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***2012 Draft Marin County Housing
Element
Supplement to the 2007
Countywide Plan EIR***

***Draft Supplemental Environmental
Impact Report***

COUNTY OF MARIN
COMMUNITY DEVELOPMENT AGENCY

State Clearinghouse No. 2012072028

DECEMBER 20, 2012

2012 DRAFT MARIN COUNTY HOUSING ELEMENT SUPPLEMENT TO THE 2007 COUNTYWIDE PLAN EIR

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1.0 INTRODUCTION AND PROJECT HISTORY

1.0 INTRODUCTION AND PROJECT HISTORY

Marin County is the lead agency for the preparation of this Draft Supplemental Environmental Impact Report (Draft SEIR). This Draft SEIR is supplemental to the *2007 Countywide Plan EIR* (State Clearinghouse Number 2004022076) that was certified by Marin County in 2007.¹ The *2007 Countywide Plan EIR* evaluated the effects that could result from implementation of the *2007 Marin Countywide Plan*, which contains land use goals, policies, and implementation programs to direct growth and development in the unincorporated portions of Marin County.

This Draft SEIR has been prepared by Marin County in accordance with the California Environmental Quality Act, including *CEQA* (Public Resources Code sections 21000-21178.1), the *State CEQA Guidelines* (California Code of Regulations, Title 14, sections 15000-15387), and the Marin County Environmental Impact Review Guidelines.

1.1 PROJECT BACKGROUND

In 2000, the Marin County Board of Supervisors approved a work program and public participation program to update the Marin Countywide Plan (*Countywide Plan*). In 2007, Marin County adopted an updated *Countywide Plan*.² The update process included the preparation of an environmental impact report (EIR). A Notice of Preparation of an EIR (NOP) for the *Countywide Plan Update* was circulated on February 16, 2004. A revised NOP was circulated on August 24, 2005 to the public agencies and all interested parties for a 30-day review and the comment period was extended to October 31, 2005. Scoping sessions were held on March 4, 2004 and October 26, 2005 to obtain public comment on issues to be considered in the EIR.

A Notice of Completion (NOC) and notice of public hearing on the Draft EIR were distributed on January 16, 2007. The NOC commenced a 60-day public review and comment period on the adequacy of the Draft EIR that ended on March 16, 2007. During the public comment period, beginning on February 12, 2007 a series of public hearings was held by the Planning Commission to receive testimony on the adequacy of the Draft EIR.

On June 4, 2007 the Final EIR, including the Response to Comments on the Draft EIR, was distributed to the public. This began a two week public review and comment period on the Final EIR, which concluded on June 18, 2007. The Planning Commission held a public hearing to consider comments on the Final EIR on June 11, 2007.

The comments on the Final EIR required minor clarification or amplification of certain aspects of the Final EIR. Response to comments on the Final EIR were prepared and adopted as an Amendment to the Final EIR (July 2007). Following additional public comments provided to the Board of

¹ Marin County Board of Supervisors Resolution No. 2007-147 *A Resolution Certifying the Final Environmental Impact Report for the 2007 Marin Countywide Plan*, November 6, 2007.

² Marin County Board of Supervisors Resolution No. 2007-148 *A Resolution Adopting the 2007 Marin Countywide Plan and Mitigation Monitoring and Reporting Program Together with Findings and A Statement of Overriding Considerations*, November 6, 2007.

Supervisors during consideration of the *Countywide Plan* and Final EIR, various changes were made to policies and programs contained in the *Countywide Plan* and proposed mitigation. A response to these changes was prepared and adopted as Amendment II to the Final EIR (October 2007).

On July 23, 2007 the Planning Commission conducted a public hearing and voted to recommend that the Board of Supervisors certify the Final EIR for the *Countywide Plan*.

Prior to and at a November 6, 2007 public hearing, the Board of Supervisors considered the Final EIR and adopted a resolution certifying the Final EIR.³

State law requires each city and county to adopt a general plan containing at least the seven mandatory elements, including a housing element. Unlike the other general plan elements, the housing element, which is required to be updated at least once every eight years, is subject to detailed statutory requirements and mandatory review by a State agency, the California Department of Housing and Community Development (HCD). Housing elements have been mandatory portions of local general plans since 1969. The 2003 Marin County Housing Element, which was first adopted by the Board of Supervisors on June 3, 2003 and then certified by HCD as complying with State law, addresses the period from 1999 through 2007.⁴ The 2003 Housing Element was incorporated into the *Countywide Plan* and adopted by the Board of Supervisors in November 2007.

Marin County has now prepared a Housing Element Update (*2012 Draft Housing Element*) for the planning period 2007 through 2014. The *2012 Housing Element* will be adopted as an amendment to and incorporated into the *Countywide Plan*. In addition to identifying potential housing sites for the 2007 through 2014 planning period, potential housing sites to consider for inclusion in the next planning period (2014 through 2022) have been identified. This environmental review evaluates the potential housing sites for both planning periods at the same level of analysis.

1.2 ENVIRONMENTAL REVIEW OF THE PROPOSED PROJECT

As discussed above, Marin County has prepared the *2012 Draft Housing Element* for the planning period 2007 through 2014. The County's current *Countywide Plan*, adopted in 2007 contains housing policies and programs in addition to the programs outlined in the 2003 Housing Element. In addition to the requirement of State law to revise and update the housing element, several changes in State law have been made since adoption of the 2003 Housing Element.⁵

Because of the proposed changes to the 2003 Housing Element and changes in State law, additional environmental analysis is required under CEQA. Marin County has determined that a supplement to

³ Marin County Board of Supervisors Resolution No. 2007-147 *A Resolution Certifying the Final Environmental Impact Report for the 2007 Marin County wide Plan*, November 6, 2007.

⁴ Prior to adoption of the 2003 Housing Element the Marin County Board of Supervisors adopted a Negative Declaration. Marin County Board of Supervisors, Resolution No. 2003-71 *Resolution of the Marin County Board of Supervisors Adopting a Negative Declaration of Environmental Impact for the Adoption of the Revised Marin County Housing Element*, June 3, 2003.

⁵ See Attachment #1 to Marin County Planning Commission Housing Element Working Session Staff Report, April 13, 2009 for an overview of Housing Element law and pertinent changes.

the 2007 Countywide Plan EIR is warranted. Pursuant to Section 15163(a)(1)-(2) of the *State CEQA Guidelines*, the Lead Agency (Marin County) may prepare a supplement to the EIR if:

- Any of the conditions described in Section 15162 (listed below in (1)(A)-(D)) would require the preparation of a subsequent EIR, and
- Only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.

The following are conditions contained in *State CEQA Guidelines* Section 15162(a) that would apply to the preparation of a Subsequent EIR:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR or Negative Declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measures or alternatives.

A supplement to an EIR need contain only the information necessary to make the previous EIR adequate for the project as revised (*CEQA Guidelines* Section 15163(b)).

In compliance with CEQA,⁶ Marin County distributed a Notice of Preparation (NOP) for the 2012 Draft Housing Element Supplemental EIR on July 13, 2012 to public agencies, organizations, and

⁶ Section 15082 of the *State CEQA Guidelines* describes the procedures for the Notice of Preparation and for determining the scope of an EIR. Projects of statewide, regional, or areawide significance (see Section 15206 of the *State CEQA Guidelines*) require the lead agency to conduct at least once scoping meeting.

individuals with an interest in or jurisdiction over the project. This step ensured early consultation with these entities on the scope of the EIR Supplement.

On August 2, 2012, Marin County conducted a public scoping session on the proposed project. The purpose of the meeting was to identify environmental issues and concerns of the public about the project in order to evaluate those issues in this EIR Supplement.

A list of individuals and agencies responding to the NOP and the general issues raised is provided in the appendix to this Draft SEIR. Indications are additionally provided as to where in the Draft SEIR responses to the NOP and scoping meeting comments can be found.

Upon review of the *2012 Draft Housing Element*, Marin County has determined that the proposed project is consistent with the criteria for preparation of a supplemental EIR as defined above. This determination is based on the analysis included in Chapter 3, Environmental Checklist, of this Draft SEIR. The Environmental Checklist evaluates the CEQA checklist categories in terms of any “changed condition” (i.e. changed circumstances, project changes, or new information of substantial importance as defined in *State CEQA Guidelines* section 15162(a)(3)(A)-(D)) that may result in a different environmental impact significance conclusion from the certified *2007 Countywide Plan EIR*.

This Draft SEIR is a program EIR under Section 15168 of the *State CEQA Guidelines*. As described in *State CEQA Guidelines* § 15168(a)(3), a program EIR “may be prepared on a series of actions that can be characterized as one large project and are related...in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program.” As a program EIR, this document focuses on the overall effect of the *2012 Draft Housing Element*. While the Draft SEIR provides an in-depth program-level review of the proposed housing sites, each individual housing site will separately and subsequently receive additional review, pursuant to CEQA, if and when individual development applications are received by Marin County. This Draft SEIR will help streamline future, tiered environmental review, because it provides program level information and data about each housing site, which identifies potentially significant environmental impacts and associated mitigation measures that may be used in analyzing future site-specific development projects.

The Draft SEIR was submitted to the State Clearinghouse and made available to all applicable federal and State regulatory agencies and other interested parties on December 20, 2012. The public review period began on December 20, 2012 and ends on February 4, 2013.

Written comments on the Draft SEIR must be made before the close of the public review period and mailed to or delivered to the following address:

Rachel Warner, Environmental Planning Manager
Marin County Community Development Agency
3501 Civic Center Drive, Room 308
San Rafael, CA 94903

Comments can be sent by email to EnvPlanning@marincounty.org or faxed to the Community Development Agency office at 415-499-7880.

A Final SEIR will be prepared after the close of the public review period. The Final SEIR will include all comments on environmental issues received by the County during the public review period and responses to those comments. The Final SEIR will be distributed to the public and to public agencies commenting on the Draft SEIR for review before the County considers certifying the Final SEIR as complete.

No action can be taken to approve the proposed project until the Final SEIR is certified by the County Board of Supervisors as having been completed in compliance with CEQA.

Incorporation by Reference

The *2007 Countywide Plan EIR* (State Clearinghouse No 2004022076) is incorporated by reference herein, and is available for review during the hours of 8:00 AM and 4:00 PM, Monday through Thursday, at the Marin County Community Development Agency office at 3501 Civic Center Drive, Room 308, San Rafael, CA 94903 and on the Community Development Agency's website at <http://www.co.marin.ca.us/depts/cd/main/fm/eir.cfm>. All documents/volumes comprising the certified *2007 Countywide Plan EIR* and all background documents pertaining to the *2012 Draft Housing Element* can be obtained for review on request at the Community Development Agency's counter or by appointment.

A list of acronyms used in this document is provided in **Exhibit 1.0-1**.

**Exhibit 1.0-1
 Acronyms**

Acronym	Meaning
AB	Assembly Bill
ABAG	Association of Bay Area Governments
Ac	acre
AH	Affordable Housing combined zoning district
BAAQMD	Bay Area Air Quality Management District
BCDC	San Francisco Bay Conservation and Development Commission
BCPUD	Bolinas Community Public Utility District
CalEEMod	California Emissions Estimator Model, Version 2011.1.1
CAP	Clean Air Plan
CARB	California Air Resources Board
CCR	California Code of Regulations
CDA	Marin County Community Development Agency
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CNDDDB	California Natural Diversity Data Base
CO-CAT	Coastal and Ocean Working Group of the California Climate Action Team
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalency
CWP	The Marin Countywide Plan
CWP Final EIR	Countywide Plan final environmental impact report
du/ac	Dwelling units per acre
EIR	Environmental impact report
EL	Extremely low income
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FTA	Federal Transit Administration
GHG	Greenhouse gases

GWP	Global Warming Potential
HCD	California Department of Housing and Community Development
HOD	Housing Overlay Designation
HCFCs	Hydro Chlorofluorocarbons
IPUD	Inverness Public Utility District
L	Low income
LCFS	Low carbon fuel standard
LCP	Local Coastal Program
LGVSD	Las Gallinas Valley Sanitary District
LID	Low-impact development
MBCSD	Muir Beach Community Services District
MCC	Marin County Code
MCFD	Marin County Fire Department
MALT	Marin Agriculture Land Trust
Marin Housing (MHA)	Housing Authority of the County of Marin
MCSTOPPP	Marin County Stormwater Pollution Prevention Program
MMTCOe	Million metric tons of CO2 emissions
MMWD	Marin Municipal Water District
MS4s	Municipal Small Separate Sewer Systems
MPC	Metropolitan planning organization
MT	Metric tons
MTC	Metropolitan Transportation Commission
NFA	No Further Action
NFIP	National Flood Insurance Program
NMWD	North Marin Water District
NOC	Notice of Completion
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NSD	Novato Sanitary District
NWI	National Wetland Inventory
PG&E	Pacific Gas & Electric Company
PM ₁₀ and PM _{2.5}	Particulate matter
PPV	Peak particle velocity
RHNA	Regional housing need allocation

RPS	Renewable portfolio standard
RWQCB	San Francisco Bay Regional Water Quality Control Board
SASM	Sewerage Agency of Southern Marin
SBCWD	Stinson Beach County Water District
SCA	Stream Conservation Area
SCWA	Sonoma County Water Agency
SEIR	Supplemental environmental impact report
SFHA	Special Flood Hazard Area
SMART	Sonoma-Marín Area Rail Transit
STG	Sound Transmission Glass
SWPPP	Stormwater pollution prevention plan
TAC	Toxic air contaminants
TCMs	Transportation Control Measures
TMDL	Total Maximum Daily Load
U.S. 101	U.S. Highway 101
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
VLI	Very low income
VMT	Vehicle miles traveled
WCA	Wetland Conservation Area

2.0 DESCRIPTION OF THE PROPOSED PROJECT

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This chapter of the SEIR provides a detailed description of the *2012 Draft Marin County Housing Element (2012 Draft Housing Element)*.

2.1 PROJECT LOCATION

Marin County's total land and water area is approximately 606 square miles, of which about 87 percent (527 square miles) is unincorporated area. Marin County is one of the nine counties that comprise the San Francisco Bay Area. It is linked to San Francisco by the Golden Gate Bridge and to the East Bay by the Richmond-San Rafael Bridge (see **Exhibit 2.0-1**). The *2012 Draft Housing Element* encompasses the unincorporated area of Marin County.

2.2 2007 COUNTYWIDE PLAN EIR

In November 2007, the Marin County Board of Supervisors certified the Final Environmental Impact Report for the *2007 Marin Countywide Plan*¹ (*2007 Countywide Plan EIR*) and adopted the Marin Countywide Plan² (*Countywide Plan*). The *2007 Countywide Plan EIR* evaluated a range of total housing units that could be built in the unincorporated area of Marin County under the various policies that encourage housing. The number of total housing units evaluated in the *2007 Countywide Plan EIR* ranged from 31,686 in Alternative 3 to 32,831 in Alternative 2 (see **Exhibit 2.0-2**). Alternative 4 (Mitigated Alternative) evaluated a total of 31,799 housing units. The proposed project (*2005 Draft CWP Update*) and Alternative 1 (the No Project Alternative) evaluated a total of 32,714 housing units. The amount of nonresidential floor area³ evaluated in the *2007 Countywide Plan EIR* ranged from 3,947,139 square feet in Alternative 3 to 5,272,188 square feet in the proposed project and Alternative 1 (No Project).

¹ *Marin Countywide Plan Update Final EIR*, County of Marin Community Development Agency, 2007. The Draft EIR is dated January 2007 and the Response to Comments volume is dated June 2007. The Final EIR can be viewed at <http://www.co.marin.ca.us/depts/cd/main/fm/eir.cfm>.

² *Marin Countywide Plan*, approved by the Marin County Board of Supervisors November 6, 2007. *The Marin Countywide Plan* can be viewed at <http://www.co.marin.ca.us/depts/cd/main/fm/TOC.cfm>.

³ Floor area is shown in square footage and refers to the floor area of any nonresidential use including retail, office, warehouse, hotels, and group quarters.

**Exhibit 2.0-1
Marin County and San Francisco Bay Area**



Legend

 Marin County Boundary

0 5 10 20 Miles



Source: County of Marin Community Development Agency, 2006.

Exhibit 2.0-2
2007 Countywide Plan EIR Alternatives

	Existing	Proposed Project	Alternative 1 (No Project)	Alternative 2	Alternative 3	Alternative 4 (Mitigated Alternative)
Housing Units	27,323	32,714	32,714	32,831	31,686	31,799
Nonresidential Floor Area	3,204,549	5,272,188	5,272,188	4,869,496	3,947,139	4,441,330

Source: 2007 Countywide Plan EIR, November 2007.

- a. Floor area is shown in square footage and refers to the floor area of any nonresidential use including retail, office, warehouse, hotels, and group quarters.

Alternative 4 (Mitigated Alternative) included the mitigation measures identified in the 2007 Countywide Plan Draft EIR to reduce identified significant impacts, such as those related to transportation, groundwater recharge, water supply and demand, and public services. Alternative 4 (Mitigated Alternative) formed the basis of the Countywide Plan adopted by the Board of Supervisors in November 2007. The 2007 Countywide Plan EIR found that the project resulted in significant unavoidable effects on the environment. Because Alternative 4 (Mitigated Alternative) met the project's basic objectives and was the environmentally superior alternative, the Planning Commission recommended and the Board of Supervisors adopted Alternative 4 (Mitigated Alternative) with certain modifications.⁴ With the modifications adopted by the Board of Supervisors, the adopted 2007 Countywide Plan permits 31,623 housing units and 4,158,800 square feet of nonresidential floor area in the unincorporated area at buildout.

2.3 PROPOSED PROJECT

Statutory Background

Every jurisdiction in California must have a General Plan and every General Plan must contain a Housing Element.⁵ Marin's General Plan is the *Marin Countywide Plan*. While jurisdictions must review and revise all elements of their General Plan on a regular basis to ensure that they remain up to date, State law is much more specific with regard to the schedule for updating the Housing Element. Housing Elements must be updated at least every eight years. State law is also specific in terms of the

⁴ The Planning Commission's and Board of Supervisor's modifications to the Mitigated Alternative are shown in Exhibit 8.0-13 in the 2007 Countywide Plan EIR and in the amendments to the 2007 Countywide Plan EIR.

⁵ California state law requires each city and county to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning", California Government Code section 65300.

issues⁶ that the Housing Element must address, and requires that every new and revised Housing Element be submitted to California’s Department of Housing and Community Development (HCD) to ensure that it meets the State’s minimum requirements.⁷ This process of “certifying” a Housing Element’s compliance with State law is unique among the General Plan elements. One requirement for every Housing Element is to demonstrate that the local jurisdiction has made adequate provision to support the development of housing at various income levels (very low, low, moderate, and above moderate) to accommodate its “fair share” allocation of existing and projected regional housing need.⁸

Proposed Housing Element

The proposed project is the *2012 Draft Marin County Housing Element*, prepared by the Marin County Community Development Agency (CDA),⁹ which is described in detail in Section 2.4, below.

Project Objectives

The primary objective of the *2012 Draft Housing Element* is to plan sustainable communities by supplying housing affordable to the full range of Marin County’s diverse community and workforce. Additional project objectives of the *2012 Draft Housing Element* focus the County’s housing strategies which are the following:

Goal 1 - Use Land Efficiently – Use Marin County’s land efficiently to meet housing needs and implement smart and sustainable development principles.

Goal 2 – Meet Housing Needs Through a Variety of Housing Choices – Respond to the broad range of housing needs in Marin County by supporting a mix of housing types, densities, prices, and designs.

Goal 3 - Ensure Leadership and Institutional Capacity – Build and maintain local government institutional capacity and monitor accomplishments so as to respond to housing needs effectively over time.

⁶ The issues that require analysis in a housing element are defined in California Government Code section 65583.

⁷ The process the Department of Housing and Community Development shall use to evaluate a housing element for compliance with State law is described in California Government Code section 65583.1.

⁸ See California Government Code section 65588.

⁹ *2012 Draft Marin County Housing Element*, Marin County Community Development Agency. The Housing Element can be viewed at: www.marincounty.org/HousingElement.www.marincounty.org/HousingElement.

2.4 DESCRIPTION OF THE 2012 DRAFT HOUSING ELEMENT

Project Description

The *2012 Draft Housing Element* is an update of the County's State-certified Housing Element that was adopted initially in November 1991, readopted with the Countywide Plan Update in January 1994, updated in June 2003, and incorporated into the *Countywide Plan* in November 2007. The 2003 Housing Element addresses the period from 1999 through 2007. The planning period for this *2012 Draft Housing Element* is January 2007 to July 2014. The next Housing Element planning period encompasses the years 2014 to 2022. This environmental review evaluates the potential housing sites for both planning periods at the same level of analysis.

To assist in the preparation of the *Draft Housing Element* in 2009, County staff conducted numerous informal public workshops, and agency Planning Commission workshops to solicit input from the community. In 2011, Marin County formed a Housing Element Task Force to review and recommend locations for future housing development. The Task Force met nine times from February to May 2011 with the goal of identifying opportunities for new affordable and multi-family housing in unincorporated Marin County. The product of the Task Force's work was a prioritized list of 35 sites that could accommodate multi-family housing development to meet the housing needs of Marin's workforce, seniors, and special needs populations.

The *2012 Draft Housing Element* is substantially changed from the *2003 Housing Element*. Background and demographic data have been updated. Analyses of housing need were revised to reflect more recent conditions. Extensive revisions were made to the Constraints and Opportunities Section, particularly in relation to Marin County's regulatory process. Most pertinent to this environmental analysis, the Site Inventory Analysis and Goals, Policies and Programs Sections of the Housing Element were revised to reflect the policy direction of the *2007 Countywide Plan*, and revisions to State law.

The Available Land Inventory (*2012 Draft Housing Element*, Figure IV-6) contains 17 sites to accommodate the 2007-2014 Regional Housing Needs Allocation. 0 sites were carried forward from the *2003 Housing Element*, because most of the sites shown in the *2003 Housing Element* were developed, received planning entitlements, and/or were counted in previous Housing Element status reports to the State of California.

There are 53 programs proposed in the *2012 Draft Housing Element*. The bulk of the programs in the *2012 Draft Housing Element* were carried forward, combined or revised from the *2003 Housing Element*. Many *2003 Housing Element* programs were deleted, either because they have been successfully implemented or are outdated.

The Goals, Policies and Programs section of the *2012 Draft Housing Element* was substantially revised from the *2003 Housing Element* to achieve several objectives. First, programs were amended and 18 new programs were added to address issues of housing need identified in the Housing Needs Analysis, to support existing policies promoting city-centered growth, and as a result of the County's policy direction toward simplifying the project review process. Changes in State law also prompted new programs specific to agricultural worker housing, homeless shelters, transitional and supportive housing, and reasonable accommodation. Second, the goals and policies of the *2012 Draft Housing Element* have been reorganized to help eliminate duplication of concepts. Finally, actionable and

measurable items have been assigned to each program to effectively evaluate implementation in the future.

A list and evaluation of 2003 Housing Element¹⁰ programs can be found as Appendix G of the 2012 Draft Housing Element.

The 2012 Draft Housing Element consists of five sections, each of which addresses a major subject area, as summarized below:

SECTION I - INTRODUCTION

The **Introduction** provides an overview and describes the purpose of the Housing Element, describes housing element law and changes to State requirements, provides a summary of the Element's goals, policies, and programs, describes the relationship to other *Countywide Plan* elements and provides a summary of the 2003 Housing Element policy and program accomplishments.

The purpose of the Housing Element is to achieve an adequate supply of decent, safe, and affordable housing for Marin's workforce, residents, and special needs populations, with a particular focus on the unincorporated areas of the County.

SECTION II - HOUSING NEEDS ANALYSIS

Regional Housing Needs Allocation

The **Regional Housing Needs Allocation** (RHNA) is a State mandated process to distribute planning responsibility for housing need throughout the State. The Bay Area's regional housing need is allocated by the State Housing and Community Development, and finalized through negotiations with the Association of Bay Area Governments (ABAG). **Exhibit 2.0-3** shows the distribution of housing units by income level (extremely low, very low, low, moderate, and above moderate income¹¹) for unincorporated Marin County for the 2007 to 2014 planning period.

¹⁰ The County of Marin Housing Element, June 2003 is available at <http://www.co.marin.ca.us/depts/cd/main/pdf/planning/HE4Web.pdf>

¹¹ One of the State's housing goals is to ensure that local governments consider the housing needs of persons at all income levels. Household income levels that are used are extremely low income (ELI) which are households with income at or below 30 percent the county's area median income (AMI), very low income (VL) households with incomes up to 50 percent of the county's AMI, low income (L) households with income between 50 and 80 percent of the county's AMI, moderate (M) are households with income between 80 and 120 percent of the county's AMI and above-moderate (AM) are households with income above 120 percent of the county's AMI.

Exhibit 2.0-3
Income Distribution of RHNA Units (2007-2014) – Unincorporated Marin

Extremely Low Income	Very Low Income	Low Income	Moderate Income	Above Moderate Income	Total
91	92	137	169	284	773

Source: http://www.abag.ca.gov/planning/housingneeds/pdfs/Final_RHNA.pdf; and Marin County Community Development Agency

The **Housing Needs Analysis** section describes the following Marin County population and housing characteristics:

Population and employment, which includes information about population growth and population by age, plus employment by industry in unincorporated Marin County. Marin County’s total population is 252,409, of which 67,427 live in the unincorporated area of the County. The Marin County resident workforce is predominantly white collar. Over 91 percent of the County’s residents age 25 or older have at least a high school diploma, compared with about 50 percent statewide. The County’s largest employers include the County government, Marin General Hospital, Kaiser Permanente, Autodesk, and Fireman’s Fund Insurance.

Household characteristics, which includes information about household types and tenure, plus annual household growth. In 2005, there were 25,750 households in unincorporated Marin County, an increase of 316 from 2000. Of these, 72 percent owned the home they lived in and 28 percent rented. According to the 2000 Census, the average household size in Marin County was 2.4 persons. Compared to the rest of the Bay Area, Marin County’s average household size is lower, averaging 0.3 fewer persons per household.

Housing stock characteristics, which includes information regarding housing units by type and production, age and condition of the housing stock, housing construction prices and trends, plus vacancy rate trends. Based on 2008 data from the California Department of Finance, the unincorporated area had 23,038 single-family homes (constituting 83 percent of the total housing stock), 4,471 multi-family homes (16 percent of all housing), and 414 mobile homes, for a total of 27,923 homes.

Housing costs, household income, and ability to pay for housing, which includes information about household income, sales prices and rents, ability to pay for housing/overpaying, overcrowding, plus foreclosures. It is estimated that 35 percent of all Marin County households fall in the extremely low, very low, and low income categories, earning less than 80 percent of median income. It was estimated in 2000 that 53 percent of all renters in Marin County were in the extremely low, very low, and low income categories. The median price for a single-family detached home in Marin County in 2008 was \$914,000, requiring an income over \$216,000 per year to qualify for a loan.

Special needs housing, which analyzes the housing needs of special populations, including seniors, the disabled, large households, female-headed and single-parent households, agricultural workers, and the homeless.

SECTION III - CONSTRAINTS AND OPPORTUNITIES FOR HOUSING DEVELOPMENT

The **Constraints and Opportunities for Housing Development** section of the *2012 Draft Housing Element* discusses nongovernmental and governmental constraints to the development of housing, with a focus on housing affordable to lower income households. Included in the discussion of nongovernmental constraints are land and construction costs, availability of financing, community resistance to new housing and availability of infrastructure. In the discussion of governmental constraints, it is stated that while regulatory standards provide consistency and foster a high quality and cohesive built environment, standards also may present conflicts in land use objectives and create constraints to the production of housing. This section analyzes land use regulations, procedures, and fees to identify possible solutions to policy conflicts.

SECTION IV - SITES INVENTORY AND ANALYSIS

Regional Housing Needs Allocation

Exhibit 2.0-3 shows the RHNA for the unincorporated area of Marin County. Every housing element must demonstrate that the local jurisdiction has made adequate provisions to support development of housing at various income levels (extremely low, very low, moderate, and above moderate) to meet its “fair share” of the existing and projected regional housing needs. The RHNA numbers establish goals that will be used to guide planning and development decision-making, although the development and actual construction of housing units will not be carried out by Marin County. Specifically, the numbers establish a method of determining whether Marin County is allocating adequate sites at a range of densities for the development of housing, including identifying available sites that allow residential uses at 30 units per acre as a measure of achieving housing goals for lower income households.

Quantified Objectives

Housing elements are required to establish local housing objectives in relation to needs, resources, and constraints (referred to as quantified objectives). The primary means through which Marin’s quantified objectives will be achieved are new construction, rehabilitation, and conversion of market-rate to affordable units. For the 2007 to 2014 planning period, Marin County has established an objective of 814 housing units of which 625 would be due to new construction, 164 through rehabilitation, and 25 through conservation.¹² The 625 housing units of new construction are based on projects for which permits have been issued or are pending.

The *2012 Draft Housing Element* identifies strategies that can achieve the County’s quantified objectives over the 2007 to 2014 planning period. The quantified objectives solely focus on site specific strategies.

Sites Inventory and Analysis

Housing elements are required to provide an inventory of sites suitable for housing development that can accommodate a jurisdiction's short-term housing development objectives, as determined by the RHNA for the period 2007 to 2014.

¹² See Figure IV-3 Quantified Objectives by Income Category, *2012 Draft Housing Element*. Conservation generally refers to the preservation of the existing affordable housing stock throughout the planning period.

Marin County's primary method for addressing the adequate sites requirements is the identification of available vacant and underutilized sites that are appropriately zoned and likely to develop within the 2007 to 2014 planning period. **Exhibit 2.0-4** provides a summary inventory of potential housing sites for the 2007 to 2014 planning period.¹³ **Exhibit 2.0-5** shows the location of the housing sites in the northern part and southern part of Marin County. **Exhibits 2.0-6, 2.0-7, 2.0-8, 2.0-9, 2.0-10, 2.0-11, and 2.0-12** show groupings of housing sites and the immediate surrounding area at a higher level of detail including proximity to nearby sites. It should be noted that **Exhibits 2.0-5** through **2.0-12** show sites for both the 2007 to 2014 planning period (the period covered by the *2012 Draft Housing Element*) and sites to consider for inclusion in the 2014 to 2022 or future planning period.

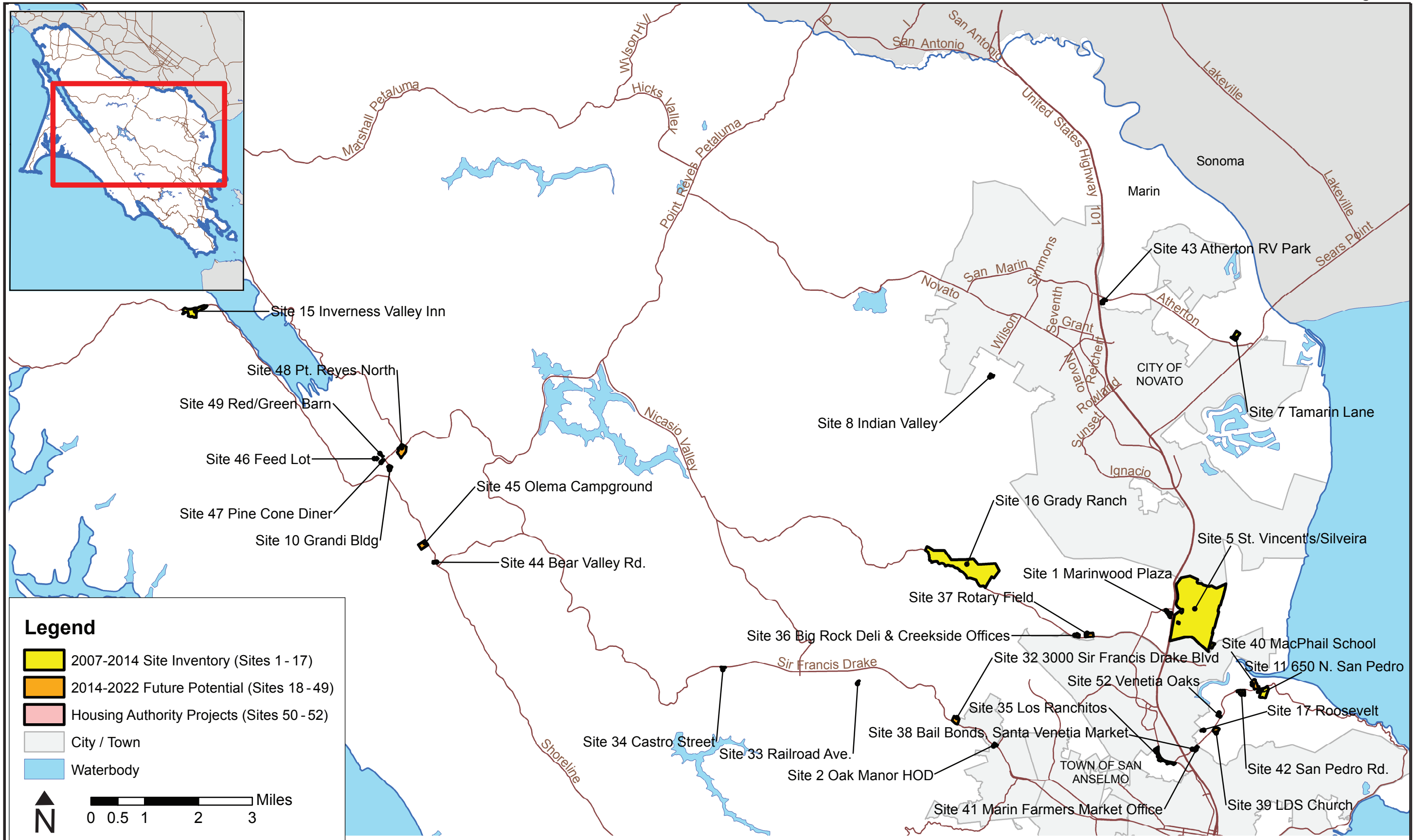
¹³ Each of the potential housing sites is analyzed in detail in Appendix F (Sites Inventory Profiles) of the *Draft Housing Element*.

