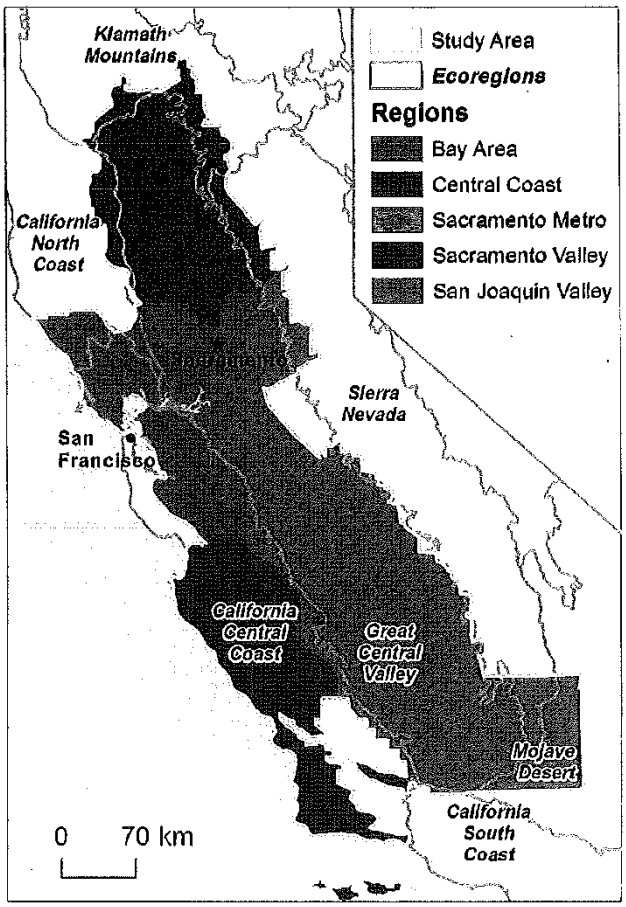

Figure 1. Study area. Extent of study area, ecoregions and reporting regions used for conversion analysis.
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restricted endemic species [19,20], yet impacts to ecosystems due to incompatible grazing are well-known, especially for riparian habitats in arid regions [21].

Despite being widespread with a rich historical legacy in the Western U.S., ranching is an economically marginal activity at small to medium scales of operation. For example, Wetzel et al. found that more than 70% of surveyed California ranchers make less than $10,000 profit annually [22]. In addition to the economic challenges of running smaller ranching operations and the demographic reality that the average age of ranchers is high, other factors have contributed to a declining population of ranchers, including impediments to intergenerational land-based wealth transfer, rise in rural residential amenity-based land purchases, and loss of critical industry infrastructure (such as processing facilities) [23–25]. These demographic and economic pressures increasingly lead to the dissolution of large land holdings into smaller parcels often resulting in the conversion of rangeland habitats into uses not compatible with ecosystem functioning [4,26,27].

The resulting fragmentation of rangeland habitat has many negative biological and social effects including loss of remote habitat, increase in human commensal species, severing of wildlife connectivity between core habitats, and an increasingly difficult social environment for ranching (e.g. new neighbors are affronted by certain aspects of a livestock operation) [2,23,28]. While the decision to break-up and sell a large ranch is made at the landowner or family level, the consequences become evident ecologically at the landscape scale with large areas converting to low density "exurbs" [3]. These diffuse development patterns

represented the fastest growing land use in the country in recent decades [29].

To counteract these trends, various conservation strategies have been used, including voluntary, publicly-funded conservation and restoration incentive programs (such as the Grassland Reserve Program and the Wildlife Habitat Incentive Program), and acquisition of development rights through purchase of a conservation easement [30,31]. These strategies can provide a range of conservation benefits including legal protection of land from conversion and improvement of habitat conditions for wildlife [31], but lack of transparency of terms and reporting makes a broad evaluation difficult [32]. Acquisition of fee title or certain rights to the land through a conservation easement requires the most upfront capital, but provides long-term assurance that the land will remain open habitat, if not actively grazed rangeland.

Conservation strategies such as reduction in property taxes for agricultural land uses through voluntary incentive programs can represent a significant boost to the economic viability of ranching [25]. One notable example of such a program was the California Land Conservation Act, commonly known as the Williamson Act (WA), that provided property tax reductions across six million hectares of the state as of 2009 [33]. Counties had been compensated by the State for lost property tax revenues ($35.1 M in 2009) but payments from the state to participating counties to compensate enrolled landowners stopped in 2009. Since then, the program has been implemented at the discretion of individual counties. Before 2009, to remove enrolled land from Williamson Act contracts, the landowner had to initiate a process of non-renewal which gradually restored the full tax burden over a nine year period. A primary reason that private landowners began the process of non-renewal was to plan for future subdivision and development, and as such it was a useful proxy for the threat of conversion to residential or commercial development. Other conservation tools such as habitat mitigation banks provide credits to offset development impacts to habitat for protected species and can provide conservation-friendly revenue streams for landowners. Future revenue from monetized ecosystem services including water banking and carbon sequestration is an area of widespread interest and active science and policy development throughout the western United States, yet substantial constraints remain [34,35].

To determine the scope and drivers of rangeland habitat conversion, this study uses geographic data for development and agricultural land uses across a 13.5 M hectare portion of the California Floristic Province. California is an ideal place to look at rangeland habitat loss and conservation because of the globally significant biodiversity in the Mediterranean climate-influenced part of the state, high rate of population growth and progressive conservation policies and funding programs. While many aspects of California rangelands are unique relative to other western United States ranching landscapes, many of the social and economic drivers of land use change are similar to other regions, including demographic trends of ranchers and displacement of grazing for more profitable land uses. This study quantifies the amount of rangeland conversion that has occurred over 21 years in California and the level of protection afforded to the remaining rangelands. This information is critical to understanding the vulnerability of this ecosystem and associated social and economic benefits provided by ranching. This study also provides needed data for conservation planning efforts in California.

Using data from 1984 to 2008 on the extent of rangelands, we mapped areas that were converted from rangelands to other uses and, through aerial imagery interpretation, determined the resulting land use at the end of the time period. To assess the conservation status of remaining rangelands, we quantified the overlap between different short-term and permanent protective measures and rangeland ecosystem types. We present this approach as an attempt to convey the full spectrum of conservation status options, moving beyond traditional gap analyses that quantify the percentage of habitats that are in various categories of permanent legal protection [36,37]. Such an adaptation of traditional analyses is critical for rangelands because of the importance of capturing the scope of voluntary programs that provide conservation benefits to landowners and society.

Study area

The study area encompasses the majority of the rangeland habitat within the California Floristic Province, including all of the Great Central Valley and California Central Coast ecoregions where data were available [38]. The study area also includes the full extent of Kern County which extends east into the southern part of the Sierra Nevada Mountains and western Mojave Desert because this portion of these ecoregions has similar habitats and land use to the southern Great Central Valley (Figure 1). The majority of the North and South Coast ecoregions were excluded from the analysis because they are not primarily in rangeland land cover. We defined our study area to align with the focus area of the California Rangeland Conservation Coalition (CRCC), a group of federal and state agencies, conservation organizations and ranchers working to develop collaborative solutions to make ranching economically viable and ecologically beneficial. As such, we focused on private rangelands and excluded the desert rangelands in the Northeast and Southeast part of California that are extensive, but have low productivity due to low rainfall and shorter growing seasons. All potential rangeland habitats in California cover 23.1 M hectares, of which approximately 60% was actually grazed in 2005 ([39].Four counties within the study area did not have data and were excluded from the analysis, Tuolumne and Calaveras in the Sierra Nevada foothills and San Mateo and Santa Cruz in the Central Coast ecoregion.

The rangeland habitats within the study area are dominated by Mediterranean annual grasslands and mixed hardwood woodlands, and are characterized by a strong latitudinal precipitation gradient. The highest average annual precipitation in the study area is near Redding, CA with 113 cm annually with the lowest in Kings County, near Taft with 14 cm annually. Coupled with the length of the growing season and differences in soil productivity, precipitation is a strong driver of forage productivity and quality, a major factor for the economic viability in ranching [40]. Forage productivity varies from 560 kg/ha to over 3900 kg/ha in areas closer to the coast [41].

Methods

Land use data

The California Farmlands Mapping and Monitoring Program (FMMP) was established in 1982 to provide consistent, objective information on agricultural land uses throughout California [42]. Eight land use categories are used to map general land use and evaluate the suitability of the land for irrigated agriculture (Prime, Statewide Importance, Unique, Locally Important) and to show the extent of grazing land, developed areas, water and other land uses. The grazing land category was used in this study to assess conversion patterns and is defined as "land on which the existing vegetation is suited to the grazing of livestock" (http://www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/map_categories.aspx). The number of counties included in FMMP has increased over the years, now including over 95% of the privately held lands in California. The program uses soil survey GIS data, aerial imagery and field

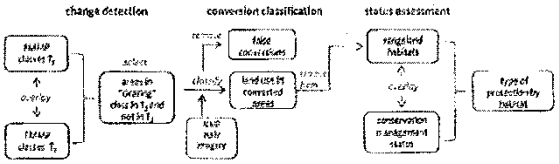

Figure 2. Sequence of core spatial analyses used in study. The three primary elements of the analysis are shown in sequence. The "change detection" step provided the full set of areas to classify in the "conversion classification." Some lands where a change was detected but were not actually converted were removed from the analysis as false conversions. Converted lands were removed from the habitat data for the "status assessment", which quantified the proportion of habitats under various types of protection. The year of the data used in FMMP overlays between time point 1 and time point 2 varied by survey area. Nineteen of the thirty-six survey areas spanned the period from 1984–2008, five spanned the period 1984–2006; and the remaining twelve covered various years with an average of seventeen years across them. The most protective conservation management status was assigned to land if multiple statuses existed, in order of precedence: fee ownership, easement, Williamson Act enrollment.
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reconnaissance to map the land use categories described above every two years. Additional classes were added in 2002 for select San Joaquin Valley counties as part of the Rural Land Mapping project to further distinguish the Other Land category. We used the FMMP dataset because it represents a consistent land use change data source over a long time period at a relatively high spatial resolution (4 ha minimum mapping unit). Our study period matches the development of Geographic Information Systems (GIS) during which time the mapping protocol for the FMMP changed accordingly. Originally the mapping process used transparent aerial photos overlaid onto 100,000 scale paper topographic sheets. The resulting land use classification was then digitized for use in a GIS. Such changes introduce some error into any analysis of long-term data.

We assembled FMMP data for 33 counties throughout California for two points in time. The time period covered for each survey area (three counties were split into two survey areas) varied based on when FMMP mapping was initiated in a survey area and data availability at the time of the analysis. The beginning year was as early as 1984 and as late as 2000 and the end year was either 2006 or 2008, for a maximum range of 24 years. The range of years by survey area is shown in Table S1, and has a mean of 21 years across all survey areas. To map areas that were converted during this time, we overlaid the datasets from the beginning and end years and selected areas that were classified as Grazing Land in the first time period and another mapping category in the later period. We applied processing techniques to the composite data to reduce any errors resulting from small misalignments of the boundaries from the two years that may have resulted from the migration to a GIS-based workflow. Specifically, we forced any point along a line within 100 meters of a point from the other time period to be snapped together in a GIS. This resulted in simpler (less sinuous) polygon shapes and the removal of smaller and more linear features from the dataset. While this processing step was essential to be able to compare the data from the two time periods, it does limit analysis of the fine-scale fragmentation patterns resulting from conversion. Polygons smaller than four hectares were removed from the combined data set, as that was the minimum mapping unit for the FMMP land use data. A flow chart illustrating our analysis steps for the study is shown in Figure 2.