Exhibit 2.0-4
2007-2014 Potential Housing Element Available Land Inventory

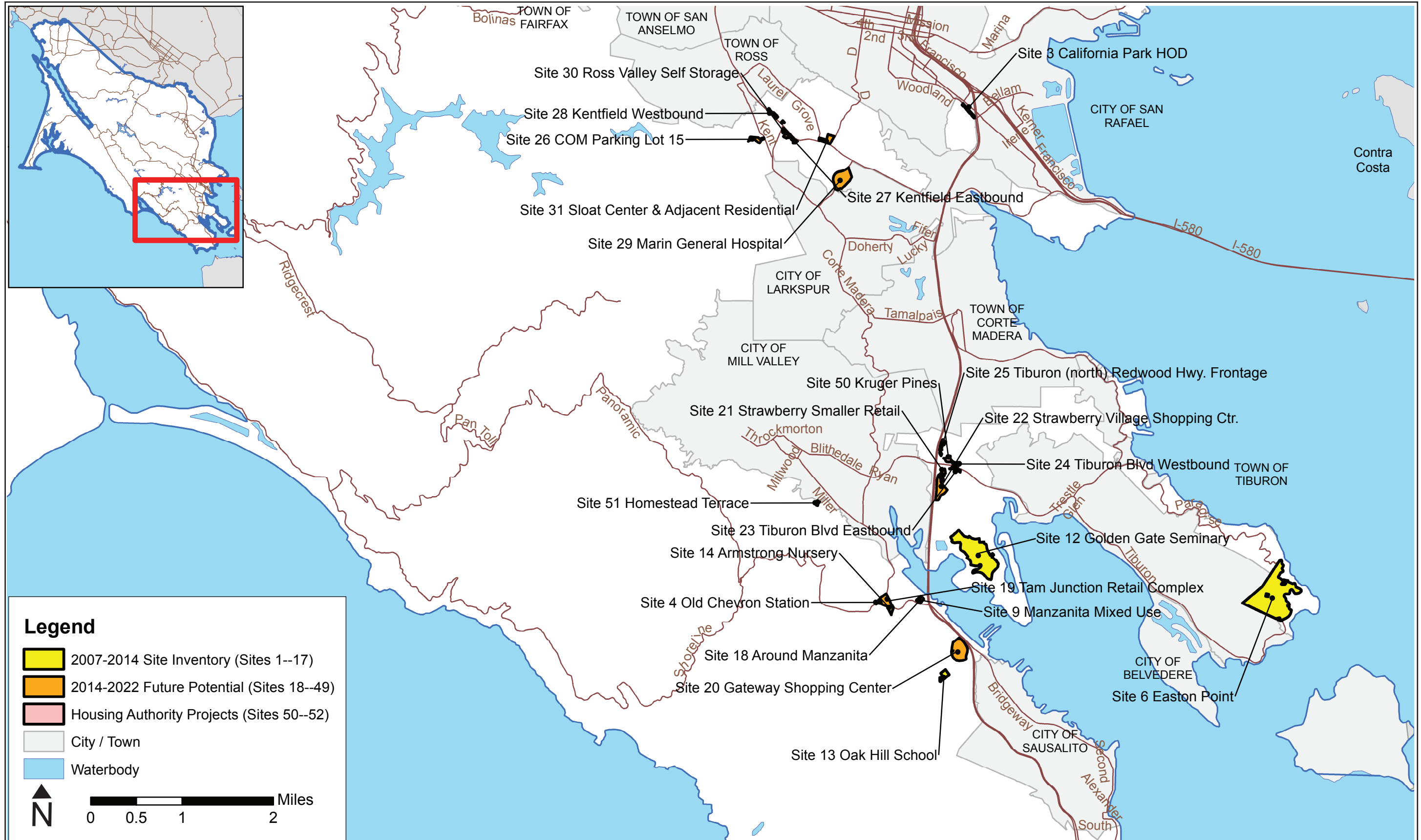
Site #	Site Name & Address	Total Acres	CWP Land Use	Zoning	Housing Element Realistic Capacity (Units)		Housing Units to Evaluate
					ELI, VL, Low	Mod., Above Mod.	
A: Affordable housing sites – 30 units per acre, or Countywide Policy							
1	Marinwood Plaza 100 Marinwood Ave	4.75	HOD / GC 30 units/acre	CP 30 units/acre	85	0	85
2	Oak Manor 2400 Sir Francis Drive Blvd.	1.58	HOD / GC 30 units/acre	C1 30 units/acre	10	0	10
3	California Park Woodland Avenue	1.82	HOD / MF2 30 units/acre	RSP-4 4 units/acre	50	0	50
4	Old Chevron Station 204 Flamingo Road	0.79	GC 30 units/acre	CP 30 units/acre	10	0	21
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	1,110	PD-Agriculture ad Env. Resource	A2	100	121	221
B: Entitled Project, not yet submitted building permits							
6	Easton Point Paradise Drive	110	PR, SF-6 4-7 units/acre	RMP-0.2, R1	0	43	43
7	Tamarin Lane 12 Tamarin Lane	6.54	SF-3 1 unit/1-5 acres	ARP-2	0	5	5
8	Indian Valley 1970 Indian Valley Road	7.7	SF-3 1 unit/1-5 acres	A2-B4 1 acre lot min	0	5	5
9	Manzanita mixed use 150 Shoreline Highway	0.56	GC 30 units/acre	CP 30 units/acre	1	2	3
10	Grandi Building 11101 State Route 1	2.5	C-NC 20 units/acre	C-VCR-B2	2	0	2
	Second Units Project – 20 second units projected per year (Jan 2012 –July 2014)				30	20	50

Site #	Site Name & Address	Total Acres	CWP Land Use	Zoning	Housing Element Realistic Capacity (Units)		Housing Units to Evaluate
					ELI, VL, Low	Mod., Above Mod.	
C: Additional Potential Sites							
11	650 N. San Pedro 650 North San Pedro	16.3	SF-4 1-2 units/acre	RE-B3 20,000 sq ft min lot area	0	12	12
12	Golden Gate Seminary Seminary Drive	73.57	MF-2 1-4 units/acre	RMP-2.47	25	20	60
13	Oak Hill School 441 Drake Ave	3.87	MF-2 1-4 units/acre	RMP-4	15	0	30
14	Armstrong Nursery 217 & 221 Shoreline Highway	1.77	NC 20 units/acre	RMPC-6	0	30	53
15	Inverness Valley Inn 3275 Sir Francis Drake	26.8	C-SF3 C-RC	C-RSP-0.33 C-RCR	20	0	21
16	Grady Ranch Lucas Valley Road	229	PR	RMP-0.031 RMP-0.379	240	0	240
17	Roosevelt Street 30 Roosevelt	0.18	SF-6 4-7 unit/acre	RA-B1	2	0	2

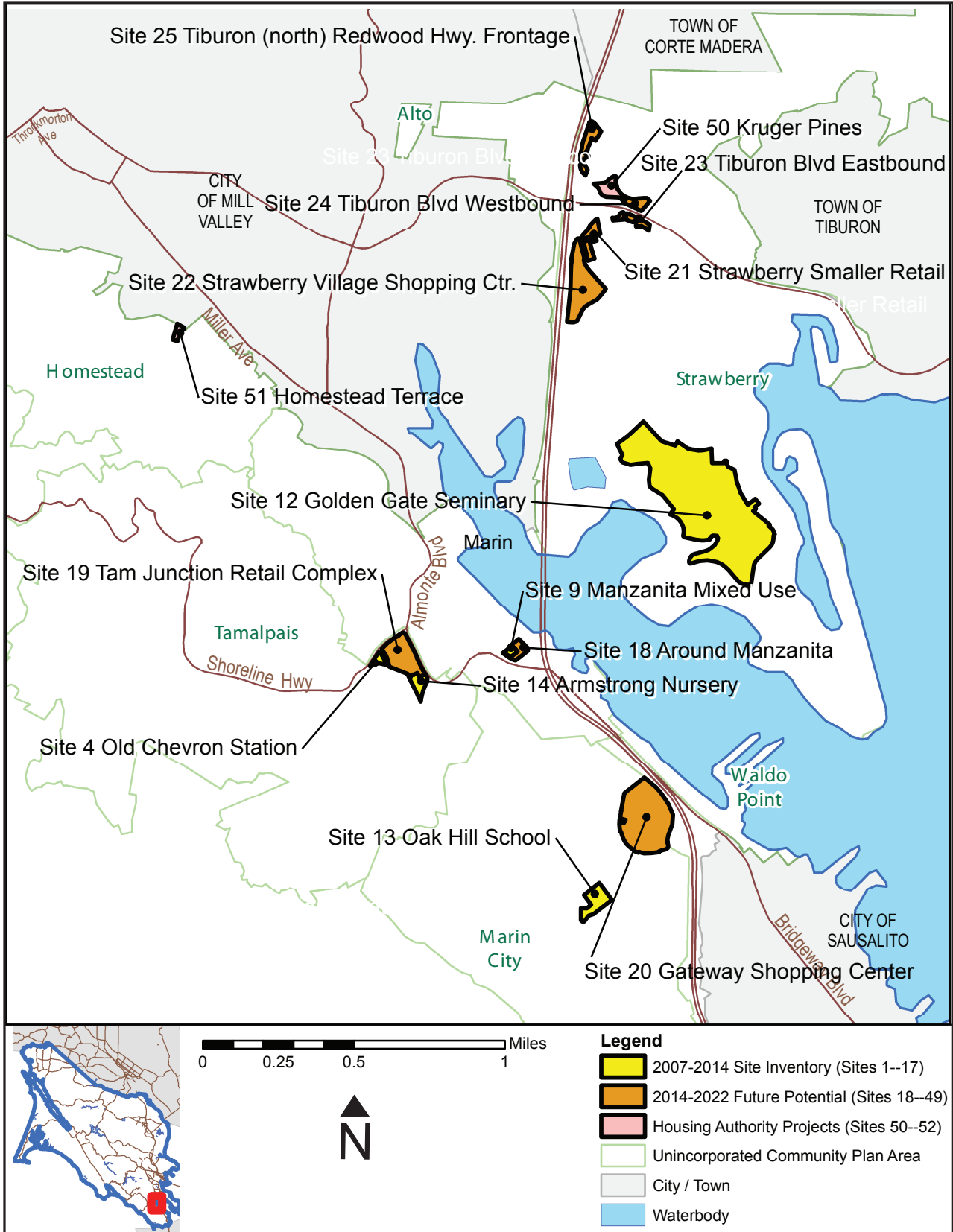
Source: Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>



Source: County of Marin Community Development Agency, October 2012



**Exhibit 2.0-6
Housing Sites - Southern Marin**



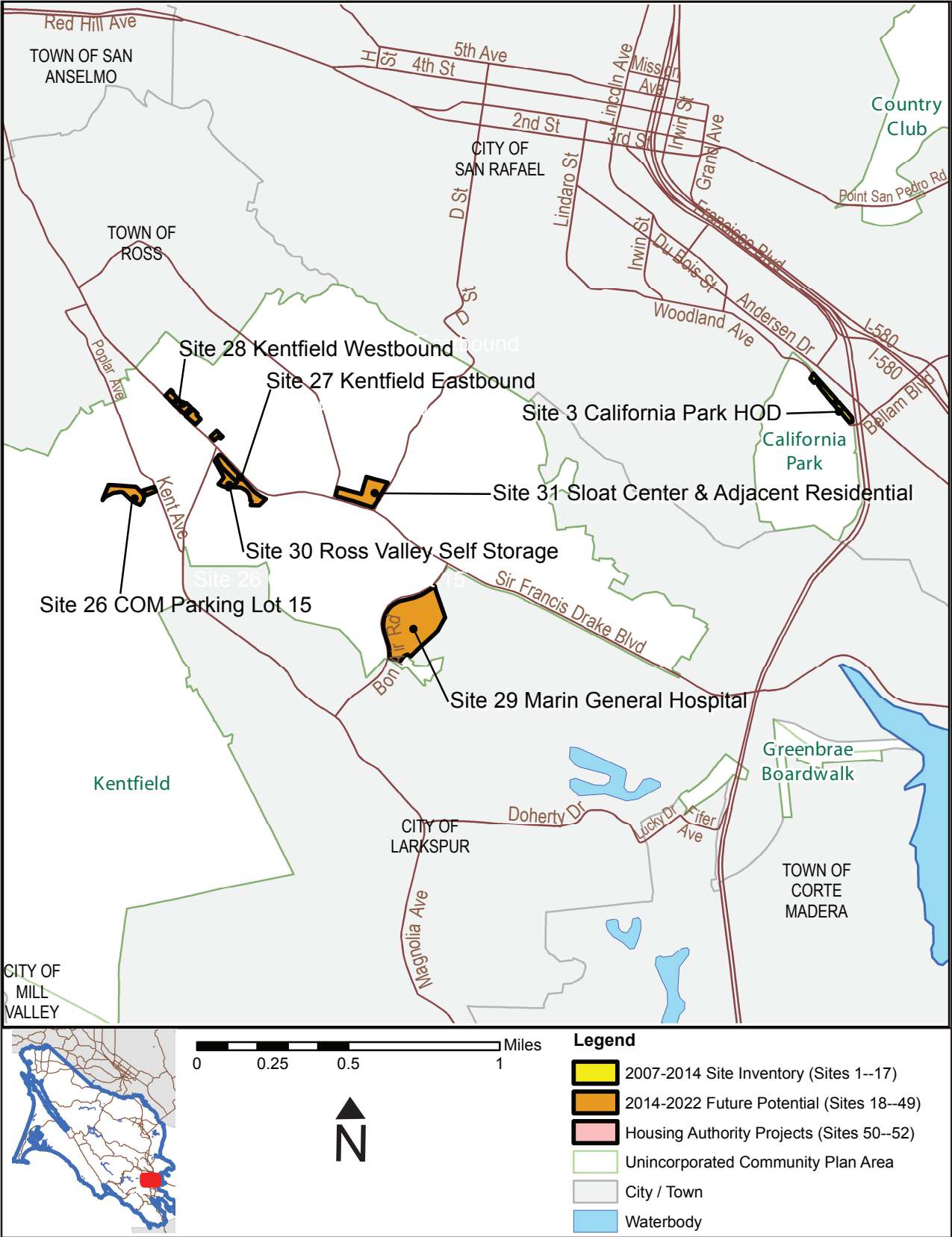
Source: County of Marin Community Development Agency, 2012

**Exhibit 2.0-7
Housing Sites - East Tiburon**



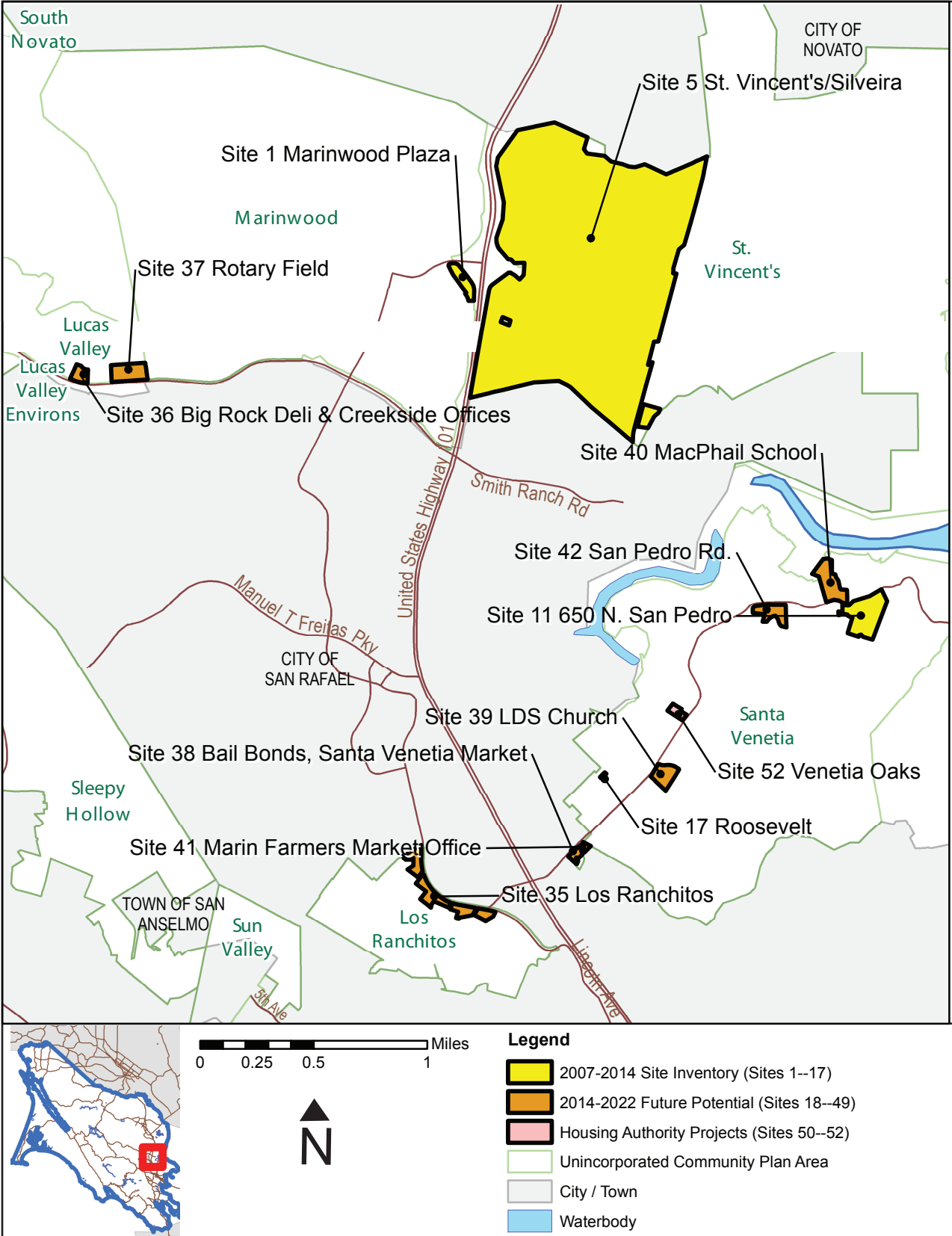
Source: County of Marin Community Development Agency, 2012

**Exhibit 2.0-8
Lower Ross Valley**



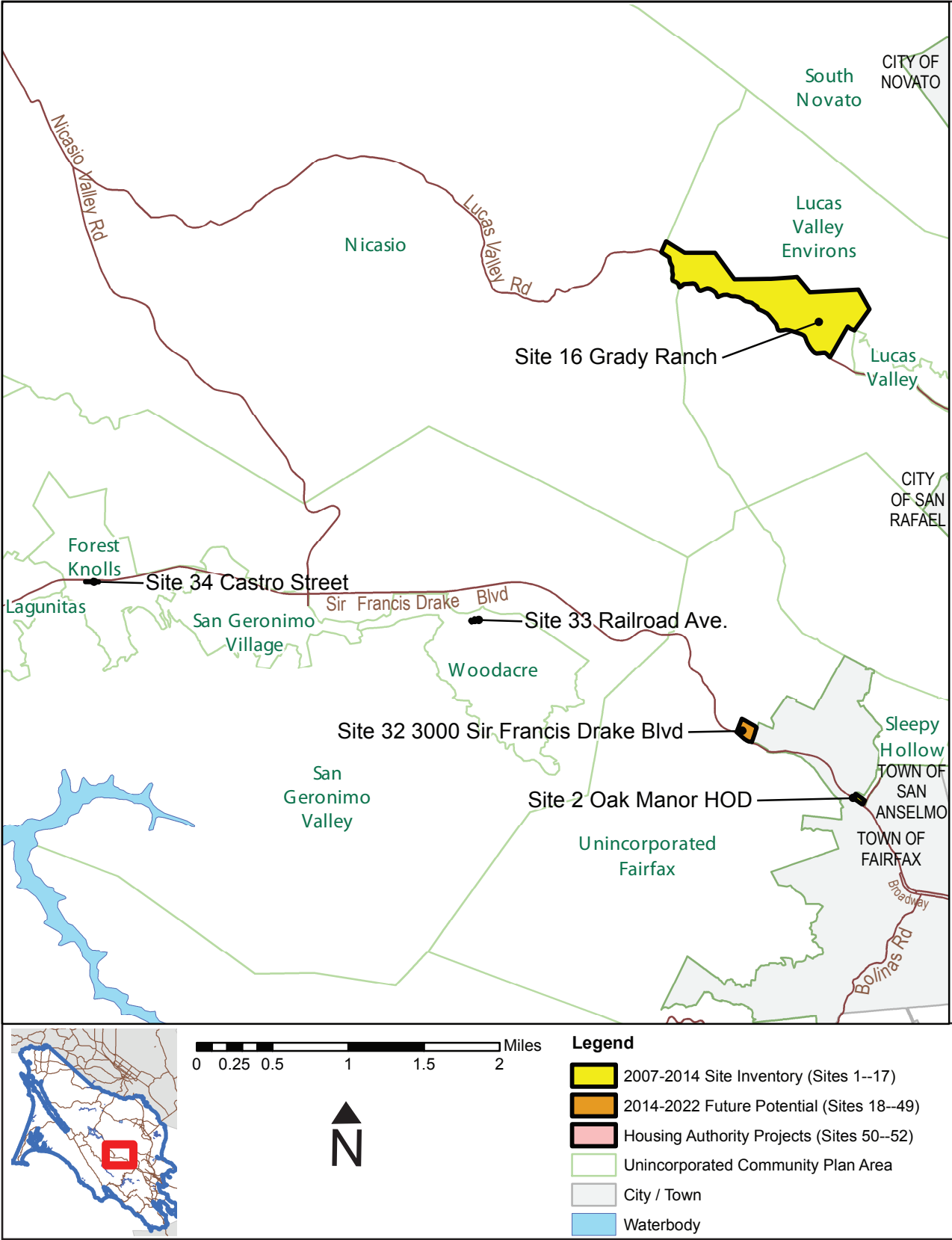
Source: County of Marin Community Development Agency, 2012

**Exhibit 2.0-9
Housing Sites - North San Rafael Environs**



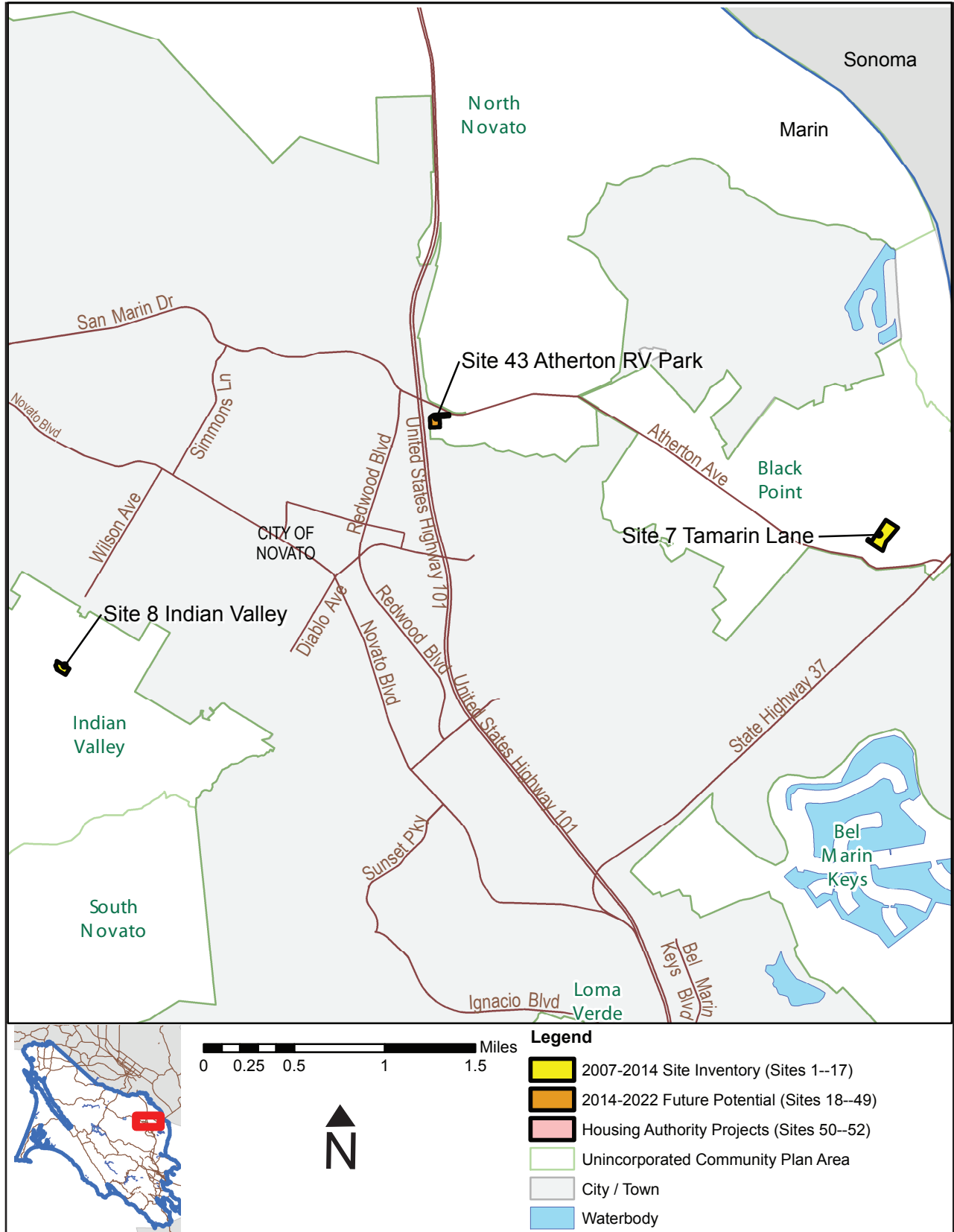
Source: County of Marin Community Development Agency, 2012

**Exhibit 2.0-10
Housing Sites - Fairfax, San Geronimo and Lucas Valleys**



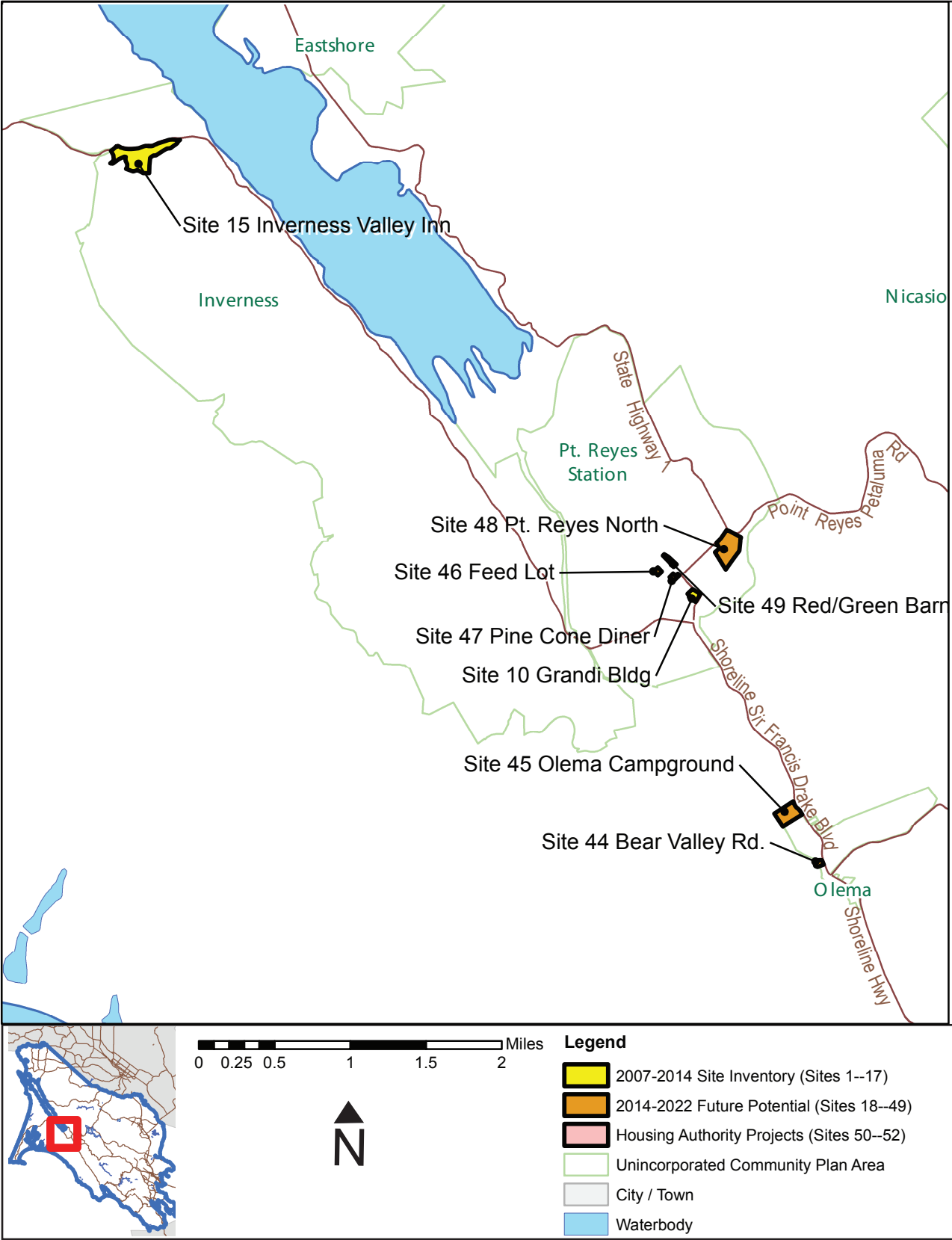
Source: County of Marin Community Development Agency, 2012

**Exhibit 2.0-11
Housing Sites - Novato**



Source: County of Marin Community Development Agency, 2012

Exhibit 2.0-12
Housing Sites - Inverness, Point Reyes Station, Olema



Source: County of Marin Community Development Agency, 2012

A jurisdiction also may utilize housing units constructed or under construction between the base year of the RHNA period and the beginning of the new planning period to meet the RHNA. The County's secondary method of addressing the adequate sites requirement, therefore, is through an inventory of dwellings that received building permits between January 1, 2007 and December 2011. Based on the unit development inventory in the housing element, a total of 282 building permits were issued for single-family homes, houseboats, mobile homes, and new second units between January 2007 and December 2011.¹⁴ An additional 34 housing units converted from market rate to deed restricted affordable rental units were eligible for credit during this period¹⁵ for a total of 316 housing units either under construction or being rehabilitated. Of this total, 10 units are very low income, 81 are low income, 47 are moderate income, and 178 are above moderate income.

Land Inventory

Housing elements are required by State law¹⁶ to include a detailed land inventory and analysis, including a site specific inventory that lists properties, their zoning and general plan designations, size and existing uses; a general analysis of environmental constraints and the availability of infrastructure, and evaluation of the suitability, availability and realistic development capacity of sites to accommodate the jurisdiction's share of the regional housing need by income level.

Initially, Marin County developed the land inventory using a combination of resources, including the County's GIS parcel database and review of policies in the *Countywide Plan* (primarily the land use element) and the Marin County Development Code (zoning). Sites also were evaluated using community input, a citizen's Housing Element Task Force, and a review of current development proposals. This analysis resulted in identification of suitable sites and an estimate of potential development capacity for these sites.

In 2011, Marin County formed a Housing Element Task Force to review and recommend possible locations for future housing development. The work of the Task Force was incorporated into the land inventory. This section contains the inventory of potential housing sites. For the purposes of this environmental review, the inventory includes sites for the 2007 to 2014 planning period (the period covered by the *2012 Draft Housing Element*) and sites to consider for inclusion in the 2014 to 2022 or future planning period. A total of 17 sites are listed in the inventory for the 2007 to 2014 planning period and a detailed analysis of each of the 17 sites is included.¹⁷ **Exhibit 2.0-5** shows the location of the housing sites in the northern part and southern part of Marin County. **Exhibits 2.0-6, 2.0-7, 2.0-8, 2.0-9, 2.0-10, 2.0-11, and 2.0-12** show groupings of housing sites and the immediate surrounding area at a higher level of detail including proximity to nearby sites. It should be noted that **Exhibits 2.0-5 through 2.0-12** show sites for both the 2007 to 2014 planning period (the period covered by the

¹⁴ See Figure IV-4 Unit Development Inventory in the *2012 Draft Housing Element*.

¹⁵ The Ridgeway Apartments is a 225-unit rental property in Marin City. Prior to conversion there were 72 units restricted to very-low and extremely-low income households. The remaining 153 unrestricted units have been converted to long-term restricted units affordable to low income households. Based on State law 34 of these units qualify for inclusion in the County's Unit Development Inventory. See pages IV-8 and IV-9 *2012 Draft Housing Element*.

¹⁶ California Government Code section 65583(a)(3).

¹⁷ See pages IV-14 through IV-19 and Appendix F of the *2012 Draft Housing Element*.

2012 Draft Housing Element) and sites to consider for inclusion in the 2014 to 2022 or future planning period.

Exhibit 2.0-4 summarizes the housing site inventory for the 2007 to 2014 planning period. **Exhibit 2.0-4** is organized in three categories:

- A. Affordable housing sites – 30 units per acre or *Countywide Plan* policy (five sites)
- B. Entitled projects, not yet submitted building permits (five sites)
- C. Additional potential sites (seven sites)

Extremely Low income (EL), very low income (VL) and low income (L) housing unit projections are provided for each site based on the site's realistic capacity. Moderate and above moderate housing units projections also are provided.¹⁸

As shown in **Exhibit 2.0-4**, the 17 sites listed in the available land inventory for the 2007 to 2014 planning period have a capacity for 560 EL, VL, and Low income housing units, and 238 moderate and above moderate income housing units.

Consistent with California Government Code section 65852.2, second units are allowed in all residential zoning districts as a permitted use subject to ministerial review. Between 2000 and 2006, Marin County issued an average of 21 second unit building permits per year, and approximately 19 per year from 2007 through 2011. There is every indication that that this trend will continue. Based on 20 second units per year for the period January 2012 through July 2014 a total of 50 second units is anticipated. Of that total it is anticipated that 30 would be affordable to ELI, VL, and Low households and 20 would be affordable to moderate and above moderate households.

¹⁸ The household income levels for these groups are provided in footnote 11.

Exhibit 2.0-13 provides a summary of the methods Marin County will use to address the 2007 to 2014 RHNA of 773 housing units.

Exhibit 2.0-13
Summary – Available Land Inventory Housing Units – 2007-2014

	<i>ELI, VL, Low</i>	<i>Mod, Above Mod</i>	<i>Totals</i>
Affordable housing and entitled projects inventory (A+B on Exhibit 2.0-4) (excluding second units)	258	176	434
Second Units Projected	30	20	50
Additional Potential (C on Exhibit 2.0-4)	302	62	364
<i>Subtotal</i>	<i>590</i>	<i>258</i>	<i>848</i>
Unit Development Inventory (Jan. 2007 to December 2011)	91	225	316
Total	681	483	1,164
Regional Housing Need Allocation	320	453	773

Source: Marin County Community Development Agency

Although the *2012 Draft Housing Element* is for the 2007 to 2014 planning period, this SEIR includes an analysis of potential housing sites for the next housing element planning period - 2014 to 2022. Program 1.b of the *2012 Draft Housing Element* is to conduct a comprehensive affordable housing sites inventory in preparation for the next housing element planning period. Consistent with Program 1.b, a list of potential housing sites for the 2014 to 2022 planning period has been prepared. **Exhibit 2.0-14** provides a summary of the housing sites that may be considered for inclusion in the Housing Element for the 2014 to 2022 planning period. A total of 32 sites with a potential of 1,373 housing units are identified. This list is intended as a menu of options, from which a small number of sites will be selected for inclusion in a future housing element. It is anticipated that inclusion of the potential sites for the 2014 to 2022 planning period in this Draft SEIR will help expedite the review and approval of the housing element for that planning period. This environmental review evaluates the potential housing sites for both planning periods at the same level of analysis.

Exhibit 2.0-14
Potential Housing Sites for 2014-2022 - Available Land Inventory

Site #	Site Name & Address	Total Acres	CWP Land Use ^a	Zoning ^a	Housing Element Realistic Capacity (Units)		Housing Units to Evaluate
					ELI, VL, Low	Mod., Above Mod.	
18	Around Manzanita 150 Shoreline	1.48	GC	CP Mixed Use 30	44	05	45
19	Tam J retail 237 Shoreline Highway	6.8	NC	RMPC-6	30	30	60
20	Gateway Shopping Center 190 Donohue Street	20.34	HOD / GC	CP	70	50	150
21	Strawberry smaller retail Reed Blvd.	2.39	SF5, GC, OC	RA-B2, C1, CP, AP	25	0	45
22	Strawberry Village 900, 950 etc. Redwood Highway	10.99	GC	H1, RMPC	0	30	30
23	Tiburon Eastbound Tiburon Blvd.	1.45	OC, GC	AP, H1 (mixed use 30)	25	0	43
24	Tiburon Westbound Knoll Road	1.44	OC	RMP-8, AP Mixed use 30	25	0	44
25	Tiburon Redwood frontage Central Drive	2.7	OC, NC.	OP, RMPC-7	0	81	81
26	College of Marin lot 15 139 Kent Avenue	3.2	PF	PF	45	0	45
27	Kentfield Eastbound Sir Francis Drake Blvd.	5.14	NC	RMPC	0	0	60
28	Kentfield Westbound	2.63	OC, PF	OP, PF	0	0	60
29	Marin General 250 Bon Air Road	19.7	PF	HOD, PF	25	25	50
30	Ross Valley Self Storage 890 College Ave.	1.56	NC	RMPC	30	30	45

Site #	Site Name & Address	Total Acres	CWP Land Use ^a	Zoning ^a	Housing Element Realistic Capacity (Units)		Housing Units to Evaluate
					ELI, VL, Low	Mod., Above Mod.	
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	5.09	SF6, SF5	R1, R1-B2	0	0	60
32	3000 SFD- Sunnyside Growing 3000 Sir Francis Drake	7.74	PR	RMP-1	10	10	30
33	Railroad Ave. Railroad Ave. and Park St.	0.50	GC	CP Mixed Use 30	4	0	4
34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	0.54	GC, NC	CP, VCR	4	2	6
35	Los Ranchitos 99-165 Los Ranchitos Drive	13.81	SF-3 1 units/1-5 acres	A2-B4 residential with limited Ag. Lot size min 1 acre	30	0	60
36	Big Rock Deli & Creekside Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	2.8	GC	CP Mixed Use 30	0	84	80
37	Rotary Field 16 Jeanette Prandi Way	12.83	PF-OS	PF-OA	60	0	60
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	1.49	OC, GC	AP, C1	21	0	44
39	LDS Church Santa Venetia 220 N. San Pedro Road	5.38	SF6, SF5, & MF2	A2-B2, R2, RA	30	0	30
40	MacPhail School 1565 Vendola Drive	9.52	PF-SF-6	PF-RSP-4.36	0	40	40
41	Marin Farmers Market 70 & 76 San Pablo Ave.	0.6	GC	C1 Mixed Use 30	18	0	18
42	San Pedro Road San Pedro Road	5.65	MF-2 SF-4	RMP-4.2 RE-B3	30	0	30

43	Atherton (Novato RV Park) 1530 Armstrong Avenue	2.68	MF-4	RX	40	40	80
44	Bear Valley Road 10045 State Route 1	1.25	C-NC	C-VCR	5	0	5
45	Olema Campground Shoreline Highway	9.94	C-RC	C-RCR	0	0	10
46	Feed Lot B St. & 6 th St.	0.92	C-SF-5	C-RA-B2	3	0	27
47	Pine Cone Diner 60 4 th St.	1.06	C-NC	C-VCR-B2	4	0	4
48	Pt. Reyes North 11598 State Route 1	16.89	C-SF-4 C-NC	C-RA-B3 C-RMPC	15	0	15
49	Red Barn (green barn) 510 Mesa Road	1.53	C-NC	C-VCR-B2	10	0	10

a. Marin Countywide Plan Land Use designations and County Zoning Districts are described in the Appendix.

Source: Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Housing Overlay Designation

Six housing sites with a *Countywide Plan* Housing Overlay Designation (HOD) are identified in the **Exhibits 2.0-4** and **2.0-14**. The HOD is a land use overlay designation to encourage and facilitate the development of affordable housing on specific commercial, multifamily residential, and public properties that meet the criteria established by the overlay. For example, a minimum of 30 housing units per acre is required, except on sites designated Neighborhood Commercial. In addition, approximately 50 percent of residential development should be affordable to low or very-low income households. The purpose of the HOD is to facilitate the review and approval of such housing and mixed-use developments.¹⁹ **Exhibit 2.0-15** lists the HOD sites and lists an estimated number of housing units for each site.

Exhibit 2.0-15
Housing Overlay Designation Sites

HOD Site	Housing Element Realistic Capacity (Housing Units)
2007-2014 Planning Period	
Marinwood Plaza	85
Oak Manor	10
California Park	50
Potential in 2014-2022 Planning Period	
Gateway Shopping Center	120
Marin General	50
Strawberry Village	30

Source: CDA data files titled cwp-parc and cwp-alt, Marin Community Development Agency, 2012

Affordable Housing Combined Zone

Program 1.c in the *2012Draft Housing Element* proposes to establish an Affordable Housing (AH) Combined District. The AH Combined District would permit 30 dwelling units (du) per acre (ac) on specific sites listed in the Housing Element. Portions or all of four specific sites would be rezoned to the AH zone in the 2007 to 2014 planning period and up to 14 sites (either portions of or the entire site) could be rezoned to the AH zone in the 2014 to 2022 planning period.