To assign a land use to the converted polygons, we used one-meter resolution, true color 2009 aerial imagery from the National Agriculture Imagery Program (NAIP) [43]. To distinguish the relative density of residential development, two categories were used: urban (housing density greater than 1 unit per .65 ha) and rural residential covering lower densities. During photo interpretation, a number of polygons were determined to be still in grazing land and not actual conversions and were a result of a change in classification. These were excluded from the analysis. Because the original FMMP classification does not identify crop types, we developed a new classification for this study that captures more variation in agricultural and developed land classes. We provide an assessment of the degree of overlap between these two classifications in Table S2.

To investigate the potential influence of the global financial crisis on land conversion rates, we assessed the rate of annual change from 2008 to 2010 for five counties that have different dominant land use types: Santa Barbara, Kern, Sacramento, Placer and Merced. We compared the rate of change for the years covered in this study and the rate for 2008–2010 to see if rates of conversion declined with economic activity.

Private and public conservation management data

To assess the degree to which rangeland ecosystems are protected from conversion through legal mechanisms, we assembled land status data representing land held in fee or under conservation easement with a private conservation organization or public agency [44]. To estimate the conservation benefit of a voluntary, non-permanent conservation program in rangelands, we compiled spatial data on lands enrolled in the California Land Conservation (Williamson) Act [45] using the latest data available for each county, as recent as 2009. Yuba County was the only county in our study area that did not participate in the program. Williamson Act contracts were between a landowner and the county in which the enrolled land exists, and lasted a period of at least ten years after which point they needed to be renewed. We also included land covered by the "Super Williamson Act" contracts that lasted 20 years.

Rangeland habitat data

We used the Multi-Source Land Cover data assembled by California Department of Forestry and Fire Protection [46] to represent the rangeland habitats of interest in the study area, classified using the California Wildlife Habitat Relationships (CWHR) standard [47]. Input data sources for this composite layer range from 1997–2002. We used a classification of rangelands used by the UC Davis Rangeland Watershed Lab as the primary list of habitats for this study (http://californiarangeland.ucdavis.edu/). We added the montane hardwood habitat type to the analysis as it is extensive within our study

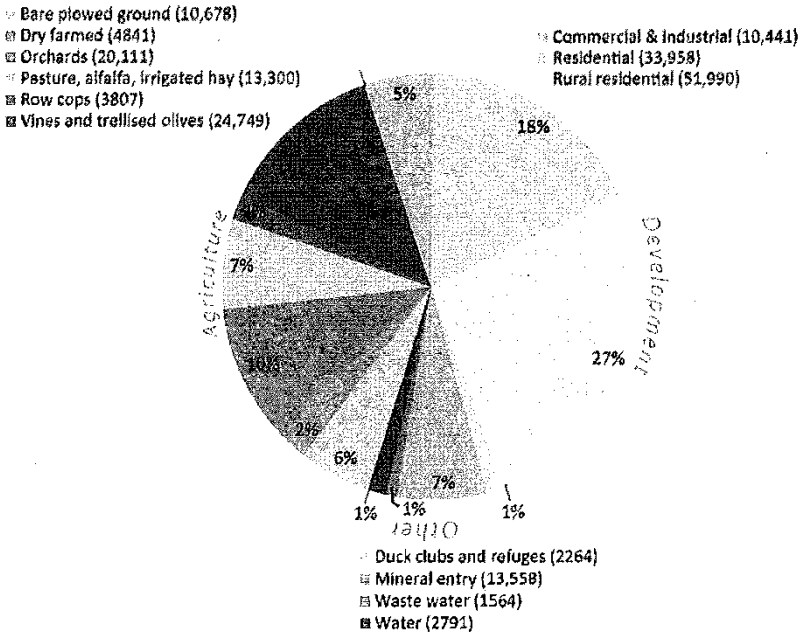

Figure 3. Area (Ha) of land cover types on land converted from rangelands during the study period. Converted areas were mapped using the California Department of Conservation's Farmland Mapping and Monitoring Program data (1984–2008) and classified using the National Agriculture Imagery Program imagery from 2009. The development categories (shown in gray) account for 49% of total area converted, agricultural conversions account for 40% and various other conversions account for about 10%.
doi:10.1371/journal.pone.0103468.g003

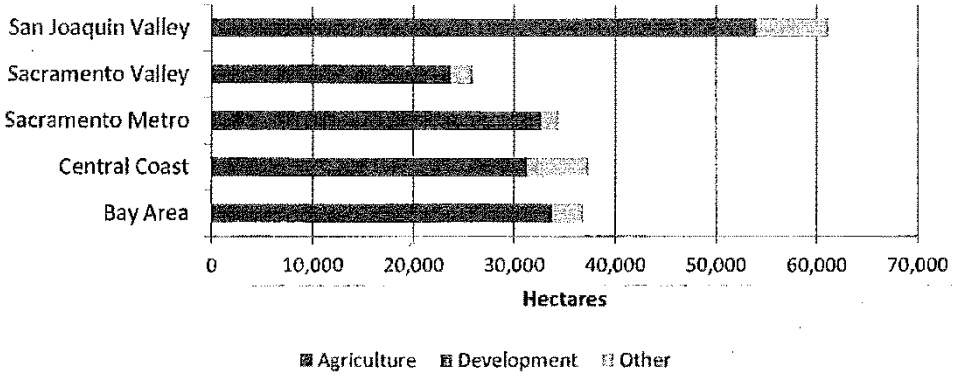

Figure 4. Regional conversion patterns by major type. The primary type of conversion for each region was variable, but can be explained partly by the existing land use in the region. For example, the more developed Sacramento Metro and Bay Area regions saw the majority of the converted land end up as residential and commercial development, while the majority of conversions in the San Joaquin Valley and Central Coast regions were to intensive agriculture classes. Conversion data are from an analysis of Farmland Mapping and Monitoring Program data, and land cover assigned using the National Agriculture Imagery Program imagery for 2009.
doi:10.1371/journal.pone.0103468.g004

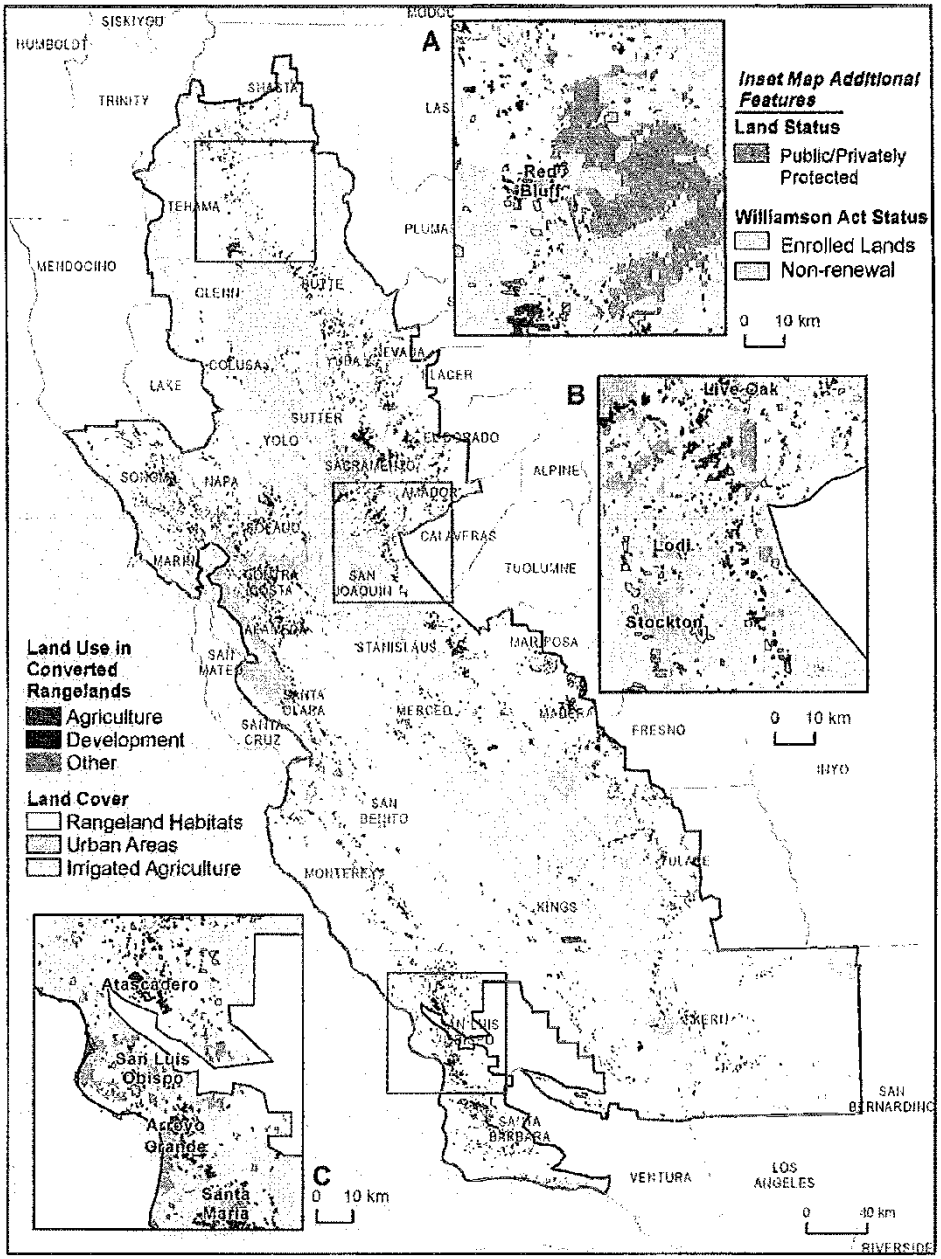
A
Inset Map Additional Features
Land Status
Public/Privately Protected
Williamson Act Status
Enrolled Lands
Non-renewal
0 10 km
Red Bluff
B
Live Oak
Lodi
Stockton
0 10 km
Land Use in Converted Rangelands
Agriculture
Development
Other
Land Cover
Rangeland Habitats
Urban Areas
Irrigated Agriculture
C
Atascadero
San Luis Obispo
Arroyo Grande
Santa Maria
0 10 km
0 40 km
SISKIYOU
HUMBOLDT
TRINITY
SHASTA
TEHAMA
MENDOCINO
GLENN
BUTTE
PLUMAS
LAKE
COLUSA
YUBA
NEVADA
PLACER
SUTTER
YOLO
EL DORADO
SACRAMENTO
ALPINE
SONOMA
NAPA
AMADOR
CALAVERAS
MARIN
CONTRA COSTA
SAN JOAQUIN
TUOLUMNE
ALAMEDA
STANISLAUS
MARIPOSA
SAN MATEO
SANTA CLARA
MERCED
MADERA
SANTA CRUZ
FRESNO
INYO
SAN BENITO
TULARE
MONTEREY
KINGS
KERN
SAN LUIS
SAN BERNARDINO
SANTA BARBARA
VENTURA
LOS ANGELES
RIVERSIDE

Figure 5. Conversion patterns by major type. The converted rangelands spanned a large geographic area. In some areas large protected area complexes were created where conversion was less widespread, possibly enabled by lower land prices (A). Agricultural conversions were more common adjacent to existing cropland (B). Conversions to developed land uses are dominated by new housing at lower densities at higher elevations in the Sierra Nevada foothills (Madera, Fresno, Butte counties) and at higher densities in the San Francisco Bay Area and near Sacramento. The areas in the Central Coast around Atascadero and Arroyo Grande experienced a large amount of conversion from a variety of sources (C).
doi:10.1371/journal.pone.0103468.g005

area and does experience some grazing depending on the location in the state, especially where California black oak (*Quercus kelloggii*) is dominant. We chose to use a habitat-based definition of rangeland extent and not the Grazing Land category from the FMMP data for the conservation status assessment because we wanted to quantify the variability of protective status across ecosystems that support domestic livestock. The diversity of ecological and social contexts for these ecosystems is high and differences in patterns of protection are useful to interpret the results across such a large study area.

We combined the data of rangeland habitats with the data for public land and privately protected areas, Williamson Act lands and converted rangeland areas within the GIS. To assess the conservation status of remaining rangelands we summarized the habitat distribution by five categories of land holdings: 1. private land, 2. private land enrolled in the Williamson Act, 3. private land not renewing Williamson Act contracts, 4. private land with a conservation easement, and 5. land held in fee title by a public agency or a non-governmental conservation organization. To facilitate reporting and interpretation, we divided the counties in the study area into distinct regions: the Bay Area, Sacramento Metro, Sacramento Valley, San Joaquin Valley, and Central Coast (Figure 1). Because geographic data on rangeland habitats do not exist before 1984, we were not able to determine which habitats were converted.

Results

Rangeland conversion

Across the study area, 195,594 ha of rangelands were converted to other uses during the time period covered in the assessment. The most common conversions were to developed land classes (96,389 ha, 49% of the total, Figure 3) with the most extensive to rural residential followed by residential land. Loss of rangelands to more intensive agricultural land uses covered 78,793 ha (40% of total) with four land uses making up 87% of all conversions, including, in descending order, vines and trellised olives, orchards, pasture/alfalfa, and the transitional category of bare plowed ground. Other conversion types covered just over 20,000 ha and were dominated by mineral extraction (gravel, clay, oil/gas, tailings ponds) accounting for 66% of all area within this category.

The San Joaquin Valley region experienced the largest amount of conversion (61,139 ha) with 54% of the converted area going to agricultural land uses (Figure 4). Conversion in the Bay Area and Sacramento Metro region was dominated by development, with the ratio of development to agricultural conversions at 2.7 and 3, respectively. In the Bay Area, the counties to the east of San Francisco Bay have the largest converted area collectively, but Sonoma County had the largest area converted of any of the Bay Area counties analyzed (Table S3).

The vast majority of the development in the Sacramento Metro region occurred in the grasslands and woodlands leading to the Sierra Nevada foothills east of Sacramento, with large conversions directly adjacent to the existing urbanized area (Figure 5). The Central Coast experienced slightly more conversion than the Bay Area or the Sacramento Region, from a diverse mix of conversion types. Agricultural conversions dominated Monterey County (primarily to vineyards) (Figure 5). In Santa Barbara County, large areas were converted to oil and gas extraction. San Luis Obispo County experienced dramatic residential growth around Arroyo Grande, Paso Robles and Atascadero totaling over 7269 ha in residential and rural residential classes (Figure 5B, Table S3).

The counties with more residential development had a slowdown in conversion rates from 2008–2010 with Sacramento and Placer declining 88% and 43%, respectively (Table 1). Santa Barbara County also experienced a drop of 40%, while Merced County's rate was 80% higher than historical suggesting that agricultural conversions did not slow in that county after the onset of the recession. Kern County also experienced a slight increase in the rate of conversions (18%) relative to the long-term average.

Conservation status

Of the remaining rangelands, 1.8M ha (24%) were protected against further conversion in fee title ownership or conservation easement held by a public agency or private conservation organization (Figure 6). In contrast, 2.8M ha (38%) of the rangeland area had no conservation status and was potentially subject to conversion to alternative land uses. Roughly the same amount of land (37%) was temporarily protected from conversion to development through enrollment in the Williamson Act.

Table 1. Rate of conversion of rangeland for years up to 2008 and for 2008–2010 based on FMMP data.

County	Number of Years Included in Study (2008 and earlier)	Rate of conversion pre-2008 (Ha/Yr)	Rate of conversion 2008–2010 (Ha/Yr)
Santa Barbara	24	576	346
Kern	20	572	674
Merced	20	548	994
Sacramento	20	485	56
Placer	24	363	208

Counties with more agricultural land (Kern, Merced) experienced an increase in the rate of conversions compared to the long-term average, while Sacramento County experienced a decline in conversions likely due to the drop in demand for new housing.
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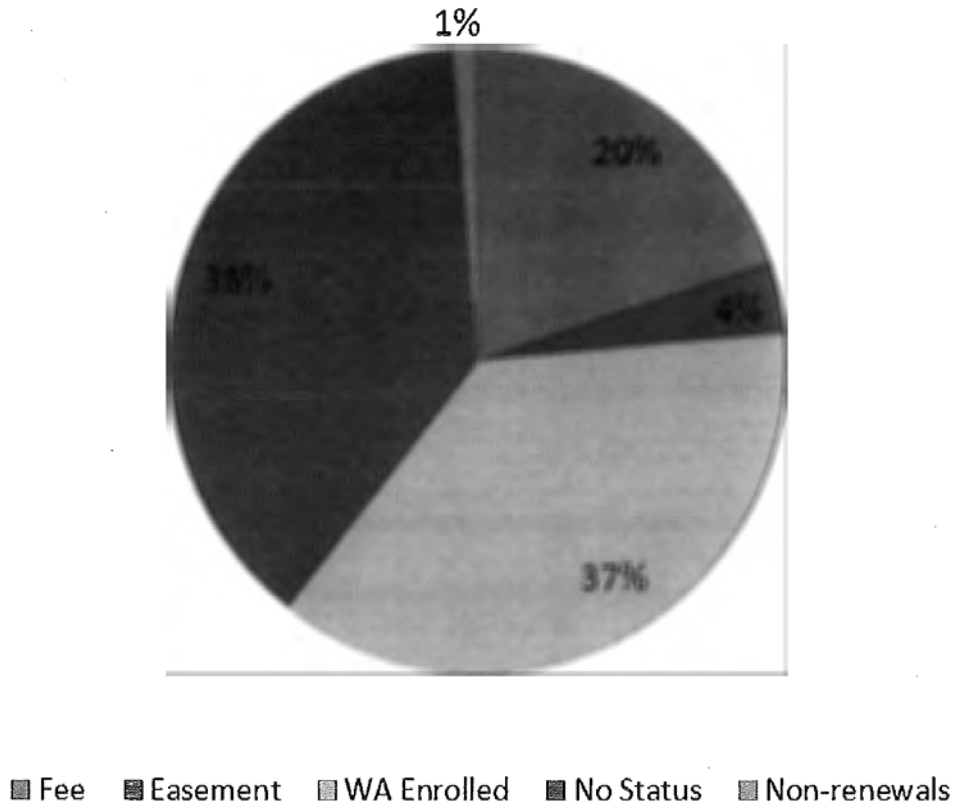

Figure 6. Conservation status of rangeland habitats. Over 60% of the total area in rangeland habitat have some protective status against various types of conversion with the majority provided by enrollment in the Williamson Act which prevented conversion to non-agricultural uses, but was defunded starting in 2009. This chart is for the portion of the study with rangeland habitats. WA = Williamson Act.
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The five most common habitat types made up 80% of the rangeland extent in the study area (Table 2), with a highly variable mix of permanent conservation status and WA enrollment. Lower elevation habitat in the Central Valley and Central Coast (annual grasslands and blue oak woodlands *(Quercus douglasii)*) were primarily conserved through enrollment in Williamson Act (49% and 46%, respectively), while higher elevation types in these regions (montane hardwood and mixed chaparral) were more commonly owned by a public entity, such as the U.S. Forest Service (23 and 44% fee, respectively). Desert scrub is most common in the southern San Joaquin Valley and western Mojave and had very little enrollment in the Williamson Act (1%) but substantial area in fee conservation status (42%). Other habitats that had a substantial percentage of area (>30%) enrolled in Williamson Act included coastal oak woodland, coastal scrub, blue oak-foothill pine and valley oak woodland.

Discussion

While rangeland conversion occurs at the ranch level, the decision to convert is driven by a complex and interacting network of economic and social factors including the incentives and disincentives provided by land use policy. The ecological and economic threats to rangelands are numerous (invasive species, climate change, lack of profitability), but the conversion to development or intensive agriculture is often the most permanent. Conversion to more intensive crop types, such as orchards and vineyards, often eliminates critical endangered species habitat (e.g. vernal pools) and fundamentally alters the structure and function of these lands for wildlife use [48]. In a similar study, the extent of vernal pools in California rangelands decreased by 13% from 1976 to 2005 [49]. Agricultural conversion requiring the irreversible mechanical ripping of impervious soil layers characteristic of vernal pools accounted for over 80 percent of this habitat loss.

While conversion of rangelands to plowed, irrigated crops represents a loss of terrestrial habitat, it also impacts aquatic

Table 2. Area (Ha) by conservation status for California rangeland habitat types.

Habitat type	Total area	Fee Title	% Fee	Cons. Easement	% Easement	WA Enrolled	% WA	No status	% No status	WA Non-renewals	% Non-Renewal
Annual Grassland	3,186,845	355,034	11%	134,645	4%	1,558,178	50%	1,057,150	33%	53,840	1.68%
Blue Oak Woodland	1,073,109	120,142	11%	42,506	4%	503,270	47%	399,267	37%	7,923	0.74%
Montane Hardwood	676,434	157,316	23%	26,301	4%	144,555	21%	344,643	51%	3,819	0.56%
Mixed Chaparral	620,111	276,153	45%	17,283	3%	117,348	19%	207,128	33%	2,170	0.35%
Desert Scrub	445,750	190,521	43%	25	0%	5,936	1%	248,690	56%	579	0.13%
Coastal Oak Woodland	363,381	92,433	25%	19,671	5%	127,324	35%	114,581	32%	8,773	2.40%
Coastal Scrub	236,455	46,940	20%	9,362	4%	93,466	40%	81,460	34%	4,821	2.03%
Blue Oak-Foothill Pine	233,051	36,564	17%	7,262	3%	89,556	38%	95,963	41%	1,707	0.75%
Chamise-Redshank Chaparral	195,295	75,221	39%	6,769	3%	56,653	29%	55,751	29%	917	0.47%
Alkali Desert Scrub	173,106	19,532	11%	2,532	1%	10,114	6%	139,150	80%	1,777	1.0%
Pinyon-Juniper	71,857	51,727	72%		0%	5,948	8%	14,173	20%	7	0.01%
Valley Oak Woodland	42,150	3,933	9%	1,682	4%	14,300	34%	21,204	50%	1,030	2.43%
Montane Chaparral	40,077	18,615	46%	133	0%	4,196	10%	17,059	43%	64	0.16%
Sagebrush	29,510	19,742	67%	40	0%	1,858	6%	7,605	27%	15	0.05%
Valley Foothill Riparian	29,119	8,779	30%	2,378	8%	4,979	17%	12,711	44%	271	0.93%
Montane Riparian	26,431	4,427	17%	799	3%	7,168	27%	13,731	52%	285	1.08%
Juniper	15,505	4,850	31%		0%	3,067	20%	7,579	49%	9	0.06%
Bitterbrush	7,758	3,013	39%	38	0%	721	9%	3,996	51%		0.00%
Wet Meadow	5,818	1,968	34%	166	3%	1,192	20%	2,427	42%	47	0.81%
Desert Succulent Shrub	2,534	180	6%		0%	354	13%	2,259	89%		0.00%
Joshua Tree	1,704	844	50%		0%	45	3%	817	48%		0.00%
Desert Wash	1,600	1,111	69%	14	1%	23	1%	458	29%		0.00%
Perennial Grassland	1,409	387	27%	0	0%	213	15%	808	57%		0.00%
Total Study Area	7,479,287	1,491,486		272,106		2,772,384		2,849,291		68,050	