The specific sites which are being evaluated for the AH Combined District are included **Exhibits 2.0-4** and **2.0-14** and are listed below in **Exhibit 2.0-16**.

¹⁹ A description of the *Countywide Plan*'s Housing Overlay Designation is provided on pages III-27 and III-28 of the *2012 Draft Housing Element*.

Exhibit 2.0-16
AH Combined District Sites

Site Name	AH Combined District	Total Units
2007 -2014 Planning period		
St. Vincent's / Silveira	Limited to 3.5 acres at 30/du/ac	221
Golden Gate Seminary	Limited to 2 acres at 30 du/ac	60
Oak Hill School	Limited to 1 acre at 30 du/ac	30
Grady Ranch	Limited to 8 acres at 30du/ac	240
2014 – 2022 Planning period		
Tam Junction retail	Limited to 2 acre at 30 du/ac.	60
Tiburon Redwood frontage	Entire site	81
College of Marin lot 15	Limited to 1.5 acres at 30 du/ac.	45
Kentfield Eastbound	Limited to 2 acres at 30 du/ac	60
Kentfield Westbound	Entire site	79
Ross Valley Self Storage	Entire site	45
Sloat Center and adjacent residential	Limited to 2 acres at 30 du/ac	60
3000 SFD –Sunnyside growing	Limited to 1 acre at 30 du/ac.	30
Los Ranchitos	Limited to 2 acres at 30 du/ac	60
Rotary Field	Limited to 2 acres at 30 du/ac.	60
LDS Church Santa Venetia	Limited to 1 acre at 30 du/ac.	30
San Pedro Road	Limited to 1 acre at 30 du/ac.	30
Atherton (Novato RV Park)	Assume fixed residential on RV portion (retain mobile home uses on majority of property.)	80
Feed Lot	Evaluate at 30 du/ac	27
Total		1,114

Source: County of Marin Community Development Agency, 2012

ADDITIONAL HOUSING OPPORTUNITIES

Section IV of *2012 Draft Housing Element* also describes a number of additional opportunities for the production of affordable housing units in the unincorporated area of Marin County. With the exception of second units and agricultural worker housing, there are no housing unit estimates associated with these opportunities.

In the Housing Element section on **Housing Development Precedents** there is a discussion of affordable housing development during the previous RHNA planning period (1999 to 2006) and the development capacity for affordable housing on small sites.

In the section on **Local Funding Opportunities**, there is a discussion of several funding programs including the County's Affordable Housing Trust Fund, the Marin Workforce Housing Trust, Restricted Affordable Housing Funds (which resulted from the excess funds of mortgage revenue bonds), and the designation of Priority Development Areas by the Association of Bay Area Governments and the Metropolitan Transportation Commission.

In the section on **Zoning for a Variety of Housing Types**, there is a discussion of how Marin County's zoning code encourages a variety of housing types, including second units, single room occupancy, manufactured housing, supportive housing, housing for agricultural workers, transitional housing, and emergency shelters.²⁰ As discussed above and included in **Exhibit 2.0-4**, Marin County anticipates that an additional 20 second units will be permitted on an annual basis from January 2012 through July 2014 (50 units total). Additionally, all 95 second unit permits issued between January 2007 and December 2011 have been included in the County's inventory of recent housing development activity.²¹ With regard to agricultural worker housing, the Marin Agricultural Housing Program is a scattered-site housing initiative which aims to rehabilitate, replace, or add new units for up to 200 total homes over the next five years.²² For the remainder of the 2007 to 2014 planning period, it is anticipated 45 extremely low or very low housing units would be provided either through rehabilitation or conservation.²³

The *Draft Housing Element* also contains discussions of **Housing in the Coastal Zone**,²⁴ **the Loss of Affordable Housing through Demolitions and Conversions**, and **Opportunities for Energy Conservation**.

SECTION V - GOALS, POLICIES & PROGRAMS

As explained below, the *2012 Draft Housing Element* contains **Goals, Policies, & Programs** that describe the County's commitment to the actions that are necessary to address the current and future housing needs.²⁵

The goals of the *2012 Draft Housing Element* are as follows:

²⁰ Definitions of second units, single room occupancy, manufactured housing, housing for agricultural works, transitional housing, and emergency shelters is provided in the Glossary in the Appendix of the *Countywide Plan*. Supportive housing is permanent rental housing linked to a range of support services designed to enable residences to maintain stable housing and lead fuller lives.

²¹ See Figure IV-4 Unit Development Inventory in the *2012 Draft Housing Element*. The Unit Development Inventory lists building permits issued in the unincorporated area from January 2007 to December 2011.

²² A discussion of zoning districts that permitted agricultural worker housing is provided on pages III-15 and III-16 and on Figure III-12 in the *2012 Draft Housing Element*.

²³ Rehabilitation refers to the number of existing housing units expected to be rehabilitated during the planning period. Conservation refers to the preservation of the existing affordable housing stock throughout the planning period.

²⁴ Marin County currently is preparing an update of its Local Coastal Program.

²⁵ The complete lists of the goals, policies, and programs are on pages V-1 through V-14 of the *2012 Draft Housing Element* and are included in the **Appendix** of this Draft SEIR.

Goal 1 - Use Land Efficiently – Use Marin County’s land efficiently to meet housing needs and implement smart and sustainable development principles.

Goal 2 – Meet Housing Needs Through a Variety of Housing Choices – Respond to the broad range of housing needs in Marin County by supporting a mix of housing types, densities, prices, and designs.

Goal 3 - Ensure Leadership and Institutional Capacity – Build and maintain local government institutional capacity and monitor accomplishments so as to respond to housing needs effectively over time.

For each of these goals, the *2012 Draft Housing Element* states policies to guide action by decision-making bodies (such as the Board of Supervisors), and identifies implementing programs to be used to implement the policy.²⁶ For example, for Housing Goal 1 (use land efficiently), Policy 1.1 is to enact policies that encourage efficient land use regulations which foster a range of housing types in unincorporated Marin. Policy 1.2 is to recognize developable land as a scarce community resource, and to protect and strive to expand the supply and residential capacity of housing sites, particularly for lower income households. Implementing programs for Housing Goal 1 include Program 1.a which would establish minimum densities on housing element sites and 1.b that would conduct a comprehensive affordable housing sites inventory.

Marin Housing Authority

The Housing Authority of the County of Marin, (Marin Housing) is a public corporation authorized to provide decent, safe and sanitary housing for low and moderate-income people. Marin Housing is separate and distinct from county government and from state agencies - much like a special district.²⁷ Marin Housing operates programs in the incorporated areas of Marin pursuant to cooperation agreements with the local towns and cities. With approximately 500 public housing units and over 2,100 housing choice voucher holders, Marin Housing is the primary source of housing for low-income households. Marin Housing properties include Kruger Pines (56 housing units) and Homestead Terrace (28 housing units) in Mill Valley and Venetia Oaks (36 units) in San Rafael. Although each of the three sites is already developed, the existing residential uses are not consistent with the *Countywide Plan* and zoning designations. Marin Housing requested the County to study in this SEIR potential *Countywide Plan* amendments and rezoning for these three sites. In the future, Marin Housing may apply to the County to amend the *Countywide Plan* land use designation and zoning on each of the three properties to reflect existing conditions. The *Countywide Plan* land use amendment and rezoning would not result in the construction of any new housing units, but would support future refinancing or rehabilitation activities on these sites. The proposal is further described in **Exhibit 2.0-17** below:

²⁶ Appendix G (Housing Element Program Implementation) of the *2012 Draft Housing Element* describes the responsibility, potential funding, time frame, and priority for implementation of the individual programs.

²⁷ The Housing Authority Commission currently consists of seven members - the five members of the Board of Supervisors, and two public housing tenants.

Exhibit 2.0-17
Marin Housing Authority Proposals

Site name	Assessor Parcel	Acres	Countywide Plan Designation	Zoning	Proposed Change	Net Effect
Kruger Pines	034-081-02 034-081-01	0.785 1.665	SF5 (2-4 units/acre)	RA-B2-01	Change CWP to MF4, zoning to RMP-25	56 units existing (22.8 du/ac) – CWP alternatives show 56 units on Parcel-02
Homestead Terrace	047-191-50 047-191-51 047-191-52 047-191-53	0.198 0.1734 0.172 0.097	SF-6 (4-7 units/acre)	R1	Change CWP to MF 4.5, zoning to RMP-45	28 units existing (43.75 du/ac), CWP alternative show 28 units on Parcel-50
Venetia Oaks	180-181-26	1.84	SF-6 (4-7 units/acre)	RA	Change CWP to MF4, zoning to RMP-20	36 units existing (19.4 du/ac) – CWP shows 36 units

Source: County of Marin Community Development Agency, 2012

2.5 ADMINISTRATIVE ACTIONS

Marin County is the lead agency for the proposed project. A lead agency, as defined in Section 15367 of the *State CEQA Guidelines*, is “the public agency that has the principal responsibility for carrying out or approving a project”.

The *2012 Housing Element* will be considered by the Marin County Board of Supervisors for adoption. No discretionary approvals or permits are required by other agencies following certification of the Final SEIR. The Marin County Planning Commission will make a recommendation for regarding Final SEIR certification to the Board of Supervisors prior to the Board of Supervisors’ action on the Final SEIR and on the proposed Housing Element. Following Marin County approval, the State Department of Housing and Community Development (HCD) will be asked to certify the County’s Housing Element. There are no responsible or trustee agencies for this project pursuant to CEQA.

Actions Covered by this SEIR

In addition to adoption of the 2012 Housing Element this Draft SEIR contemplates the following actions as implementing programs and activities. These approvals will be considered and made solely by the Marin County Board of Supervisors and are the following:

- The *Countywide Plan* will be amended to incorporate the *2012 Housing Element*.
- Certain individual sites will require *Countywide Plan* land use designation amendments and rezoning. For example:

Inverness Valley Inn which is proposed for inclusion in the 2007 to 2014 planning period. The current Coastal-Resort Commercial Recreation and Coastal Residential Single-family Planning zoning districts would require a rezone and Local Coastal Plan amendment to allow residential uses on the recreational zoning acres.

Rotary Field which is proposed for inclusion in the 2014 to 2022 planning period. The *Countywide Plan* land use designation is Public Facility / Open Space (PF-OS) and the zoning is Public Facility (PF). Both a *Countywide Plan* and rezoning would be required for this site to permit housing development.

- *Countywide Plan* land use amendments and rezoning for the three Main Housing projects listed in **Exhibit 2.0-17** above.
- With approval of the Affordable Housing (AH) Combined District, the specific sites listed in the Housing Element would be rezoned to the AH zone.

RELATED MARIN COUNTY DEVELOPMENT CODE UPDATE

The *2012 Draft Housing Element* programs include amendments to the Development Code to be enacted after adoption of the *2012 Housing Element*; however, this SEIR contemplates these actions as implementing programs and activities of the *2012 Housing Element*. The purpose of the amendments is to make the Development Code consistent with the goals, policies, and programs of the *2012 Housing Element*. The Development Code updates would include:

- Increasing the potential for efficient land use by amending allowable land uses, revising permit processing procedures, and establishing multi-family design guidelines.
- Amending Title 22 of the Marin County Development Code to streamline the review of residential development projects and increase the certainty of the development process applicants. Measures include changes to permit processing requirements and procedures, revising standards, and codifying incentives.
- Establishing an Affordable Housing Combined Zoning District, adopting necessary *Countywide Plan* amendments and approving property rezoning to be consistent with that district.
- Amending the fee schedule as contemplated in certain *2012 Draft Housing Element* programs, such as planning and roadway fee reductions for second units.
- Amending Title 24 of the Marin County Code related to parking and other site improvements.

3.0 SUPPLEMENTAL ENVIRONMENTAL REVIEW AND CHECKLIST

3.0 SUPPLEMENTAL ENVIRONMENTAL REVIEW AND CHECKLIST

3.1 SUMMARY OF CONCLUSIONS

This section summarizes the conclusions of this Draft Supplemental Environmental Impact Report (Draft SEIR) prepared for the *2012 Draft Marin County Housing Element (2012 Draft Housing Element)*.

The environmental checklist, which follows in **Section 3.4 Environmental Checklist**, analyzes the potentially significant environmental effects of the proposed *2012 Draft Housing Element* and compares them to the conclusions in the *2007 Countywide Plan EIR* to determine if proposed changes to the County's Housing Element, changes in circumstances, or new information require major revisions to the *2007 Countywide Plan EIR* due to new or substantially more severe significant impacts. As discussed below, because three new or substantially more severe significant impacts have been identified, this Draft SEIR was prepared pursuant to *State CEQA Guidelines* Sections 15162 and 15163.

Potentially New or Substantially More Severe Significant Impacts

Based on the analyses in this Draft SEIR, potentially new significant impacts or a significant increase in the severity of previously identified impacts could occur in three impact areas - Air Quality; Hydrology, Water Quality and Flooding Hazard; and Noise.

As set forth below, seven new mitigation measures and one revised *2007 Countywide Plan EIR* mitigation measure have been identified. These new and revised mitigation measures will reduce the new or substantially more severe significant impacts to a less-than-significant level.

AIR QUALITY

Residential development that could occur under the *2012 Draft Housing Element* would have the potential to result in new or substantially more severe impacts due to exposures to toxic air contaminants (TAC) along highways and heavily traveled roads (see *2007 Countywide Plan EIR* Impact 4.3-3 [*Buffer Zones for Potential Sources of Odor/Toxics*]). This is due, in part, to new and updated procedures for evaluating and identifying impacts from TAC exposure available from the BAAQMD. In addition, new information, in the form of updated BAAQMD CEQA Air Quality Guidelines, has been made available since certification of the *2007 Countywide Plan EIR*. This information indicates that without appropriate mitigation, new residences developed as a part of the *2012 Draft Housing Element* could expose new sensitive receptors to significant TAC levels. One new mitigation measure and one revised *2007 Countywide Plan EIR* mitigation measure have been identified for the *2012 Draft Housing Element* to reduce potentially significant TAC exposures to a less-than-significant impact.

New Mitigation Measure Air Quality-1 Applications for new housing projects that may have potentially significant toxic air contaminant (TAC) exposures, as identified in **Exhibits 3.0-4** and **3.0-5**, shall include a detailed analysis of the potential health risks from exposure of future residents to TACs using refined modeling techniques. This analysis shall identify both the level of TAC exposure and measures to reduce unacceptable exposures to a less-than-significant level. Mitigation measures that achieve compliance with the adopted standards of the BAAQMD for residential exposure to TACs shall be incorporated into the design of the project to reduce the risk to an acceptable level. Such measures would include, but are not limited to, site design, use of appropriate filtration in ventilation systems, vegetative barriers, or a combination of the measures.

Revised Mitigation Measure Air Quality-2 Revise Program **AIR-2.c** of the *Countywide Plan* as follows:

***Program AIR-2.c Health Risk Analysis for Sensitive Receptors.** ~~Require that Applications for new projects involving locating sensitive receptors proposed 150 feet of freeways near roadways and stationary sources identified as posing potentially significant TAC or PM_{2.5} exposure using BAAQMD CEQA Analysis Tools, shall include an analysis of the potential health risks. Mitigation measures which comply that achieve compliance with the adopted standards of the BAAQMD for control of exposure of sensitive receptors to odor/toxics for sensitive receptors shall be identified to reduce these risks to acceptable levels.~~*

A detailed discussion of air quality setting, impacts, and mitigation measures is found in Environmental Checklist Section 3 (Air Quality), below.

HYDROLOGY, WATER QUALITY AND FLOODING HAZARD

New information has been made available since certification of the *2007 Countywide Plan EIR*, including an updated Federal Emergency Management Agency Flood Insurance Study and associated Flood Insurance Rate Maps, plus an assessment of potential flooding impacts resulting from climate-induced sea level rise by the San Francisco Bay Conservation and Development Commission (BCDC). Although no new or substantially more severe significant impacts would occur, new mitigation measures have been identified in response to this new information. The five new mitigation measures are as follows:

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-1 The County shall obtain BCDC's GIS files for Marin County tidal inundation mapping for both the mid-century (2050) and end-of-century (2099) projected sea level rise scenarios, and develop GIS layers that can be viewed through the MarinMaps web portal. If the available map data from BCDC and USGS are of insufficient resolution to inform planning efforts, the County shall prepare its own mapping based on the predicted tidal elevations and enhanced topographic data. For applications to build new housing units, the location of the proposed housing site shall be compared to this information to determine the suitability of the site for residential use and the need for design measures or other measures to reduce flooding risks. Implement Mitigation Measure Hydrology, Water Quality and Flooding Hazard-2, if applicable,

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-2 On housing sites for which refined inundation mapping verifies that the site's location is within a 2050 tidal inundation zone, building pads shall be raised to a level that results in finished floor elevations one foot higher than a combination of the projected inundation elevation plus an estimate of wave

runup given the particular weather (i.e., wind patterns and velocities) and hydraulic conditions at each site.

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-3 The County shall coordinate with the Federal Emergency Management Agency to incorporate current projections of mid-century sea level rise and potential changes to precipitation characteristics associated with climate change into future flood insurance studies and the Flood Insurance Rate Maps for Marin County and Incorporated Area as new information is developed by the USACE and other federal agencies (e.g., NOAA) involved in climate change monitoring and adaptation.

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-4 The County shall adopt the regional policies addressing adaptation to predicted sea level rise recently adopted by BCDC as part of its San Francisco Bay Plan and coordinate with other Bay Area counties and regional planning agencies in developing appropriate changes to development codes and flood protection strategies.

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard- 5 The County shall adopt and implement a new *Countywide Plan* policy that addresses new development in mapped dam failure inundation areas that is substantially similar to the following:

Policy EH-(new) Consider flood inundation resulting from upstream dam failures when assessing flood hazards for new development and redevelopment projects and implementing associated programs within the County.

A detailed discussion of hydrology, water quality and flood hazards setting, impacts, and mitigation measures is found in Environmental Checklist Section 9 (Hydrology, Water Quality, and Flooding Hazards), below.

NOISE

This Draft SEIR identifies one new significant impact associated with exposure of persons to groundborne vibration levels associated with Sonoma-Marín Area Rail Transit (SMART) train operations. One new mitigation measure (**Noise-1**) has been identified, which would reduce impacts associated with exposure of persons to groundborne vibration levels associated with SMART train operations to a less-than-significant level. The new mitigation measure is as follows:

New Mitigation Measure Noise - 1 The County shall use the Federal Transit Administration (FTA) vibration impact criteria to evaluate the compatibility of sensitive uses proposed along the SMART corridor using the best available information (e.g., *2005 SMART DEIR*) or site-specific measurements and analyses (assuming active operations). The FTA thresholds for residences are 80 VdB¹ for frequent events (more than 70 vibration events from the same source per day), 75 VdB for occasional events (30 to 70 vibration events from the same source per day), and 72 VdB for infrequent events (fewer than 30 vibration events from the same source per day). Developers

¹ The abbreviation “VdB” is used for vibration decibels to reduce the potential for confusion with sound decibels. The velocity of the ground is expressed on the decibel scale, and the reference velocity is 1 x 10⁻⁶ in. /sec. RMS, which equals 0 VdB. A vibration velocity of 1 in. /sec. equals 120 VdB.

of sensitive uses shall demonstrate that the potential impacts of existing or potential vibration levels have been reduced to levels that are less than or equal to the FTA vibration impact thresholds. The implementation of this measure would reduce the impact to a less-than-significant level.

A detailed discussion of noise setting, impacts, and mitigation measures is found in Environmental Checklist Section 12 (Noise), below.

Previously Identified Significant Unavoidable Impacts

As discussed below, significant unavoidable impacts would continue to occur in the areas of Aesthetics, Agriculture and Forest Resources, Air Quality, Biological Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology, Water Quality, and Flooding Hazard, Noise, Population and Housing, Transportation and Traffic, Utilities and Service Systems, as previously disclosed and analyzed in the *2007 Countywide Plan EIR*, but would not be substantially more severe.

AESTHETICS

The *2007 Countywide Plan EIR* identified Impact 4.12-4 (*Light Pollution and Nighttime Sky*) as a significant unavoidable project and cumulative impact. While some properties proposed for new housing could be developed at higher densities than were analyzed in *2007 Countywide Plan EIR*, previously adopted Mitigation Measure 4.12-2 would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

AGRICULTURE AND FOREST RESOURCES

The *2007 Countywide Plan EIR* identified Impact 4.8-1 (*Conversion of Agricultural Lands to Non-Agricultural Uses*) as a significant unavoidable project and cumulative impact. Even though no new or increased conversion of agricultural lands would result from the *2012 Draft Housing Element*, above what was previously disclosed and evaluated in the *2007 Countywide Plan EIR*, conversion of agricultural lands would remain a significant unavoidable project and cumulative impact.

AIR QUALITY

The *2007 Countywide Plan EIR* identified Impact 4.3-1 (*Inconsistency with Clean Air Plan*) and Impact 4.3-2 (*Inconsistency with Clean Air Plan Transportation Control Measures*) as significant unavoidable project and cumulative impacts. Previously adopted Mitigation Measures 4.3-1 and 4.3-2 would reduce these impacts, but not to a less-than-significant level, because 1) vehicle miles travelled (VMT) may still exceed the rate of population growth, mostly because the predicated rate of VMT growth is so much higher than the rate of population growth, and 2) the Board of Supervisors found that implementation of Program **TR-2.g** (*Add Bicycle Lands*) was not feasible. While some properties proposed for residential development in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, these

impacts would remain significant unavoidable impacts, but would not be substantially more severe than the impacts analyzed in the *2007 Countywide Plan EIR*.

BIOLOGICAL RESOURCES

The *2007 Countywide Plan EIR* identified Impact 4.6-2 (*Sensitive Natural Communities*) and Impact 4.6-4 (*Wildlife Habitat and Movement Opportunities*) as significant unavoidable project and cumulative impacts. Previously adopted Mitigation Measure 4.6-2 would reduce Impact 4.6-2 but not to a less-than-significant level, because the Board of Supervisors found that full funding for Program **BIO-1.b** (*Develop Habitat Monitoring Programs*) was not available at the time of *Countywide Plan* adoption and that the mitigation measure, therefore, was not fully feasible. Previously adopted Mitigation Measure 4.6-4 would reduce Impact 4.6-4, but not to a less-than-significant level, because it would not fully mitigate potential impacts of land uses and land use activities on existing natural habitat. While properties proposed for residential development in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, these would remain significant unavoidable impacts, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

GEOLOGY AND SOILS

The *2007 Countywide Plan EIR* identified Impact 4.7-1 (*Surface Fault Rupture*), Impact 4.7-2 (*Seismic Ground Shaking*), Impact 4.7-3 (*Seismic Related Ground Failure*) and Impact 4.7-4 (*Landsliding*) as significant unavoidable project and cumulative impacts. Previously adopted Mitigation Measures 4.7-1, 4.7-2, 4.7-3, and 4.7-4 would reduce these impacts, but not to a less-than-significant level. This is, in part, because although these measures would reduce adverse effects of minor to moderate seismic events, they would not do so for severe events (such as a high magnitude earthquake). With regard to landsliding, Mitigation Measure 4.7-4 would not eliminate source areas of debris flows and landslides in Marin County, especially during prolonged or intense rainfall events. While properties proposed for residential development in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, these impacts would remain significant unavoidable impacts, but would not be substantially more severe than the impacts analyzed in the *2007 Countywide Plan EIR*.

GREENHOUSE GAS EMISSIONS

After certification of the *2007 Countywide Plan EIR*, the BAAQMD developed a procedure to estimate greenhouse gas emissions from proposed land use plans. The *2007 Countywide Plan EIR* identified Impact 4.3-6 (*Increases in Greenhouse Gas Emissions*) as a significant unavoidable project and cumulative impact because development that could occur under the *Countywide Plan*, including the Housing Element, would increase greenhouse gas emissions over existing levels. Even though, as shown in **Exhibits 3.0-10** and **3.0-11**, neither development of the housing sites in the 2007-2014 planning period nor development of housing sites in the 2014-2022 planning period would exceed the BAAQMD threshold of 4.6 MT of CO₂e per capita per year, Impact 4.3-6 would remain a significant unavoidable project and cumulative impact.

HAZARDS AND HAZARDOUS MATERIALS

The 2007 Countywide Plan EIR identified Impact 4.10-2 (*Hazardous Emissions, Materials or Waste Near School Sites*) as a significant unavoidable impact due to the potential for hazardous emissions, hazardous materials, or hazardous waste to be released or found near school sites due to development that could occur under the Countywide Plan. Previously adopted Mitigation Measure 4.6-4 would reduce this impact, but not to a less-than-significant level, because the Board of Supervisors found that full funding for Program **EJ-1.a** (*Investigate a Possible Nexus*) was not available at the time of Countywide Plan adoption and that the mitigation measure was, therefore, not fully feasible. While properties proposed for residential development in the 2012 Draft Housing Element could be developed at higher densities than were analyzed in the 2007 Countywide Plan EIR, previously adopted mitigation measures and Countywide Plan policies and program would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the 2007 Countywide Plan EIR.

HYDROLOGY, WATER QUALITY, AND FLOODING HAZARD

The 2007 Countywide Plan EIR identified Impact 4.5-7 (*Exposure of People or Structures to Flood Hazards*) and Impact 4.7-8 (*Tsunamis and Seiches*) as significant unavoidable project and cumulative impacts. Previously adopted Mitigation Measure 4.5-7 would reduce Impact 4.5-7, but not to a less-than-significant level, because the Board of Supervisors found that full funding for Program **AIR-5.c** (*Prepare Response Strategies*), was not available at the time of Countywide Plan adoption and that the mitigation measure was, therefore, not fully feasible. Previously adopted Mitigation Measure 4.7-8 would reduce Impact 4.7-8, but not to a less-than-significant level, because people and development (i.e., structures, critical facilities, lifelines, and emergency access) in low-lying areas could still experience substantial damage, loss, injury, or death in the event of a severe tsunami or seiche event. New information has been made available since certification of the 2007 Countywide Plan EIR, including an updated Flood Insurance Study and associated Flood Insurance Rate Maps, plus an assessment of potential flooding impacts resulting from climate-induced sea level rise by BCDC. This new information shows revised areas subject to flooding due to factors such as higher flood flows and future sea level rise. Although no new or substantially more severe impacts with regard to exposure of people or structures to flood hazards would occur, new mitigation measures (**Mitigation Measure Hydrology, Water Quality and Flooding Hazard-1, Hydrology, Water Quality and Flooding Hazard-2, Hydrology, Water Quality and Flooding Hazard-3, and Hydrology, Water Quality and Flooding Hazard-4**) have been identified in response to this new information to reduce this significant unavoidable impact by further protecting areas from flooding, but not to a less-than-significant level. While properties proposed to be included in the AH Combined District and other properties identified in the 2012 Draft Housing Element could be developed at higher densities than were analyzed in the 2007 Countywide Plan EIR, previously adopted mitigation measures and Countywide Plan policies and programs would continue to apply. Therefore, the impacts due to exposure of people or structures to flood hazards, tsunamis and seiches would remain significant unavoidable impacts, but would not be substantially more severe than the impact analyzed in the 2007 Countywide Plan EIR.

NOISE

The 2007 Countywide Plan EIR identified Impact 4.4-5 (*Construction Noise*) as a significant unavoidable project and cumulative impact, because new development would temporarily elevate noise levels at adjacent noise sensitive land uses. Previously adopted Mitigation Measure 4.4-5 would

reduce this impact, but not to a less-than-significant level, because noise levels due to construction would continue to be elevated at adjacent noise sensitive land uses. While properties proposed for residential development in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and program would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

POPULATION AND HOUSING

The *2007 Countywide Plan EIR* identified Impact 4.1-2 (*Growth and Concentration of Population*) as a significant unavoidable project and cumulative impact, because development consistent with the *Countywide Plan* would induce substantial growth within the unincorporated area. Previously adopted Mitigation Measure 4.1-2 would reduce this impact, but not to a less-than-significant level, because substantial growth and concentration of population would still occur in the unincorporated area as a result of development consistent with the *Countywide Plan*. While properties proposed for residential development in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

TRANSPORTATION AND TRAFFIC

The *2007 Countywide Plan EIR* identified 23 significant unavoidable transportation impacts. Based on a review of Section 4.1, Transportation, in the *2007 Countywide Plan EIR* and the results of the traffic model forecasts prepared as a part of this Draft SEIR the following would remain significant unavoidable impacts:

- Impact 4.2-1** Increase in Vehicle Miles Traveled (project and cumulative)
- Impact 4.2-2** Unacceptable LOS on U.S. 101 at Golden Gate Bridge (project and cumulative)
- Impact 4.2-3** Unacceptable LOS on State Route 1 from U.S. 101 to Almonte Boulevard (project and cumulative)
- Impact 4.2-4** Unacceptable LOS on State Route 131 from U.S. 101 to Strawberry Drive (project and cumulative)
- Impact 4.2-6** Unacceptable LOS on Sir Francis Drake Boulevard from U.S. 101 to Eliseo Drive (project and cumulative)
- Impact 4.2-7** Unacceptable LOS on East Sir Francis Drake Boulevard from Larkspur Ferry to San Quentin (cumulative)
- Impact 4.2-8** Unacceptable LOS on I-580 at the Richmond Bridge (cumulative)
- Impact 4.2-9** Unacceptable LOS on U.S. 101 from I-580 to Sir Francis Drake Boulevard (cumulative)

- Impact 4.2-10** Unacceptable LOS on U.S. 101 from Second Street to I-580(cumulative)
- Impact 4.2-12** Unacceptable LOS on Lucas Valley Road from Las Gallinas Avenue to Los Gamos (project and cumulative)
- Impact 4.2-13** Unacceptable LOS on U.S. 101 at the Sonoma / Marin County Line (project and cumulative)
- Impact 4.2-14** Unacceptable LOS at Intersection of State Route 131 (Tiburon Boulevard) and Redwood Highway Frontage Road (cumulative)
- Impact 4.2-18** Unacceptable LOS at Intersection of Miller Creek Road and U.S. 101 southbound off-ramp (cumulative)
- Impact 4.2-19** Unacceptable LOS at Intersection of Miller Creek Road and U.S. 101 northbound off-ramp (cumulative)
- Impact 4.2-20** St. Vincent's / Silveira / Marinwood Traffic Impacts (project and cumulative)
- Impact 4.2-21** San Rafael Rock Quarry Traffic Impacts (cumulative)
- Impact 4.2-22** Kentfield Traffic Impacts (project and cumulative)
- Impact 4.2-23** Strawberry Traffic Impacts (project and cumulative)
- Impact 4.2-24** Tam Valley / Almonte Traffic Impacts (project and cumulative)

Previously adopted Mitigation Measures 4.2-1, 4.2-2, 4.2-6, 4.2-8, 4.2-10, 4.2-13, 4.2-14, 4.2-18, 4.2-19, 4.2-20, 4.2-21, 4.2-22, and 4.2-23 would reduce these impacts, but not to a less-than-significant level. Therefore, these would remain significant unavoidable impacts, but would not be substantially more severe than the impacts analyzed in the *2007 Countywide Plan EIR*.

UTILITIES AND SERVICE SYSTEMS

The *2007 Countywide Plan EIR* identified significant unavoidable water supply and demand impacts (both project and cumulative). These impacts are Impact 4.9-1 (*Adequacy of Water Supply During a Normal Year*), Impact 4.9-2 (*Adequacy of Water Supply During a Drought and Multi-Drought Years*), Impact 4.9-4 (*Impact to Groundwater Supply*), Impact 4.9-5 (*Interference with or Degradation of Water Supply*), and Impact 4.9-6 (*Secondary Impacts*). While properties proposed for residential development in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, the overall number of residential units that could be developed would remain the same as under the *Countywide Plan*. Therefore, these would remain significant unavoidable impacts, but would not be substantially more severe than the impacts analyzed in the *2007 Countywide Plan EIR*.

Areas In Which New or Substantially More Severe Impacts Would Not Occur

This analysis has identified the impact areas in which the *2012 Draft Housing Element* would not result in new or substantially more severe impacts than those described in the *2007 Countywide Plan EIR*, including the significant unavoidable impacts discussed above. These areas are Agriculture and Forest Resources, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation and Traffic, and Utilities and Service Systems

AESTHETICS

Based on a review of Section 4.12 Visual Impacts in the *2007 Countywide Plan* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe significant aesthetics impacts.

AGRICULTURE AND FOREST RESOURCES

Based on a review of Section 4.18 Agriculture in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe significant impacts on agricultural resources.

Impacts on forest resources were not analyzed in the *2007 Countywide Plan EIR*. As determined in the analysis in Environmental Checklist Item 2(d), the residential development that could occur under the *2012 Draft Housing Element* would not cause or contribute to the loss or conversion of forest land because none of the proposed housing sites are designated as forest land.

BIOLOGICAL RESOURCES

Based on a review of Section 4.6 Biological Resources in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not result in new or substantially more severe significant impacts to biological resources. While new information regarding special-status species and sensitive natural communities has been made available since certification of the *2007 Countywide Plan EIR*, no new or substantially more severe significant impacts would occur.

CULTURAL RESOURCES

Based on a review of Section 4.12 Cultural Resources in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe significant cultural resources impacts.

GEOLOGY

Based on a review of Section 4.7 Geology and Section 4.5 Hydrology, Water Quality, and Flood Hazards in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential

development that could occur under the *2012 Draft Housing Element* would not result in new significant impacts or substantially more severe significant impacts due to geologic conditions.

GREENHOUSE GAS EMISSIONS

As described above, new information has been made available since certification of the *2007 Countywide Plan EIR*, including a procedure developed by the BAAQMD to estimate greenhouse gas emissions. Based on the analysis in this Draft SEIR, neither development of the housing sites in the 2007-2014 planning period nor development of housing sites in the 2014-2022 planning period would exceed the BAAQMD threshold of 4.6 MT of CO₂e per capita per year (see **Exhibits 3.0-10** and **3.0-11**); therefore, the *2012 Draft Housing Element* would not result in new or substantially more severe significant impacts due to GHG emissions.

HAZARDS AND HAZARDOUS MATERIALS

Based on a review of Section 4.10 Public Services in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe significant hazards and hazardous materials impacts.

LAND USE AND PLANNING

Land use and planning impacts are analyzed in Section 4.1 Land Use, Population and Housing of the *2007 Countywide Plan EIR*. The issue of whether the *Countywide Plan* would conflict with a habitat conservation plan or natural community conservation plan is discussed in Section 4.6 Biological Resources of the *2007 Countywide Plan EIR*. Based on a review of these impact sections in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe significant land use and planning impacts.

MINERAL RESOURCES

Based on a review of the *2007 Countywide Plan EIR*, the Initial Study for the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe significant mineral resources impacts.

POPULATION AND HOUSING

Based on a review of Section 4.1 Land Use in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe significant population and housing impacts.

PUBLIC SERVICES

Impacts on public services (fire protection, police protection, schools, and parks) from the buildout of the *Countywide Plan* were analyzed in the *2007 Countywide Plan EIR* (Impact 4.10-9 [*Increased Demand for Fire Protection and Emergency Services Facilities*], Impact 4.10-11 [*Demand for Additional Criminal Justice Facilities*], Impact 4.10-12 [*Demand for Public Education Services*], and Impact 4.10-13 [*Increased Demand for Park and Recreation Services and Facilities*]). The *2007 Countywide Plan EIR* concluded that there would be no significant public services impacts; therefore, no mitigation was required. The proposed *2012 Draft Housing Element* will not lead to new significant impacts that were not analyzed in the *2007 Countywide Plan EIR*, because the total number of housing units that can be developed in the unincorporated area with buildout of the *Countywide Plan* would not change due to adoption and implementation of the Housing Element. While some of the housing sites could be developed at a higher density than were evaluated in the *2007 Countywide Plan EIR*, this increase in density would not have a significant impact on public service providers. The previously identified less-than-significant impacts on public services would, therefore, remain less-than-significant.

RECREATION

Based on a review of Section 4.10 Public Services in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe significant impacts on park and recreation facilities.

TRANSPORTATION / TRAFFIC

Based on a review of Section 4.2 Transportation in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe significant transportation impacts.

In addition, based on the results of the traffic model conducted for this Draft SEIR, previously identified significant unavoidable impacts would *no longer* occur at the following four locations:

Impact 4.2-11 Unacceptable LOS on South Novato Boulevard from U.S. 101 to Sunset Parkway (cumulative)

Impact 4.2-15 Unacceptable LOS at Intersection of Second Street and Grand Avenue (Intersection D) (cumulative)

Impact 4.2-16 Unacceptable LOS at Intersection of Third Street and Grand Avenue (Intersection E) (cumulative)

Impact 4.2-17 Unacceptable LOS at Intersection of Miller Creek Road and Las Gallinas Avenue (Intersection F) (cumulative)

UTILITIES AND SERVICE SYSTEMS

Impacts on utilities and service systems (including water supply, wastewater management, stormwater drainage, and solid waste) from the buildout of the *Countywide Plan* were analyzed in the *2007*

Countywide Plan EIR. Several of these impacts (Impact 4.10-4 [*Increased Wastewater Treatment Demand*], Impact 4.5.6 [*Stormwater Drainage Systems Capacities*], Impact 4.10-5 [*New or Expanded Wastewater Facilities*], Impact 4.9-3 [*Require New or Expanded Water Supply Facilities*] and Impact 4.10-6 [*Increased Solid Waste Disposal Demand*]) were determined to be either less-than-significant or reduced to a less-than-significant level with mitigation measures identified in the *2007 Countywide Plan EIR*. In regard to Impact 4.9-3 it was determined that some new or expanded water supply facilities may be needed. This impact was determined to be less-than-significant because although construction of new or expanded water supply facilities could result in adverse effects to the environment the *Countywide Plan* includes policies that would reduce construction related impacts to a less-than-significant level.