Data sources for fee and easement protected areas from GreenInfo Network. Williamson Act enrollment data from Department of Conservation, and rangeland habitat data from CalVeg. WA = Williamson Act.
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ecosystems through surface or groundwater use [50]. Conversion of oak savanna to vineyards has been shown to represent a net increase in groundwater stress, especially in the dry summer months [51]. The conversion of rangeland to irrigated crops puts excessive demands on already depleted groundwater resources, particularly during drought conditions where managed surface water resources are restricted and groundwater is the only source of agricultural water [52]. These secondary effects of conversion need to be considered when conducting land use planning for rural parts of the state, particularly in the context of projected changes due to climate change. Compared to annual crops, nuts and vines constitute a "hardening" of water use in that the crops will fail without water whereas fields of annual crops can be fallowed to conserve water resources.

Changes in consumption patterns in wine, almonds, olives and other orchard crops may be driving the expansion of these crop types in rangeland ecosystems. Wine grape acreage increased in the state during the time period covered in this study by 56% [53] with the contribution of the northern Central Valley outpacing the increase in more traditional wine regions such as Napa and Sonoma counties, due to the region's role in producing varietals whose popularity has grown in recent decades, such as merlot, chardonnay and cabernet sauvignon [54]. Increases in international consumption of almonds and olives may be contributing to the expansion of these crops in the region. Almonds are primarily grown for international export (67% of production exported in 2010) with the European Union, China and India being the largest importers. The harvested area for almonds in California increased by 78% (over 120,000 ha) from 1984 to 2008 [55].

While this analysis classified the land use in 2009 in converted areas, we cannot necessarily assume that the 2009 land use was the original driver for conversion, as the original conversion may have occurred 20 or more years earlier. Other studies have shown that land use change in California is very dynamic with many conversions between grasslands/shrublands ecosystems and agriculture due to fallowing of agricultural land and the impact of longer drought cycles [27,56,57]. Additionally, development conversions are often preceded by agricultural conversions [58]. Given that, we assume that some of the areas that were classified as residential development in 2009 were initially converted from rangeland to agricultural types, though likely to annual crops rather than perennial crops (e.g. orchards, vineyards). Interactions between conversion types have been observed elsewhere [59] and have been proposed to explain some rangeland conversion in California [27]. The theory holds that when prime farmland is converted to residential and commercial development at the edge of cities, it causes a displacement of agricultural land uses to areas with more marginal soils, such as rangelands [59]. It is likely that as more marginal soils are exploited, the fertilizer inputs would increase to maintain productivity and that the sandier, well-drained soils would require more irrigation than a similar crop in better soils [50]. Thus, the cumulative effects of development of prime farmland need to be a factor in future land use planning in the Central Valley, and other rapidly growing regions with extensive farmland.

Post-recession rates of change revealed variability in the response to the economic downturn in 2008. Yet, further investigation of the response of different land uses to catastrophic events, both economic and natural, is needed to help interpret this limited comparison. Higher temporal resolution studies of economic and climatic drivers of land use change can yield helpful information for planners, and can provide a complementary perspective to this long-term assessment of change [57].

Our results show that over a third of the rangeland area has no protective legal status, suggesting that some of these areas may be at risk to future habitat loss. Yet the drivers on land use change are spatially variable, often corresponding to proximity to existing development and infrastructure, and unprotected land is not necessarily at risk of development within the scale of a few decades. There may be local protective ordinances or zoning that benefit ranching landowners in these areas, but such an assessment is beyond the scope of this study. Permanent habitat protection is relatively low across all rangeland types (24%) with a strong bias toward more montane and desert habitat types. Some of these areas may be protected from development but not grazed, such as State Parks, because of other resource priorities (e.g. recreation or water quality) and as such represent an area of trade-off between these values and livestock production, and any ecological benefits associated with grazing.

Conservation easements are currently an underutilized strategy for rangeland protection, with only small proportions of annual grasslands (4%) and blue oak woodlands (3%) covered by these agreements. While a lack of standardized data collection on easement locations likely make this an underestimate, easements still cover a very small percentage of foothill habitats. As it is a voluntary solution that can provide conservation benefits to landowners and society while providing an infusion of money into ranching operations, conservation easements should be prioritized in public and private funding for rangeland conservation [60].The foothills of Mt. Lassen in the northern Central Valley is a region where extensive rangeland easements have helped limit the expansion of development from the city of Red Bluff while creating a connected network of protected lands stretching from valley floor to subalpine habitats (Figure 5A).

The results of this study can be used to prioritize general areas to implement conservation strategies such as purchasing easements or focusing ecological restoration efforts. The data from this study can be integrated into habitat connectivity assessments for example, to quantify the level of fragmentation from conversion in potential linkages between existing core habitat. While other factors need to be considered for site-specific project implementation, broad priority areas can be identified by analyzing patterns of conversion and types of land protection such as presented here. Similar analyses can be used to identify areas where land use policies that maintain extensive agriculture such as livestock grazing may be needed to prevent loss of rangelands, if that is an objective of the local jurisdiction.

The Williamson Act had benefited landowners in California across a large area covered by rangelands for 44 years, especially for annual grasslands and blue oak woodlands, the two most extensive habitat types (49% and 46% respectively). Other studies have highlighted the importance of these property tax benefits for maintaining ranching operations [22,25], but it is not a panacea for rangeland ecosystem protection. An analysis of the conservation status and conversion datasets used in this study showed that 53% of the areas converted to vineyards were enrolled in Williamson Act in 2009. As such, it is clear that the Act did not prevent rangeland loss to more intensive agricultural land uses. Refinements to a restored Williamson Act, or subsequent legislation, that protect the broader array of public benefits including wildlife habitat, may be needed to prevent the agricultural intensification of rangelands. Yet, given the extensive area of enrolled lands, the benefits of the law for habitat protection were immense and restoring the Williamson Act should be a statewide land use policy priority. It is highly likely that increased development would result if subvention payments from the State or counties to landowners disappear altogether [22]. In fact, we see

some evidence of that occurring in the most recent report on Williamson Act enrollment [61]. There was a decline of 14.5% in annual enrollment in 2010–2011 and a sharp increase in non-renewals in 2011 of 69,000 hectares compared to the annual average of non-renewals of 30,000 for the previous decade.

While we have taken one step toward a full spectrum conservation status analysis by including enrollment in the Williamson Act and conservation easements, the status assessment highlights the need to integrate multiple types of data to develop a comprehensive picture of conversion and conservation. Because conservation in private lands relies on a diverse array of voluntary, incentive-based programs that provide direct payments, tax relief or regulatory streamlining in exchange for beneficial management, often at the scale of individual ranches, we need better systems to track and account for the cumulative benefit of these programs. Integrating such programmatic data with change detection analyses such as this one can help develop a regional conservation accounting system that can be used to generate an ecological "P&L" statement, one of *protection* and *loss*. Inventorying and mapping the broad range of beneficial restoration actions that are publicly funded to promote agricultural best management practices or habitat restoration will provide a more nuanced and complete picture of what conservation benefits are realized by what interests [62].

Ultimately, the public pays to replace the goods and services lost when natural habitats are converted, such as pollination of crops and development of water storage and delivery systems [12,52]. In addition, when conversions take place near existing protected land, the ecological connectivity value of that land is eroded due to habitat fragmentation. If the protected land was acquired with public funds, then society pays twice for that investment, once for the initial purchase and again to replace the ecosystem service benefits that are lost by adjacent habitat loss. Developing alternative markets to compensate landowners for the additive ecosystem benefit of beneficial management decisions (e.g. increased soil carbon storage as an emissions offset) may ultimately provide critical revenue to improve the economic viability of ranching operations [15,63]

Conclusion

Creating and implementing solutions to the problem of rangeland habitat loss and associated impacts will require an understanding of the economic and social drivers that lead to the breakup of larger land holdings, particularly those drivers related to global agricultural commodities. Solving such challenges requires cross-disciplinary collaboration to create strategies that address the various social contexts for ranching. The numerous ecological and social benefits provided by rangeland ecosystems in the Western United States can only be sustained if economic incentives are promoted to maintain ecologically sustainable grazing operations across large land ownerships. Accounting for the full economic, ecological and social costs of rangeland conversion would provide decision-makers with a greater ability to weigh trade-offs associated with land use change.

Supporting Information

Table S1 Time range by county or survey area for FMMP data. The average range of all survey area is 21 years. (DOCX)

Table S2 Classification agreement between the Farmland Mapping and Monitoring Program (FMMP) categories and the classification used in this study. B- Bare Plowed Ground; CI- Commercial and Industrial; DB- Dirt Bikes; DF- Dry farmed; DCR- Duck clubs and refuges; ME- Mineral entry: gravel, clay, oil fields, tailings; N- Nurseries; O- Orchards; P- Pasture, alfalfa, irrigated hay; R- Residential; Ri- Rice; RC- Row crops; RR- Rural residential; U- Unknown; V- Vines and trellised olives; WW- Wastewater; W- Water. (DOCX)

Table S3 Conversion types by counties. Area in hectares. (DOCX)

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Author Contributions

Conceived and designed the experiments: DC JM. Performed the experiments: DC RH. Analyzed the data: DC RH. Wrote the paper: DC JM RH.

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Response to Comments from Gabriel Mob. Ross, Shute, Mihaly & Weinberger LLP, on Behalf of Hills For Everyone, Dated September 9, 2014

J-1 This comment states that the General Plan Update proposes a dramatic increase in density for approximately 3,000 acres of largely undeveloped land in southern Chino Hills in direct violation of Measure U. As discussed in Response to Comment H-1 above, this comment appears to be addressing a proposed change in the Zoning Map that would delete a current note on the Map that limits density in the Agriculture-Ranches zoned area west of Chino Hills State Park to a 40-acre minimum. The General Plan Update includes the proposed deletion of this existing Zoning Map note to create consistency between the General Plan and the Zoning Map. However, other provisions of the proposed General Plan Update effectively limit density in the southeastern portion of the area (reference General Plan policies LU-1.1.4, 1.15, 1.17 and 1.18.). Because the General Plan designation of the area does not change, no violation of Measure U occurs. However, to clarify that the density of the area remains at 1 dwelling unit to 40 acres, the proposed General Plan Update Land Use Map and the proposed Zoning Map are revised to relabel the area Agriculture/Ranches-40 and Agriculture-Ranches-40 (R-A-40), respectively. Tables 2-1 and 2-2 and Section 4.1.3 of the EIR are modified to reflect the new Agriculture/Ranches-40 General Plan Land Use Map designation. This change to the EIR would not result in new or increased environmental impacts and consequently, it does not warrant additional information or analysis within the EIR.