Because there continues to be adequate wastewater, stormwater drainage and solid waste capacities plus water supply facilities, as evaluated in the *2007 Countywide Plan EIR*, and addressed by *Countywide Plan* policies and programs, impacts related to these utility systems would remain less-than-significant. Based on a review of the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, while properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, the overall number of housing units provided for in the *2012 Draft Housing Element* would not change from the *Countywide Plan*. Therefore, total wastewater, stormwater drainage and solid waste demands and water supply facilities would not exceed levels previously evaluated in the *2007 Countywide Plan EIR*, and the impacts on utilities and service systems would not change.

3.2 EXPLANATION OF CHECKLIST EVALUATION CATEGORIES

Explanation of Checklist Categories

The purpose of this checklist is to evaluate the California Environmental Quality Act (CEQA) environmental issue categories in terms of whether the *2012 Draft Housing Element* (the Project) may involve any “changed conditions” (i.e. changed circumstances, project changes, or new information of substantial importance) that may result in a new or substantially more severe environmental impact significance conclusion from the *2007 Countywide Plan EIR* (State Clearinghouse No. 2004022076), certified by Marin County in 2007.² The row titles of the checklist include the full range of environmental topics, as presented in Appendix G of the *State CEQA Guidelines*. The column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and *State CEQA Guidelines* Sections 15162 and 15163. A “no” answer does not necessarily mean that there are no potentially significant impacts of the *2012 Draft Housing Element* for that environmental issue category, but that there is no change in the significance or severity of the impact since it was analyzed and addressed in the *2007 Countywide Plan EIR*. For instance, the environmental categories might be answered with a “no” in the checklist because the *2012 Draft Housing Element* does not introduce changes that would result in a

² Marin County Board of Supervisors Resolution No. 2007-147 A Resolution Certifying the Final Environmental Impact Report for the 2007 Marin Countywide Plan, November 6, 2007.

modification to the environmental impact significance conclusions of the *2007 Countywide Plan EIR*. The purpose of each column of the checklist is described below.

WHERE IMPACT WAS ANALYZED IN THE 2007 COUNTYWIDE PLAN EIR

This column provides a cross-reference to the pages of the *2007 Countywide Plan EIR* in which information and analysis that pertains to the environmental issue listed under each topic may be found.

DO PROPOSED CHANGES INVOLVE NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS?

Pursuant to Section 15162(a)(1) of the *State CEQA Guidelines*, this column indicates whether the proposed changes in the current project will result in new significant impacts that have not already been considered in the *2007 Countywide Plan EIR* or a substantial increase in the severity of a previously identified significant impact.

DO ANY NEW CIRCUMSTANCES INVOLVE NEW OR SUBSTANTIALLY MORE SEVERE IMPACTS?

Pursuant to Section 15162(a)(2) of the *State CEQA Guidelines*, this column indicates whether there have been changes to the project area or the vicinity (circumstances under which the project is undertaken) which have occurred subsequent to certification of the *2007 Countywide Plan EIR*, which would result in the *2012 Draft Housing Element* having new significant environmental impacts that were not considered in the *2007 Countywide Plan EIR* or that substantially increase the severity of a previously identified impact.

ANY NEW INFORMATION OF SUBSTANTIAL IMPORTANCE REQUIRING NEW ANALYSIS OR VERIFICATION?

Pursuant to Section 15162(a)(3)(A-D) of the *State CEQA Guidelines*, this column indicates whether new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence at the time the *2007 Countywide Plan EIR* was certified as complete is available, thus requiring an update to the analysis of the *2007 Countywide Plan EIR* to verify that the environmental conclusions remain valid. If the new information shows that (A) the project will have one or more significant effects not discussed in the prior environmental document; (B) that significant effects previously examined will be substantially more severe than shown in the prior environmental document; (C) that mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the Project, but the Project proponents decline to adopt the mitigation measure or alternative; or (D) that mitigation measures or alternatives which are considerably different from those analyzed in the prior environmental document would substantially reduce one or more significant effects on the environment, but the Project proponents decline to adopt the mitigation measure or alternative, then the question would be answered ‘Yes,’ requiring the preparation of a subsequent or supplemental EIR. However, if the additional analysis completed as part of this Environmental Checklist review finds that the conclusions of the *2007 Countywide Plan EIR* remain the same and no new significant impacts are identified, or identified environmental impacts are not found to be more severe, or additional mitigation is not necessary, the question would be answered ‘Yes, but no significant impact would

occur³ and no additional environmental documentation (supplemental or subsequent EIR) would be required.

DO 2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES REDUCE IMPACTS TO A LESS-THAN-SIGNIFICANT LEVEL?

Pursuant to Section 15162(a)(3) of the *State CEQA Guidelines*, this column indicates whether the *2007 Countywide Plan EIR* identifies feasible mitigation measures to avoid or minimize the significant impacts of the proposed Project. In most cases, the mitigation measures that were identified in the *2007 Countywide Plan EIR* were incorporated into the *Countywide Plan*, and in some cases have already been implemented. A “Yes” response will be provided in either instance. If “NA” is indicated, this Environmental Checklist review concludes that the impact does not occur with this Project and, therefore, no mitigation measures are needed.

3.3 DISCUSSION AND MITIGATION SECTIONS

Analysis and Discussion

This impact analysis included a review of the 52 housing sites (see **Exhibits 2.0-4** and **2.0-14** for a list of the sites), some of which consist of as many as 20 parcels. **Exhibit 2.0-5(a)** shows the location of the housing sites in the northern part of Marin County. **Exhibit 2.0-5(b)** shows the location of the housing sites in the southern part of Marin County. **Exhibits 2.0-6, 2.0-7, 2.0-8, 2.0-9, 2.0-10, 2.0-11, and 2.0-12** show groupings of housing sites and the immediate surrounding area at a higher level of detail including proximity to nearby sites. To facilitate the review process for this number of sites/parcels, a matrix format was used in several of the EIR sections. To assist with this analysis the Geographical Information Systems staff within the Marin County Community Development Agency (CDA) prepared an access portal to the County’s MarinMap website. GIS layers for different attributes (such as pertaining to geology, vegetation, hydrology, hazards (e.g., flooding), and other environmental factors (such as sensitive aquatic habitats) were accessed for the proposed housing sites. This portal enabled a more accurate and efficient review of the proposed housing sites in the context of each of the impact assessment categories. Online access to current aerial photography was utilized to confirm the land use and development densities of parcels in the vicinity of the project sites and to assess the level of urbanization in the vicinity.

It also is noted that adoption and implementation of the *2012 Draft Housing Element* would not substantially alter development patterns currently allowed under the *Countywide Plan*. Although there will be the need for some *Countywide Plan* land use designation amendments and some rezonings, (as discussed in **Chapter 2.0 Description of the Proposed Project**),³ development would occur in areas already designated for residential, commercial, or public facilities development. Some of the housing sites in the 2007-2014 and 2014-2022 planning periods may, however, be developed at an increased

³ As discussed in Section 2.5, as a part of the Proposed Project two Project sites (Inverness Valley Inn and Rotary Field) will require a *Countywide Plan* land use designation amendment and rezoning and the three Marin housing projects will require both *Countywide Plan* land use amendments and rezonings.

intensity than assumed for the analysis of the *Countywide Plan* in the *2007 Countywide Plan EIR*. For example, properties proposed to be included in the AH Combined District (see **Exhibit 2.0-16**) could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*.

Finally the *2007 Countywide Plan EIR* evaluated a range of housing units at buildout in the unincorporated area. The *2007 Countywide Plan EIR* evaluated a range of total housing units upon buildout of the *Countywide Plan* that differ according to project alternatives, from a low of 31,686 housing units for *Alternative 3* to a high of 32,831 housing units for *Alternative 2* (see **Exhibit 2.0-2**). Buildout of the *Countywide Plan* would result in approximately 31,623 housing units in the unincorporated area. New housing units constructed pursuant to the *2012 Draft Housing Element* would not exceed the number of housing units that the *2007 Countywide Plan EIR* bases its environmental impact evaluations on.

A discussion of the elements of the checklist is provided under each environmental category in order to clarify the answers. The discussion provides information about the particular environmental issue, how the *2012 Draft Housing Element* relates to the issue and the status of any mitigation that may be required or that has already been implemented.

Unless modified in the discussion below, the significance criteria used to evaluate the magnitude of impacts is the same significance criteria used in the *2007 Countywide Plan EIR*. In the *2007 Countywide Plan EIR* each topical area starts its impact analysis by listing the significance criteria.

Mitigation Measures

Applicable mitigation measures identified in the *2007 Countywide Plan EIR* and adopted and incorporated into the *Countywide Plan* by the County, which apply to the *2012 Draft Housing Element*, are listed under each environmental category. The text of the applicable mitigation measures from the *2007 Countywide Plan EIR* is included in the Mitigation Measures section of each checklist item. In most instances the *2007 Countywide Plan EIR* mitigation measures were adopted as a part of the *Countywide Plan*. In many instances this resulted in new or revised *Countywide Plan* policies or programs. In these instances, the *Countywide Plan* policy or program that was adopted is referenced and described in this Draft SEIR analysis.

New mitigation measures have been identified for three environmental issue areas: Air Quality (Checklist Section 3), Hydrology, Water Quality and Flooding Hazard (Checklist Section 9) and Noise (Checklist Section 12).

Conclusions

A discussion of the specific conclusion for each topical section relating to the analysis is contained in each topical section.

3.4 ENVIRONMENTAL CHECKLIST

The findings and overall conclusions of the *2012 Draft Housing Element* environmental checklist and requirements for further environmental documentation pursuant to *State CEQA Guidelines* Sections 15162 and 15163 are stated in this Subsection 3.4. The full environmental checklist follows.

Aesthetics

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
1. Aesthetics. Would the Project:					
a. Have a substantial adverse effect on a scenic vista?	Discussed in Section 4.12 Visual Resources, see Impact 4.12-1.	No	No	Yes, but new or more severe significant effects would not occur.	NA
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Discussed in Section 4.12 Visual Resources, see Impact 4.12-1.	No	No	No	NA
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	Discussed in Section 4.12 Visual Resources, see Impact 4.12-1 and 4.12-2.	No	No	Yes, but new or more severe significant effects would not occur.	Yes MM 4.12-2
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Discussed in Section 4.12 Visual Resources, see Impact 4.12-4.	No	No	Yes, but new or more severe significant effects would not occur.	No MM 4.12-4 would reduce impact, but still found significant unavoidable. No change from the CWP EIR.

Aesthetics - Setting

As noted in Section 4.12 Visual Resources of the *2007 Countywide Plan EIR*, Marin County's visual setting consists of a combination of landscapes including agricultural lands, parklands that account for 27 percent of Marin County acreage, including the Point Reyes National Seashore and the Golden Gate National Recreational Area, the built environment character, and scenic corridors. Scenic

corridors include the State Route 1 Corridor, also referred to as the Shoreline Highway, and the U.S. 101 Corridor (also referred to the Redwood Highway) which provides scenic views of the interaction between built environment along the City-Centered Corridor and visual features of Marin County's natural landscape, and the State Route 37 corridor. Marin County's visual setting, which is the background for the aesthetic setting, is essentially the same as described in the *2007 Countywide Plan EIR*.

Aesthetics - Discussion

Aesthetic impacts are analyzed in Section 4.12 Visual Resources of the *2007 Countywide Plan EIR*.

Section 3.5, Community Design, of the Built Environment Element of the *Countywide Plan* describes issues related to visual quality and provides goals, policies, and programs to promote design characteristics in development that preserve the unique character of Marin County's unincorporated communities and rural area, plus protect scenic resources. Goal **DES-1** (*Preservation of Community Character*) calls for preservation of community character. Policy **DES-1.1** (*Address Design at the Community Level*) establishes that new design should demonstrate consistency within the existing community, and similarly **DES-1.2** (*Protect Rural Character*) ensures that development in rural areas is consistent with existing designs and scale, and does not detract from the qualities of the existing landscape. Program **DES-1.a** (*Add Design Components to Community Plans*) requires that community plans have customized design standards that respond to local design issues, reflect the unique character of each area, and encourage ridgeline and viewshed protection. Goal **DES-3** (*New Development in Built Areas*) and Policies **DES-3.1** (*Promote Infill*) and **DES-3.2** (*Promote Green Spaces*) promote infill development with compact forms and the use of public space to soften impacts. Goal **DES-4** (*Protection of Scenic Resources*) and Policy **DES-4.1** (*Preserve Visual Quality*) protect scenic quality and views of the natural environment, including ridgelines and upland greenbelts, hillsides, water, and trees from adverse impacts resulting from new development. Additionally, Section 3.4, Community Development, of the Built Environment Element of the *Countywide Plan* provides policies and programs that address development in rural areas. *Countywide Plan* Policy **CD-1.3** (*Reduce Potential Impacts*) and Program **CD-1.c** (*Reduce Potential Impacts*) require that the residential density for that portion of a property with sensitive habitat or within the Ridge and Upland Greenbelt or the Baylands corridor and properties that lack public water or sewer systems, shall be calculated at the lowest end of the density range as established by the governing *Countywide Plan* Land Use Designation, except for multi-family parcels identified in certified Housing Elements.

There are no designated State Scenic Highways or National Scenic Byways within Marin County.

The adoption of the *2012 Draft Housing Element* would not authorize new housing in excess of the number of units (31,623) analyzed in the *2007 Countywide Plan EIR* and would not directly result in new development. However implementation of Housing Element policies and programs would facilitate future residential development at higher densities in some locations and residential development in a limited number of new locations than allowed under current *Countywide Plan* land use designations. For example, implementation of Program 1.c (*Establish an Affordable Housing Combined Zoning District*) would establish an Affordable Housing Combined District that would permit increases in residential density of specified housing sites to 30 housing units per acre (see **Exhibit 2.0-16**). However, development would occur in areas already designated for residential,

commercial, or public facilities. Any residential development that occurs subsequent to the *2012 Draft Housing Element* would be subject to *Countywide Plan* goals and policies plus Development Code requirements including Design Review, and potentially further environmental review.⁴

1(a) It is stated in the *2007 Countywide Plan EIR* discussion of Impact 4.12-1 (*Scenic Resources*) that while new development consistent with implementation of the *Countywide Plan* could degrade the quality of scenic resources, including scenic vistas, implementation of the goals, policies, and programs of the *Countywide Plan* would reduce this impact to a less-than-significant level. Implementation of the *2012 Draft Housing Element* would not increase the severity of impacts on scenic resources. New development pursuant to the Housing Element would be subject to existing policies and programs, including those listed above, that require designs that preserve scenic qualities and views of the natural environment (Policy **DES 4-1**) and would not be located in any new areas affecting a scenic vista. The discussion for Impact 4.12-1 addresses development on the St. Vincent's / Silveira properties, where the *Countywide Plan* allows development of 69.8-acres. The *Countywide Plan* would preserve 975-acres as open space. Under the *2012 Draft Housing Element* 3.5-acres would be developed with residential uses, significantly less than the *Countywide Plan*. As discussed above, even though some sites may be developed with increased density the County's Development Code, Design Review, and *Countywide Plan* policies would reduce the impact of new development pursuant to the Housing Element. This previously identified less-than-significant impact would remain less-than-significant.

1(b) There are no designated State Scenic Highways or National Scenic Byways within Marin County.

1(c) The *2012 Draft Housing Element* identifies housing sites for new affordable housing development. This includes four properties (housing sites 5, 12, 13, and 16) where all or portions of which, are proposed for the AH Combined District in the 2007 – 2014 planning period. This would exceed housing densities evaluated in the *2007 Countywide Plan EIR*. Each of these properties is located in a different community. Fourteen additional properties have been identified for AH combining district in the 2014 – 2022 planning period (see **Exhibit 2.0-16**). As stated in Impacts 4.12-1 (*Scenic Resources*) and 4.12-2 (*Community Character*) policies and programs of the *Countywide Plan*, provisions of the Marin County Development Code, and Design Review of individual projects would preserve and possibly improve visual character and quality of the site and surroundings. Policies and programs in the *2012 Draft Housing Element* address aesthetic impacts including Program 1.f (*Develop Multi-family Design Guidelines*) that emphasize preservation of natural features, massing, and compatibility with neighboring development. Impact to visual character and quality of sites and surrounding areas are discussed with Impacts 4.12-1 and 4.12-2. Because any new development resulting from implementation of the *2012 Draft Housing Element* would comply with existing *Countywide Plan* and Development Code policies and regulations, and further guided by the implementing programs under *2012 Draft Housing Element* Policy 1.4 (*Design, Sustainability, and Flexibility*), this project would not involve new or substantially more severe significant impacts than discussed under Impacts 4.12-1 and 4.12-2 of the *2007 Countywide Plan EIR*. The proposed development of individual sites would be evaluated for visual impacts upon development application submittal.

⁴ Marin County Code – Title 22, Development Code, Article IV Land Use and Development Permits – Chapter 22.42 Design Review, Marin County Board of Supervisors, January 2012.

- 1(d) As stated in Impact 4.12-4 (*Light Pollution and Nighttime Sky*) of the 2007 Countywide Plan EIR, implementation of Mitigation Measure 4.12-4 adds Program **DES-1.h** (*Lighting Design Guidelines*) which is discussed below, and reduces adverse changes to visual resources resulting from additional sources of lighting. However visual impacts resulting from nighttime lighting would remain a significant unavoidable impact. While properties proposed for AH Combined District and other properties identified in the 2012 Draft Housing Element could be developed at higher densities than anticipated for the analysis contained in the 2007 Countywide Plan EIR, the adversity of nighttime lighting impacts resulting from potential construction would be minimized because all development projects would be consistent with Countywide Plan Program **DES-1.h** (*Lighting Design Guidelines*). Therefore circumstances related to new development would not involve substantially more severe impacts.

Aesthetics - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The 2007 Countywide Plan EIR identified two mitigation measures to reduce identified visual impacts. Both Mitigation Measures 4.12-2 and 4.12-4 were adopted as a part of the Countywide Plan. Mitigation Measure 4.12-4 became Program **DES-1.h** (*Lighting Design Guidelines*). Future housing development projects would be subject to these Countywide Plan programs.

Mitigation Measure 4.12-2 In order to reduce impacts to the visual character of Marin County's communities to a less-than-significant level, Mitigation Measure 4.12-2 requires the County to obtain funding for Program **DES-1.a** (*Add Design Components to Community Plans*) and to revise the time frame of its implementation to the medium-term or sooner. In addition, the Marin County Community Development Agency would be responsible for revising design guidelines of community plans to be consistent with the Countywide Plan.

Mitigation Measure 4.12-4 stated that in order to minimize light trespass, light pollution, and glare, new development and projects that would make significant parking lot improvements or add new lighting would be required to prepare a lighting plan for design review and approval by County staff. Mitigation Measure 4.12-4 added Program **DES-1.h** to the Built Environment Element of the Countywide Plan. Program DES-1.h reads as follows:

Program DES-1.h Lighting Design Guidelines. *Amend the Development Code to include lighting design guidelines to be applied through design review and other discretionary permits. Explore the feasibility of amending the Building Code to include lighting specifications. Require new development and major remodel projects that would make significant parking lot improvements or add new lighting to submit a lighting plan consistent with these guidelines for design review by County staff. Lighting design guidelines and/or specifications should address:*

- *Efficiency – Cost effective energy efficient standards for outdoor lighting shall be developed to conserve energy thereby reducing excessive lighting, light pollution, light trespass, and glare;*
- *Reasonableness of Intensity – Acceptable standards shall be defined for various land uses and development types specifying the maximum allowable total lumens per acre;*

- *Directional Control* – Standards shall be developed to minimize the upward transmission and intensity of light at various distances from its source through the use of full-cutoff lighting, downward casting, shielding, visors etc;
- *Signage* – Standards with respect to illuminated signs shall be developed that prohibit or limit the size, spacing, design, upward transmission of light, and hours of operation. In addition, signs should be white or light colored lettering on dark backgrounds;
- *Night Lighting* – Hours of operation for various uses shall be specified in order to prohibit all-night lighting except when warranted for public safety reasons. On demand lighting shall be encouraged;
- *Education* – A voluntary educational component of this program shall include the distribution of informational materials for use by county residents, developers, and lighting supply retailers. These materials shall provide specific methods and product information necessary for compliance of new development as well as aiding the conversion of existing lighting sources;
- *Incentives* – The County shall develop incentives for residents and businesses encouraging the conversion of existing lighting sources to compliant ones; and
- *Enforcement* – These standards shall be incorporated into the County Development Code and design review process for new development.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to aesthetics would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

CONCLUSION

Based on a review of Impact 4.12-1 (*Scenic Resources*) and Impact 4.12-2 (*Community Character*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, new residential development that could occur under the *2012 Draft Housing Element* would have the same impacts on the existing visual character or quality of the unincorporated area as the *Countywide Plan*. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, policies and programs are in place to ensure that future development would not result in impacts to scenic resources and community character. Previously adopted Mitigation Measure 4.12-2 would continue to apply and would reduce impacts to community character to a less-than-significant level. There would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to scenic resources and community character; therefore, no additional analysis is required.

As stated in the discussion of Impact 4.12-4 (*Light Pollution and Nighttime Sky*) in the *2007 Countywide Plan EIR*, adverse changes to visual resources resulting from additional sources of lighting due to residential development that could occur under the *Countywide Plan* would be significant and unavoidable. This is because some of the additional sources of lighting would be beyond the control of the County (i.e., from the cities or from ministerial projects). While properties

proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in *2007 Countywide Plan EIR*, previously adopted Mitigation Measure 4.12-2 would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Agriculture and Forest Resources

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substance Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
2. Agriculture and Forest Resources. Would the project:					
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Discussed in Section 4.8 Agriculture, see Impact 4.8-1.	No	No	No	NA
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Discussed in Section 4.8 Agriculture, see Impact 4.8-2.	No	No	No	NA
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	Discussed in Section 4.8 Agriculture, see Impact 4.8-1.	No	No	No	NA
d. Result in the loss of forest land or conversion of forest land to non-forest use?	Not specifically analyzed in EIR	No	No	No	NA
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	Discussed in Section 4.8 Agriculture, see Impact 4.8-1.	No	No	No	NA

Agriculture and Forest Resources – Setting

The environmental setting for impacts on agricultural resources is essentially the same as the setting described for Marin County agriculture in Section 4.8 Agriculture of the *2007 Countywide Plan EIR*. The *2007 Countywide Plan EIR* did not analyze impacts on forest resources because that EIR predates the December 2009 CEQA Guidelines amendments. As discussed in Environmental Checklist Item 2(d), below, none of the proposed housing sites would cause or contribute to the loss or conversion of forest land.

Exhibit 4.8-1 in the *2007 Countywide Plan EIR* summarizes Marin County agricultural production and provides crop values for 2002-2004. Updated information for 2011 for Marin County agricultural production value is provided in **Exhibit 3.0-1**.

Exhibit 3.0-1 Marin County Total Agricultural Production Value

Commodity	2004^a (Dollars)	2011^a (Dollars)	Percent of Total (2011)	Net Change (2004-2011)	Percent Change (2004-2011)
Livestock Products	33,244,138	31,369,320	45	-1,874,818	-5.6
Livestock & Miscellaneous	11,126,083	19,883,814	28	+8,757,731	+78.7
Fruit, Grape and Vegetable Crops	7,010,753	13,160,403	19	+6,149,650	+87.7
Aquaculture	2,853,898	4,658,103	7	+1,804,205	+63.2
Nursery Crops	662,590	1,004,764	1	+342,174	+51.6
Total	54,897,462	70,076,404	100	+15,178,942	+27.7

a Values represent gross returns to the producer and do not indicate actual net profits.

Source: *Marin County Livestock and Agricultural Crop Reports, 2010, 2011*. Marin County Department of Agriculture • Weights and Measures, May 2011, May 2012.

Exhibit 4.8-2 in the *2007 Countywide Plan EIR* shows the conversion of agricultural designated land to Urban and Built-Up and Other lands between 1984 and 2004. More recent agricultural land use conversion data between 2004 and 2010 is provided in **Exhibit 3.0-2**.

Exhibit 3.0-2
Marin County Agricultural Land Use Conversion

Year	Important Farmland^a (acres)	Grazing Land (acres)	Total Marin County Agricultural Land^b (acres)	Urban and Built-Up Land (acres)	Other Land^c (acres)
2004	66,458	89,938	156,396	41,903	135,644
2010	63,817	89,256	153,073	42,341	138,429
Total	-2,641	682-	-3,323	+438	+2,785

- a Prime Farmland plus Farmland of Statewide Importance, Unique Farmland and Farmland of Local Importance
- b Important Farmland plus Grazing Land
- c Acreage increase in Other Land categories was due to formation of the Point Reyes National Seashore and the Golden Gate National Recreational Area and other protected areas.

Source: Land Use Conversion Tables for Marin County 1984 – 2010, Farmland Mapping and Monitoring Program, California Department of Conservation.

Agriculture and Forest Resources - Discussion

Agricultural impacts are analyzed in Section 4.8 Agriculture of the *2007 Countywide Plan EIR*. Impacts analyzed in the *2007 Countywide Plan EIR* include Impact 4.8-1 (*Conversion of Agricultural Lands to Non-Agricultural Uses*) and Impact 4.8-2 (*Conflicts with Williamson Act Contracts*).

Section 2.10, Agricultural and Food, of the Natural Systems & Agricultural Element of the *Countywide Plan* describes Marin County’s agricultural resources and includes goals, policies, and programs to protect agricultural resources. *Countywide Plan* Map 2-20 shows protected agricultural lands in Marin County including Marin Agricultural Land Trust (MALT)⁵ conservation easements, Williamson Act Contracts (ten year contracts) and Farmland Security Zone Contracts (20 year contracts). Additionally, the California Department of Conservation compiles maps of important farmlands for each county in California, including Marin County.

Countywide Plan Goal **AG-1** (*Preservation of Agricultural Lands and Resources*) calls for the preservation of agricultural lands. Policy **AG-1.1** (*Limit Residential Use*), and Programs **AG-1.a**

⁵ The Marin Agricultural Land Trust (MALT) is a non-profit organization formed by a coalition of local ranchers and environmentalist. MALT acts as a private conservation alternative to the sale, subdivision, or development of farmland by acquiring conservation easement in voluntary transaction with landowners. Since the organization was founded in 1980, MALT has permanently preserved nearly 44,300 acres of farmland that might otherwise have been developed with non-agricultural uses. That is nearly half of the farmland in Marin County.

(*Residential Building Sizes in Agricultural Areas*) and **AG-1.b** (*Require Production and Stewardship Plans*) limit residential development on agricultural properties to that which is reasonably related to agriculture by providing standards for non-agricultural structures, subjecting residences over 4,000 square feet to design review, and requiring preparation of agricultural production plans submitted with residential and other non-agricultural development applications. Policy **AG 1.3** (*Preserve Agricultural Zoning*) preserves agricultural zoning and Policy **AG-1.4** (*Limit Non-Agricultural Zoning*) limits non-agricultural zoning to areas where conflict with agricultural land uses would be minimized. Policy **AG-1.2** (*Encourage Contractual Protection*) and Programs **AG-1.d** (*Standardize Conservation Easements*) and **AG-1.e** (*Facilitate Land Conservation Contracts*) facilitate conservation of agricultural lands by means of easements and contracts.

The *2012 Draft Housing Element* designates the St. Vincent's / Silveira site (housing site 5), which currently has agricultural uses, for the AH Combined District (Program 1.c - *Establish an Affordable Housing Combined Zoning District*). This would permit affordable housing development on up to 3.5 acres of the site with a density of 30 housing units per acre (see **Exhibit 2.0-16**). The St. Vincent's and Silveira properties consist of 1,100-acres mostly used for agriculture. Other uses include non-profit facilities and a private school. *Countywide Plan* Policy **SV-2.4** (*Cluster Development*) restricts development on the site, allowing up to five percent of non-agricultural development on each of the properties. Existing development does not count against the five percent.

2012 Draft Housing Element Policy 2.1 (*Special Needs Groups*) would promote development and rehabilitation of housing for agricultural workers. Program 2.j (*Promote the Development of Agricultural Worker Units in Agricultural Zones*) would promote the development of agricultural housing by expediting permit processing, update zoning to allow agricultural worker housing, program consideration for legalization of existing agricultural worker housing units, and seeking funding to assist with rehabilitation and replacement of agricultural units.

2(a) The adoption and subsequent implementation of the *2012 Draft Housing Element* would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Implementation of Program 1.c (*Establish an Affordable housing Combined Zoning District*) of the *2012 Draft Housing Element* would permit designation of up to 3.5 acres of the St. Vincent / Silveira properties, which the State has designated as Farmland of Local Importance, for affordable residential development. As stated in the discussion of *Impact 4.8-1* (*Conversion of Agricultural Lands to Non-Agricultural Uses*) conversion of Farmland of Local Importance is not considered a significant effect. Implementation of the *Countywide Plan* redesignated 5,942 acres in unincorporated Marin County from an agricultural designation to a non-agriculture designation, primarily Open Space. This includes 129 acres of land classified by the State as Farmland of Statewide Importance. The impact of converting agricultural lands to non-agricultural uses (*Impact 4.8-1*) was previously identified in the *2007 Countywide Plan EIR* to be significant unavoidable project and cumulative impact. Implementation of the *2012 Draft Housing Element* would not increase the severity of this significant unavoidable impact.

2(b) The *2007 Countywide Plan EIR* found that land use conflicts resulting from implementation of the *Countywide Plan* with Williamson Act Contracts would be a less-than-significant impact. Adoption of the *2012 Draft Housing Element*, and implementation of Program **1c** (*Establish and Affordable Housing Combined Zoning District*) would not alter land under a Williamson Act

contract. The St. Vincent's / Silveira housing site is not under a Williamson Act contract.⁶ This previously identified less-than-significant impact would remain less-than-significant.

- 2(c) The *2007 Countywide Plan EIR* found that with implementation of the *Countywide Plan* impacts resulting from conflicts between agricultural and urban uses would be less-than-significant (*Impact 4.1-3 [Land Use Conflicts between Agricultural and Urban Uses]*). Policy **SV-2.4 (Cluster Development)** allows up to five percent additional urban development on the St. Vincent's / Silveira properties (housing site 5). This would amount to 37 acres on the St. Vincent's property and 17 acres on the Silveira property. An analysis of existing and future development footprints on the St. Vincent's / Silveira properties is provided on Exhibit 4.1-13 in the *2007 Countywide Plan EIR*. The *2007 Countywide Plan EIR* found that with implementation of Policy **AG-1.1 (Limit Residential Use)** and Programs **AG-1.a (Residential Building Sizes in Agricultural Areas)** and **AG-1.b (Require Production and Stewardship Plans)** residential development and building size would be limited in order to maintain agricultural production. Policy **AG-1.4 (Limit Non-Agricultural Zoning)** would minimize intrusion of residential uses into areas of agricultural production. Implementation of the *2012 Draft Housing Element* would lead to 3.5 acres of the St. Vincent's / Silveira property conversion to residential development. This is substantially less than the amount considered and analyzed with the implementation of the *Countywide Plan*. Therefore, implementation of the *2012 Draft Housing Element* would not increase the severity of impacts, and this previously identified less-than-significant impact would remain less-than-significant.
- 2(d) Impacts due to loss of forest land or conversion of forest land to non-forest use was not specifically analyzed in the *2007 Countywide Plan EIR*. The adoption and subsequent implementation of the *2012 Draft Housing Element* would not lead to loss of forest land or conversion of forest land to non-forest use because none of the proposed housing sites are designated as forest land. This impact would be less-than-significant.
- 2(e) As discussed above, the *2007 Countywide Plan EIR* found conversion of agricultural lands to non-agricultural uses (*Impact 4.8-1 [Conversion of Agricultural Lands to Non-Agricultural Uses]*) would be a significant unavoidable impact with implementation of the *Countywide Plan*. *Impact 4.1-3 (Land Use Conflicts between Agricultural and Urban Uses)* would be a less-than-significant impact. Adoption and subsequent implementation of the *2012 Draft Housing Element* would lead to 3.5 acres of urban development of the St. Vincent's / Silveira properties (housing site 5), where implementation of the *Countywide Plan* Policy **SV-2.4 (Cluster Development)** would allow up to 54 acres of urban development. Therefore with the adoption of the *2012 Draft Housing Element* and implementation of *Program I.c*, which would rezone 3.5 acres of the St. Vincent's / Silveira property for affordable housing development, there would be no increase in the severity of impacts associated with conversion of agricultural land or conflicts between agricultural land and urban uses. Because none of the proposed housing sites is designated as forest land or requires construction of infrastructure or other development within designated forest land, the *2012 Draft Housing Element* would not involve other changes that would lead to conversion of forest land to non-forest use,

⁶ *2007 Countywide Plan EIR*, Exhibit 4.8-4 shows parcels under Williamson Act Contracts where Land Use Designation would change.

Agriculture and Forest Resources - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

Mitigation Measure 4.8-1 in the *2007 Countywide Plan EIR* is not applicable to implementation of the *2012 Draft Housing Element* because the mitigation measure deals with agricultural processing, retail sales, and visitor-serving uses.

The *2007 Countywide Plan EIR* stated that there is no mitigation available for the conversion of State and County designated agricultural lands to open space uses.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to agriculture or forest resources would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Agriculture and Forest Resources - Conclusion

As stated in the discussion of Impact 4.8-1 (*Conversion of Agricultural Lands to Non- Agricultural Uses*) in the *2007 Countywide Plan EIR* the conversion of State and County designated agricultural lands due to implementation of the *Countywide Plan* would be significant and unavoidable. Previously adopted Mitigation Measure 4.8-1 would reduce this impact, but not to a less-than-significant level, because a small amount of conversion would still occur. Although properties identified in the *2012 Draft Housing Element* would not result in new or increased conversion of agricultural lands than what is already anticipated and evaluated in the *2007 Countywide Plan EIR*, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Based on a review of Impact 4.8-2 (*Conflicts with Williamson Act Contracts*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, the residential development that could occur under the *2012 Draft Housing Element* would not have any impact on Williamson Act contracts since it would not alter land under a Williamson Act contract. There would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to conflicts with Williamson Act Contracts; therefore, no additional analysis is required.

The residential development that could occur under the *2012 Draft Housing Element* would not cause or contribute to the loss or conversion of forest land.

Air Quality

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
3. Air Quality. Would the project:					
a. Conflict with or obstruct implementation of the applicable air quality plan?	Discussed in Section 4.3 Air Quality, see Impact 4.3-1.	No	No	No	No MM 4.3-1 (same as MM 4.2-1) would reduce impact, but still found significant unavoidable. No change from CWP EIR.
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Discussed in Section 4.3 Air Quality, see Impact 4.3-4.	No	No	No	NA
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Discussed in Section 4.3 Air Quality, see Impacts 4.3-1 and 4.3-2.	No	No	Yes, but new or more severe significant effects would not occur.	MM 4.3-1 (same as MM 4.2-1) and MM 4.3-2 would reduce impact, but still found significant unavoidable. No change from CWP EIR.
d. Expose sensitive receptors to substantial pollutant concentrations?	Discussed in Section 4.3 Air Quality, see Impact 4.3-3.	No	Yes	Yes	No
e. Create objectionable odors affecting a substantial number of people?	Discussed in Section 4.3 Air Quality, see Impact 4.3-3.	No	No	No	Yes, MM4.3-3(a) and 4.3-3(b)

Air Quality – Updated Setting

The *Countywide Plan* identified vehicle traffic as the primary source of air pollutant emissions in Marin County, with busy roadways causing localized high exposures of toxic air contaminants (TACs). The rate of vehicle travel under the *Countywide Plan* was projected (in 2007) to exceed projections used in the most recent Clean Air Plan⁷ (CAP) prepared by the Bay Area Air Quality Management District (BAAQMD) for the year 2030. These data were reviewed to assess the consistency of the *Countywide Plan* and *2012 Draft Housing Element* with the latest BAAQMD CAP and to further assess TAC exposure with the *2012 Draft Housing Element* sites.

BAAQMD has revised recommended thresholds of significance since certification of the *2007 Countywide Plan EIR*. However, BAAQMD's adoption of its 2011 thresholds was called into question by an order issued March 5, 2012, in *California Building Industry Association v. BAAQMD* (Alameda Superior Court Case No. RGI0548693). The order requires BAAQMD to set aside its approval of the thresholds until it has conducted environmental review under CEQA. The claims made in the case concerned the environmental impacts of adopting the thresholds, that is, how the thresholds would indirectly affect land use development patterns. Those issues are not relevant to the scientific basis of BAAQMD's analysis of what levels of pollutants should be deemed significant. This analysis considers the science informing the thresholds as being supported by substantial evidence. Scientific information supporting the thresholds was documented in BAAQMD's proposed thresholds of significance analysis.⁸ The thresholds will not cause any indirect impact in terms of land use development patterns insofar as this project is concerned, because the proposal to construct the project is not influenced by the BAAQMD guidelines. Accordingly, the analysis herein uses the thresholds and methodologies from BAAQMD's 2011 *CEQA Air Quality Guidelines*⁹ to determine the potential impacts of the project on the existing environment. The significance thresholds used in this analysis are summarized in **Exhibit 3.0-3**.

⁷ *Bay Area 2010 Clean Air Plan*, BAAQMD, September 2010.

⁸ *California Environmental Quality Act Guidelines Update Proposed Thresholds of Significance*, BAAQMD, December 2009.

⁹ *CEQA Air Quality Guidelines*, BAAQMD, May 2011.