Note: During the public consideration of the General Plan Update, the Planning Commission received testimony from property owners and environmental interests regarding the proposed redesignation of the southeastern portion of the City to Agriculture/Ranches 40 in both the General Plan Update and proposed Zoning Map. As part of the public process, the Planning Commission carefully considered all concerns and determined at its January 20, 2015 meeting that the public's interest is best served at this time by retaining the designation in the General Plan and Zoning Map currently in existence, including the current policies, procedures and legislative intent of the current General Plan and Zoning Map. The Planning Commission voted to forward this recommendation to City Council along with a recommendation that staff be directed to research this issue and work with the property owners and community to recommend an action to the Planning Commission to provide clarity regarding the area's density. Therefore, at this time, the General Plan Update Land Use Map will not be revised to relabel the area Agriculture/Ranches-40, the Zoning Map will not be revised to relabel the area Agriculture-Ranch-40 (R-A-40), and the Zoning Map will retain the existing zoning.

J-2 This comment states that the proposed approval of the General Plan and Zoning Update violates California Environmental Quality Act, *California Public Resources Code* §§210000, *et seq.* and state Planning and Zoning Law, *California Government Code* §§65000 *et seq.* because the EIR fails to acknowledge the environmental impacts of the dramatic increase in density proposed for south Chino Hills. As discussed above, the General Plan Update does not propose an increase in density for south Chino Hills. That area will remain at a 40-acre minimum lot size. As discussed in Section 4.1.5 of the EIR, build-out under the City's existing General Plan is very similar to that proposed by the General Plan Update. The differences between the City's existing and proposed General Plan include an increase of 780 residential units to meet the City's RHNA obligation, and a decrease of 269,000 non-residential square feet due to the redesignation of a currently designated commercial property to the new Mixed Use land use designation.

Section 4.1.5 of the EIR correctly provides that the General Plan Update for conformity with local and regional plans is evaluated relative to potential conflicts with the General Plan Update. Because the only increase in residential units promulgated through the General Plan Update is to accommodate the City's RHNA obligation, the project is consistent with Measure U. Regarding consistency with regional plans, the EIR explains that the existing 2012 RTP/SCS underestimates growth pursuant to the City's existing General Plan. SCAG is initiating an update of the RTP/SCS, which will cover the 2016-2040 planning period. General Plan Update policies support coordination with regional planning efforts. To augment this support, Mitigation Measure LU-1 will be implemented to ensure the updated RTP/SCS correctly incorporates the City of Chino Hills General Plan Update projections. This measure would avoid conflicts with RTP/SCS growth forecasts.

Section 6.2 of the EIR provides a comprehensive analysis of potential growth impacts associated with the project. It finds that because the City is nearing build-out and the General Plan Update does not authorize a new major infrastructure project or substantial increases in density, the project would not have direct growth-inducing effects.

Section 5.0 of the EIR provides a discussion of project alternatives consistent with §15126.6 of the CEQA Guidelines. Given that non-residential land uses in the City are 75% built-out and residential land uses are 83% built-out, there are few build-out alternatives that are feasible, that would reduce significant environmental impacts, and that would achieve all or most of the City General Plan Vision Statements. However, despite these limitations, the City has carefully considered several alternative strategies to manage long-term growth and achieve its vision. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

Note: See Planning Commission recommendation at J-1, above.

J-3 This comment addresses the General Plan and Zoning Updates compliance with Measure U, focusing on the proposed deletion of the Zoning Map note regarding the 40-acre minimum lot size. As discussed in Response to Comment J-1 above, the General Plan Update includes the proposed deletion of this existing Zoning Map note and to create consistency between the General Plan and the Zoning Map. However other provisions of the proposed General Plan Update effectively limit density in the southeastern portion of the area. Because the General Plan designation of the area does not change, no violation of Measure U occurs. However, to clarify that the density of the area remains at 1 dwelling unit to 40 acres, the proposed General Plan Update Land Use Map and the proposed Zoning Map are revised to relabel the area Agriculture/Ranches-40 and Agriculture-Ranches-40 (R-A-40), respectively. Tables 2-1 and 2-2 and Section 4.1.3 of the EIR are modified to reflect the new Agriculture/Ranches-40 General Plan Land Use Map designation. This change does not provide new environmental information that could result in new or increased environmental impacts and, consequently, it does not warrant additional information or analysis within the EIR.

Note: See Planning Commission recommendation at J-1, above.

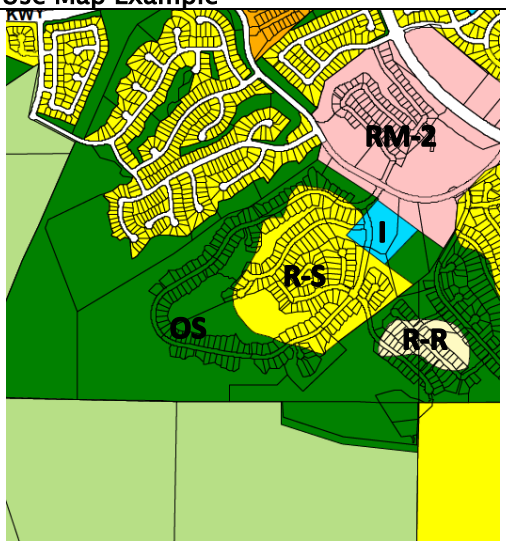
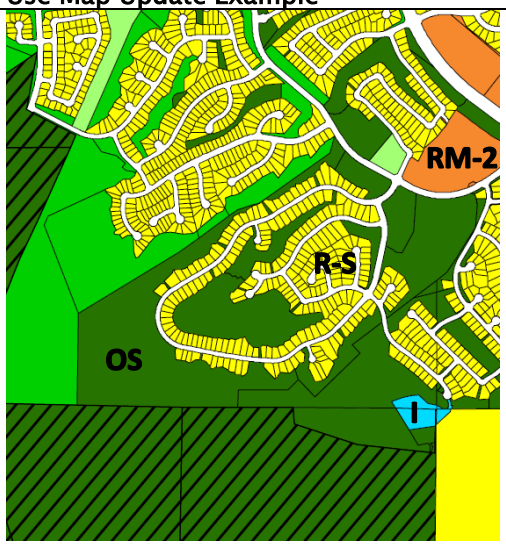
J-4 This comment states that the project is unclear and incomplete because, for example, neither the General Plan Update nor the EIR indicates indicate which existing General Plan policies have been eliminated or changed. This comment is incorrect, as both the General Plan Update and the EIR

clearly identify which policies are new, modified, or existing. All goals and policies of the existing General Plan are incorporated in the General Plan Update.

As discussed in Section 4.1.3 of the EIR, primary land use mapping and policy changes of the General Plan Update include:

- Clarify open space designations;
- Designate sites suitable for Very High Density Residential development to satisfy the City's RHNA requirement;
- Create a new Mixed Use land use designation;
- Transfer residential density between sites by moving unused density from existing institutional sites and from the Founders High Density Residential site to sites suitable for Mixed Use and Agriculture/Ranches designations;
- Convert Planned Development zoning designations to traditional zoning consistent with existing or planned land uses and with Measure U;
- Permit residential clustering in Agriculture/Ranches and Rural Residential sites to protect environmental and visual resources through the Site Plan Review process;
- Correct land use designations for sites that have developed or are expected to develop at uses or densities that differ substantially from their existing General Plan land use designation, and
- Correct mapping errors.

The mapping errors in the existing General Plan Land Use Plan involved land use designations that do not correspond to parcel boundaries, and residential land use designations that overlap onto public and or private open space and rights of way. Figure 1 below illustrates examples of the two types of errors and the manner in which the proposed General Plan Update corrects the errors.

Type of Change	Existing Chino Hills General Plan Land Use Map Example	Proposed Chino Hills General Plan Land Use Map Update Example
Correction of mapping errors – Land Use designation corresponding to parcel boundaries.		

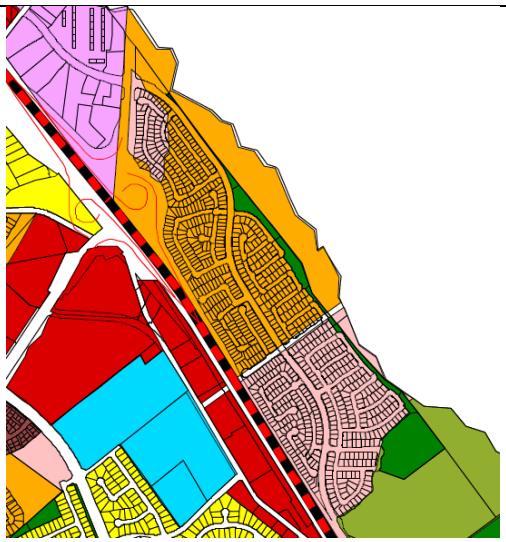
Correction of mapping errors – Land Use designation overlapping onto public and/or private rights-of-way.		

Figure 1. General Plan Land Use Map Corrections

Regarding PD designations, the General Plan Update includes Action LU-2.4.1, which states: "Track setback and other development standards for residential properties within former Planned Development (PD) areas, and continue to allow development within these areas to proceed in accordance with approved PD standards." Section E.7 of the General Plan Update Land Use Element explains the proposed process to convert PD areas to zoning. On the City Official Zoning Map, existing PD areas will be converted to a suitable zoning designation. For developed PD areas, zoning designations will be applied that best match the development in compliance with Measure U and other applicable law. To the extent the development standards for a Planned Development (PD) are different than the proposed zoning, separate municipal code amendments will be developed and adopted for each particular PD concurrently with the removal of the PD designation to avoid, to the greatest extent possible, any property from becoming non-conforming due to a redesignation. If the Council approves the General Plan Update with Action LU-2.4.1, the City will then initiate the Municipal Code amendment process for each PD.

Table 2-2 of the EIR presents the General Plan Update calculation of Agriculture/Ranches land, which is 7,170 acres and 1,270 dwelling units, for an average density of 0.18 or an average lot size of 5.6 acres. This calculation is a reasonable estimate of City build-out, not a "theoretical midrange" estimate as stated in the comment. The 8,682 acreage number cited in the comment is the existing General Plan acreage count for Agriculture/Ranches (actually 8,681), which erroneously includes 1,511 acres of Open Space land and is corrected in the Land Use Map Update. As discussed in Response to Comment H-1 above, the Final General Plan Update includes the proposed Agriculture/Ranches-40 designation and recalculates residential build-out based on existing development, approved plans, and in the case of undeveloped and uncommitted land, typical City development patterns of 62.5% of maximum site development potential as indicated in Table 2-2 of the EIR. This results in an expected residential build-out of 29,026 dwelling units, a 574-unit reduction to the 29,600 build-out presented in the draft General Plan Update. Because the EIR is based on a larger than expected residential build-out, it correctly evaluates a reasonable worst-case estimate.

Regarding the number of proposed residential units assumed in the EIR, the commenter appears to confuse information presented in the EIR. Table 4-2 of the EIR identifies 5,807 units as the difference between the proposed General Plan Update and existing development. The presentation of 780 units on page 4-201 of the EIR is the number of additional units that the General Plan Update would add to build-out. These 780 units are the City's RHNA obligation under its 4th and 5th Cycle Housing Elements. The Urban Water Management Plan is a 2012 study based on projections that have been corrected through the General Plan Update process. The southeastern portion of the City is expected to remain at a 40-acre minimum, and the General Plan Update Land Use Map and the Zoning Map relabel the southeastern portion accordingly. The EIR project description is correct, and as noted previously, represents a reasonable worst case estimate of City build-out. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

Note: See Planning Commission recommendation at J-1, above.

J-5 This comment states that the EIR fails to properly analyze the General Plan and Zoning Updates' inconsistency with Measure U, state law, and other land use policies. The comment focuses on density within the southeastern portion of the City and compliance with Measure U and Regional Comprehensive Plan and Guide (RCPG) policies that mandate focusing growth along major transportation corridors. As discussed in Response to Comment J-1 above, the General Plan Update includes the proposed deletion of this existing Zoning Map note and to create consistency between the General Plan and the Zoning Map. However other provisions of the proposed General Plan Update effectively limit density in the southeastern portion of the area. Because the General Plan designation of the area does not change, no violation of Measure U occurs. However, to clarify that the density of the area remains at 1 dwelling unit to 40 acres, the proposed General Plan Update Land Use Map and the proposed Zoning Map are revised to relabel the area Agriculture/Ranches-40 and Agriculture-Ranch-40 (R-A-40), respectively. Tables 2-1 and 2-2 and Section 4.1.3 of the EIR are modified to reflect the new Agriculture/Ranches-40 General Plan Land Use Map designation. Future growth promulgated by the General Plan Update includes a new Mixed Use designation and Very High Density residential to accommodate the City's RHNA obligation. This future growth is concentrated along major transportation corridors, notably SR-71, Soquel Canyon Parkway, and Grand Avenue, in compliance with RCPG policies. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

Note: See Planning Commission recommendation at J-1, above.

J-6 This comment states that the EIR fails to properly analyze impacts of developing existing ranchlands and increasing density in southern Chino Hills. As discussed in Response to Comment J-1 above, the General Plan Update does not propose to increase in density in southern Chino Hills. To clarify that the density of the southeastern area remains at 1 dwelling unit to 40 acres, the proposed General Plan Update Land Use Map and the proposed Zoning Map are revised to relabel the area Agriculture/Ranches-40 and Agriculture-Ranch-40 (R-A-40), respectively. The General Plan Update does not propose to change the existing Agriculture/Ranches designation on the remaining southern portion of the City. This designation currently allows for 1 dwelling unit per 5 acres with agriculture as an accessory use. The General Plan Update proposes to expand options for agriculture uses in this designation by permitting agriculture as a primary use subject

to a site development permit (reference Table 1-3 of the General Plan Update and Table 2-1 of the EIR).

Regarding impacts on agricultural lands, the Project Initial Study (EIR Appendix A) explains that the California Department of Conservation 2010 Important Farmland Map for San Bernardino County classifies the majority of Chino Hills as Grazing Land and Urban and Built-Up Land. Grazing Land is defined by the state as land on which the existing vegetation is suited to the grazing of livestock. In Chino Hills, Grazing Lands are located primarily within the hillside areas on properties with Open Space and Agriculture/Ranches land use designations. The existing General Plan defines an Agriculture/Ranches land use classification that allows a residential density of up to 0.2 dwelling units. The proposed General Plan Update maintains this classification, and as noted above expands agriculture opportunities by defining it as a primary use within the designation. Prime Farmland is identified on portions of the Boys Republic property, which consists of approximately 196 acres, most of which is used for grazing and alfalfa or hay production to feed the cattle. This property is designated both in the existing General Plan and the proposed General Plan Update as Institutional. The other Prime Farmland is identified on 37-acre property on the east side of Fairfield Ranch on Business Park designated land. Agriculture operations on this Business Park property have recently been terminated, and the property owner is currently processing an application through the City to develop the land as a mix of business ark and apartments. No properties within the City remain in an agricultural preserve.

Response to Comment H-1 (page 62) above discussed impacts to biological resources, visual resources, and Chino Hills State Park. The response outlines the numerous policies to protect ridgelines and areas adjacent to Chino Hills State Park. The EIR presents these policies and finds that their implementation will contribute to the protection of biological and aesthetics resources within the City. Section 6.2 of the EIR provides a comprehensive analysis of potential growth impacts associated with the project. Future growth promulgated by the General Plan Update includes redesignating existing Commercial land to establish a new Mixed Use designation and Very High Density residential to accommodate the City's Regional Housing Needs Assessment (RHNA) obligation. This future growth is concentrated along major transportation corridors, notably SR-71, Soquel Canyon Parkway, and Grand Avenue, in compliance with RCPG policies. The EIR finds that, because the City is nearing build-out and the General Plan Update does not authorize a new major infrastructure project or substantial increases in density, the project would not have direct growth inducing effects. This comment does not provide new environmental information that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

Note: See Planning Commission recommendation at J-1, above.

J-7 This comment states that the EIR analysis of project alternative is inadequate. As discussed in Response to Comment J-2 above, Section 5.0 of the EIR provides a discussion of project alternatives consistent with §15126.6 of the CEQA Guidelines. Given that non-residential land uses in the City are 75% built-out and residential land uses are 83% built-out, there are few build-out alternatives that are feasible, would reduce significant environmental impacts, and would achieve all or most of the City General Plan Vision Statements. However, despite these limitations, the City has carefully considered several alternative strategies to manage long-term growth and achieve its vision. This comment does not provide new environmental information

that could result in new or increased environmental impacts, and consequently, it does not warrant additional information or analysis within the EIR.

J-8 This comment states that the EIR must be revised and recirculated. The issues raised in Mr. Ross's letter center around the concern that density in the southeastern portion of the City could increase as a result of the General Plan Update. This is not the intent of the General Plan Update. As a result of this concern, which was also expressed by a number of other responders to the EIR, the proposed General Plan Update Land Use Map and the proposed Zoning Map are revised to relabel the area Agriculture/Ranches-40 and Agriculture-Ranch-40 (R-A-40), respectively. Each of the comments raised by Mr. Ross and other responders is addressed in the Final EIR. Some of the comments received resulted in minor clarifications or revisions to information contained in the EIR. These minor revisions/corrections do not substantially alter the analyses or findings of the EIR, and consequently, do warrant recirculating the EIR.

Note: See Planning Commission recommendation at J-1, above.

K. Gayou, Judith and Anthony

Karen Pulvers

From: Judith <judith_gayou@hotmail.com>
Sent: Tuesday, September 09, 2014 5:12 PM
To: Community Development-web mail
Subject: Chino Hills Development Plan

We moved from the city to this beautiful community thirty - three years ago and have enjoyed every minute of the rural life and having a safe and beautiful environment in which to raise a family. Little was here in 1981, a gas station, one market, a drug store and a couple of fast food places. We drove about a half hour east or west for a serious shopping adventure and planned our errands accordingly. Through the years the added shopping amenities have been both a blessing and a curse. We understand and agree with progress, but please, not at the expense of the country environment we all came here for. What was once our scenic highway 142 has become a rush hour traffic throughway resembling a busy downtown LA street. Please continue to be the good stewards that you have been for this community in the past and help us preserve our way of life here. **K-1**

Respectfully,
Judith and Anthony Gayou
The Summit Ranch
Chino Hills

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Response to Comments from Judith and Anthony Gayou, The Summit Ranch, Chino Hills, Dated September 9, 2014

K-1 This comment addresses changes that have occurred in the City of Chino Hills and traffic on Carbon Canyon Road (SR-142). The proposed General Plan Update would have similar levels of growth and traffic as the City's existing General Plan. However, the City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

L. Diana Casteel

Karen Pulvers

From: Diana <raiderdi@yahoo.com>
Sent: Monday, September 08, 2014 6:58 PM
To: Community Development-web mail
Subject: Chino Hills General Plan

My name is Diana Casteel and I have lived in Chino Hills for the last 13 years. As a member of Hope for the Hills, I have attended many City Council meetings and understand the city's need to address low income housing; however, I want to go on the record as being opposed to any housing projects before the City addresses its infrastructure. L-1

Take a moment to look at Eastvale. It has beautiful houses, but since they are just NOW addressing infrastructure, residents must deal daily with the construction on Pine Avenue. Don't let that happen here.

We can do anything... but let's know what we're doing before we jump in.

Thank you.

Diana Casteel
14654 Hiddenspring Circle
Chino Hills

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Response to Comments from Diana Casteel, 14654 Hiddenspring Circle, Chino Hills, Dated September 8, 2014

L-1 This comment states opposition to any housing projects before the City addresses infrastructure. The City of Chino Hills appreciates the resident's concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

Infrastructure plans are discussed within Sections 4.9, 4.14 and 4.15 of the EIR. In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

M. Dave Master

Karen Pulvers

From: Dave Master <dave_master_edu@yahoo.com>
Sent: Tuesday, September 09, 2014 5:10 PM
To: Community Development-web mail
Subject: Comment re: Chino Hills Draft General Plan

I was unable to attend the meeting last week, but I wanted to register a comment and ask for some clarification.

While I understand why people want to move to our peaceful, bucolic Chino Hills, the laid back, green and unhurried atmosphere that drew is and others to the area will disappear if we continue to allow every empty plot of land to be overdeveloped. We need to put some limitations on population density or Chino Hills will soon become "Moreno Valley West".

With this in mind, the Draft General Plan and Draft EIR call for a change in minimum lot size for the lands in southern Chino Hills from 1 unit per 40 acres to 1 unit per 5 acres. Would you please address this issue. This may be a violation of Measure U. M-1

thanks, dave master
2360 Gypsum Court

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Response to Comments from Dave Master, 2360 Gypsum Court, Chino Hills Dated September 9, 2014

M-1 This comment states that the Draft General Plan and the Draft EIR call for a change in minimum lot size for the lands in southern Chino Hills from 1 unit per 40 acres to 1 unit per 5 acres and that this may be a violation of Measure U. The City of Chino Hills appreciates the resident's concerns which are similar to issues raised in Comment H-1, above.

As discussed in Response to Comment H-1 above, the General Plan Update includes the proposed deletion of an existing Zoning Map note to create consistency between the General Plan and the Zoning Map. Because the General Plan designation of the area does not change, no violation of Measure U occurs. However, to clarify that the density of the area remains at 1 unit to 40 acres, the proposed General Plan Update Land Use Map and the proposed Zoning Map have been revised to relabel the area Agriculture/Ranches-40 and Agriculture-Ranch-40 (R-A-40), respectively.

Note: During the public hearing on the General Plan Update, the Planning Commission received testimony from property owners and environmental interests regarding the proposed redesignation of the southeastern portion of the City to Agriculture/Ranches40 in both the General Plan Update and proposed Zoning Map. As part of the public process, the Planning Commission carefully considered all concerns and determined at its January 20, 2015 meeting that the public's interest is best served at this time by retaining the designation in the General Plan and Zoning Map currently in existence, including the current policies, procedures and legislative intent of the current General Plan and Zoning Map. The Planning Commission voted to forward this recommendation to City Council along with a recommendation that staff be directed to research this issue and work with the property owners and community to recommend an action to the Planning Commission for providing clarity regarding the area's density. Therefore, at this time, the General Plan Update Land Use Map will not be revised to relabel the area Agriculture/Ranches-40, the Zoning Map will not be revised to relabel the area Agriculture-Ranch-40 (R-A-40), and the Zoning Map will retain the existing zoning.