Exhibit 3.0-3
Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Operational Thresholds
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day) Annual Average Emissions (tons/year)
Criteria Air Pollutants		
Regional (ROG, NO _x , PM ₁₀ , PM _{2.5})	None	<ol style="list-style-type: none"> 1. Consistency with CAP control measures and 2. Projected VMT or vehicle trip increase is less than or equal to projected population increase.
Local (CO)	None	9.0 ppm (8-hour avg.) or 20.0 ppm (1-hour avg.)
Health Risks, Hazards and Odors		
Excess Cancer Risk	None	10 per one million
Hazard Index	None	1.0
Incremental annual average PM _{2.5}	None	0.3 µg/m ³
Odors	None	Potential for frequent odor complaints

Note: ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = coarse particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM_{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less.

Source: BAAQMD, *California Environmental Quality Act Guidelines Update Proposed Thresholds of Significance*, BAAQMD, December 2009.

It should be noted that BAAQMD CEQA Guidelines construction related significance thresholds apply to specific development projects and not planning documents. Therefore, these thresholds do not apply here.

Air Quality - Discussion

Air quality impacts are analyzed in Section 4.3 Air Quality of the *2007 Countywide Plan EIR*.

Section 2.7, Atmosphere and Climate, of the Natural Systems & Agricultural Element of the *Countywide Plan* describes issues related to Marin County air quality and its contribution to regional air quality problems. Goals, policies, and programs are provided to improve air quality (including regional air quality), minimize potential impacts from land uses that may emit pollution and/or odors on residential and other land uses sensitive to such emissions, and to reduce vehicle-generated pollutants.

Since certification of the *2007 Countywide Plan EIR* the Bay Area Air Quality Management District (BAAQMD) has adopted the *Bay Area 2010 Clean Air Plan*.¹⁰ Updated *CEQA Air Quality Guidelines* were adopted in June 2010 and updated in May 2011. This constitutes a change in circumstances and/or new information of substantial importance that may result in new or substantially more severe significant impacts, or involve new mitigation measures that may be considered feasible.

3(a) The most recent clean air plan is the *Bay Area 2010 Clean Air Plan (CAP)* that was adopted by BAAQMD in September 2010. This plan addresses air quality impacts with respect to obtaining ambient air quality standards for non-attainment pollutants (i.e., ozone and particulate matter or PM₁₀ and PM_{2.5}), reducing exposure of sensitive receptors to TACs, and reducing greenhouse gas emissions such that the region can meet AB 32 goals of reducing emissions to 1990 levels by the year 2020.

CLEAN AIR PLAN PROJECTIONS

The consistency of the *2012 Draft Housing Element* with the Clean Air Plan projections is primarily a question of maintaining consistency with the population/employment assumptions utilized in the CAP. Changes that would affect the CAP's underlying assumptions (e.g., increases in employment or population), could increase emission projections. Vehicle travel projections under the *2012 Draft Housing Element* are not projected to change in comparison with those that would occur under the *Countywide Plan*.

The CAP includes emissions control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. The control measures are divided in to five categories that include:

- measures to reduce stationary and area sources;
- mobile source measures;
- transportation control measures;
- land use and local impact measures; and
- energy and climate measures

In developing the control measures, BAAQMD identified the full range of tools and resources available, both regulatory and non-regulatory, to address emissions. Implementation of each control measure will rely on some combination of the following:

- BAAQMD adoption and enforcement of rules to reduce emissions from stationary sources, area sources, and indirect sources;
- Revisions to BAAQMD's permitting requirements for stationary sources;

¹⁰ *Bay Area 2010 Clean Air Plan*, BAAQMD, September 2010.

- Enforcement of CARB rules to reduce emissions from heavy - duty diesel engines;
- Allocation of grants and other funding by BAAQMD and/or partner agencies;
- Promotion of best policies and practices that can be implemented by local agencies through guidance documents, model ordinances, etc.;
- Partnerships with local governments, other public agencies, the business community, non-profits, etc.;
- Public outreach and education;
- Enhanced air quality monitoring;
- Development of land use guidance and CEQA guidelines, and BAAQMD review and comment on Bay Area projects pursuant to CEQA; and
- Leadership and advocacy.

This approach relies upon lead agencies to assist in implementing some of the control measures. A key tool for local agency implementation is the development of land use policies and implementing measures that address new development or redevelopment in local communities.

STATIONARY AND AREA SOURCE CONTROL MEASURES

The CAP includes Stationary Source Control measures that BAAQMD adopts as rules or regulations through their authority to control emissions from stationary and area sources. The BAAQMD is the implementing agency, since these control measures are applicable to sources of air pollution that must obtain District permits. Any new stationary sources would be required to obtain proper permits through BAAQMD. In addition, Marin County uses BAAQMD's *CEQA Air Quality Guidelines* to evaluate air pollutant emissions from new sources.

MOBILE SOURCE MEASURES

The CAP includes Mobile Source Measures that would reduce emissions by accelerating the replacement of older, dirtier vehicles and equipment through programs such as the BAAQMD's Vehicle Buy-Back and Smoking Vehicle Programs, and promoting advanced technology vehicles that reduce emissions. The implementation of these measures relies heavily upon incentive programs, such as the Carl Moyer Program ¹¹ and the Transportation Fund for Clean Air, ¹² to

¹¹ Carl Moyer Memorial Air Quality Standards Attainment Program provides incentive grants for cleaner-than-required engines, equipment and other sources of pollution providing early or extra emission reductions. Eligible projects include cleaner on-road, off-road, marine, locomotive and agricultural sources. The program achieves near-term reductions in emissions of oxides of nitrogen (NO_x), particulate matter (PM), and reactive organic gas (ROG) which are necessary for California to meet its clean air commitments under the State Implementation Plan. NO_x and ROG combine in the presence of sunlight to form ozone (smog), while PM, a component of diesel exhaust, has been identified as a toxic air contaminant by the Air Resources Board, Information Available at <http://www.arb.ca.gov/msprog/moyer/moyer.htm>, accessed October 2012.

achieve voluntary emission reductions in advance of, or in addition to, CARB requirements. CARB has new regulations that require the replacement or retrofit of on-road trucks, construction equipment and other specific equipment that is diesel powered.

TRANSPORTATION CONTROL MEASURES

The CAP includes transportation control measures (TCMs) that are strategies meant to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions. While most of the TCMs are implemented at the regional level (e.g., by MTC or Caltrans), there are measures that the CAP relies upon local communities to assist with implementation. In addition, the CAP includes land use measures and energy and climate measures where implementation is aided by proper land use planning decisions. The *Countywide Plan* includes measures to reduce vehicle travel that are generally consistent with the CAP TCMs.

TAC EXPOSURE

The *2012 Draft Housing Element* includes sensitive receptors that would be located near sources of TAC emissions. The CAP includes measures to reduce TAC exposure to sensitive receptors. The County, as lead CEQA agency, uses the BAAQMD *CEQA Air Quality Guidelines* to identify significant risks from TAC exposure and develop appropriate mitigation measures.

2012 DRAFT HOUSING ELEMENT CONSISTENCY WITH CAP

According to the BAAQMD a proposed plan must demonstrate that its projected VMT or vehicle trips (VT) (either measure may be used) must be less than or equal to its projected population increase to be considered to have a less-than-significant impact on criteria air pollutants and precursor emissions. Adoption and subsequent implementation of the *2012 Draft Housing Element* would not substantially alter development patterns currently allowed under the *Countywide Plan*. The number of housing units that could be built following adoption of the *2012 Draft Housing Element* would not exceed the number of housing units evaluated in the *2007 Countywide Plan EIR*. Vehicle travel projections under the *2012 Draft Housing Element* are not projected to change with respect to those that would occur under the *Countywide Plan*. Future housing development would be required to be consistent with the goals and policies of the *Countywide Plan* including all goals and policies pertaining to air quality. The *2012 Draft Housing Element* would not substantially affect population forecasts made for the *2007 Countywide Plan EIR*, which found that vehicle miles traveled (VMT) would outpace population growth. This significant unavoidable impact was identified in the *2007 Countywide Plan EIR* under Impact 4.3-1 (*Inconsistency with Clean Air Plan*), and implementation of the *2012 Draft Housing Element* would not result in a new or substantially more severe impact. This would continue to be a significant unavoidable impact. Mitigation Measure 4.3-1 identified in the *2007 Countywide Plan EIR* and adopted by the County would continue to be required.

¹² The Transportation Fund for Clean Air (TFCA) is a grant program funded by a \$4 surcharge on motor vehicles registered in the Bay Area. This generates approximately \$22 million per year in revenues. TFCA provides grants to projects that implement the most cost-effective projects in the Bay Area that will decrease motor vehicle emissions, and thereby improve air quality, Information Available at <http://www.baaqmd.gov/Divisions/Strategic-Incentives/Funding-Sources/TFCA.aspx>, accessed October 2012.

- 3(b) Impact 4.3-4 (*Carbon Monoxide Concentrations Along Roadways*) of the 2007 *Countywide Plan EIR* addressed carbon monoxide concentrations along roadways and found this impact to be less-than-significant. This was due to the fact that traffic increases under the *Countywide Plan* would result in carbon monoxide concentrations that would be below ambient air quality standards at the most congested intersections. In the update to the 2011 *CEQA Air Quality Guidelines*, BAAQMD screening guidance indicates that intersections with less than 44,000 vehicles per hour would have a less-than-significant impact with respect to local carbon monoxide impacts. There are no intersections in Marin County where traffic volumes approach this level of traffic. Under the *CEQA Air Quality Guidelines*, violations of ambient air quality standards due to regional air pollutants (e.g., ozone and particulate matter [PM₁₀ and PM_{2.5}]) are addressed through an analysis of the plan consistency with the CAP (see Checklist Item 3.A above). There are no quantified emission-based thresholds for criteria pollutants that apply to plans. BAAQMD has identified quantified emission thresholds for projects. This impact (Impact 4.3-4) would continue to be less-than-significant.
- 3(c) The increase of criteria pollutants associated with the *Countywide Plan* and *Draft 2012 Housing Element* are addressed under Environmental Checklist Item 3(a) above.
- 3(d) The exposure of sensitive receptors to TAC emissions from both long-term operation and short-term construction are discussed below.

LONG-TERM OPERATION-RELATED TAC EMISSIONS

The BAAQMD has developed and updated procedures for evaluating and identifying impacts from TAC exposure since certification of the 2007 *Countywide Plan EIR*. As a result, housing sites listed in **Exhibits 2.0-4** and **2.0-14** were reviewed in regard to potential air quality impacts. Of prime concern is the potential exposure along heavily traveled roads (such as U.S. 101 and Interstate 580) of future residents to toxic air contaminants (TAC) including fine particulate matter (PM_{2.5}). In addition, BAAQMD has made available screening data to identify screening TAC exposure from highways, local roadways and stationary sources. Use of BAAQMD screening data, such as its on-road mobile sources screening analysis, allows for identification of potential impacts. Use of other BAAQMD screening criteria allows for an analysis of potential new or substantially more severe impacts associated with individual housing sites.

Busy roadways are a source of TAC emissions that could affect new sensitive receptors, such as residences. BAAQMD provides screening tools and tables that indicate predicted community risk impacts that roadways pose. BAAQMD's Google Earth Highway Screening Analysis Tool¹³ is a Google Earth map tool used to identify estimated risk and hazard impacts from highways throughout the Bay Area. This tool was used to identify potential TAC exposure from State highways (e.g., U.S. 101 and Interstate 580) at 2012 *Draft Housing Element* sites. BAAQMD also publishes Roadway Screening Analysis Tables,¹⁴ which are county-specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area. These tables were used to predict TAC exposure from busy roadways near 2012 *Draft Housing Element* sites. Stationary sources of TAC that could affect housing sites were identified using

¹³ *Highway Screening Analysis Tool*, BAAQMD, April 2011.

¹⁴ *Roadway Screening Analysis Tables*, BAAQMD, May 2011.

BAAQMD's Stationary Source Screening Analysis Tool.¹⁵ This is a Google Earth map tool that identifies stationary sources and associated estimated risk and hazard impacts. These tools that were used to identify TAC exposure are available at BAAQMD's website.

Exhibits 3.0-4 and **3.0-5** present results of a screening level analysis performed using BAAQMD tools for the *2012 Draft Housing Element* sites in **Exhibits 2.0-4** and **2.0-14**. **Exhibits 3.0-4** and **3.0-5** identify sites that have potentially significant exposures. The level of TAC exposure presented in this analysis is based on modeling assumptions that use screening level models. These types of models have conservative assumptions built into the analysis to ensure that exposures are over predicted rather than under predicted. This allows the identification of potential significant impacts that can be further defined using refined modeling techniques. These types of techniques are typically applied during project-level review, where the potential for significant impacts has been identified through a screening analysis. The analysis presented in this document identifies areas where cancer risk and PM_{2.5} exposure are potentially significant. A refined analysis prepared during project review is necessary to determine if those exposures are significant and identify means to reduce the exposures. These sites would require detailed analysis at the project-level during consideration of individual development applications to ensure that health risks from TAC exposure are not significant. If detailed modeling indicates significant exposures, then additional measures would be required to reduce impacts to a less-than-significant level, per *Countywide Plan Policy AIR-2.1 (Buffer Emission Sources and Sensitive Land Uses)*, plus Programs **AIR-1.b (Evaluate Air Quality Impacts of Proposed Projects and Plans)**, **AIR-2.a (Require Separation Between Air Pollution Sources and Other Land Uses)**, **AIR-2.b (Protect Sensitive Receptors Near High-Volume Roadways)**, and **AIR-2.c (Health Risk Analysis for Sensitive Receptors)**. Such measures could include site design, use of appropriate filtration in ventilation systems, vegetative barriers, or a combination of the measures. Program **AIR-2.c** addresses impacts within high-volume roadways that were based on TAC modeling conducted in support of the *2007 Countywide Plan EIR*. Since the time of that analysis, BAAQMD has revised procedures for assessing roadway TAC impacts and added procedures for identifying and analyzing potential TAC impacts from stationary sources. The screening level analysis presented in **Exhibits 3.0-4** and **3.0-5** are based on the latest BAAQMD screening methods. To avoid significant impacts associated with the *2012 Draft Housing Element*, Program **AIR-2.c** will have to be revised to reflect new BAAQMD procedures for evaluating TAC impacts.

The *2007 Countywide Plan EIR* identified Mitigation Measures 4.3-3(a), 4.3-3(b) and 4.3-3(c) under Impact 4.3-3 (*Buffer Zones for Potential Source of Odor/Toxics*) to address significant health risks resulting from both mobile and stationary sources of TACs. New information, in the form of updated BAAQMD CEQA Air Quality Guidelines, has been made available since certification of the *2007 Countywide Plan EIR*. This information indicates that without appropriate mitigation, new residences developed as part of the *2012 Draft Housing Element* could expose new sensitive receptors to significant TAC levels. To avoid significant impacts associated with the *2012 Draft Housing Element*, Program **AIR-2.c** will have to be revised to reflect new BAAQMD procedures for evaluating TAC impacts.

¹⁵ *Stationary Source Screening Analysis Tool*, May 2012.

SHORT-TERM CONSTRUCTION-RELATED EMISSIONS

As discussed in the 2007 Countywide Plan EIR under Impact 4.3-5 (*Fugitive Dust Associated with Construction Projects*), construction of individual projects would involve activities that result in air pollutant emissions. Construction activities such as demolition, grading, construction worker travel to and from project sites, delivery and hauling of construction supplies and debris to and from the project site, and fuel combustion by on-site construction equipment would generate pollutant emissions. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. Dust emissions can lead to both nuisance and health impacts. Policies **AIR-1.2** (*Meet Air Quality Standards*) and **AIR-1.3** (*Require Mitigation of Air Quality Impacts*) would require that projects meet air quality standards and impacts are mitigated. Specifically, Program **AIR-1.b** (*Evaluate Air Quality Impacts of Proposed Projects and Plans*) would require that new projects are evaluated in accordance with the *BAAQMD CEQA Guidelines* and **AIR-1.g** (*Require Control Measures for Construction and Agriculture Activity*) require reasonable and feasible control measures for construction activities, which include feasible fugitive dust control measures recommended by the BAAQMD. Construction-related emissions measures recommended by BAAQMD are listed below:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

With adoption and implementation of the 2012 Draft Housing Element, no new significant impact or a substantial increase in the severity of a previously identified significant impact (Impact 4.3-3 [*Buffer Zones from Potential Source of Odor/Toxics*]) would occur. Short-term construction-related emissions would remain less-than-significant.

3(e) Impact 4.3-3 of the 2007 *Countywide Plan EIR* addressed potential odor impacts. The 2007 *Countywide Plan EIR* identified Mitigation Measures 4.3-3(a) and 4.3-3(b) to address potential odor impacts. No new significant impact (Impact 4.3-3) or a substantial increase in the severity of a previously identified significant impact would occur with implementation of the 2012 *Draft Housing Element*.

Air Quality - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The 2007 *Countywide Plan EIR* identified several mitigation measures to reduce identified air quality impacts. Mitigation Measures 4.3-1 (which is the same as Mitigation Measure 4.2-1), 4.3-2, and 4.3-3 were adopted as a part of the *Countywide Plan*. As appropriate, future housing development would be subject to Mitigation Measures 4.2-1, 4.3-2, and 4.3-3, and related *Countywide Plan* policies and programs, identified in the 2007 *Countywide Plan EIR*.

Mitigation Measure 4.2-1 became Policy TR-1.8 (*Reduce Vehicle Miles Traveled [VMT]*) and Program TR-1.s (*VMT Reduction Monitoring and Implementation and Transportation Demand Management Program*). They read as follows:

Policy TR-1.8 Reduce Vehicle Miles Traveled (VMT). Reduce the rate of increase for total vehicle miles traveled by single-occupant automobile to not exceed the population growth rate.

Program TR-1.s VMT Reduction Monitoring and Implementation and Transportation Demand Management Program Develop and implement a countywide program for monitoring and reducing VMT consistent with State and regional efforts and based on information from State and regional planning agencies. Identify and require in new developments specific transportation demand management (TDM) strategies for reducing the VMT below levels that would otherwise occur. Consider the following types of strategies for inclusion in the VMT Reduction Monitoring and Implementation and Transportation Demand Management Program:

- *Increased transit.*
- *All new residential projects consisting of 25 units or more should be located within 1/2 mile of a transit node, shuttle service, or bus route with regularly scheduled, daily service.*
- *New multi-family projects consisting of 25 units or more should include TDM measures such as reduced parking for affordable or senior projects, subsidized public transportation passes, or ride-matching programs based on site specific review. For market rate projects, consider TDM programs such as charging parking fees separate from rent.*
- *Safe, convenient connections should be provided to existing pedestrian and bicycle facilities and secure bicycle parking should provide be provided in new nonresidential developments.*

- *TDM should be required for new or expanded projects with 50 employees or more, including programs such as parking cash out, subsidized transit passes, ridesharing incentives, and bicycle storage facilities.*

Mitigation Measure 4.3-2(a) of the 2007 Countywide Plan EIR added a new program to the Design Section of the Built Environment Element as follows:

Program DES-2.d Require Parking “Cash-Out” Program. *Require new office developments with more than 50 parking spaces to offer a Parking “Cash-Out” Program. Consider the feasibility of a parking cash-out program for other new developments located in the City-Centered corridor.*

Mitigation Measure 4.3-2(b) of the 2007 Countywide Plan EIR required Marin County to identify a funding source, make a higher priority or implement sooner, Programs **AIR-3.a** (funding source, higher priority, implement sooner), **AIR-3.d** (higher priority), **AIR-3.e** (higher priority), **TR-2.k** (higher priority, implement sooner), **TR-1.c** (funding sources, higher priority, implement sooner).

Mitigation Measure 4.3-3(a) revised policy **AIR-2.1** of the Natural Systems & Agriculture Element to read as follows:

Policy AIR-2.1 Buffer Emission Sources and Sensitive Land Uses. *Consider potential air pollution and odor impacts from land uses that may emit pollution and/or odors when locating (a) air pollution sources, and (b) residential and other pollution-sensitive land uses in the vicinity of air pollution sources (which may include freeways, manufacturing, extraction, hazardous materials storage, landfill food processing, wastewater treatment, and other similar uses.)*

Mitigation Measure 4.3-3(b) revised Program **AIR-2.a** of the Natural Systems & Agriculture Element to read as follows:

Policy AIR-2.a Require Separation Between Air Pollution Sources and Other Land Uses. *Only allow (a) emission sources or (b) other uses in the vicinity of air pollution or odor sources if the minimum screening distances between sources and receptors established in the BAAQMD CEQA Guidelines can be met, unless detailed project-specific studies demonstrate compatibility with adjacent uses despite separations that do not meet the screening distance requirements.*

Mitigation Measure 4.3-3(c) added a new program to the Natural Systems & Agriculture Element as follows:

Program AIR-2.c Health Risk Analysis for Sensitive Receptors. *Require that projects involving sensitive receptors proposed within 150 feet of freeways shall include an analysis of the potential health risks. Mitigation measures which comply with adopted standards of the BAAQMD for control of odor/toxics for sensitive receptors shall be identified in order to reduce these risks to acceptable levels.*

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

One new mitigation measure and one revised 2007 Countywide Plan EIR mitigation measure have been identified for the 2012 Draft Housing Element to reduce potentially significant TAC exposures:

New Mitigation Measure Air Quality-1 Applications for new housing projects that may have potentially significant toxic air contaminant (TAC) exposures, as identified in **Exhibits 3.0-4** and **3.0-5**, shall include a detailed analysis of the potential health risks from exposure of future residents to TACs using refined modeling techniques. This analysis shall identify both the level of TAC exposure and measures to reduce unacceptable exposures to a less-than-significant level. Mitigation measures that achieve compliance with the adopted standards of the BAAQMD for residential exposure to TACs shall be incorporated into the design of the project to reduce the risk to an acceptable level. Such measures would include, but are not limited to, site design, use of appropriate filtration in ventilation systems, vegetative barriers, or a combination of the measures.

Revised Mitigation Measure Air Quality-2 Revise Program **AIR-2.c** of the *Countywide Plan* as follows:

***Program AIR-2.c Health Risk Analysis for Sensitive Receptors.** ~~Require that Applications for new projects involving locating sensitive receptors proposed 150 feet of freeways near roadways and stationary sources identified as posing potentially significant TAC or PM_{2.5} exposure using BAAQMD CEQA Analysis Tools, shall include an analysis of the potential health risks. Mitigation measures which comply that achieve compliance with the adopted standards of the BAAQMD for control of exposure of sensitive receptors to odor/toxics for sensitive receptors shall be identified to reduce these risks to acceptable levels.~~*

Air Quality - Conclusion

As stated in the discussion of Impact 4.3-1 (*Inconsistency with Clean Air Plan*) and 4.3-2 (*Inconsistency with Clean Air Plan Transportation Control Measures*) in the *2007 Countywide Plan EIR*, impacts due to inconsistencies with the Clean Air Plan due to development that could occur under the *Countywide Plan* would be significant and unavoidable. Previously adopted Mitigation Measures 4.3-1 and 4.3-2 would reduce this impact, but not to a less-than-significant level, because 1) VMT may still exceed the rate of population growth, mostly because the predicated rate of VMT growth is so much higher than the rate of population growth, and 2) the Board of Supervisors found that implementation of Program TR-2.g (*Add Bicycle Lands*) was not feasible. While properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, these would remain significant unavoidable impacts, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Based on a review of Impact 4.3-4 (*Carbon Monoxide Concentrations Along Roadways*) and 4.3-5 (*Fugitive Dust Associated with Construction Projects*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would have a less-than-significant impact on carbon monoxide concentrations along roadways or fugitive dust associated with construction projects. With implementation of *Countywide Plan* policies and programs, residential development that could occur under the *2012 Draft Housing Element* would have a less-than-significant impact on these air quality impact areas. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to carbon monoxide

concentrations along roadways or fugitive dust associated with construction projects; therefore, no additional analysis is required.

Based on a review of Impact 4.3-3 (*Buffer Zones for Potential Source of Odor/Toxics*) in the *2007 Countywide Plan EIR* and on the analysis in the Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would have the same impact on the potential source of toxics as the *Countywide Plan*. Due, in part, to new information in the form of updated BAAQMD CEQA Air Quality Guidelines, the *2012 Draft Housing Element* has the potential for more severe impacts related to toxic air contaminants. *Countywide Plan* policies and programs as well as previously adopted Mitigation Measure 4.3-3 would continue to apply. One new mitigation measure (Air Quality-1) and one revised *2007 Countywide Plan EIR* mitigation measure (Air Quality-2) have been identified and would reduce the impacts of the *2012 Draft Housing Element* on toxic air contaminants to a less-than-significant level.

Based on a review of Impact 4.3-3 (*Buffer Zones for Potential Source of Odor/Toxics*) in the *2007 Countywide Plan EIR* and on the analysis in the Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would have the same odor impact as the *Countywide Plan*. Due, in part, to new information in the form of updated BAAQMD CEQA Air Quality Guidelines, the *2012 Draft Housing Element* has the potential for more severe impacts related to exposure to toxic air contaminants. *Countywide Plan* policies and programs as well as previously adopted Mitigation Measure 4.3-3 would continue to apply. A new mitigation measure (Air Quality-1) and a revised *2007 Countywide Plan EIR* mitigation measure (Air Quality-2) have been identified and would reduce the impacts of the *2012 Draft Housing Element* related to exposure to toxic air contaminants to a less-than-significant level.

Exhibit 3.0-4
2007-2014 Potential Housing Sites - Health Risk Screening Analysis by Site

Site #	Site Name & Address	Total Acres	Total Units	Potentially Significant Cancer Risk (>10 in 1 million)? ^a	Potentially Significant Chronic or Acute Hazard Risk Index (>1.0)? ^a	Potentially Significant PM _{2.5} Concentration (>0.3 µg/m ³)? ^a
1	Marinwood Plaza 100 Marinwood Avenue	4.75	85	Yes Mobile: <i>US 101</i>	No	No
				Stationary: <i>Marinwood Valero</i> (100 Marinwood Avenue)		
2	Oak Manor 2400 Sir Francis Drake Blvd.	1.58	10	No	No	No
3	California Park Woodland Avenue	1.82	50	Yes Mobile: <i>US 101</i>	No	No
4	Old Chevron Station 204 Flamingo Road	0.79	21	Yes Stationary: <i>Shoreline Cleaners</i> (204 Flamingo Road)	No	No
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	1,110	221	Yes Mobile: <i>US 101</i>	No	Yes Mobile: <i>US 101</i>
6	Easton Point Paradise Drive	110	43	No	No	No
7	Tamarin Lane 12 Tamarin Lane	6.54	5	No	No	No
8	Indian Valley 1970 Indian Valley Road	7.7	5	No	No	No
9	Manzanita mixed use 150 Shoreline Highway	0.56	3	No	No	No
10	Grandi Building 11101 State Route 1	2.5	2	Yes Stationary: <i>AT&T Generator</i> (2 nd Street and B Street)	No	No

Site #	Site Name & Address	Total Acres	Total Units	Potentially Significant Cancer Risk (>10 in 1 million)?	Potentially Significant Chronic or Acute Hazard Risk Index (>1.0)?	Potentially Significant PM_{2.5} Concentration (>0.3 µg/m³)?
11	650 N. San Pedro 650 North San Pedro	16.3	12	No	No	No
12	Golden Gate Seminary Seminary Drive	73.57	60	No	No	No
13	Oak Hill School 441 Drake Ave	3.87	30	No	No	No
14	Armstrong Nursery 217 & 221 Shoreline Highway	1.77	53	No	No	No
15	Inverness Valley Inn 3275 Sir Francis Drake	26.8	21	No	No	No
16	Grady Ranch Lucas Valley Road	229	240	Yes Stationary: <i>Verizon Wireless Generator</i> (3800 Lucas Valley Road)	No	No
17	Roosevelt Street 30 Roosevelt	0.18	2	No	No	No

a. The screening analysis conducted for this Draft SEIR indicated a potential for a significant impact. Individual project applications will require additional analysis to determine project level of significance.

Source: Illingworth & Rodkin, Inc., 2012

Exhibit 3.0-5
Potential Housing Sites for 2014-2022 - Health Risk Screening Analysis by Site

Site #	Site Name & Address	Total Acres	Total Units	Potentially Significant Cancer Risk (>10 in 1 million)?^a	Potentially Significant Chronic or Acute Hazard Risk Index (>1.0)?^a	Potentially Significant PM_{2.5} Concentration (>0.3 µg/m³)?^a
18	Around Manzanita 150 Shoreline	1.48	45	No	No	No
19	Tam J retail 237 Shoreline Highway	6.8	60	Yes Stationary: <i>Shoreline Cleaners</i> (204 Flamingo Road)	No	No
20	Gateway Shopping Center 190 Donohue Street	20.34	150	Yes Mobile: <i>US 101</i>	No	No
				Stationary: <i>Sausalito Marin City Sanitary District Generator</i> (180 Donahue Street)		
21	Strawberry smaller retail Reed Blvd.	2.39	45	Yes Mobile: <i>US 101</i>	No	No
22	Strawberry Village 900, 950 etc. Redwood Highway	10.99	30	Yes Mobile: <i>US 101</i>	No	Yes Mobile: <i>US 101</i>
				Stationary: <i>ARCO Facility #00524</i> (789 Redwood Highway, #524)		
23	Tiburon Eastbound Tiburon Blvd.	1.45	43	Yes Stationary: <i>Chevron Station #94390</i> 105 Tiburon Boulevard	No	No
24	Tiburon Westbound Knoll Road	1.44	44	Yes Mobile: <i>SR 131</i>	No	No
				Stationary: <i>Chevron Station #94390</i> 105 Tiburon Boulevard		
25	Tiburon Redwood frontage Central Drive	2.7	81	Yes Mobile: <i>US 101</i>	No	Yes Mobile: <i>US 101</i>

Site #	Site Name & Address	Total Acres	Total Units	Potentially Significant Cancer Risk (>10 in 1 million)?	Potentially Significant Chronic or Acute Hazard Risk Index (>1.0)?	Potentially Significant PM_{2.5} Concentration (>0.3 µg/m³)?
26	College of Marin lot 15 139 Kent Avenue	3.2	45	No	No	No
27	Kentfield Eastbound Sir Francis Drake Blvd.	5.14	60	No	No	No
28	Kentfield Westbound	2.63	60	No	No	No
29	Marin General 250 Bon Air Road	19.7	50	Yes Stationary: <i>Marin General</i> (160 Donahue Street)	No	Stationary: <i>Marin General</i> (160 Donahue Street)
30	Ross Valley Self Storage 890 College Ave.	1.56	45	No	No	No
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	5.09	60	No	No	No
32	3000 SFD- Sunnyside Growing 3000 Sir Francis Drake	7.74	30	No	No	No
33	Railroad Ave. Railroad Ave. and Park St.	0.50	4	No	No	No
34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	0.54	6	No	No	No
35	Los Ranchitos 99-165 Los Ranchitos Drive	13.81	60	No	No	No
36	Big Rock Deli & Creekside Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	2.8	80	No	No	No
37	Rotary Field 16 Jeanette Prandi Way	12.83	60	No	No	No

Site #	Site Name & Address	Total Acres	Total Units	Potentially Significant Cancer Risk (>10 in 1 million)?	Potentially Significant Chronic or Acute Hazard Risk Index (>1.0)?	Potentially Significant PM_{2.5} Concentration (>0.3 µg/m³)?
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	1.49	44	Yes Mobile: <i>US 101</i>	No	No
39	LDS Church Santa Venetia 220 N. San Pedro Road	5.38	30	No	No	No
40	MacPhail School 1565 Vendola Drive	9.52	40	No	No	No
41	Marin Farmers Market 70 & 76 San Pablo Ave.	0.6	18	No	No	No
42	San Pedro Road San Pedro Road	5.65	30	Yes Stationary: County of Marin, MERA, San Pedro Generator (2099 Bayhills Dr.)	No	No
43	Atherton (Novato RV Park) 1530 Armstrong Ave	2.68	80	Yes Mobile: <i>US 101</i>	No	No
44	Bear Valley Road 10045 State Route 1	1.25	5	No	No	No
45	Olema Campground Shoreline Highway	9.94	10	No	No	No
46	Feed Lot B St. & 6 th St.	0.92	27	No	No	No
47	Pine Cone Diner 60 4 th St.	1.06	4	Yes Stationary: <i>Greenbridge Gas and Auto Inc.</i> (11401 SR #1)	No	No
48	Pt. Reyes North 11598 State Route 1	16.89	15	No	No	No
49	Red Barn (green barn) 510 Mesa Road	1.53	10	No	No	No
50	Kruger Pines	2.45	28	No	No	No
51	Homestead Terrace	0.64	73	No	No	No
52	Venetia Oaks	1.84	55	No	No	No

a. The screening analysis conducted for this Draft SEIR indicated a potential for a significant impact. Individual project applications will require additional analysis to determine project level of significance.

Source: Illingworth & Rodkin, Inc., 2012

Biological Resources

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
4. Biological Resources. Would the project:					
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Discussed in Section 4.6 Biological Resources, see Impact 4.6-1.	No	No	Yes, but new or more severe significant effects would not occur.	Yes MM 4.6-1
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	Discussed in Section 4.6 Biological Resources, see Impact 4.6-2.	No	No	Yes, but new or more severe significant effects would not occur.	No MM 4.6-2 would reduce impact, but still found significant unavoidable. No change from CWP EIR.
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Discussed in Section 4.6 Biological Resources, see Impact 4.6-3.	No	No	No	NA
d. Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Discussed in Section 4.6 Biological Resources, see Impact 4.6-4.	No	No	No	No MM 4.6-4 would reduce impact, but still found significant unavoidable. No change from CWP EIR.

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Discussed in Section 4.6 Biological Resources, see Impact 4.6-5.	No	No	No	NA
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Discussed in Section 4.6 Biological Resources, see Impact 4.6-6.	No	No	No	NA

Biological Resources – Updated Setting

Biological Resources are discussed in Section 4.6 of the *2007 Countywide Plan EIR*, evaluating the potential impact of land uses and development consistent with the *Countywide Plan* on the County’s sensitive biological and wetland resources. As discussed in the *2007 Countywide Plan EIR*, numerous goals, policies, and programs of the *Countywide Plan*, especially in the Natural Systems and Agricultural Element, would serve to avoid or minimize adverse impacts on the biological and wetland resources in the County. The *2007 Countywide Plan EIR* analyzed the effectiveness of these relevant goals, policies and programs in the *Countywide Plan* to reduce or avoid adverse changes to the environment resulting from proposed land use designations and development applications, and the degree to which they would mitigate identified impacts to a less-than-significant level. These relevant goals, policies, and programs of the *Countywide Plan* also require adequate site-specific environmental assessment during review of individual development applications and may require project-specific mitigation, as discussed further below.

An assessment of the potential impacts of the *2012 Draft Housing Element* on biological and wetland resources was performed using data from the *2007 Countywide Plan EIR*, which was updated where applicable to the changes proposed in the *2012 Draft Housing Element* or to reflect changed circumstances or new information, together with interpretation of GIS data available from MarinMap. Additionally, field reconnaissance surveys were conducted by Environmental Collaborative on August 7 and 27 of 2012. Queries were also run by County GIS staff to confirm the degree to which mapped sensitive resources overlapped *2012 Draft Housing Element* proposed housing sites. **Exhibits 3.0-6 and 3.0-7** summarize information on vegetative cover for each housing site, together with a determination on whether there are any “Protected Trees” present as defined under the Native Tree Preservation and Protection Ordinance (Chapter 22.27 of Marin County Code), and likelihood of presence of any Wetland Conservation Areas (WCA), Stream Conservation Areas (SCA), and/or

occurrences of special-status species or sensitive natural communities. It should be noted that the information provided in **Exhibits 3.0-6** and **3.0-7** is based on the review of available data and the results of preliminary field reconnaissance surveys, with no detailed surveys performed as part of this analysis. Where there is a possibility for sensitive resources to be present, which could be affected by a proposed development application, pursuant to Program **BIO-2.a** a site assessment would be performed as part of future environmental review for individual development applications to confirm presence or absence and to define necessary mitigation, if required.

In general, the data and mapping from the *2007 Countywide Plan EIR* remains accurate and applicable to the *2012 Draft Housing Element*, including regulations related to the protection and management of biological and wetland resources. The status of some special-status species has changed, requiring reconsideration of applicability to the *2012 Draft Housing Element* sites. In addition, the classification system used by the California Department of Fish and Game (CDFG) to define sensitive natural communities has been further refined since the *2007 Countywide Plan EIR* was certified. The following provides a setting update for these two subject areas – special-status species and sensitive natural communities.

Special-status Species - Special-status species are plants and animals that are legally protected under State and / or federal Endangered Species Acts (ESA), or other regulations. The status of some special-status species has changed and new occurrences in Marin County have been reported by the California Natural Diversity Data Base (CNDDDB) of the CDFG. Exhibit 4.6-3 in the *2007 Countywide Plan EIR* contains a list of 75 special-status animal species and Exhibit 4.6-4 contains a list of 78 special-status plant species known or suspected from Marin County, together with their status and typical habitat characteristics. These lists were reviewed and species information was updated for consideration as part of the impact assessment for the *2012 Draft Housing Element* based on the most recent data from the CNDDDB and an updated species list prepared by the U.S. Fish and Wildlife Service.¹⁶ The updated lists of special-status species known or suspected to occur in Marin County are contained in the **Appendix**, providing information on 92 special-status animal species and 87 special-status plant species, including status, typical habitat characteristics, and number of reported occurrences in Marin County and the state.

Sensitive Natural Communities - Sensitive natural communities are natural community types of limited distribution statewide or within a county or region, and are considered to have a high inventory priority with the CNDDDB because of their rarity. Sensitive natural community types are monitored by the CNDDDB due to their continuing loss as a result of conversion for urban and agricultural development, flood control improvements, and other habitat modifications. The most current version of the CDFG *List of California Terrestrial Natural Communities*, which was last updated in 2010, indicates which natural communities have a high inventory priority and are therefore considered sensitive. As acknowledged in the *2007 Countywide Plan EIR*, detailed mapping of the distribution of sensitive natural communities is generally not available. This continues to be the case with only limited occurrence data available from the CNDDDB records, but the required site assessment performed as part of future environmental review of specific Draft Housing Element sites would serve to confirm presence or absence of any sensitive natural community types and would define necessary mitigation, if required.