N. Elizabeth Friel

Karen Pulvers

From: friel2@aol.com
Sent: Monday, September 08, 2014 2:59 PM
To: Community Development-web mail
Subject: Density vs roads

Please consider the impact of more residents causing carbon canyon rush hour traffic to slow to a crawl-- adding more time to commutes already too long and frustrating. Roads then more homes/ apartments. Thank you. Elizabeth Friel. 2465 Turquoise Circle, Chino Hills. **N-1**

Sent from my iPad

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Response to Comments from Elizabeth Friel, 2465 Turquoise Circle, Chino Hills Dated September 8, 2014

N-1 This comment raises concern for Carbon Canyon rush hour traffic and the impact of additional houses on this traffic. The commenter recommends more roads before more homes. The proposed General Plan Update would have similar levels of growth and traffic as the City's existing General Plan. However, the City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

O. Gail Griffin

Karen Pulvers

From: Gail Griffin <ggriffin2000@yahoo.com>
Sent: Monday, September 08, 2014 5:57 PM
To: Community Development-web mail
Subject: General Plan

I suggest road improvements generating better traffic flow **before** any new high density developments are initiated. Also, I suggest Old Carbon Canyon Road be completed through to Vellano Club Drive giving another access in and out of Carbon Canyon, especially during emergencies such as fire. O-1

Thank you,

Gail Griffin
2080 Turquoise Cir
Chino Hills, CA
909-952-9515

1

Response to Comments from Gail Griffin, 2080 Turquoise Circle, Chino Hills Dated September 8, 2014

O-1 The commenter recommends more roads before any new high density development, and completion of Old Carbon Canyon Road through Vellano Club Drive to provide another access into and out of Carbon Canyon, especially during emergencies such as fire. Emergency access for the Vellano development is already provided through Valley Springs Road. Vellano Club Drive is a private road, and the topography of the land between it and Old Carbon Canyon Road makes its use as an emergency accessway difficult. However, the City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

P. Joanne Genis

Karen Pulvers

From: JGenis3833@aol.com
Sent: Tuesday, September 09, 2014 8:54 PM
To: Community Development-web mail
Subject: General Plan changes

Hello,

At the meeting, it was stated that the City will not be built-out for a few more years, which mean more traffic to come. We're already dealing with poor traffic conditions at Peyton/CHP, Pipeline/CHP, and Eucalyptus (between Peyton and CHP), during peak hours. I understand that we can't stop developers from developing dwellings, but you can control the numbers of dwellings to be built. P-1

I would like to suggest that you put an e-alert and information in our waters bills to let the residents know about any further meetings regarding the General Plan change.

I love this city, but what I don't like is the idea that we soon could be given an "F" for traffic issues.

Thank you for your service,
Regards,
Joanne Genis

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Response to Comments from Joanne Genis Dated September 9, 2014

P-1 The commenter raises concerns regarding traffic, specifically along Chino Hills Parkway, and controlling the numbers of dwellings to be built. The commenter also suggests that the City put an e-alert and information in the water bills to let residents know about any further meetings regarding the General Plan change. The City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

Q. Chrisanne Goodwin

Karen Pulvers

From: Chrisanne Goodwin <chrisannegoodwin@msn.com>
Sent: Monday, September 08, 2014 11:52 AM
To: Community Development-web mail
Subject: General Plan Comments ~ Attention Joann Lombardo

Chrisanne Goodwin
15290 Turquoise Circle N
Chino Hills, CA 91709
951 206 3808

September 8, 2014

Dear Joann Lombardo,

I request you take into strong consideration the out-of- control traffic situations already plaguing our city before we further complicate matters by moving forward with any new home or apartment projects. I understand the mandates that need to be fulfilled however common sense must be considered. As our leader in our city I believe it is your job to ensure our voices are heard. We can no longer tolerate any more traffic within our city limits. The roads must **first** be constructed prior to any more development within our city. This is about the only control we have as many other cities surrounding Chino Hills have already begun buildng new homes and the traffic will be filtering through Chino Hills further complicating *our* roads.

I think it's time that instead of using "studies" that are inaccurate and absolutely lacking in common sense and being satisfied with "D" grades, our city leaders take a stance and demand we fast track development of our roads before we further home construction. I am not against home construction, but I am against making decisions that lack common sense.

I appreciate the work you do and hope you will take into consideration that we **are** in a serious situation when *you* are even admitting our most used thoroughfare is at a "D" status even *before* new homes are built!

Q-1

Thank you for your service and I look forward to some positive results.

Sincerely,

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Chrisanne Goodwin

Response to Comments from Chrisanne Goodwin, 15290 Turquoise Circle N, Chino Hills Dated September 8, 2014

Q-1 The commenter recommends more roads before any new residential development. Section 4.14 of the EIR discusses the City's Roadway Plan and improvements proposed to mitigate traffic associated with City build-out. The proposed General Plan Update would have similar levels of growth and traffic as the City's existing General Plan, with much of current and expected future traffic on City roads exacerbated by regional growth. However, the City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

R. Misty Lamb

Karen Pulvers

From: melissa lamb <misty_m_lamb@yahoo.com>
Sent: Tuesday, September 09, 2014 10:08 AM
To: Community Development-web mail
Subject: General Plan: New Homes and Affordable Housing

Dear Ms. Lombardo,

It was recently brought to my attention concerning the proposal for new homes and affordable housing construction. My husband Dana and I have been residents of the canyon since 1987. We are constantly dismayed buy the continued escalation of traffic in the Canyon, on Chino Hills Parkway as well as on Peyton. Although we no longer are taking our kids to school, Peyton is a disaster in the making. The lack of foresight when planning the expansion of services on Peyton with out proper infrastructure continues to put children who attend schools in this area at risk. Please urge our council to address the impact that this expansion will bring to Chino Hills. Emphasis on solving the eminent grid lock prior to construction needs to be a high priority. Build roads prior to construction. R-1

I am requesting that my email and concern be part of the permanent record.

Sincerely,

Misty Lamb
15264 Turquoise Circle North
Chino HIlls, Ca. 91709

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Response to Comments from Misty Lamb, 15264 Turquoise Circle North, Chino Hills Dated September 9, 2014

R-1 The comment raises concerns regarding traffic in the Canyon, on Chino Hills Parkway, and on Peyton, specifically regarding school traffic, and recommends more roads before any new development. Section 4.14 of the EIR discusses the City's Roadway Plan and improvements proposed to mitigate traffic associated with City build-out. The proposed General Plan Update would have similar levels of growth and traffic as the City's existing General Plan, with much of current and expected future traffic on City roads exacerbated by regional growth. However, the City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

S. Mary McCarthy

Karen Pulvers

From: Mary McCarthy <gm_mccarthy@verizon.net>
Sent: Tuesday, September 09, 2014 2:47 PM
To: Community Development-web mail
Subject: New home developments

There are 10 new developments planned for Chino Hills. Yet we have seen no effort to alleviate The traffic congestion our main streets are now experiencing, except for the slow process of widening Peyton Ave. The Canyon is near impossible to enter during peak hours. Chino Hills Parkway, and Grand back up and Peyton sometimes slows to a crawl. **S-1**
How can we continue to build homes without new access roads? As we Live in Carbon Canyon We are very concerned about any added traffic in this city .
Thank you,
Gary and Mary McCarthy

Sent from my iPad

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Response to Comments from Gary and Mary McCarthy Dated September 9, 2014

S-1 The comment raises concerns regarding traffic in the Canyon, on Chino Hills Parkway, and on Grand, and recommends more roads before any new development. Section 4.14 of the EIR discusses the City's Roadway Plan and improvements proposed to mitigate traffic associated with City build-out. The proposed General Plan Update would have similar levels of growth and traffic as the City's existing General Plan, with much of current and expected future traffic on City roads exacerbated by regional growth. However, the City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

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T. Judith Cleri

Karen Pulvers

From: jcleri@aol.com
Sent: Monday, September 08, 2014 3:18 PM
To: Community Development-web mail
Subject: Planning HD

You have got to be kidding me that you are even considering putting high density housing in Chino Hills. Traffic is a nightmare as it is. It is unacceptable that you would even consider having a D or F rating for traffic. What happened to keeping Chino Hills as one of the nicest areas to live? **T-1**

Respectfully,

Judith Cleri
2457 Limestone Ct.
Chino Hills, CA 91709

jcleri@aol.com
TNG Real Estate Consultants
(909) 597-6965 Office
(909) 489-3688 Cell
(877) 585-3610 Fax

Blessed are those that can give without remembering and take without forgetting!

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Response to Comments from Judith Cleri, 2457 Limestone Court, Chino Hills Dated September 8, 2014

T-1 The comment raises concerns regarding traffic and high density housing. The General Plan update proposes multifamily housing consistent with the City of Chino Hills' adopted Housing Element and the City's state mandated Regional Housing Needs Assessment requirements. Section 4.14 of the EIR discusses the City's Roadway Plan and improvements proposed to mitigate traffic associated with City build-out. The proposed General Plan Update would have similar levels of growth and traffic as the City's existing General Plan, with much of current and expected future traffic on City roads exacerbated by regional growth. However, the City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

U. Melodi Ramquist

Karen Pulvers

From: Melodi Ramquist <mramquist68@icloud.com>
Sent: Tuesday, September 09, 2014 11:09 AM
To: Community Development-web mail
Subject: road congestion

Hello Planning Commission,
I wanted to chime in that the worsening road congestion and increasing accidents should be the priority BEFORE adding to the population of Chino Hills.
When I moved here in 1997 when the population was probably around 40,000 and I remember hearing the "master plan" was upwards of 80,000 if I recall correctly. Back then Chino Hills was quiet. Now you can hear the traffic on Chino Hills Pkwy even in the hills above and sounds of the gun range and the freeway throughout town.
I wondered what would become of this beautiful, quiet place as the population grew, mass retail opened, "lower income housing" was built and traffic increased. We're not even at that "master" number and we have already seen the increase in crime, trash, noise and traffic issues. U-1
I'm concerned that Planning Commission and City Hall continues to consider building more homes and apartments and taking away open spaces (which we share with wildlife) without fixing the issues we are facing right now.
I'm not confident our local government will listen to any of these pleas and I know you all live here and have to deal with it too, but I think the "almighty dollar" speaks volumes and issues will be swept under by lobbyists.
I'm asking that you do what's right for Chino Hills. I believe all people know the difference between right and wrong. You are in a position to vote and work ethically for the best interest of the residents of Chino Hills.
Tank you for your consideration,
Melodi Ramquist
909-606-1322

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Response to Comments from Melodi Ramquist Dated September 9, 2014

U-1 The comment raises concerns regarding traffic, trash, noise, crime, and loss of open space. The General Plan update proposes multifamily housing consistent with the City of Chino Hills' adopted Housing Element and the City's state mandated Regional Housing Needs Assessment requirements. No loss of existing or planned open space would occur through the General Plan Update. Growth and traffic under the General Plan Update would be similar to that under the City's existing General Plan, with much of current and expected future traffic on City roads exacerbated by regional growth. However, the City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

V. Dana Lamb

Karen Pulvers

From: Lamb, Dana <dlamb@Exchange.FULLERTON.EDU>
Sent: Tuesday, September 09, 2014 10:12 AM
To: Community Development-web mail
Subject: Traffic Issues

Dear Ms. Lombardo,

As a 28 year resident of Chino HIlls, I would like to share some concerns about the traffic that is impacting our lives. On the 30th of April 1907 a handful of powerful and smart people decided to build a magnificent ocean vessel that they hoped would set a new standard for luxury travel in the Atlantic. The engineering and design details were extensive with an almost obsessive focus on luxury and elegance. In spite of the grand intent to create the ultimate passenger trade experience, the men and women involved in the creation of this great ship overlooked some basic issues that led to an equally historic tragedy.