¹⁶ *Species list for Marin County Housing Element Update, Document Number 120823051003*, U.S. Fish and Wildlife Service, letter to James Martin, Environmental Collaborative, August 23, 2012.

Biological Resources - Discussion

Biological Resources impacts are analyzed in Section 4.6 Biological Resources of the *2007 Countywide Plan EIR*.

Section 2.4, Biological Resources, of the Natural Systems & Agricultural Element of the *Countywide Plan* describes biotic conditions in Marin County. *Countywide Plan* Map 2-1 shows vegetation countywide, Map 2-2 shows the distribution of special-status species and sensitive natural communities, Map 2-3 shows wetlands and streams, Map 2-4 shows watersheds with streams and observed steelhead trout and Coho salmon. Section 2.4 provides goals, policies, and programs to protect biological resources including enhancement of native habitat and biodiversity, protection of sensitive biological resources, and protection of wetlands plus riparian areas.

Protection of sensitive biological resources in the *Countywide Plan* is achieved by confirming whether any resources of concern are present on a site proposed for development, and providing adequate avoidance or mitigation where direct impacts are unavoidable. The *Countywide Plan* identifies policies and programs that the County implements during the environmental review of projects in order to identify and protect sensitive biological resources and provide for adequate mitigation where complete avoidance is not possible as part of future development. Program **BIO-2.a** (*Require Site Assessments*) requires a site assessment by a qualified professional where proposed development applications may adversely affect sensitive resources, including occurrences of special-status species and occurrences of sensitive natural communities. Program **BIO-3.c** (*Require Site Assessment*) requires development applications to include the submittal of a site assessment by a qualified professional where incursions into the Wetland Conservation Area (WCA) are proposed or adverse impacts to wetlands resources may otherwise occur. Program **BIO-4.g** (*Require Site Assessment*) requires development applications to include the submittal of a site assessment prepared by a qualified professional where incursions into the Stream Conservation Area (SCA) are proposed, or adverse impacts to riparian resources may otherwise occur. Policies and programs related to biological and wetland resources in the *Countywide Plan* that are particularly applicable to the *2012 Draft Housing Element* include the following:

Policy BIO-1.1 *Protect Wetlands, Habitat for Special-Status Species, Sensitive Natural Communities, and Important Wildlife Nursery Areas and Movement Corridors.* Protect sensitive biological resources, wetlands, migratory species of the Pacific flyway, and wildlife movement corridors through careful environmental review of proposed development applications, including consideration of cumulative impacts, participation in comprehensive habitat management programs with other local and resource agencies, and continued acquisition and management of open space lands that provide for permanent protection of important natural habitats.

Policy BIO-1.3 *Protect Woodlands, Forests, and Tree Resources.* Protect large native trees, trees with historical importance; oak woodlands; healthy and safe eucalyptus groves that support colonies of monarch butterflies, colonial nesting birds, or known raptor sites; and forest habitats. Prevent the untimely removal of trees through implementation of standards in the Development Code and the Native Tree Preservation and Protection Ordinance. Encourage other local agencies to adopt tree preservation ordinances to protect native trees and woodlands, regardless of whether they are located in urban or undeveloped areas. See also Policy **SV-1.7** (*Preserve Trees*).

Policy BIO-2.1 *Include Resource Preservation in Environmental Review.* Require environmental review pursuant to CEQA of development applications to assess the impact of proposed development on native species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and important wildfire nursery areas and movement corridors.

Require adequate mitigation measures for ensuring the protection of any sensitive resources and achieving “no net loss” of sensitive habitat acreage, values, and function.

Policy BIO-2.2 *Limit Development Impacts.* Restrict or modify proposed development in areas that contain essential habitat for special-status species, sensitive natural communities, wetlands, baylands and coastal habitat, and riparian habitats, as necessary to ensure the continued health and survival of these species and sensitive areas. Development projects should preferably be modified to avoid impacts on sensitive resources, or to adequately mitigate impacts by providing on-site or (as a lowest priority) off-site replacement at a higher ratio.

Policy BIO-2.3 *Preserve Ecotones.* Condition or modify development permits to ensure that ecotones, or natural transitions between habitat types, are preserved and enhanced because of their importance to wildlife. Ecotones of particular concern include those along the margins of riparian corridors, baylands and marshlands, vernal pools, and woodlands and forests where they transition to grasslands and other habitat types.

Policy BIO-2.4 *Protect Wildlife Nursery Areas and Movement Corridors.* Ensure that important corridors for wildlife movement and dispersal are protected as a condition of discretionary permits, including consideration of cumulative impacts. Features of particular importance to wildlife for movement may include riparian corridors, shorelines of the coast and bay, and ridgelines. Linkages and corridors shall be provided that connect sensitive habitat areas such as woodlands, forests, wetlands, and essential habitat for special-status species, including an assessment of cumulative impacts.

Policy BIO-2.5 *Restrict Disturbance in Sensitive Habitat During Nesting Season.* Limit construction and other sources of potential disturbance in sensitive riparian corridors, wetlands, and baylands to protect bird nesting activities. Disturbance should generally be set back from sensitive habitat during the nesting season from March 1 through August 1 to protect bird nesting, rearing, and fledging activities. Preconstruction surveys should be conducted by a qualified professional where development is proposed in sensitive habitat areas during the nesting season, and appropriate restrictions should be defined to protect nests in active use and ensure that any young have fledged before construction proceeds.

Policy BIO-2.8 *Coordinate with Trustee Agencies.* Consult with trustee agencies (the California Department of Fish and Game, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration Fisheries, U.S. Army Corps of Engineers, Environmental Protection Agency, Regional Water Quality Control Board, and Bay Conservation and Development Commission) during environmental review when special-status species, sensitive natural communities, or wetlands may be adversely affected.

Program BIO-2.a *Require Site Assessments.* Require site assessment by a qualified professional for development applications that may adversely affect sensitive biological or wetland resources, including jurisdictional wetlands, occurrences of special-status species, occurrences of sensitive natural communities, and important wildlife nursery areas and movement corridors. The assessment should determine the presence or absence of any sensitive resources that could be affected by development, evaluate the potential impacts, and identify measures for protecting the resource and surrounding habitat. Require the assessment to be conducted by a qualified professional paid for by the applicant. Unless waived, the qualified professional should be hired directly by Marin County.

Policy BIO-3.1 Protect Wetlands. Require development to avoid wetland areas so that the existing wetlands and upland buffers are preserved and opportunities for enhancement are retained (areas within setbacks may contain significant resource values similar to those within wetlands and also provide a transitional protection zone). Establish a Wetland Conservation Area (WCA) for jurisdictional wetlands to be retained, which includes the protected wetland and associated buffer area. Development shall be set back a minimum distance to protect the wetland and provide an upland buffer. Larger setback standards may apply to wetlands supporting special status species or associated with riparian systems and baylands under tidal influence, given the importance of protecting the larger ecosystems for these habitat types as called for under Stream Conservation and Baylands Conservation policies defined in Policy BIO-4.1 and BIO-5.1, respectively. Regardless of parcel size, a site assessment is required either where incursion into a WCA is proposed or where full compliance with all WCA criteria would not be met.¹⁷

Policy BIO-3.2 Require Thorough Mitigation Where avoidance of wetlands is not possible, require provision of replacement habitat on-site through restoration and/or habitat creation at a minimum ratio of 2 acres for each acre lost (2:1 replacement ratio) for on-site mitigation and a minimum 3:1 replacement ratio for off-site mitigation. Mitigation wetlands should be of the same type as those lost and provide habitat for the species that use the existing wetland. Mitigation should also be required for incursion within the minimum WCA setback/transition zone.

Program BIO-3.b Comply with Regulations to Protect Wetlands Continue to require development applications to include the submittal of a wetland delineation for sites with jurisdictional wetlands and to demonstrate compliance with these wetlands policies, standards, and criteria, and with State and federal regulations.

Program BIO-3.c Require Site Assessment. Require development applications to include the submittal of a site assessment prepared by a qualified professional where incursions into the WCA are proposed, or adverse impacts to wetlands resources may otherwise occur. The assessment should be considered in determining whether any adverse direct or indirect impacts on wetlands would occur as a result of the proposed development, whether wetlands criteria and standards are being met, and to identify measures necessary to mitigate any significant impacts. The site assessment may also serve as a basis for the County to apply restrictions in addition to those required by State and federal regulations. The site assessment shall be paid for by the applicant. Unless waived, the qualified professional shall be hired directly by Marin County.

Program BIO-3.d Prioritize Wetland Avoidance Amend the Development Code to require development to avoid wetlands and transition zones. Where avoidance of wetlands is not possible, require the provision of replacement habitat on-site through restoration and/or habitat creation, provided that no net loss of wetland area, wetland function, and habitat values occurs. On-site wetlands mitigation shall be provided at a minimum ratio of 2 acres for each acre lost (2:1 replacement ratio). Allow off-site wetland mitigation only when an applicant has demonstrated that no net loss of wetland area, wetland functions, and wetland values would occur, and that on-site mitigation is not possible. In those rare instances when on-site wetlands loss is unavoidable and on-site replacement is infeasible, require that a minimum of 3 acres be provided through

¹⁷ Wetland protection criteria for evaluating development projects is contained in pages 2-22 thru 2-24 of the *Natural Systems & Agricultural Element of the Countywide Plan*.

mitigation for each acre lost (3:1 replacement ratio), preferably of the same habitat type as the wetland area that would be lost. The mitigation site should be close to the site of loss so that the mitigation wetland would provide habitat for the species that use the existing wetlands.

Program BIO-3.e *Establish Clear Mitigation Criteria.* Amend the Development Code to incorporate wetland impact mitigations measures that accomplish the following objectives:

- a. No net losses shall occur in wetland acreage, functions, or values. This should include both direct impacts on wetlands and essential buffers, and consideration of potential indirect effects of development due to changes in available surface water and nonpoint water quality degradation. Detailed review of the adequacy of a proposed mitigation plan shall be performed as part of environmental review of the proposed development project to allow for a thorough evaluation of the anticipated loss, as well as the replacement acreage, functions, and values.
- b. Mitigation shall be implemented prior to and/or concurrently with the project activity causing the potential adverse impact to minimize any short-term loss and modification to wetlands.
- c. An area of adjacent upland habitat shall be protected to provide an adequate buffer for wetland functions and values. Development shall be set back the minimum distance specified in Policy BIO-3.1 to create this buffer, unless an exception is allowed and appropriate mitigation is provided where necessary, pursuant to Policy BIO-3.2.
- d. Mitigation sites shall be permanently protected and managed for open space and wildlife habitat purposes.
- e. Restoration of wetlands is preferred to creation of new replacement wetlands, due to the greater likelihood of success.
- f. Mitigation projects must to the extent feasible minimize the need for ongoing maintenance and operational manipulation (dredging, artificial water-level controls, etc.) to ensure long-term success. Self-sustaining projects with minimal maintenance requirements are encouraged.
- g. All plans to mitigate or minimize adverse impacts to wetland environments shall include provisions to monitor the success of the restoration project. The measures taken to avoid adverse impacts may be modified if the original plans prove unsuccessful. Performance bonds shall be required for all mitigation plans involving habitat creation or enhancement, including the cost of five years of post-completion monitoring.
- h. Mitigation must be commensurate with adverse impacts of the wetland alteration and consist of providing similar values and greater wetland acreage than those of the wetland area adversely affected. All restored or created wetlands shall be provided at the minimum replacement ratio specified in Program BIO-3.d and shall have the same or increased habitat values as the wetland proposed to be destroyed.

Policy BIO-4.1 *Restrict Land Use in Stream Conservation Areas* A Stream Conservation Area (SCA) is established to protect the active channel, water quality and flood control functions, and associated fish and wildlife habitat values along streams. Development shall be set back to protect the stream and provide an upland buffer, which is important to protect significant resources that may be present and provides a transitional protection zone. Best management practices shall be adhered to in all designated SCAs. Best management practices are also strongly encouraged in ephemeral streams not defined as SCAs.

Policy BIO-4.2 *Comply with SCA Regulations.* Implement established setback criteria for protection of SCAs through established discretionary permit review processes and/or through adoption of new ordinances. Environmental review shall be required where incursion into an SCA is proposed and a discretionary permit is required.

In determining whether allowable uses are compatible with SCA regulations, development applications shall not be permitted if the project does any of the following:

- Adversely alters hydraulic capacity
- Causes a net loss in habitat acreage, value, or function
- Degrades water quality

Program BIO-4.g *Require Site Assessment.* Require development applications to include the submittal of a site assessment prepared by a qualified professional where incursions into the SCA are proposed, or adverse impacts to riparian resources may otherwise occur. Unless waived, the qualified professional shall be hired by Marin County. The site assessment shall be paid for by the applicant and considered in determining whether any adverse direct or indirect impacts on riparian resources would occur as a result of the proposed development, whether SCA criteria and standards are being met, and to identify measures necessary to mitigate any significant impacts. The site assessment may also serve as a basis for the County to apply restrictions in addition to those required by State and federal regulations.

Program BIO-4.h *Comply with SCA Criteria and Standards.* All development permit applications shall be reviewed for conformity with these SCA policies, criteria, and standards and in accordance with the California Environmental Quality Act. Proposals that do not conform to SCA policies, and cannot be modified or mitigated to conform, shall be denied. If a proposal involves the creation of a new parcel that is wholly or partially in an SCA, the land division shall be designed to ensure that no development occurs within the SCA.

Program BIO-4.i *Replace Vegetation in SCAs.* When removal of native riparian vegetation is unavoidable in an SCA, and mitigation is required, require establishment of native trees, shrubs, and ground covers within a period of five years at a rate sufficient to replicate, after a period of five years, the appropriate density and structure of vegetation removed. Require replacement and enhancement planting to be monitored and maintained until successful establishment provides for a minimum replacement or enhancement ratio of 2:1.

Policy BIO-5.1 *Protect the Baylands Corridor.* Ensure that baylands and large, adjacent essential uplands are protected, and encourage enhancement efforts for baylands, including those in the Baylands Corridor. The following criteria shall be used to evaluate proposed development projects that may impact the Baylands Corridor:

- For large parcels (over 2 acres in size), adhere to development setback standards for areas qualifying for protection under the WCA and SCA, but increase setback distances as necessary to ensure that hydrologically isolated features such as seasonal wetlands and freshwater marshes are adequately linked to permanently protected habitat. These additional development setbacks shall serve to prevent fragmentation and preserve essential upland buffers in the Baylands Corridor.

- For small parcels (2 acres or less in size), encourage property owners where suitable habitat exists to preserve up to 10 feet landward of mean high tide as a species refuge area for high water events. Site constraints, opportunities for avoidance of sensitive biological resources, and options for alternative mitigation, may also be considered.
- Minor redevelopment involving less than 25% of a structure on a residential or industrial parcel that is already filled and at least 50% developed may be exempted from the requirements for a site assessment, provided that no additional filling or modification to wetlands occurs.

Policy BIO-5.2 *Limit Development and Access.* Ensure that development does not encroach into sensitive vegetation and wildlife habitats, damage fisheries or aquatic habitats, limit normal wildlife range, or create barriers that cut off access to food, water, or shelter for wildlife. Require an environmental assessment where development is proposed within the Baylands Corridor.

Policy BIO-5.3 *Leave Tidelands in Their Natural State.* Require that all tidelands be left in their natural state to respect their biological importance to the estuarine ecosystem. Any modifications should be limited to habitat restoration or enhancement plans approved by regulatory agencies.

- 4(a) As discussed under Impact 4.6-1 (*Special-Status Species*) in the 2007 Countywide Plan EIR, potential impacts on special-status species include direct loss of individuals or localized populations, elimination or degradation of essential habitat, and isolation of disjunctive occurrences or subpopulations due to habitat fragmentation. Conversion of existing natural habitat to urban development, roadways, and other infrastructure improvements could result in the elimination of populations of special-status species where present within the limits of proposed grading and development. Removing existing vegetation during site grading and the increases in urban-generated pollutants typically associated with development could result in indirect impacts on the water quality of receiving waters. If not properly addressed, this could result in degradation of essential habitat for anadromous fish and other aquatic special-status species through increased sedimentation, runoff contamination, and other changes to existing conditions.

Based on review of County GIS data, specific occurrences of special-status plant and animal species¹⁸ extend over portions of six of the housing sites (sites 3, 6, 34, 44, 45, and 48). An additional 11 of the housing sites (sites 2, 5, 6, 15, 16, 27, 30, 32, 36, 37, and 51) are located within 120 feet of a designated “fish stream” mapped by the County based on known presence of listed anadromous species – steelhead, Coho, or Chinook salmon. As indicated in **Exhibits 3.0-6** and **3.0-7**, further examination performed during this environmental review analysis indicates that nine of the housing sites (sites 5, 6, 11, 15, 16, 32, 44, 45, and 51) have known occurrences of special-status species present on or in the immediate vicinity. Several of the sites located in proximity to a designated “fish stream” were identified as being “unlikely” to support special-status species because they were separated from the nearby stream by paved roadways and other developed conditions, such as housing sites 27, 34, 30, and 37. An additional 16 of the housing sites (sites 7, 8, 10, 12, 13, 14, 20, 26, 29, 35, 36, 40, 42, 47, 49, and 52) were determined to have

¹⁸ Based on records maintained by CNDDDB with an accuracy class of one-quarter mile or less, together with egret and heron rookery occurrences monitored by Audubon Canyon Ranch and established or historic records of special-status anadromous fish mapped by County staff.

a remote to moderate potential to possibly support currently unreported occurrences of special-status species based on the presence of relatively undisturbed natural areas and important habitat features such as creeks and wetlands. It should be noted that the potential for occurrence of special-status species at some of these sites is extremely remote, but, when warranted, further detailed surveys performed as part of site assessments required under the *Countywide Plan* would serve to confirm presence or absence.

The Biological Resources section of the Natural Systems & Agriculture Element in the *Countywide Plan* contains policies that provide for the identification and protection of special-status species as part of development review, including further review of the *2012 Draft Housing Element* sites, where appropriate. Policies **BIO-1.1** and **BIO-2.1** acknowledge the environmental review process pursuant to CEQA and the importance of protecting sensitive resources such as special-status species. Policy **BIO-2.2** serves to limit development impacts by restricting or modifying proposed development in areas that contain essential habitat for special-status species. Development projects should preferably be modified to avoid impacts, or to adequately mitigate impacts by providing on-site or (as a lowest priority) off-site replacement at a higher ratio. Policy **BIO-2.8** calls for consultation with trustee agencies during environmental review when special-status species may be adversely affected. Policy **BIO-2.9** promotes early consultation at the outset of project planning to ensure that the possible State and federal agency requirements to protect sensitive habitat are incorporated into development plans. Policy **BIO-2.5** restricts development near sensitive habitat during the nesting season, protecting important bird nesting areas. Program **BIO-2.a** requires a site assessment by a qualified professional where proposed development applications may adversely affect sensitive resources, including occurrences of special-status species. Program **BIO-2.c** requires coordinating County review with that of other jurisdictional agencies and requires evidence of compliance with any necessary permits from federal and State agencies prior to issuance of County grading or building permits, which helps to ensure that inadvertent impacts are avoided as part of the permit review and authorization process.

While any potential impact on special-status species would be considered potentially significant, implementation of the relevant policies and programs from the *Countywide Plan* would serve to avoid or adequately mitigate potential impacts associated with the *2012 Draft Housing Element*. With effective implementation of the policies and programs discussed above, future development and land use projected in the *2012 Draft Housing Element* impacts on special-status species (Impact 4.6-1[*Special-Status Species*]) would remain less-than-significant after mitigation.

- 4(b) As discussed under Impact 4.6-2 (*Sensitive Natural Communities*) in the *2007 Countywide Plan EIR*, potential impacts on sensitive natural communities include all or partial conversion to developed uses and fragmentation or modification to such an extent that the resource no longer functions as a natural community. Insufficient setbacks from riparian vegetation, marshlands and other wetlands, valley oak woodlands, and other sensitive natural communities can contribute to incremental loss and incursion into the natural community types, again compromising their habitat value and eventually preventing natural regeneration.

As indicated in **Exhibits 3.0-6** and **3.0-7**, only two of the housing sites (sites 6 and 11) have known occurrence of sensitive natural communities on them, both native grasslands. This relatively small percentage is most likely more a reflection of the less rigorous monitoring by the CNDDDB and lack of detailed site assessments than a definitive determination on absence of sensitive natural communities on any of the other *2012 Draft Housing Element* sites. Areas that qualify as SCAs or WCAs most likely support sensitive natural communities, such as riparian scrub, riparian woodland, freshwater marsh, and coastal salt marsh, which are generally not

closely mapped or monitored by the CNDDDB. When known occurrences of areas that qualify as SCAs or WCAs are included in the totals from **Exhibits 3.0-6** and **3.0-7**, 20 of the housing sites (sites 5, 8, 11, 13, 14, 15, 16, 18, 20, 26, 27, 30, 32, 35, 36, 40, 42, 44, 45, and 51) support areas with known or potential sensitive natural community types which could be affected by development associated with implementation of the *2012 Draft Housing Element*.

The Biological Resources section of the Natural Systems & Agriculture Element of the *Countywide Plan* contains policies and programs that provide for the identification and protection of sensitive natural communities as part of development review. Policies **BIO-1.1** and **BIO-2.1** acknowledge the environmental review process pursuant to CEQA and the importance of protecting sensitive resources such as sensitive natural communities. Policy **BIO-2.2** limits development impacts by restricting or modifying proposed development in areas that contain sensitive natural communities. Policy **BIO-1.3** calls for protecting woodlands, forests, and native tree resources. Policy **BIO-2.8** calls for consultation with trustee agencies during environmental review when regulated sensitive natural communities may be adversely affected. Policy **BIO-2.9** promotes early consultation at the outset of project planning to ensure that the possible requirements to protect sensitive habitat are incorporated into development plans. Program **BIO-2.a** requires a site assessment by a qualified professional where proposed development applications may adversely affect sensitive resources, including occurrences of sensitive natural communities. Program **BIO-2.c** requires coordinating County review with that of jurisdictional agencies and requires evidence of compliance with any necessary permits from federal and State agencies prior to issuance of County grading or building permits, which aids in ensuring that inadvertent impacts are avoided during the permit review and authorization process.

Policies in the *Countywide Plan* established conservation areas over streams and jurisdictional wetlands and creation of a Baylands Corridor over baylands, serving to protect much of the important sensitive natural community types in the County. Policy **BIO-4.1** limits land uses in designated SCAs to those that create minimal disturbance or alteration to water, soils, vegetation, and wildlife and that maintain or improve stream function or habitat values. Policy **BIO-4.2** establishes setback standards along an SCA, and numerous other policies call for protection of riparian vegetation, control of exotic vegetation, restoration of culverted and damaged streams, among other provisions. Policy **BIO-3.1** requires development to avoid wetland areas through creation of a WCA which serves to protect jurisdictional wetlands to be retained. Where full avoidance of jurisdictional wetlands is not possible, Policy **BIO-3.2** requires thorough mitigation and specifies minimum replacement ratios where complete avoidance is not feasible. Policy **BIO-5.1** establishes protections as part of the Baylands Corridor through specified criteria based primarily on parcel size and proximity to mean high tide. Policy **BIO-5.2** serves to limit development so that it does not encroach into sensitive resources and requires an environmental assessment where development is proposed within the Baylands Corridor. Other policies require that tidelands be left in their natural state, that marshlands be restored, preservation of freshwater habitat, restrictions on access, and encouraging open space acquisition of larger parcels.

Impact 4.6-2 (*Sensitive Natural Communities*) was previously determined to be significant and unavoidable. Previously adopted Mitigation Measure 4.6-2 would reduce this impact, but not to a less-than-significant level, because the Board of Supervisors found that full funding for Program BIO-1.b (Develop Habitat Monitoring Programs), was not available at the time of *Countywide Plan* adoption and that the mitigation measure, was, therefore, not fully feasible. No substantial new or increased impacts on sensitive natural communities would occur as a result of adoption and implementation the *2012 Draft Housing Element* in addition to what is already anticipated and was evaluated in the *2007 Countywide Plan EIR*, but potential impacts on sensitive natural communities would continue to remain a significant unavoidable impact.

- 4(c) The 2007 *Countywide Plan EIR* found that development and land-use activities projected by the *Countywide Plan* could result in significant direct and indirect impacts to jurisdictional wetlands and other waters, but that implementation of relevant policies and programs would serve to fully mitigate potential impacts to a less-than-significant level. As indicated in **Exhibits 3.0-6** and **3.0-7**, seven housing sites support areas that qualify as WCAs (sites 5, 11, 14, 18, 20, 42, and 45) based on data mapping prepared as part of the National Wetland Inventory (NWI) as well as conditions observed during the field reconnaissance surveys. An additional ten housing sites (sites 3, 4, 8, 15, 26, 32, 33, 35, 37, and 40) had field conditions that indicated “possible” presence of jurisdictional wetlands that could qualify as WCAs, but further detailed site assessment would be necessary to confirm this initial determination. And an additional 19 housing sites supported areas with known (sites 5, 8, 13, 14, 15, 16, 26, 27, 30, 32, 35, 36, 44, 45, and 51) or possible (sites 3, 6, 40, and 42) areas suspected to qualify as SCAs that may also contain areas of jurisdictional wetlands that could qualify as WCAs. Collectively, a large percentage of the housing sites contain known or possible WCAs and / or SCAs, indicating that potential direct and indirect loss or modification to existing wetlands and streams is likely.

The *Countywide Plan* calls for a site assessment as part of the project review process to determine the extent of possible jurisdictional waters where wetlands may be present on undeveloped lands. This site assessment process provides for effective avoidance or appropriate mitigation where potential impacts on the WCA are anticipated. Policy **BIO-3.1** requires development to avoid wetland areas so that the existing wetlands and upland buffers are preserved and calls for creation of a WCA in order to adequately protect the jurisdictional wetlands to be retained. Where full avoidance of jurisdictional wetlands is not possible, Policy **BIO-3.2** requires thorough mitigation and specifies a replacement ratio of 2:1 (wetlands created to wetlands lost) for on-site mitigation and 3:1 for off-site mitigation. The WCA policies require that agency permits be secured before a grading plan is issued by the County, ensuring that the concerns of jurisdictional agencies are fully addressed and appropriate mitigation and monitoring programs are completed before any resource loss occurs.

With effective implementation of the policies and programs discussed above, future development and land use projected in the 2012 *Draft Housing Element* would have a less-than-significant project impact on wetland resources (Impact 4.6-3). This impact would remain less-than-significant.

- 4(d) As discussed under Impact 4.6-4 (*Wildlife Habitat and Movement Opportunities*) of the 2007 *Countywide Plan EIR*, development and land-use activities projected by the *Countywide Plan* would result in a substantial reduction in existing habitat, would contribute to further fragmentation of remaining natural areas, and could interfere with the movement of native fish and wildlife species. These include potential impacts on special-status species, sensitive natural communities, and streams and wetlands, as well as more general wildlife habitat resources. Development typically involves the removal of existing vegetation, grading and construction of structures, installation of utility connections and infrastructure such as a septic system where a sanitary sewer system is not available, impervious paving for driveways and parking, and ornamental landscaping, all of which directly affect existing habitat conditions. In addition to the direct conversion of existing habitat associated with construction, development contributes to an increase in human activity, noise, vehicle traffic, artificial light, and secondary effects of increased urban runoff volumes and pollutant levels, among other changes to existing habitat conditions.

Development restrictions can be implemented to avoid and minimize potential impacts on specific sensitive resources and to provide for replacement habitat where complete avoidance is

infeasible. Where sensitive resources are identified and avoidance and compensatory mitigation is effectively implemented, this serves to address the potential impacts on these particular resources, such as special-status species, sensitive natural communities, and wetlands. However, mitigation is not required for loss of relatively common wildlife habitats when undeveloped land is converted to urban and suburban uses as part of new development. For individual development applications, the loss of common wildlife habitat is generally considered insignificant unless it is clear, for example, that the project would obstruct a known movement corridor for terrestrial or aquatic species, such as the last opportunity for wildlife movement through an otherwise urbanized area, or the creation of a drop structure or other physical impasse along a stream channel that would prevent movement of fish and other aquatic life. Partial mitigation for these examples of potential impacts on wildlife habitat could include dedication of land to create a wildlife movement corridor of a minimum width and enhanced vegetative cover, or for design of a fish passage system in the channel bottom to maintain in-stream movement opportunities.

The *2007 Countywide Plan EIR* assumed that the conversion of common wildlife habitat as a result of land-use activities and individual development projected by the *Countywide Plan* would eventually reach a level where when combined these potential impacts become cumulatively significant. There are no standards that can be applied in identifying the threshold for when this combined or cumulative loss of common wildlife habitat becomes significant. However, the land area that would be modified to accommodate the 5,491 housing units and the 1,236,781 square feet of non-residential uses projected by the *Countywide Plan* was considered substantial enough to be considered a significant impact on wildlife habitat and movement opportunities. There is no way to physically provide replacement habitat for the natural cover and common wildlife habitat converted to development on a countywide basis, which would require turning an equal acreage of urban development to natural habitat. This is not warranted on an individual development application basis where the loss of common wildlife habitat is not considered significant and is not feasible from a financial, social, or land-use policy basis. While the majority of development consistent with the *Countywide Plan* would occur within the City-Centered Corridor near existing urban development, collectively a substantial loss of wildlife habitat and movement opportunities could occur over time. This impact was therefore identified as a significant unavoidable impact of the *Countywide Plan* in the *2007 Countywide Plan EIR*.

As discussed under Impact 1-1 (*Special-status Species*), Impact 1-2 (*Sensitive Natural Communities*), and Impact 1-3 (*Wetlands and Other Waters*), of the *2007 Countywide Plan EIR*, numerous policies and programs in the Natural Systems & Agriculture Element of the *Countywide Plan* would serve to avoid or minimize adverse impacts on sensitive biological and wetland resources and would require adequate mitigation during review of individual development applications. Policy **BIO-1.3** calls for the protection of woodlands, forests, and tree resources. Policy **BIO-2.4** requires that important wildlife movement corridors be protected as a condition of discretionary permits, and Policy **BIO-2.3** requires protection of ecotones or natural transitions between habitat types. Policy **BIO-2.5** restricts disturbance in sensitive habitat during the nesting season to protect nests in active use. Policy **BIO-2.6** calls for maintaining safe wildlife movement opportunities along riparian corridors at road crossings so they continue to function. Policies and Programs **BIO-1.4**, **BIO-1.5**, **BIO-1.6**, **BIO-1.7**, **BIO-1.8**, **BIO-1.9**, **BIO-1.e**, and **BIO-1.f** serve to protect against habitat degradation through restrictions on inappropriate landscaping, controls on the use of herbicide and insecticides, education and controls on the spread of vegetation and wildlife diseases, and efforts to control and eradicate invasive exotic species.

Future development and land use activities associated with the *2012 Draft Housing Element* would contribute to further conversion of natural habitat to urban and suburban uses. However,

each of the *2012 Draft Housing Element* sites is already designated for residential or other urban uses and implementation of the *2012 Draft Housing Element* would not result in new or substantially more severe significant impacts. No substantial new or increased impacts on wildlife habitat or movement opportunities would occur as a result of adoption and implementation the *2012 Draft Housing Element* in addition to what is already anticipated and was evaluated in the *2007 Countywide Plan EIR*, but potential impacts on wildlife habitat and movement opportunities (Impact 4.6-4 [*Wildlife Habitat and Movement Opportunities*]) would continue to remain a significant unavoidable impact.

- 4(e) Development associated with implementation of the *2012 Draft Housing Element* would be evaluated for consistency with the *Countywide Plan*, including the Natural Systems & Agriculture Element. While proposed development may adversely affect sensitive biological and wetland resources in some locations, mitigation would be required by the County and trustee agencies where significant impacts are identified. Policies and programs in the Natural Systems & Agriculture Element include conduct of a site assessment, compliance with agency requirements and adequate mitigation where sensitive biological and wetland resources may be adversely affected. Project review would serve to ensure that proposed projects are consistent with the relevant policies and programs of the *Countywide Plan*, and would require adequate mitigation where direct avoidance is determined to be infeasible.

The Native Tree Preservation and Protection Ordinance (Chapter 22.27) of the Marin County Code (MCC) establishes regulations for the preservation and protection of native trees in the non-agricultural unincorporated areas of the County by limiting tree removal in a manner that allows for reasonable use and enjoyment of private property. The ordinance applies only to “protected trees” on improved and unimproved parcels, generally prohibiting the removal of native trees between 6 and 10 inches in diameter (depending on species) without a permit, unless the tree is a nuisance or hazard. The County may require that tree removal be mitigated by replanting, or that an in lieu fee be paid where tree planting on the site is not feasible or appropriate. As indicated in **Exhibits 3.0-6 and 3.0-7**, 39 of the housing sites (sites 1, 3, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 44, 45, 48, 49, 50, 51, and 52) appear to contain trees that would meet the definition of “protected trees” under the Native Tree Preservation and Protection Ordinance. Future development of these sites would have to comply with the provisions of the Ordinance through avoidance or any required mitigation.

Development and land use activities associated with the *2012 Draft Housing Element* would result in a less-than-significant project impact on potential conflicts with local plans and ordinances, and would make a less than cumulatively considerable contribution to cumulative impacts under this significance criterion.

- 4(f) Development associated with implementation of the *2012 Draft Housing Element* would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. No such conservation plans have been adopted encompassing all or portions of Marin County, and therefore, no impact is anticipated.

Marin County is participating in the FishNet4C program, which is a county-based, regional salmonid protection and restoration effort intended to meet the requirements of the Federal ESA in protecting anadromous salmonids and their habitats. Mitigation Measure 4.6-1 for Impact 4.6-1 (*Special Status Species*), in the *2007 Countywide Plan EIR* included a recommendation to acknowledge the importance of continued County participation in the FishNet4C program, which is essential to improving habitat conditions for listed anadromous fish and other aquatic species.

As indicated below, this mitigation was adopted as Program **BIO-2.e** as part of the *Countywide Plan*.

Biological Resources – Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The *2007 Countywide Plan EIR* identified three mitigation measures to reduce identified biological resources impacts. Mitigation Measures 4.6-1, 4.6-2, and 4.6-4 were adopted as a part of the *Countywide Plan*.

As applicable to specific project sites, future housing development would be subject to Mitigation Measures 4.6-1, 4.6-2, and 4.6-4, which together with implementation of the relevant goals and programs, serve to mitigate any potential impacts to a less-than-significant level. These mitigation measures are listed below:

Mitigation Measure 4.6-1 became Program **BIO-2.e** (*Participate in FishNet4C Program*) to state:

Program BIO-2(e) Participate in FishNet4C Program. Continue to actively participate in the FishNet4C program and work cooperatively with participating agencies to implement recommendations to improve and restore aquatic habitat for listed anadromous fish species and other fishery resources.

Mitigation Measure 4.6-2 In order to reduce the impact to sensitive natural communities to a less-than-significant level, this mitigation measure required the County to revise Program **BIO-1.b** (*Develop Habitat Monitoring Programs*), priority to medium, and improve the timeframe of its implementation to the medium-term or sooner.

Mitigation Measure 4.6-4 The *Draft 2005 CWP Update* shall be revised to provide expanded minimum boundaries for the proposed Baylands Corridor on the St. Vincent's / Silveira properties and to ensure implementation of essential programs necessary to identify and protect important wildlife habitat and movement opportunities.

Mitigation Measure 4.6-4(a) Adopt Option 2 in **Map 2-5a** of the *Draft 2005 CWP Update* to provide for greater consideration of the remaining sensitive biological features on larger undeveloped properties including the St. Vincent's / Silveira properties and in the vicinity of Gness Field. This larger corridor would ensure that any future development applications must consider how individual biological features contribute to the overall habitat values of the larger baylands ecosystem, provide adequate setbacks for areas qualifying for protection under the WCA and SCA, and ensure protection of essential linkages to permanently protected habitat. By extending the boundary of the proposed Baylands Corridor on the St. Vincent's / Silveira properties to U.S. 101, additional emphasis would be given on providing essential linkages between the entire Miller Creek corridor, the scattered seasonal wetlands, and the oak woodlands along Pacheco Ridge. The Baylands Corridor under Option 2 would also encompass the entire 300-foot distance landward of the historic bay marshlands on the St. Vincent's / Silveira properties recommended as a minimum setback distance from historic tidelands in the *Baylands Ecosystem Habitat Goals* report. Including the historic tidelands and adjacent uplands as part of the Baylands Corridor on the St. Vincent's / Silveira properties would provide for recognition of the potential for possible future restoration and enhancement of the baylands on the undeveloped

portion of this property. Any efforts to restore or enhance wetlands located west of Gness Field would have to be balanced with the possible safety concerns that increased activity by birds and other wildlife may have on airport operations.

Mitigation Measure 4.6-4(b) In order to reduce impacts to wildlife habitat and movement opportunities, the County would obtain additional funding for Program **BIO-2.b** (*Conduct Habitat Connectivity Assessment*) and revise the timeframe of its implementation to the medium-term or sooner.

Maps 2.5-a and 2.5-b- of the *Countywide Plan* were revised to reflect Mitigation Measure 4.6-4.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to biological resources would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Biological Resources - Conclusion

Based on a review of Impact 4.6-1 (*Special-Status Species*) and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would have the same impacts on special-status species and sensitive natural communities as the *Countywide Plan*. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, policies and programs would serve to avoid or adequately mitigate potential impacts on special-status species and sensitive natural communities. Furthermore, previously adopted Mitigation Measure 4.6-1 would continue to apply and would reduce impacts on special-status species to a less-than-significant level. There would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to special-status species; therefore, no additional analysis is required.