The 20 lifeboats on the floating palace known as the Titanic could only take 1,178 people yet the ship was designed to carry 2,223 people on board.

Chino Hills is currently one of the most attractive and successful communities in Southern California with it's natural beauty, safety, and family-oriented atmosphere. One of the challenges our community membersface is the increasing gridlock due to the lack of options as people travel from home to work, not only in our immediate community but many of our surrounding cities as well. As my wife and I became involved in research about traffic issues, it became clear to me that the demand for alternate routes has not been the priority to our city's administrators that our growth would indicate.

The Titanic was truly an impressive site as it sailed out of the harbor on the 2nd of April 1912. Undoubtedly most passengers reveled in its opulence and felt perfectly safe but on the 12th day of the voyage the lack of planning betrayed 1,552 of them who lost their lives that night.

The quality of life in Chino Hills will also sink under the weight of these traffic problems. I realize that it will not be easy, but our community leaders need to begin serious planning and negotiations for alternate routes now. How can you allow for even more residential building without insuring that there will be the infrastructure to handle the dramatic growth in population and it's accompanying demands? I suggest that the city binds the building of the new residential developments to concrete resolutions of thetraffic issues to create the political and financial motivation this kind of effort will require. — **V-1**

Sincerely Yours,

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Dana J. Lamb
Professor Emeriti, Entertainment Art and Animation
Internship Coordinator
California State University, Fullerton
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Office: 657.278.2076
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dlamb@fullerton.edu
Www.fullerton.edu/arts/art

Response to Comments from Dana Lamb, California State University – Fullerton, 800 N. State College Boulevard, Fullerton Dated September 9, 2014

V-1 The comment raises concerns regarding traffic, quality of life and the need to tie new development to traffic solutions. Section 4.14 of the EIR discusses the City's Roadway Plan and improvements proposed to mitigate traffic associated with City build-out. The proposed General Plan Update would have similar levels of growth and traffic as the City's existing General Plan, with much of current and expected future traffic on City roads exacerbated by regional growth. However, the City of Chino Hills appreciates the residents' concerns and will forward the comment to the Planning Commission and City Council for review and consideration.

In terms of the EIR, the comment does not provide new environmental information or directly challenge information provided in the Draft EIR and consequently, does not warrant additional information or analysis within the EIR.

W. Duane Thompson

Joann Lombardo

From: City Clerk-web mail
Sent: Tuesday, September 09, 2014 8:24 AM
To: Joann Lombardo
Cc: Rad Bartlam
Subject: FW: Chino Hills 2014 General Plan Update DEIR

-----Original Message-----
From: Duane Thompson [mailto:duanethompson1@me.com]
Sent: Saturday, September 06, 2014 8:35 AM
To: City Clerk-web mail
Subject: Chino Hills 2014 General Plan Update DEIR

9/6/2014

Thank you for the opportunity to comment.

Upon reading the 2014 General Plan General Plan Update, Draft Program EIR, and Appendices, I am left with several questions.

1- Where is the math that shows all of the past and future number of Chino Hills homes added in order to comply with Regional Housing Needs Assessments? (including all simultaneous transfers of zoning designations) W-1

2- The DEIR says the City is following the law specifically in regards to Measure U. Where is the explanation of how the City is interpreting Measure U compliance? W-2

3- Measure U only gives the City the right to increase residential density in order to meet the City's "minimum mandated Housing Element requirements" not the maximum. Where is the explanation and math that discusses minimum and maximum numbers, including possible reductions? W-3

4- It is my understanding that Regional Housing Needs Assessment numbers for Chino Hills are determined by the Southern California Association of Governments. Yet the DEIR on page 14, Matrix of Mitigation Measures says, "SCAG growth forecasts for Chino Hills are lower than the levels anticipated in the General Plan Update, representing an inconsistency with the regional planning programs based on these forecasts..." How does the General Plan Update comply with Measure U if it is not just meeting the "minimum mandated Housing Element requirements" but in fact exceeding the maximum? W-4

5- Where is the discussion in the DEIR of all the potential impacts of the conversion of the Hill of Hope property from institutional to residential, including traffic impacts on Carbon Canyon Road, wildlife corridors, trails, etc.? W-5

6- Where is the discussion in the DEIR of all the potential impacts of the zone changes and density increases to the large lots in the south end of Chino Hills? W-6

Finally, in summary, as one of the promoters and authors of Measure U and a current land owner in Chino Hills, it would seem to me that many of these proposed changes are in direct opposition to the intent that voters had when they passed Measure U. I would even go as far as to say they seem to be illegal. Not only that, the EIR is totally lacking in the analysis of impacts and cumulative impacts of this massive increase in residential housing units and zoning changes. W-7

Duane Thompson

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275 Verbena Ln.
Brea, Ca. 928234

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Response to Comments from Duane Thompson, 275 Verbena Lane, Brea Dated September 9, 2014

W-1 This comment asks "Where is the math that shows all of the past and future number of Chino Hills homes added in order to comply with Regional Housing Needs Assessments?". Table 2-2 of the EIR provides acreages by land use designation for the General Plan Update Land Use Map, and Table 2-3 compares those to acreages within the existing General Plan Land Use Map. As shown in the table, the General Plan Update would result in an increase of 780 residential units and a decrease of 269,000 square feet of non-residential square footage. Section 4.1.3 of the EIR explains that the increase in residential units is due to the City's share of the regional housing needs as part of the 4th and 5th cycles of the Regional Housing Needs Assessment (RHNA) that the Southern California Association of Governments (SCAG) has allocated to the City.[1] The decrease of non-residential square feet is due to the redesignation of currently designated Commercial sites and Industrial sites to Mixed Use and/or Very High Density Residential. The EIR discussion further explains how the City's current adopted Housing Element meets its obligation by designating two sites Very High Density Residential, which allows for density of up to 35 dwelling units per acre. These two sites are the Overton Moore site, previously designated Institutional, and the Tres Hermanos site "A," designated Commercial. Proposed density transfers are depicted on Tables 4-3 and 4-4 of the EIR. This comment does not warrant additional information or analysis within the EIR.

W-2 This comment asks "Where is the explanation of how the City is interpreting Measure U compliance?". Section 4.1.2 of the EIR defines Measure U, and Section 4.1.3 provides a discussion of project impacts relative to Measure U. This comment does not warrant additional information or analysis within the EIR.

W-3 This comment asks "Where is the explanation and math that discusses minimum and maximum *[Measure U]* numbers?". Response to comment W-1 above, identifies the EIR sections that discuss the City's RHNA obligation and the transfers proposed pursuant to Measure U. This comment does not warrant additional information or analysis within the EIR.

W-4 This comment asks "How does the General Plan Update comply with Measure U if it is not just meeting the 'minimum mandated Housing Element requirements' but in fact exceeding the maximum?". SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is a regionwide transportation planning tool that is updated every four years. The existing 2012 RTP/SCS underestimates the City's growth and may therefore underestimate long-range regional transportation system needs related to that growth. RTP/SCS projections should have been based on the General Plan Land Use Plans for each county and city in the SCAG region, including Chino Hills. But as shown in EIR Table 4-7, the RTP/SCS estimate does not accurately reflect the City's existing General Plan, and is incorrect. The RHNA is a separate planning process that is initiated by the California Housing and Community Development Department to ensure that each California jurisdiction provides for its fair share of housing. The City of Chino Hills has updated its Housing Element to comply with its state mandated RHNA requirement, and is now updating its General Plan Land Use Map to comply with its adopted Housing Element. The City of Chino Hills is meeting its minimum mandated Housing Element requirements. This comment does not warrant additional information or analysis within the EIR.

[1] The 4th cycle RHNA covers the planning period from 2006 to 2014; the fifth cycle RHNA covers the planning period from 2014 to 2021

W-5 This comment asks "Where is the discussion in the DEIR of all the potential impacts of the conversion of the Hill of Hope property from institutional to residential?". The EIR analysis of impacts is based on the proposed General Plan Land Use Map and associated land use tables. (Please reference Appendix I, Traffic Impact Study for the Transportation & Circulation Element for the City of Chino Hills General Plan Update.) For the Hill of Hope site, the EIR analysis applies a maximum of 31 dwelling units, which is the maximum density applied to the site (reference EIR Table 4-4). Maintaining an Institutional designation on the Hill of Hope property could result in a future conversion to another more intensive religious or educational facility. The General Plan Update proposes to redesignate the site to Agriculture/Ranches, which is the lowest traffic-generating land use in the City other than open space. This comment does not warrant additional information or analysis within the EIR.

W-6 As discussed in Response to Comment M-1 above, the existing Zoning Map includes a note that limits density in the Agriculture-Ranch zoned area west of Chino Hills State Park to a 40-acre minimum, while the existing General Plan includes a statement that "Developers may have an interest to pursue more intensive use of this area in the future." The General Plan Update includes the proposed deletion of this existing Zoning Map note to create consistency between the General Plan and the Zoning Map. Other provisions of the proposed General Plan Update effectively limit density in the southeastern portion of the area. Because the General Plan designation of the area does not change, no violation of Measure U occurs. However to clarify that the density of the area remains at 1 unit to 40 acres, the proposed General Plan Update Land Use Map and the proposed Zoning Map have been revised to relabel the area Agriculture/Ranches-40 and Agriculture-Ranch-40 (R-A-40), respectively. Tables 2-1, Table 2-3, and Section 4.1.3 of the EIR have been modified to reflect the new Agriculture/Ranches-40 General Plan Land Use Map designation.

Note: During the public hearing on the General Plan Update, the Planning Commission received testimony from property owners and environmental interests regarding the proposed redesignation of the southeastern portion of the City to Agriculture/Ranches40 in both the General Plan Update and proposed Zoning Map. As part of the public process, the Planning Commission carefully considered all concerns and determined at its January 20, 2015 meeting that the public's interest is best served at this time by retaining the designation in the General Plan and Zoning Map currently in existence, including the current policies, procedures and legislative intent of the current General Plan and Zoning Map. The Planning Commission voted to forward this recommendation to City Council along with a recommendation that staff be directed to research this issue and work with the property owners and community to recommend an action to the Planning Commission for providing clarity regarding the area's density. Therefore, at this time, the General Plan Update Land Use Map will not be revised to relabel the area Agriculture/Ranches-40, the Zoning Map will not be revised to relabel the area Agriculture-Ranch-40 (R-A-40), and the Zoning Map will retain the existing zoning.

W-7 This comment states that the EIR is totally lacking in the analysis of impacts and cumulative impacts of this massive increase in residential housing units and zoning changes. As discussed in Response to Comments W-1 through W-6, the only proposed residential increase promulgated by the General Plan Update is the 780 units required to meet the City's RHNA obligation. This obligation is documented in the City's adopted Housing Element. Further, non-residential square footage would decrease by 269,000 square feet. Cumulative impacts are addressed in each relevant section of the EIR, notably traffic, noise, and air quality. This comment does not warrant additional information or analysis within the EIR.