Based on a review of Impact 4.6-3 (*Wetlands and Other Waters*), Impact 4.6-5 (*Conflict with Local Policies or Ordinances*) and 4.6-6 (*Conflict with Adopted Habitat or Natural Community Conservation Plans*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any impact on these biological resource impact areas. With implementation of *Countywide Plan* policies and programs, residential development that could occur under the *2012 Draft Housing Element* would have a less-than-significant impact on wetland resources. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to wetland resources, potential conflicts with local plans and ordinances, or conflict with an adopted habitat or natural community conservation plans; therefore, no additional analysis is required.

As stated in the discussion of Impact 4.6-4 (*Wildlife habitat and Movement Opportunities*) in the *2007 Countywide Plan EIR*, impacts to wildlife habitat and movement opportunities due to development that could occur under the *Countywide Plan* would be significant and unavoidable because of a reduction of existing natural habitat, contribution to habitat fragmentation, and obstruction of

movement opportunities. Previously adopted Mitigation Measure 4.6-4 would reduce this impact, but not to a less-than-significant level, because it would not fully mitigate potential impacts of land uses and land use activities on existing natural habitat. Furthermore, Impact 4.6-2 (Sensitive Natural Communities) was identified as significant and unavoidable. Previously adopted Mitigation Measure 4.6-2 would reduce this impact, but not to a less-than-significant level, because the Board of Supervisors found that full funding for Program **BIO-1.b** (*Develop Habitat Monitoring Programs*) was not available at the time of *Countywide Plan* adoption and that the mitigation measure was, therefore, not fully feasible. While properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, these would remain significant unavoidable impacts, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Exhibit 3.0-6
2007-2014 Potential Housing Sites – Biological Constraints

Site #	Site Name & Address	Total Acres	Total Units	Vegetation ^a (Protected Trees)	WCA ^b	SCA ^c	Special-Status Species ^d
1	Marinwood Plaza 100 Marinwood Ave	4.75	85	IM, UB (Yes)	No	No	Unlikely
2	Oak Manor 2400 Sir Francis Drive Blvd.	1.58	10	UB (No)	No	No	Unlikely
3	California Park Woodland Avenue	1.82	50	UB, WL (Yes)	Possible	Possible - Intermittent drainage on AP 018-075-14/01	Unlikely
4	Old Chevron Station 204 Flamingo Road	0.79	21	UB (No)	Possible	No	Unlikely
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	1,110	221	AG, BA, HG, IG, IM, QA, QZ, UB (Yes)	Yes - FEW	Yes - Perennial "Lucas Creek"	Known - Reported occurrences of plant and animal species
6	Easton Point Paradise Drive	110	43	HG, QA, QB, UB (Yes)	No	Possible - Ephemeral drainage 300+ feet in length	Known - Reported occurrences of plant and animal species, and native grassland sensitive natural community
7	Tamarin Lane 12 Tamarin Lane	6.54	5	QA, QD (Yes)	No	No	Possible - Potential for occurrence of numerous species based on largely undeveloped condition
8	Indian Valley 1970 Indian Valley Road	7.7	5	QA, UB (Yes)	Possible	Yes - Perennial "Wilson Creek"	Possible - Remote potential for occurrence of several species due to creek and undeveloped areas
9	Manzanita mixed use 150 Shoreline Highway	0.56	3	UB (No)	No	No	Unlikely
10	Grandi Building 11101 State Route 1	2.5	2	UB (Yes)	No	No	Possible - Potential for bat roosts in building(s)

Site #	Site Name & Address	Total Acres	Total Units	Vegetation^a (Protected Trees)	WCA^b	SCA^c	Special-Status Species^d
11	650 N. San Pedro 650 North San Pedro	16.3	12	HG, QA, QB, QZ (Yes)	Yes - FEW	No	Known - Nesting colony for great blue heron and great egret, and native grassland sensitive natural community
12	Golden Gate Seminary Seminary Drive	73.57	60	BA, HG, IC, IG, UB (Yes)	No	No	Possible - Remote potential for occurrence of several species in undeveloped area
13	Oak Hill School 441 Drake Ave	3.87	30	OA, QB, UB (Yes)	No	Yes - Perennial stream	Possible - Remote potential for occurrence of several species due to creek and undeveloped areas
14	Armstrong Nursery 217 & 221 Shoreline Highway	1.77	53	HC, UB (No)	Yes - EMW	Yes - Tidal "Coyote Creek"	Possible - Potential for occurrence of numerous species based on marsh habitat along Coyote Creek
15	Inverness Valley Inn 3275 Sir Francis Drake	26.8	21	PM (Yes)	Possible	Yes - Perennial "Third Valley Creek"	Known - Northern spotted owl territory, coho and steelhead use of creek, and potential for occurrences of other species due to creek and undeveloped areas
16	Grady Ranch Lucas Valley Road	229	240	HG, NX, QA (Yes)	No	Yes - Perennial "Miller Creek"	Known - Reported occurrences of steelhead and plant species, and native grassland sensitive natural community
17	Roosevelt Street 30 Roosevelt	0.18	2	HG, UB (No)	No	No	Unlikely

**Exhibit 3.0-7
Potential Housing Sites for 2014-2022 – Biological Constraints**

Site #	Site Name & Address	Total Acres	Total Units	Vegetation ^a (Protected Trees)	WCA ^b	SCA ^c	Special-Status Species ^d
18	Around Manzanita 150 Shoreline	1.48	45	UB (No)	Yes - HC adjacent to site	No	Unlikely
19	Tam J retail 237 Shoreline Highway	6.8	60	UB (No)	No	No	Unlikely
20	Gateway Shopping Center 190 Donohue Street	20.34	150	UB, WA (No)	Yes - WA and HC	No	Possible - Remote potential for occurrence of several species in undeveloped area
21	Strawberry smaller retail Reed Blvd.	2.39	45	UB (Yes)	No	No	Unlikely
22	Strawberry Village 900, 950 etc. Redwood Highway	10.99	30	UB (No)	No	No	Unlikely
23	Tiburon Eastbound Tiburon Blvd.	1.45	43	UB (Yes)	No	No	Unlikely
24	Tiburon Westbound Knoll Road	1.44	44	UB (Yes)	No	No	Unlikely
25	Tiburon Redwood frontage Central Drive	2.7	81	QZ, UB (Yes)	No	No	Unlikely
26	College of Marin lot 15 139 Kent Avenue	3.2	45	IM, QA, UB (Yes)	Possible	Yes - Intermittent stream unnamed	Possible - Remote potential for occurrence of several species in undeveloped area
27	Kentfield Eastbound Sir Francis Drake Blvd.	5.14	60	HT, UB (Yes)	No	Yes - Perennial "Corte Madera Creek"	Unlikely - Coho and steelhead use of Corte Madera Creek but separated by path and concrete channel bank
28	Kentfield Westbound	2.63	60	UB (Yes)	No	No	Unlikely

Site #	Site Name & Address	Total Acres	Total Units	Vegetation ^a (Protected Trees)	WCA ^b	SCA ^c	Special-Status Species ^d
29	Marin General 250 Bon Air Road	19.7	50	HG, IM, QA, UB (Yes)	No	No	Possible - Remote potential for occurrence of several species in undeveloped area
30	Ross Valley Self Storage 890 College Ave.	1.56	45	UB (Yes)	No	Yes - Perennial "Corte Madera Creek"	Unlikely - Coho and steelhead use of Corte Madera Creek but separated by path and concrete channel bank
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	5.09	60	IM, UB (Yes)	No	No	Unlikely
32	3000 SFD- Sunnyside Growing 3000 Sir Francis Drake	7.74	30	NX, QB, UB (Yes)	Possible	Yes - Perennial "Fairfax Creek"	Known - Coho and steelhead use of Fairfax Creek, and potential for occurrences of other species due to creek, pond and undeveloped areas
33	Railroad Ave. Railroad Ave. and Park St.	0.50	4	HG, UB (Yes)	Possible	No	Unlikely
34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	0.54	6	HG, UB (Yes)	No	No	Unlikely – Coho, steelhead, and Chinook use of San Geronimo Creek but separated by Castro Street
35	Los Ranchitos 99-165 Los Ranchitos Drive	13.81	60	HG, IM, NR,UB (Yes)	Possible	Yes - Perennial stream unnamed	Possible - Remote potential for occurrence of several species due to creek and undeveloped areas
36	Big Rock Deli & Creekside Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	2.8	80	NR, UB (Yes)	No	Yes - Perennial "Miller Creek"	Possible – Coho and steelhead known from adjacent Miller Creek
37	Rotary Field 16 Jeanette Prandi Way	12.83	60	HG, NR (Yes)	Possible	No	Unlikely – Steelhead use of Lucas Creek but separated by Lucas Valley Road

Site #	Site Name & Address	Total Acres	Total Units	Vegetation ^a (Protected Trees)	WCA ^b	SCA ^c	Special-Status Species ^d
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	1.49	44	UB (Yes)	No	No	Unlikely
39	LDS Church Santa Venetia 220 N. San Pedro Road	5.38	30	UB, QA, QB (Yes)	No	No	Unlikely
40	MacPhail School 1565 Vendola Drive	9.52	40	HG, UB, QA (Yes)	Possible	Possible - Intermittent stream	Possible - Remote potential for occurrence of several species due to creek and undeveloped areas
41	Marin Farmers Market 70 & 76 San Pablo Ave.	0.6	18	UB (No)	No	No	Unlikely
42	San Pedro Road San Pedro Road	5.65	30	QB, UB (Yes)	Yes	Possible - Ephemeral drainage 300+ feet in length	Possible - Potential for occurrence of numerous species based on largely undeveloped condition
43	Atherton (Novato RV Park) 1530 Armstrong Avenue	2.68	80	QA, UB (No)	No	No	Unlikely
44	Bear Valley Road 10045 State Route 1	1.25	5	HG, NR, UB, (Yes)	No	Yes - Perennial "Olema Creek"	Known – Coho and steelhead use of Olema Creek, and potential for occurrences of other species due to creek and undeveloped areas
45	Olema Campground Shoreline Highway	9.94	10	AG, UB, HG, PM, WL (Yes)	Yes - FEW	Yes - Perennial "Olema Creek"	Known – Coho and steelhead use of Olema Creek, and potential for occurrences of other species due to creek and undeveloped areas
46	Feed Lot B St. & 6 th St.	0.92	27	HG (No)	No	No	Unlikely

Site #	Site Name & Address	Total Acres	Total Units	Vegetation ^a (Protected Trees)	WCA ^b	SCA ^c	Special-Status Species ^d
47	Pine Cone Diner 60 4 th St.	1.06	4	UB (No)	No	No	Possible - Potential for bat roosts in building(s)
48	Pt. Reyes North 11598 State Route 1	16.89	15	HG, NR, QB (Yes)	No	No	Possible - Potential for occurrence of numerous species based on largely undeveloped condition. Chinook, coho and steelhead use of adjacent Lagunitas Creek
49	Red Barn (green barn) 510 Mesa Road	1.53	10	HG, UB (Yes)	No	No	Possible – Remote potential for occurrence of several species in undeveloped area
50	Kruger Pines	2.45	28	QZ, UB (Yes)	No	No	Unlikely
51	Homestead Terrace	0.64	73	IM, UB (Yes)	No	Yes - Perennial “Reed Creek”	Known – Steelhead use of Reed Creek
52	Venetia Oaks	1.84	55	QA, UB (Yes)	No	No	Possible - - Remote potential for occurrence of several species in undeveloped area

a. Vegetation cover type data taken from Exhibit 1, Marin County Vegetation Community Types, in Section 4.6 Biological Resources of the 2007 *Countywide Plan EIR*, plus conditions observed during field reconnaissance surveys. Cover types: AG (Agriculture), BA (General Barren), HC (Pickleweed-Cord Grass), HG (Annual Grasses and Herbs), HT (Tule-Cattail), IM (Non-native/Ornamental Conifer/Hardwood Mixture), NR (Mixed Riparian Hardwood), NX (Interior Mixed Hardwood), PM (Bishop Pine), QA (Coastal Live Oak), QB (California Bay), QD (Blue Oak), QZ (Eucalyptus), UB (Urban), and WL (Willow riparian scrub).

b. Wetland Conservation Area (WCA) occurrence data based on presence indicator based on data mapping prepared as part of the National Wetland Inventory (NWI), plus conditions observed during field reconnaissance surveys. Program BIO-3.c of the *Countywide Plan* calls for further site assessment when proposed development applications may adversely affect sensitive resources, which would serve to confirm presence or absence, if necessary. Mapped wetland categories include: Estuarine and Marine Wetland (EMW), Freshwater Emergent Wetland (FEW); Freshwater Forested Scrub Wetland (FFSW), Pickleweed-Cord Grass (HC), and Freshwater Pond (WA). Categories include: 1) “No” where no indication of a WCA is present based on County mapping of NWI data or observed field conditions, 2) “Yes” where a known WCA is present based on County mapping of NWI data; and 3) “Possible” where possible jurisdictional wetlands may be present based on observed field conditions but where further review is needed to confirm that conditions are met to qualify as a WCA.

c. Stream Conservation Area (SCA) occurrence data based on County mapping consistent with Program Goal Bio-4 in the *Countywide Plan*, plus conditions observed during field reconnaissance surveys. Program BIO-4.g of the *Countywide Plan* calls for further site assessment when proposed development applications may adversely affect sensitive

resources, which would serve to confirm presence or absence, if necessary. Categories include: 1) “No” where no indication of SCA is present based on County mapping and observed field conditions, 2) “Yes” where a known SCA is present based on County mapping; and 3) “Possible” where ephemeral drainages may be present based on observed

d. Special-Status Species occurrence data based on records of the California Natural Diversity Data Base (CNDDDB). Categories include: 1) “unlikely” where no CNDDDB records have been reported from the site and existing highly disturbed and/or developed conditions make presence unlikely; 2) “possible” where non-specific CNDDDB occurrence records are known from the site vicinity and existing conditions do not preclude possible presence; and 3) “known” where specific CNDDDB records indicate presence of one or more special-status plant or animal species. Presence of a special-status species was affirmative when a CNDDDB occurrence record with an accuracy class of one-quarter mile or less overlapped a Draft Housing Element site. Program BIO-2.a of the *Countywide Plan* calls for further site assessment when proposed development applications may adversely affect sensitive resources, which would serve to confirm presence or absence, if necessary.

Cultural Resources

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
5. Cultural Resources. Would the project:					
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	Discussed in Section 4.11 Cultural Resources, see Impact 4.11-1.	No	No	No	Yes MM 4.11-1
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Discussed in Section 4.11 Cultural Resources, see Impact 4.11-2.	No	No	No	NA
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Discussed in Section 4.11 Cultural Resources, see Impact 4.11-2.	No	No	No	NA
d. Disturb any human remains, including those interred outside the formal cemeteries?	Discussed in Section 4.11 Cultural Resources, see Impact 4.11-2.	No	No	No	NA

Cultural Resources – Setting

The evidence of human occupation and other life forms constitutes Marin County’s cultural resources. This includes unique paleontological resources that provide a study of life existing during prehistoric or geologic time, unique archaeological resources that provide a past study of human life and culture, and historical resources. The environmental setting described in Section 4.11 Cultural Resources of the *2007 Countywide Plan EIR* is essentially unchanged.

Cultural Resources – Discussion

Cultural Resources impacts are analyzed in Section 4.11 *Cultural Resources* of the 2007 *Countywide Plan EIR*. The analysis of environmental topics in the 2007 *Countywide Plan EIR* includes Impact 4.11-1 (*Historical Resources*) and Impact 4.11-2 (*Archeological and Paleontological Resources and Human Remains*).

Section 4.13, Historical and Archaeological Resources, of the Socioeconomic Element of the *Countywide Plan* describes cultural resources (including both archaeological resources and historical buildings and / or structures) in Marin County, and includes goals, policies, and programs to preserve and protect historical and other cultural resources. *Countywide Plan* Map 4-1 shows the location of properties in Marin County that are either on the National Register or are a State Historical Landmark. The St. Vincent's School for Boys on the St. Vincent's is a registered California historic landmark. *Countywide Plan* Goal **HAR-1** (*Historical Resource Protection*) calls for identification and protection of archaeological and historical resource as major contributors to quality of life and community vitality in Marin County. Policies intended to prevent impacts to historical, archaeological, and paleontological resources include Policy **HAR-1.1** (*Preserve historical Resources*) and Policy **HAR-1.3** (*Avoid Impacts to Historical Resources*). Program **HAR-1.a** (*Map Resource Areas*) requires the mapping of archaeological resource areas. Program **HAR-1.d** (*Require Archaeological Surveys for New Development*) requires archaeological surveys for new development when located within archaeological resource areas, **HAR-1.e** (*Require Permanent Protection*) requires feasible avoidance and permanent protection of archaeological resources, and **HAR-1.m** (*Require Design Compatibility*) requires design compatibility for projects that have, or are located adjacent to cultural resources to provide adequate buffers to prevent adverse impacts. Regarding the St. Vincent's / Silveira properties, Policy **SV-4.1** (*Preserve Historic Sites*) preserves historic sites on the property and Policy **SV-4.2** (*Preserve Archaeological Sites*) would protect identified archaeological resources as well as ensure that new archaeological resource discovered during development are protected.

The adoption of 2012 *Draft Housing Element* and implementations of its policies would not directly authorize any new development. Housing Element implementation would, however, facilitate residential development on certain properties at higher densities than anticipated with implementation of the *Countywide Plan*. The 2007 *Countywide Plan EIR* discussion of Impact 4.11-2 (*Archeological and Paleontological Resources and Human Remains*) identifies the St. Vincent's / Silveira properties (housing site 5) as an area with high archaeological sensitivity, where several archaeological sites have been previously identified on the properties.¹⁹

5(a) Impact 4.11-1 (*Historical Resources*) includes a discussion of how new development and redevelopment consistent with the *Countywide Plan* could disturb historical resources due to demolition, destruction, alteration, or structural relocation. Implementation of *Countywide Plan* policies and programs, such as Policy **HAR-1.3** (*Avoid Impacts to Historical Resources*) and Policy **SV-4.1** (*Preserve Historic Sites*), reduce these impacts to a less-than-significant level. New residential development that would occur pursuant to the adoption and implementation of the 2012 *Draft Housing Element* would be required to comply with *Countywide Plan* policies and, therefore, would not result in any new or substantially more severe significant impacts than what was identified in the 2007 *Countywide Plan EIR*. Impact 4.11-1, which was found to be mitigated to less-than-significant levels, would remain less-than-significant with adoption and implementation of the 2012 *Draft Housing Element*.

¹⁹ St. Vincent's / Silveira Constraints Report, City of San Rafael, 1991-1992.

- 5(b) The *2007 Countywide Plan EIR* identified that disturbance to archeological and paleontological resources, and the potential unearthing of human remains resulting from development consistent with implementation of the *Countywide Plan* would be reduced to a less-than-significant impact with implementation of *Countywide Plan* policies and programs intended to preserve and protect these resources. This includes specific policies, Policies **SV.4.1** and **SV-4.2**, that address known resources on the St. Vincent's / Silveira properties (housing site 5). New development pursuant to the implementation of the *2012 Draft Housing Element* would not result in new or substantially more severe significant impacts on archaeological resources.
- 5(c) Development within an area designated on the County's cultural resources sensitivity maps requires an archeological or paleontological survey report. According to Policy **HAR-1.f** (*Involve Appropriate Authorities*) a referral may be sent to the California Historical Resources Information System, Northwest Information Center or other authorities for project review. In the event paleontological resources are discovered, *Countywide Plan* policies that call for preservation and protection would be enforced, such as Policy HAR-1.3 which calls for the protection of cultural resources from potentially damaging activities. With implementation of the *2012 Draft Housing Element*, this previously identified less-than-significant impact would remain less-than-significant.
- 5(d) Although very unlikely due to the scarcity of undocumented human remains, any development pursuant to the policies and programs of the *2012 Draft Housing Element* could potentially result in the disturbance of human remains during construction activities. Each individual development project that undergoes discretionary review is subject to environmental review, which would allow for the mitigation of this unlikely impact. Standard mitigation measures are addressed in State *CEQA Guidelines* 15064.5(e). The potential disturbance of human remains was considered a less-than-significant impact in the *2007 Countywide Plan EIR*. Implementation of the *2012 Draft Housing Element* would not create new or substantially more severe impacts, and this impact would remain less-than-significant.

Cultural Resources - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The *2007 Countywide Plan EIR* identified one mitigation measure to reduce impacts to historical resources to a less-than-significant level. Mitigation Measure 4.11-1 of the *2007 Countywide Plan EIR* was adopted as a part of the *Countywide Plan*.

Mitigation Measure 4.11-1 required Marin County to obtain additional funding for programs **HAR-1.g** (*Create a County Historical Commission*), **HAR1.1** (*Adopt Preservation Guidelines*), and **HAR-1.m** (*Require Design Compatibility*) and to revise the time frame of their implementation to the medium-term or sooner.

Implementation of Mitigation Measure 4.11-1 together with implementation of other *Countywide Plan* policies and programs would reduce impacts anticipated with implementation of the *Countywide Plan* to historical resources (Impact 4.11-1) to a less-than-significant level. The *2007 Countywide Plan EIR* found that Impact 4.11-2 would be a less-than-significant impact. Any impacts associated with development pursuant to implementation of the *2012 Draft Housing Element* would not exceed the severity of impacts anticipated with implementation of the *Countywide Plan*. The *Countywide Plan* establishes policies for the preservation and protection of historical resources, and potential archaeological and paleontological

resources on the St. Vincent's / Silveira properties. These policies would apply to the development of housing with implementation of Housing Element Program 1.c.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to cultural resources would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Cultural Resources - Conclusion

Based on a review of Impact 4.11-1 (*Historic Resources*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would have the same impacts on historic resources as the *Countywide Plan*. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, policies and programs of the *Countywide Plan* would serve to avoid or adequately mitigate potential impacts on historic resources. Furthermore, previously adopted Mitigation Measures 4.11-1 would continue to apply and would reduce impacts on historic resources to a less-than-significant level. There would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to historic resources; therefore, no additional analysis is required.

Based on a review of Impact 4.11-2 (*Archaeological and Paleontological Resources and Human Remains*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any impact on archeological or paleontological resources or on human remains. With implementation of *Countywide Plan* policies and programs, residential development that could occur under the *2012 Draft Housing Element* would have a less-than-significant impact on these cultural resources. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to archaeological and paleontological resources and human remains; therefore, no additional analysis is required.

Geology and Soils

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
6. Geology and Soils. Would the project:					
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Landslides? 	Discussed in Section 4.7 Geology, see Impacts 4.7-1, 4.7-2, 4.7-3, and 4.7-4.	No	No	No	No MM 4.7-1, MM 4.7-2, MM 4.7-3, and MM 4.7-4 would reduce impact, but still found significant unavoidable. No change from CWP EIR.
b. Result in substantial soil erosion or the loss of topsoil?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, see Impacts 4.5-2 and 4.5-4.	No	No	No	Yes MM 4.5-4

<p>c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</p>	<p>Discussed in Section 4.7 Geology, see Impacts 4.7-1, 4.7-2, 4.7-3, 4.7-4 and 4.7-5.</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>No MM 4.7-1, MM 4.7-2, MM 4.7-3, and MM 4.7-4 would reduce impact, but still found significant unavoidable. No change from CWP EIR.</p>
<p>d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</p>	<p>Discussed in Section 4.7 Geology, see Impact 4.7-6.</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>Yes MM 4.7-6</p>
<p>e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?</p>	<p>Discussed in Section 4.7 Geology, see Impact 4.7-7.</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>Yes MM 4.7-7</p>

Geology and Soils – Setting

The geologic setting described in Section 4.7 Geology of the *2007 Countywide Plan EIR*, including information regarding fault rupture zones, seismic ground shaking, liquefaction, and landsliding as assessed for the *2007 Countywide Plan EIR*, are essentially the same today.

Geology and Soils - Discussion

Soil and geology impacts are analyzed in Section 4.7 Geology, and soil erosion impacts are analyzed in Section 4.5 Hydrology, Water Quality, and Flood Hazards of the *2007 Countywide Plan EIR*.

As a part of the assessment of the potential impacts of the *2012 Draft Housing Element* on geology and soils, GIS data available from MarinMap was reviewed and interpreted. The specific data layers pertaining to soils and geologic issues, which are available from the County’s GIS system and which were reviewed for this analysis, are: Alquist-Priolo Zones, Debris Flow Sources, Earthquake Faults, General Geology, Landslides, Liquefaction, Ground Shaking, Soil Type, and Expansive Soils. These data were reviewed to assess the Soils and Geology and land use compatibility of housing sites identified in the *2012 Draft Housing Element*. **Exhibits 3.0-8** and **3.0-9** summarize information on soils and geology data for each housing site.

Section 2.6, Environmental Hazards, of the Natural Systems & Agricultural Element and Section 4.6 Public Safety of the Socioeconomic Element of the *Countywide Plan* contains policies and programs that address hazardous geologic conditions in Marin County, which include seismic ground shaking, seismic-related ground failure, landslides, subsidence and settlement. Policy **EH-1.1** (*Enhance Public Awareness*) informs the public of existing environmental hazard studies, sources of hazard information, and public services available, and Program **EH-2.o** requires updates to Geologic Hazard Maps as new information becomes available. Policy **EH-2.1** (*Avoid Hazard Areas*) requires new development to avoid or minimize the potential of hazards from earthquakes and unstable ground conditions. Policy **EH-2.2** (*Comply with the Alquist-Priolo Act*) requires continued implementation and enforcement of the Alquist-Priolo Earthquake Fault Zoning Act, and Program **EH-2.c** (*Prohibit Structures in Active Fault Traces*) prohibits placement of specified structures intended for human occupancy within 50-feet of an active fault trace. Policy **EH-2.3** (*Ensure Seismic Safety of New Structures*) requires that new building construction adhere to seismic provisions in the most recent version of State and County Codes. Program **EH-2.a** (*Require Geotechnical Reports*) requires geotechnical reports that evaluate site geologic hazard condition, provide mitigation sufficient to reduce risks to acceptable levels, address any potential impacts a project would have on adjacent lands and off-site conditions, meets requirements of other agencies that have jurisdiction for certain land development applications. Program **EH-2.i** (*Reliability of Lifelines and Access (Evacuation) Routes*) reduces the adverse effects of geologic hazards on critical public lifelines and emergency access routes. Program **EH-2.n** (*Post-Earthquake Damage Assessment*) requires damage assessment of buildings and facilities after the occurrence of a damaging earthquake. Program **EH-2.b** (*Require Construction Observation and Certification*) requires that construction work to correct slope instability or mitigate other geologic hazards be supervised and certified by a geotechnical engineer and / or an engineering geologist. Program **EH-2.f** (*Avoid Known Landslide Areas*) requires that new development avoid landslide areas and landslide prone slopes unless appropriate mitigation measures can stabilize the site. Program **EH-2.g** (*Identify Compressible Soil Potential*) requires that development projects on land underlain by compressible materials include site preparation and construction techniques necessary to reduce the risk. Program **EH-2.i** (*Minimize Impacts of Site Alteration*) limits fill, excavation, and other grading activities in areas susceptible to geologic hazard. Policy **PS-3.1** (*Plan Thoroughly for Emergencies*) is intended to ensure that County services and the public are prepared for emergency and disasters. Program **PS-3.f** (*Require Hydrologic Studies*) promotes structural and non-structural earthquake safety and program **PS-3.g** directs appropriate locations for emergency service facilities. Policies **WR-2.3** (*Avoid Erosion and Sedimentation*) and **WR-2.4** (*Design County Facilities to Minimize Pollutant Input*), and Program **WR-2.b** of Section 2.5 Water Resources of the Natural Systems and Agriculture Element minimize soil erosion and promote on-site sediment retention by requiring storm water quality protection guidelines for all development and construction activities.

Countywide Plan Map 2-9 shows the location of seismic shaking amplification hazards, Map 2-10 shows the location of fault hazards, and Map 2-11 shows liquefaction susceptibility hazards.

The 2007 *Countywide Plan EIR* evaluated the overall impacts that would result from implementation of the *Countywide Plan* at a program level. The 2007 *Countywide Plan EIR* did not examine the effects of site specific projects that may occur in the future.

The 2007 *Countywide Plan EIR* did evaluate geologic impacts for four identified Housing Overlay Designation (HOD) sites (Marinwood Shopping Center, Strawberry Shopping Center, Fairfax / Oak Manor site, Marin City Shopping Center) plus the St. Vincent's / Silveira properties and the San Rafael Quarry). Three HOD sites (Marinwood Plaza [housing site 1], Oak Manor [housing site 2], and California Park [housing site 3]) are included in the 2007 through 2004 planning period (see **Exhibit 2.0-4**), plus an additional three HOD sites (Strawberry Village [housing site 21], Gateway Shopping Center [housing site 20] and Marin General [housing site 29]) in the 2014-2022 planning period (see **Exhibit 2.0-14**). Although all six HOD sites are included in the *Countywide Plan* (see *Countywide Plan* Figure 3-3), the California Park and Marin General HOD sites were not explicitly included in the 2007 *Countywide Plan EIR* analysis.

- 6(a) The 2007 *Countywide Plan EIR* analyzes how implementation of the *Countywide Plan* would expose people and structures to adverse effects resulting from the occurrence of geologic hazards in Section 4.7 Geology. This includes Impact 4.7-1 (*Surface Fault Rupture*), Impact 4.7-2 (*Seismic Ground Shaking*), Impact 4.7-3 (*Seismic Related Ground Failure*), and Impact 4.7-4 (*Landsliding*). Ground shaking is the primary cause of earthquake damage to man-made structures. When the ground shakes strongly, buildings can be damaged or destroyed and their occupants may be injured or killed. Seismologists have observed that some areas tend to repeatedly experience stronger seismic shaking than others. This is because the ground under these areas is relatively soft. Typically, soft soils amplify ground shaking. The influence of the underlying soil on the local amplification of earthquake shaking is called the site effect. If an earthquake is strong enough and close enough to cause damage, the damage will usually be more severe on soft soils. **Exhibits 3.0-8** and **3.0-9** provide ratings for the seismic shaking intensity level for each housing site. Mitigation Measures 4.7-1 thru 4.7-4 have become (in part) *Countywide Plan* policies and programs that govern new development, some requiring a combination of hazard avoidance, site preparation to mitigate hazards, and structures capable of withstanding a seismic event, to reduce the impacts of minor to moderate geologic events to a less-than-significant level. However, impacts resulting from the occurrence of a severely hazardous natural geologic disaster, such as a high magnitude seismic event or a landslide triggered by intense rainfall, cannot be reduced to a less-than-significant level. Therefore these impacts were found to be significant unavoidable impacts. **Exhibits 3.0-8** and **3.0-9** lists each of the proposed housing sites and provides information on the seismic shaking intensity level, liquefaction potential, and the presence of landslides and debris flows.

Adoption of the 2012 *Draft Housing Element* and implementation of its policies and programs does not authorize new residential development. However future development could occur on each of the housing sites after adoption of the Housing Element and following environmental review and approval of individual development applications for the respective sites. Future development would be subject to the mitigation measures found in the 2007 *Countywide Plan EIR*, which have become *Countywide Plan* policies and programs. These development projects would individually be subject to *Countywide Plan* policies such as **EH-2.1** (*Avoid Hazard Areas*), **EH-2.3** (*Ensure Seismic Safety of New Structures*), and related *Countywide Plan* programs that require geotechnical reports that include evaluation of hazards (Program **EH-2.a**), require construction observation and certification (Program **EH-2.b**), prohibit structures in active fault traces (Program **EH-2.c**), and require avoidance of known landslide areas (Program **EH-2.f**). Housing sites 44 (Olema Campground) and 45 (Bear Valley Road) and a portion of housing site 46 (Feed Lot) are located within the Alquist-Priolo Earthquake Fault Zone. *Countywide Plan* Program **EH-2.d** prohibits new building sites within the zone unless a geotechnical report prepared by a professional geologist establishes that development would comply with applicable State and County earthquake standards and regulations. Implementation of these *Countywide Plan* programs will ensure that future development projects implement the measures identified in site-specific geotechnical reports and will not be located in close proximity to active fault traces. With implementation of the 2012 *Draft Housing Element*, significant unavoidable impacts resulting from fault rupture, seismic ground shaking, ground failure, and landsliding would remain. Future development on housing sites would be subject to separate environmental review. Compliance with *Countywide Plan* policies and programs would reduce the adverse effects brought on by future development, and no new impacts or increases to the severity of existing impacts would occur.

- 6(b) Soil erosion is discussed in the 2007 *Countywide Plan EIR* with Impact 4.5-2 (*Water Quality – Soil Erosion and Downstream Sedimentation Related to Construction*) and Impact 4.5-4 (*Drainage – On-Site and Downstream Erosion and Sedimentation*). Future development projects would involve construction and grading activities that could cause soil erosion. The analysis in the 2007 *Countywide Plan EIR* found that construction-related soil erosion and downstream sedimentation impacts (Impact 4.5-2) would be less-than-significant. On-site and downstream erosion and sedimentation impacts

(Impact 4.5-4) were found to be significant, but would be reduced to less-than-significant levels with implementation of Mitigation Measure 4.5-4,

Future construction that occurs after adoption of the *2012 Draft Housing Element* would be required to comply with the requirements of the Marin County stormwater ordinances, such as Marin County Code Section 23.18.093 which require a stormwater management plan that incorporates best management practices for any grading and construction permits for new development and redevelopment projects. Grading and construction permits require a stormwater management plan that incorporates best management practices to reduce soil erosion. Furthermore, where required by the nature and extent of any development as determined by the Public Works agency, a project shall implement a stormwater pollution prevention plan (SWPP) that addresses permanent (post construction) measures that control erosion and sedimentation (Marin County Code Section 24.04.627). These permits are regulated by local municipalities. Compliance with these requirements would reduce the adverse effects of soil erosion from construction and grading activities. Therefore the adoption and implementation of the *2012 Draft Housing Element* would not create a new significant impact or increase the severity of a previously identified significant impact.

- 6(c) Thirty-seven housing sites (sites 2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 34, 36, 37, 40, 42, 43, 44, 45, 46, 48, 49, 50, and 51) contain soils with a high or very high liquefaction potential. Liquefaction is the transformation of a granular material from a solid state into a liquefied state because of increased pore-water pressures. Liquefaction and earthquake-induced ground failures, caused by liquefaction of underlying materials, has resulted in significant damage to structures and loss of life during past earthquakes. Liquefaction occurs in areas underlain by loose, saturated and cohesionless sand, silt and gravel. Much of the land adjacent to San Francisco Bay and the major rivers and streams is underlain by unconsolidated deposits that are particularly vulnerable to earthquake shaking and liquefaction of water-saturated granular sediment. Twenty-seven housing sites (sites 5, 6, 7, 11, 12, 13, 15, 16, 20, 21, 22, 23, 24, 25, 29, 31, 34, 35, 37, 38, 39, 40, 41, 42, 43, 50, and 52) have landslides present (see **Exhibits 3.0-8** and **3.0-9**). Slides and earth flows are landslides that can pose serious hazards to property in the hillside terrain of the San Francisco Bay region. They tend to move slowly and thus rarely threaten life directly. When they move -- in response to changes such as increased water content, earthquake shaking, addition of load, or removal of downslope support -- they deform and tilt the ground surface. The result can be destruction of foundations, offset of roads, and breaking of underground pipes within and along the margins of the landslide, as well as overriding of property and structures downslope.

Future residential development that occurs after adoption of the *2012 Draft Housing Element* would require site specific evaluations to assess geologic hazard situations and proposed changes brought on by the development project. At this time no specific project details are known because the Housing Element is not proposing project-specific development on individual sites. However this impact is discussed in the *2007 Countywide Plan EIR* within the analysis of Impact 4.7-1 (*Surface Fault Rupture*), Impact 4.7-2 (*Seismic Ground Shaking*), Impact 4.7-3 (*Seismic Related Ground Failure*), Impact 4.7-4 (*Landsliding*), and Impact 4.7-5 (*Subsidence and Settlement*). Subsidence and settlement impacts would be reduced to less-than-significant levels with implementation of Mitigation Measure 4.7-5, which among other things requires geotechnical reports to identify geologic hazards, mitigation, and construction observance and certification by a State Certified Geologist or a Registered Geotechnical Engineer. As discussed in Environmental Checklist Item 6(a) other impacts would remain significant and unavoidable due to the inability to mitigate adverse effects during a severe geologic occurrence such as a major earthquake. No new circumstances would occur with implementation of the *2012 Draft Housing Element* that would increase the severity of impacts. This previously determined significant unavoidable impact would remain.

- 6(d) Impacts resulting from structures exposed to expansive soils are discussed in the *2007 Countywide Plan EIR* under Impact 4.7-6 (*Expansive Soils*). Expansive soils are naturally prone to large volume changes through the absorption of pore water. The physical manifestation of such moisture change most often is expansion or swelling during the winter and subsequent shrinkage due to drying or desiccation in the summer. This cyclic volume change can exert large forces on structures, causing damage. On hillsides, expansive soils are adversely affected by gravity and cyclically creep downhill. The *2007 Countywide Plan* finds that significant impacts resulting from structures exposed to expansive soils would be reduced to less-than-significant levels with implementation of Mitigation Measure 4.7-6. Fourteen housing sites (housing sites 5, 12, 16, 21, 22, 23, 24, 33, 36, 37, 44, 45, 48, and 50) contain soil units with high expansion potential. If development occurs on these sites then site specific geotechnical reports, mitigation, and construction observation and certification would be necessary as required by *Countywide Plan* policies and programs, such as programs **EH-2.a** (*Require Geotechnical Reports*), **EH-2.b** (*Require Construction Observation and Certification*), and **EH-1.c** (*Improve Soils Information*). Impacts resulting from structures exposed to expansive soils would remain less-than-significant upon implementation of the *2012 Draft Housing Element*.
- 6(e) The *2007 Countywide Plan EIR* discusses septic systems and soil suitability under Impact 4.7-7 (*Septic Suitability of Soils*). Many variables affect the suitability of soils for septic system use, including soil type, topography, soil thickness, percolation rates, and depth to bedrock. An assessment of soils in Marin County for septic tank absorption field suitability indicated there are no *favorable* soils in Marin County and soils contain *moderate* to *severe* limitations.²⁰ Some soils are incapable of supporting septic systems and would result in a significant impact if a new septic system were to be built. *Countywide Plan* Policy **PFS-3.1** (*Reduce Toxins in Wastewater*), Policy **PFS-3.2** (*Promote Alternative Wastewater Systems*) and Programs **PFS-3.c**, **PFS-3.d**, **PFS-3.e**, **WR-2.c**, **WR-2.d**, **WR-2.e**, **WR-2.f**, **WR-2.h**, and **WR-2.i** reduce the adverse effects on water quality resulting from septic systems where soils lack suitability by updating and enforcing septic standards, monitoring installation and maintenance of septic systems, and researching and implementing alternative wastewater disposal systems. Implementation of Mitigation Measure 4.7-7 would reduce this impact to a less-than-significant level by obtaining funding for Program **WR-2.e** (*Continue Providing High-Priority Inspections*). Due to their location outside of a sanitary district, nine housing sites (sites 10, 33, 34, 44, 45, 46, 47, 48, and 49) designated in the *2012 Draft Housing Element* would require a septic system or other alternative wastewater disposal system, where it is not feasible to require annexation into a given sanitary district, because sewer hookups would not be feasible. Upon development of such properties mitigation would be required to reduce impacts to a less-than-significant level. Therefore, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe impacts due to the need for a septic system or other alternative wastewater disposal system.

²⁰ *Soil Survey of Marin County California*, Kashiwagi, J.H., 1985. *Emphasis* added by Nichols • Berman.

Geology – Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The 2007 Countywide Plan EIR identified several mitigation measures to reduce geology and soils impacts. Mitigation Measures 4.7-1(a), 4.7-1(b), 4.7-2, 4.7-3, 4.7-4, 4.7-5, 4.7-6, 4.7-7 and 4.5-4 of the 2007 Countywide Plan EIR were adopted as a part of the Countywide Plan.

Mitigation Measure 4.7-1(a) revised Policy **EH-2.2** (*Comply with the Alquist-Priolo Act*) and Program **EH-2.d** (*Limit Building Sites in Alquist-Priolo Zones*) of the Natural Systems as follows:

Policy EH-2.2 Comply with the Alquist-Priolo Act. *Continue to implement and enforce the Alquist-Priolo Earthquake Fault Zoning Act.*

Program EH-2.d Limit Building Sites in Alquist-Priolo Zones. *Prohibit new building sites in any Alquist-Priolo Earthquake Fault Zone, unless a geotechnical report prepared by a professional geologist establishes that the development will comply with all applicable State and County earthquake standards and regulations.*

Mitigation Measure 4.7-1(b) added a new program to the Natural Systems and Agriculture Element as follows:

Program EH-2.l Reliability of Lifelines and Access (Evacuation) Routes. *In cooperation with utility system providers, emergency management agencies, and others, assist in the development of strategies to reduce adverse effects of geologic hazards, especially fault surface rupture and landslides to critical public lifelines and access (i.e., evacuation) routes in an emergency.*

Mitigation Measure 4.7-1(c) requires continual implementation of County ordinances requiring geological assessment (e.g., Preliminary Soils, Soils Investigation, and Geologic / Geotechnical Reports) for new subdivisions and grading permits to identify the presence of surface fault rupture.

Mitigation Measure 4.7-2(a) revised Policy **EH-2.3** (*Ensure Safety of New Structures*) and Programs **EH-2e** (*Retrofit County Buildings*) of the Natural Systems and Agriculture Element, and **PS-3.f** (*Promote Structural Safety*), and **PS-3.g** (*Locate Emergency Services Facilities Appropriately*) of the Built Environment Element as follows:

Policy EH-2.3 Ensure Seismic Safety of New Structures. *Design and construct all new buildings to be earthquake resistant. The minimum level of design necessary would be in accordance with seismic provisions and criteria contained in the most recent version of the State and County Codes. Construction would require effective oversight and enforcement to ensure adherence to the earthquake design criteria.*

Program EH-2.e Retrofit County Buildings and Critical Facilities. *Identify and remedy any County-owned structures and critical facilities in need of seismic retrofit or other geotechnical / structural improvements, including eliminating any potentially hazardous features, and / or relocating services if necessary.*

Program PS-3.f Promote Structural and Nonstructural Safety. *Provide and inform the public of the available educational guides promoting structural and nonstructural earthquake safety. Encourage natural gas safety and water heater bracing installation of automatic natural gas shutoff*

valves in buildings. Encourage retrofit of older buildings and securing nonstructural elements of a building to prevent the falling or throwing of objects.

Program PS-3.g Locate Emergency Services Facilities Appropriately. Locate and design emergency buildings and vital utilities, communication systems, and other public facilities so that they remain operational during and after an emergency or disaster. Encourage that these structures and facilities are designed to be earthquake proof to ensure continuous operation even during extreme seismic ground shaking.

Mitigation Measure 4.7-2(b) added Program **EH-2.n** To the Natural Systems and Agriculture Element as follows:

Program EH-2.n Post-earthquake Damage Assessment. Undertake immediate damage assessment of essential service buildings and facilities and then other buildings as part of the County's emergency response planning in response to a damaging earthquake.

Mitigation Measure 4.7-2(c) requires funding for the revised Program **EH-2.e** (Retrofit County Buildings and Critical Facilities) and revises the time frame of its implementation to the medium-term or sooner.

Mitigation Measure 4.7-2(d) requires continual implementation of County ordinances to ensure new construction utilizes California Building Code seismic design requirements, seismic shut-off devices, and anchoring of liquid petroleum gas tanks as well as require geological assessment (e.g., Soils Investigation and Geologic / Geotechnical reports) for grading permits to determine the effects of seismic ground shaking on proposed grading.

Mitigation Measure 4.7-3(a) revised Programs **EH-2.a** (*Require Geotechnical Reports*) and **EH-2.b** (*Require Construction Certification*) of the Natural Systems and Agriculture Element as follows:

Program EH-2.a Require Geotechnical Reports. Continue to require any applicant for land division, master plan, development approval, or new construction in a geologic hazard area to submit a geotechnical report prepared by a State-certified Engineering Geologist or a Registered Geotechnical Engineer that:

- Evaluates soil, slope, and other geologic hazard conditions;
- Commits to appropriate and comprehensive mitigation measures sufficient to reduce risks to acceptable levels, including post-construction site monitoring, if applicable;
- Addresses the impact of the project on adjacent lands, and potential impacts of off-site conditions;
- Meets the requirements of other agency regulations with jurisdiction in the hazard area, such as BCDC requirements for the safety of fills consistent with the Bay Plan.

Program EH-2.b Require Construction Observation and Certification. Require any work or construction oversight undertaken to correct slope instability or mitigate other geologic hazard conditions be supervised and certified by a geotechnical engineer and / or an engineering geologist.

Mitigation Measure 4.7-3(b) added a new program to the Natural Systems and Agriculture Element that reads as follows:

Program EH-2.o Geologic Hazard Areas. *Update Geologic Hazard Area maps as updated information becomes available. These maps should be used to determine the need for geologic and geotechnical reports for proposed development or redevelopment.*

Mitigation Measure 4.7-3(c) requires continual implementation of County ordinances requiring geological assessment (e.g., Preliminary Soils, Soils Investigation, and Geologic / Geotechnical reports) for new subdivisions and grading permits to identify hazards associated with seismic-related ground failure.

Mitigation Measure 4.7-4(a) reduces adverse effects from the exposure of people and structures to landslides to a less-than-significant level, the County would adopt and implement revised programs (i.e., Programs **EH-2.a** [*Require Geotechnical Reports*] and **EH-2.b** [*Require Construction Observation and Certification*]) and the new program (i.e., **EH-2.o** [*Geologic Hazard Areas*]) in Mitigation Measure 4.7-3 of Impact 4.7-3 Seismic-Related Ground Failure.

Mitigation Measure 4.7-4(b) requires continued implementation of County ordinances requiring a Stability Report for new construction in specified areas on County slope stability maps, assessment of storm related landslide damage, limits to slope steepness. In addition, continue to implement County ordinances requiring geological assessment (e.g., Preliminary Soils, Soils Investigation, and Geologic / Geotechnical reports) for new subdivisions and grading permits to identify hazards associated with landsliding.

Mitigation Measure 4.7-5(a) reduces adverse effects from the exposure of people and structures to subsidence and settlement to a less-than-significant level, the County would adopt and implement the revised programs (i.e., Programs **EH-2.a** [*Require Geotechnical Reports*] and **EH-2.b** [*Require Construction Observation and Certification*]) and the new program (i.e., **EH-2.o** [*Geologic Hazard Areas*]) in Mitigation Measure 4.7-3 of Impact 4.7-3 Seismic-Related Ground Failure.)

Mitigation Measure 4.7-5(b) revises the timeframe of implementation of Program **EH-2.g** (*Identify Compressible Soil Potential*) to the medium-term or sooner.

Mitigation Measure 4.7-5(c) requires continued implementation of County ordinances that provide guidelines for subsidence evaluations of land that are or could be prone to subsidence as well as requiring geological assessment (e.g., Preliminary Soils, Soils Investigation, and Geologic / Geotechnical reports) for new subdivisions and grading permits to identify hazards associated with subsidence and settlement.

Mitigation Measure 4.7-6(a) reduces adverse effects from the exposure of structures to expansive soils to a less-than-significant level by requiring the County adopt and implement the revised programs (i.e., Programs **EH-2.a** [*Require Geotechnical Reports*] and **EH-2.b** [*Require Construction Observation and Certification*]) and the new program (i.e., **EH-2.o** [*Geologic Hazard Areas*]) in Mitigation Measure 4.7-3 of Impact 4.7-3 Seismic-Related Ground Failure.

Mitigation Measure 4.7-6(b) requires continued implementation of County ordinances that provide soil classification guidelines and design considerations for development in areas of expansive soils as well as requiring geological assessment (e.g., Preliminary Soils, Soils Investigation, and Geologic / Geotechnical reports) for new subdivisions and grading permits to identify hazards associated with expansive soils.

Mitigation Measure 4.7-7 reduces adverse effects from septic system use in unsuitable soils to a less-than-significant level, by obtaining funding for Program **WR-2.e** (*Continue Providing High-Priority Inspections*) in order to continue no-cost inspections of septic systems in high priority areas.

Mitigation Measure 4.5-4 is described in Environmental Checklist Section 9.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to geology and soils would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Geology and Soils Conclusion

Based on a review of Impact 4.5-4 (*Drainage – On-Site and Downstream Erosion and Sedimentation*) Impact 4.7-6 (*Expansive Soils*) and Impact 4.7-7 (*Septic Suitability of Soils*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would have the same impacts on on-site and downstream erosion and sedimentation, expansive soils, and septic suitability of soils as the *Countywide Plan*. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, policies and programs would serve to avoid or adequately mitigate potential impacts due to erosion and sedimentation, expansive soils, and suitability of soils for septic systems. Furthermore, previously adopted Mitigation Measures 4.5-4, 4.7-6, and 4.7-7 would continue to apply and would reduce impacts to a less-than-significant level. There would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to on-site and downstream erosion and sedimentation, expansive soils, and suitability of soils for septic systems; therefore, no additional analysis is required.

Based on a review of Impact 4.5-2 (*Water Quality – Soil Erosion and Downstream Sedimentation Related to Construction*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have a more severe impact. With implementation of *Countywide Plan* policies and programs, residential development that could occur under the *2012 Draft Housing Element* would have a less-than-significant impact due to soil erosion and downstream sedimentation cause by construction activities. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to soil erosion and downstream sedimentation related to construction; therefore, no additional analysis is required.

As stated in the discussion of Impact 4.7-1 (*Surface Fault Rupture*), Impact 4.7-2, (*Seismic Ground Shaking*) Impact 4.7-3 (*Seismic-Related Ground Failure*) and Impact 4.7-4 (*Landsliding*) in the *2007 Countywide Plan EIR*, geologic impacts associated with seismic related events and landsliding due to development that could occur under the *Countywide Plan* would be significant and unavoidable. Previously adopted Mitigation Measures 4.7-1, 4.7-2, 4.7-3, and 4.7-4 would reduce these impacts, but not to a less-than-significant level. This is, in part, because although these measures would reduce adverse effects of minor to moderate events they would not do so for severe events (such as a high magnitude seismic event). Furthermore, with regard to landsliding, Mitigation Measure 4.7-4 would not eliminate source areas of debris flows and landslides in Marin County, especially during prolonged or intense rainfall events. While properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, these would remain significant unavoidable impacts, but would not be substantially more severe than the impacts analyzed in the *2007 Countywide Plan EIR*.

Exhibit 3.0-8
2007-2014 Potential Housing Sites - Geology and Soils Considerations

Site #	Site Name & Address	Total Acres	Total Housing Units	Geologic Units Mapped on Site ^a	Soil Units and Expansion Potential (nil-high) ^b	Seismic Shaking Intensity Level (1-4) ^c	Liquefaction Potential (very low-very high) ^d	Landslides ^e and/or Debris Flow Source Areas ^f
1	Marinwood Plaza 100 Marinwood Ave	4.75	85	Qal	204 Nil	2	Moderate	No
2	Oak Manor 2400 Sir Francis Drive Blvd.	1.58	10	Qal	185, 204 Nil to Moderate	2	High	No
3	California Park Woodland Avenue	1.82	50	afbm	202, 203 Nil	4	Very High	No
4	Old Chevron Station 204 Flamingo Road	0.79	21	afbm	204 Nil	4	Very High	No
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	1,110	221	Afbm, Qal, Kfs	105, 158, 163, 204 Moderate to High	1-4	Very Low-High	Few Landslides Present; Debris Flow Source Areas, five debris flow sources recorded onsite in 1982.
6	Easton Point Paradise Drive	110	43	KJFm, Jfngs, sp	129, 180 Low to Moderate	1-2	Very Low	Landslides Present; Debris Flow Source Areas, eight debris flow sources recorded on site in 1982.
7	Tamarin Lane 12 Tamarin Lane	6.54	5	Kgrn, Qal	109 Moderate	1-2	Very Low	Few Landslides Present
8	Indian Valley 1970 Indian Valley Road	7.7	5	Qal	102 Low	2	Low	No
9	Manzanita mixed use 150 Shoreline Highway	0.56	3	afbm	203 Nil	4	Very High	No
10	Grandi Building 11101 State Route 1	2.5	2	Qt	161 Moderate	2, 4	Low -Very High	No
11	650 N. San Pedro 650 North San Pedro	16.3	12	Kfs	180 Low	1 to 2	Very Low-Very High	Few Landslides Present

Site #	Site Name & Address	Total Acres	Total Housing Units	Geologic Units Mapped on Site ^a	Soil Units and Expansion Potential (nil-high) ^b	Seismic Shaking Intensity Level (1-4) ^c	Liquefaction Potential (very low-very high) ^d	Landslides ^e and/or Debris Flow Source Areas ^f
12	Golden Gate Seminary Seminary Drive	73.57	60	fsr	143, 144, 203 Nil to High	2 to 4	Very Low-Very High	Few to Mostly Landslides Present
13	Oak Hill School 441 Drake Ave	3.87	30	Sp, fsr, Kfgwy	165, 179 Low to Moderate	2	Very Low-Very High	Few Landslides Present
14	Armstrong Nursery 217 & 221 Shoreline Highway	1.77	53	afbm	204 Nil	4	Very High	No
15	Inverness Valley Inn 3275 Sir Francis Drake	26.8	21	Qal, Kgr	168, 169 Low	1 to 3	Very Low -High	Few Landslides Present
16	Grady Ranch Lucas Valley Road	229	240	Qal, sp, Kfs, Jfgs	105, 164, 185 Moderate to High	1 to 2	Very Low-Moderate	Few Landslides Present
17	Roosevelt Street 30 Roosevelt	0.18	2	Qal	204 Nil	2	Moderate	No

Exhibit 3.0-9
Potential Housing Sites for 2014-2022 - Geology and Soils Considerations

Site #	Site Name & Address	Total Acres	Total Housing Units	Geologic Units Mapped on Site ^a	Soil Units and Expansion Potential (nil-high) ^b	Seismic Shaking Intensity Level (1-4) ^c	Liquefaction Potential (very low-very high) ^d	Landslides ^e and/or Debris Flow Source Areas ^f
18	Around Manzanita 150 Shoreline	1.48	45	afbm	203 Nil	4	Very High	No
19	Tam J retail 237 Shoreline Highway	6.8	60	afbm	204 Nil	4	Very High	No
20	Gateway Shopping Center 190 Donohue Street	20.34	150	afbm	165, 203 Nil to Moderate	2, 4	Very High	Few Landslides Present
21	Strawberry smaller retail Reed Blvd.	2.39	45	fsr	143, 204 Nil to High	2	High	Few Landslides Present
22	Strawberry Village 900, 950 Redwood Highway	10.99	30	afbm, fsr	143, 204 Nil to High	2, 4	High	Few Landslides Present
23	Tiburon Eastbound Tiburon Blvd.	1.45	43	fsr	143 High	2	Very Low-High	Few Landslides Present
24	Tiburon Westbound Knoll Road	1.44	44	fsr	143 High	2	Very Low	Few Landslides Present
25	Tiburon Redwood frontage Central Drive	2.7	81	fsr	204 Nil	2	Very Low-Low	Few Landslides Present
26	College of Marin lot 15 139 Kent Avenue	3.3	45	Qal	179, 181, 182, 204 Nil to Low	2 to 3	Very Low-High	No
27	Kentfield Eastbound Sir Francis Drake Blvd.	5.14	60	afbm	182, 204 Nil to Low	2 to 4	High-Very High	No
28	Kentfield Westbound	2.63	60	Qal, Kfs	204 Nil	2	High	No
29	Marin General 250 Bon Air Road	19.7	50	afbm, fsr	181, 204 Nil to Low	2, 4	Very Low-Very High	Few Landslides Present
30	Ross Valley Self Storage 890 College Ave.	1.56	45	Qal, afbm	204 Nil	2 to 4	High-Very High	No

Site #	Site Name & Address	Total Acres	Total Housing Units	Geologic Units Mapped on Site^a	Soil Units and Expansion Potential (nil-high)^b	Seismic Shaking Intensity Level (1-4)^c	Liquefaction Potential (very low-very high)^d	Landslides^e and/or Debris Flow Source Areas^f
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	5.09	60	Kfs	182 Low	2 to 3	Very Low-High	Few Landslides Present
32	3000 SFD- Sunnyside Growing 3000 Sir Francis Drake	7.74	30	Qal, Kfs	180, 204 Nil to Low	1 to 2	High	No
33	Railroad Ave. Railroad Ave. and Park St.	0.50	4	Qal	105 High	2	Moderate	No
34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	0.54	6	Qal	101 Low	2	High	Few Landslides Present
35	Los Ranchitos 99-165 Los Ranchitos Drive	13.81	60	fsr	165, 204 Nil to Moderate	2	Very Low	Few to Mostly Landslides Present
36	Big Rock Deli & Creekside Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	2.8	80	Qal, Kfs	105 High	2	High	No
37	Rotary Field 16 Jeanette Prandi Way	12.83	60	Qal, Kfs	105, 185, 204 Nil to High	2	Very Low-High	Few to Mostly Landslides Present
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	1.49	44	Kfs	204 Nil	2	Moderate	Few Landslides Present
39	LDS Church Santa Venetia 220 N. San Pedro Road	5.38	30	Kfs	180 Low	1	Very Low	Few to Mostly Landslides Present
40	MacPhail School 1565 Vendola Drive	9.52	40	afbm, Kfs	180, 204 Nil to Low	1, 4	Very Low-Very High	Few Landslides Present
41	Marin Farmers Market 70 & 76 San Pablo Ave.	0.6	18	Kfs	204 Nil	2	Moderate	Few Landslides Present
42	San Pedro Road San Pedro Road	5.65	30	Kfs	180, 204 Nil to Low	2	Very Low-Very High	Few Landslides Present
43	Atherton (Novato RV Park) 1530 Armstrong Avenue	2.68	80	Qal, KJfm	179, 204 Nil to Low	2, 4	Very Low-High	Few to Mostly Landslides Present
44	Bear Valley Road 10045 State Route 1	1.25	5	Qal, Kfs	105, 150 High	2, 3	Very Low-Very High	No

Site #	Site Name & Address	Total Acres	Total Housing Units	Geologic Units Mapped on Site ^a	Soil Units and Expansion Potential (nil-high) ^b	Seismic Shaking Intensity Level (1-4) ^c	Liquefaction Potential (very low-very high) ^d	Landslides ^e and/or Debris Flow Source Areas ^f
45	Olema Campground Shoreline Highway	9.94	10	Qal, fsr	105, 162 Moderate to High	2, 3	Very High	No
46	Feed Lot B St. & 6 th St.	0.92	27	Qt	161 Moderate	2, 4	Low-Very High	No
47	Pine Cone Diner 60 4 th St.	1.06	4	Qt	161 Moderate	2	Low	No
48	Pt. Reyes North 11598 State Route 1	16.89	15	Qt, Kfs	114, 148, 149 Low to High	2, 3	Low-Very High	No
49	Red Barn (green barn) 510 Mesa Road	1.53	10	Qt	161 Moderate	2, 4	Low-Very High	No
50	Kruger Pines	2.45	56	fsr	143 High	2	Very Low-High	Few Landslides Present
51	Homestead Terrace	0.64	28	fsr	179, 204 Nil to Low	3	Very Low-High	No
52	Venetia Oaks	1.84	36	Kfs	180, 204 Nil to Low	1 to 2	Very Low-Moderate	Few Landslides Present

- a. Geologic unit symbols specific to a unique bedrock of surficial deposit type mapped by the USGS: Qal – Alluvium, afbm – artificial fill over bay mud, Kfs – Franciscan complex sandstone/shale, KJFm – Franciscan complex, metagraywacke and metamorphic, Jfngs – Franciscan complex meta-greenstone, sp – Coast Range ophiolite serpentine, Kgrn – granite, Qt – alluvial Marine Terrace deposits, fsr – Franciscan complex mélange, kfgwy – Franciscan complex greywacke, Kgr – Granodiorite and granite of Inverness Ridge.
- b. The soil unit numerical designations are defined in the Appendix. These numerical designations refer to a specific soil type mapped by the United States Department of Agriculture, Natural Resources Conservation Service (NRCS). The map units are typically composed of more than one soil type within their boundaries; and, individual profiles for a specific soil type may have varying expansion potentials. For example, a single soil type may have low, medium and high expansion potential layers in its profile. Therefore, the highest expansion potential designation determined for a specific map unit is shown. This provides a conservative and generalized overview of the soil expansion potential in the County. A rating of moderate to high indicates soils that may cause damage to buildings, roads and other structures if they are not designed for expansive soil conditions.
- c. 1- least ground shaking amplification, 2- some ground shaking amplification, 3- greater ground shaking amplification, 4- greatest ground shaking amplification.
- d. The liquefaction susceptibility units were designated on the basis of a criteria matrix that assigns susceptibility values to all combinations of geologic unit (type and age of the deposit) and ground-water level (Knudson et al., 2000). The resulting units reflect the likelihood that loose, saturated, granular sediment is present within 50 feet of the ground surface. The matrix was calibrated using information on past occurrences of liquefaction, previous geologic and geotechnical studies, and limited boring log data. Very high is the most susceptible to liquefaction, while very low is least susceptible.

- e. The map shows a summary distribution of landslides in Marin County and the areas designated mostly landslide will be more susceptible to landslides relative to the areas mapped as few landslides. Mostly Landslide - consists of mapped landslides, intervening areas typically narrower than 1500 feet, and narrow borders around landslides; defined by drawing envelopes around groups of mapped landslides. Few Landslides - contains few, if any, large mapped landslides, but locally contains scattered small landslides and questionably identified larger landslides; defined in most of the region by excluding groups of mapped landslides but defined directly in areas containing the 'Many Landslides' unit by drawing envelopes around areas free of mapped landslides. Many Landslides - consists of mapped landslides and more extensive intervening areas than in 'Mostly Landslide'; defined by excluding areas free of mapped landslides; outer boundaries are quadrangle and County limits to the areas in which this unit was defined.
- f. The data in the map represent the debris-flow sources mapped after the catastrophic storm of January 1982.

Sources:

Geologic units mapped on site: MarinMap Data Viewer. Geology. <http://www.marinmap.org/Geocortex/Essentials/Marinmap/Web/Viewer.aspx?Site=MMDataViewer> (August 2012). The units shown are compiled from four USGS publications and 2004 topographic mapping - Open-File Report (1997) OFR97-456 for Point Reyes and the San Andreas Fault Zone, 1:48000 - Miscellaneous Field Study (2000) MF-2337 for parts of Marin, San Francisco, and Contra Costa counties, 1:75000 - portion of Miscellaneous Field Study (2002) MF-2402 for northernmost Marin and western Sonoma counties, 1:62500 - portion of Scientific Investigations Map (2007) SIM-2956 for eastern Sonoma county, 1:62500.

Soil Units and Expansion Potential: MarinMap Data Viewer. Soil Expansive. <http://www.marinmap.org/Geocortex/Essentials/Marinmap/Web/Viewer.aspx?Site=MMDataViewer> (August 2012).

Seismic shacking intensity level: MarinMap Data Viewer. Shake. <http://www.marinmap.org/Geocortex/Essentials/Marinmap/Web/Viewer.aspx?Site=MMDataViewer> (August 2012).

Liquefaction: MarinMap Data Viewer. Liquefaction. <http://www.marinmap.org/Geocortex/Essentials/Marinmap/Web/Viewer.aspx?Site=MMDataViewer> (August 2012). The source for this data is: Knudson, K.L., Sowers, J.M., Witter, R.C., Wentworth, C.M. and Helley, E.J., Preliminary Maps of Quaternary Deposits and Liquefaction Susceptibility, Nine-County San Francisco Bay Region, California: a Digital Database, Open-File Report 00-44, Online Version 1.0, U.S. Geological Survey, 2000.

Landslides: MarinMap Data Viewer. Landslide. <http://www.marinmap.org/Geocortex/Essentials/Marinmap/Web/Viewer.aspx?Site=MMDataViewer> (August 2012).

Debris Flows: MarinMap Data Viewer. Debris Flow Source. <http://www.marinmap.org/Geocortex/Essentials/Marinmap/Web/Viewer.aspx?Site=MMDataViewer> (August 2012).

Greenhouse Gas Emissions

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
7. Greenhouse Gas Emissions. Would the project:					
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Discussed in Section 4.3 Air Quality, see Impact 4.3-6.	No	No	Yes, but new or more severe significant effects would not occur.	No MM 4.3-6 would reduce impact, but still found significant unavoidable. No change from CWP EIR
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Discussed in Section 4.3 Air Quality, see Impact 4.3-6.	No	No	No	NA

Greenhouse Gas Emissions – Updated Setting

Since certification of the *2007 Countywide Plan EIR* the Bay Area Air Quality Management District (BAAQMD) has adopted updated *CEQA Air Quality Guidelines*.²¹ As a part of the updated CEQA Guidelines a threshold of significance for greenhouse gas (GHG) emissions has been adopted. The BAAQMD thresholds were developed specifically for the Bay Area after considering the latest Bay Area GHG inventory and the effects of AB 32 scoping plan measures that would reduce regional emissions. BAAQMD intends to achieve GHG reductions from new land use developments to close the gap between projected regional emissions with AB 32 scoping plan measures and the AB 32 targets. The BAAQMD applies a GHG emissions efficiency threshold at the plan level of 4.6 metric tons (MT) of CO₂e (carbon dioxide equivalency) per 2020 capita (or service population) per year to projects and specific plans. A threshold of 6.6 MT CO₂e is applied to General Plans that include the entire community land use inventory. However, BAAQMD’s adoption of its 2011 thresholds was called into question by an order issued March 5, 2012, in *California Building Industry Association v. BAAQMD* (Alameda Superior Court Case No. RGI0548693). The order requires BAAQMD to set aside its approval of the thresholds until it has conducted

²¹ *CEQA Air Quality Guidelines*, BAAQMD, May 2011.

environmental review under CEQA. The claims made in the case concerned the environmental impacts of adopting the thresholds, that is, how the thresholds would indirectly affect land use development patterns. Those issues are not relevant to the scientific basis of BAAQMD's analysis of what levels of pollutants should be deemed significant. This analysis considers the science informing the thresholds as being supported by substantial evidence. Scientific information supporting the thresholds was documented in BAAQMD's proposed thresholds of significance analysis.²² The thresholds will not cause any indirect impact in terms of land use development patterns insofar as this project is concerned, because the proposal to construct the project is not influenced by the BAAQMD guidelines. Accordingly, this analysis uses the thresholds and methodologies from BAAQMD's May 2011 *CEQA Air Quality Guidelines* to determine the potential impacts of the project on the existing environment.

ENVIRONMENTAL BACKGROUND

Global temperatures are affected by naturally occurring and anthropogenic (generated by mankind) atmospheric gases, such as water vapor, carbon dioxide, methane, and nitrous oxide.²³ Gases that trap heat in the atmosphere are called greenhouse gases (GHG). Solar radiation enters the earth's atmosphere from space, and a portion of the radiation is absorbed at the surface. The earth emits this radiation back toward space as infrared radiation. Greenhouse gases, which are mostly transparent to incoming solar radiation, are effective in absorbing infrared radiation and redirecting some of this back to the earth's surface. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This is known as the greenhouse effect. The greenhouse effect maintains a habitable climate. Natural processes and human activities emit GHGs. Emissions from human activities, such as electricity production, motor vehicle use and agriculture are elevating the concentration of GHGs in the atmosphere, and are reported to have led to a trend of unnatural warming of the earth's natural climate, known as global warming or climate change. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred because it implies that there are other consequences to the global climate in addition to rising temperatures. Other than water vapor, the GHGs contributing to global warming include the following gases:

- Carbon dioxide, which is primarily a byproduct of fuel combustion.
- Nitrous oxide, which is a byproduct of fuel combustion and also associated with agricultural operations such as fertilization of crops.
- Methane, which is commonly created by off-gassing from agricultural practices (e.g. keeping livestock) and landfill operations.
- Chlorofluorocarbons, which were widely used as refrigerants, propellants and cleaning solvents but their production has been mostly reduced by international treaty.
- Hydrofluorocarbons, which are now used as a substitute for chlorofluorocarbons in refrigeration and cooling.

²² *California Environmental Quality Act Guidelines Update Proposed Thresholds of Significance*, BAAQMD, December 2009.

²³ Summary for Policymakers: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Intergovernmental Panel on Climate Change, 2007.

- Perfluorocarbons and sulfur hexafluoride emissions, which are commonly created by industries such as aluminum production and semiconductor manufacturing.

Gases in the atmosphere can contribute to the greenhouse effect both directly and indirectly. Direct effects occur when the gas itself absorbs outgoing radiation and redirects some of it back to the earth's surface. Indirect effects occur when gases cause chemical reactions that produce other GHGs or prolong the existence of other GHGs. Carbon dioxide (CO₂) is the most abundant GHG. The Global Warming Potential (GWP) concept compares the ability of each GHG to trap heat in the atmosphere in relation to CO₂. Hence, CO₂ has a GWP of 1. The GWP of the GHGs is expressed in terms of CO₂ equivalent (CO₂e). Other GHGs, such as methane and nitrous oxide are commonly found in the atmosphere but at much lower concentrations. However, the GWP for methane is 21, while the GWP for nitrous oxide is 310. Other trace gases, such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), which are halocarbons that contain chlorine, have much greater GWPs than CO₂. Fortunately, these gases are found at much lower concentrations and many are being phased out as a result of global efforts to reduce destruction of stratospheric ozone. In the United States, CO₂ emissions account for about 85 percent of the CO₂e emissions, followed by methane at about eight percent and nitrous oxide at about five percent. For consistency purposes, emissions are typically reported as metric tons (MT) of CO₂e on an annual basis (i.e., metric tons per year of MTPY). Note that one metric ton is equivalent to 1.1 U.S. tons.

An expanding body of scientific research supports the theory that global warming is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally-occurring resources within California could be adversely affected by the global warming trend. Increased precipitation and sea level rise could increase coastal flooding, saltwater intrusion (a particular concern in the low-lying Sacramento–San Joaquin Delta, where potable water delivery pumps could be threatened), and degradation of wetlands. Mass migration and/or loss of plant and animal species also could occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY

California emissions of GHGs or CO₂ equivalent emissions were estimated at 484 million metric tons of equivalent CO₂ emissions (MMTCO₂e) per year, which is about seven percent of the emissions from the entire United States. It is estimated that the United States contributes up to 35 percent of the world's CO₂ equivalent emissions. Transportation is the largest source of GHG emissions in California, contributing about 40 percent of the emissions. Electricity generation is second at over 20 percent. Because California imports electricity during the summer, however, energy sources contribute about 25 percent of GHG emissions during the summer. Industrial activities account for about 20 percent of the State's emissions. On a per-person basis, GHG emissions are lower in California than most other states. Because California is a populous state, however, it is the second largest GHG emitting state in the United States and one of the largest emitters in the world.

CARB staff has estimated that the 1990 statewide emissions level to have been 427 MMTCO₂e. Under a "business as usual" scenario, annual emissions of GHG in California are projected to increase to approximately 596 MMTCO₂e by 2020. Therefore a statewide reduction in GHG emissions of almost 30 percent by 2020 will be required to meet the AB 32 goal.

REGULATORY SETTING

Global climate change resulting from GHG emissions is an emerging environmental concern being raised and discussed at the international, national, and statewide level. At each level, agencies are considering strategies to control emissions of gases that contribute to global climate change.

Federal Laws and Regulations

The U.S. Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements, but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.²⁴

The EPA's endangerment finding covers emissions of six key GHGs - CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆ - that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. Emissions of CO₂, CH₄, N₂O are applicable to the proposed Project).

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more per year are required to submit an annual report.

State Laws and Regulations

a. AB 32, the Global Warming Solutions Act

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in AB 32, the Global Warming Solutions Act, and Executive Order S-03-05.

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-3-05, signed June 1, 2005. Executive Order S-03-05 set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

²⁴ EPA: *Greenhouse Gases Threaten Public Health and the Environment. Science overwhelmingly shows greenhouse gas concentrations at unprecedented levels due to human activity*, United States Environmental Protection Agency (EPA), December 2009, Available online: <http://yosemite.epa.gov/opa/admpress.nsf/0/08D11A451131BCA585257685005BF252>, accessed August 2012.

AB 32 directed the California Air Resources Board (CARB) to adopt discrete early action measures to reduce GHG emissions and outline additional reduction measures to meet the 2020 target. Based on the GHG emissions inventory conducted for the Scoping Plan by CARB, GHG emissions in California by 2020 are anticipated to be approximately 596 million metric tons (MMT). In December 2007, CARB approved a 2020 emissions limit of 427 MMT (471 million tons) for the State. The 2020 target requires a total emissions reduction of 169 MMT, 28.5 percent from the projected emissions of the business-as-usual (BAU) scenario for the year 2020 (i.e. 28.5 percent of 596 MMT).^{25 26}

In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MT per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012. The Climate Action Registry Reporting Online Tool was established through the Climate Action Registry to track GHG emissions. The final Scoping Plan was adopted by CARB on December 11, 2008. Key elements of CARB's GHG reduction plan that are applicable to the proposed Project include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a mix of 33 percent for energy generation from renewable sources;
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS).²⁷

While local government operations were not accounted for in achieving the 2020 emissions reduction, CARB estimates that land use changes implemented by local governments that integrate jobs, housing, and services result in a reduction of 5 MMT, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments play in the successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of today's levels by 2020 to ensure that municipal and community-wide emissions match the State's reduction target. Measures that local governments take to support shifts in land use patterns are anticipated to emphasize compact, low-impact growth over development in greenfields, resulting in fewer VMT.

²⁵ *Climate Change Proposed Scoping Plan, a Framework for Change*, California Air Resources Board (CARB), October 2008.

²⁶ CARB defines BAU in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

²⁷ On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. One of the court's rulings preliminarily enjoins the CARB from enforcing the regulation during the pendency of the litigation. In January 2012, CARB appealed that decision to the Ninth Circuit Court of Appeals (Ninth Circuit), and then moved to stay the injunction pending resolution of the appeal. On April 23, 2012, the Ninth Circuit granted the CARB's motion for a stay of the injunction while it continues to consider CARB's appeal of the lower court's decision.

b. Energy Conservation Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2010 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

The most recent Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) were revised by the California Energy Commission on December 21, 2007. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. While these regulations are now often viewed as “business-as-usual,” they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

On July 17, 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). The green building standards that became mandatory in the 2010 edition of the code established voluntary standards on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011.

c. Renewable Power Requirements

A major component of California’s Renewable Energy Program is the renewable portfolio standard (RPS) established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. CARB has now approved an even higher goal of 33 percent by 2020. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

d. Vehicle Emission Standards/Improved Fuel Economy

Vehicle GHG emission standards were enacted under AB 1493 (Pavley I) and the LCFS. Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020.

Regulation of GHG Emissions on a Regional Level

In 2008, Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 17 regions in California managed by a metropolitan planning organization (MPO). The Metropolitan Transportation Commission (MTC) is the MPO for the nine-county San Francisco Bay Area

region. MTC's targets are a 7 percent reduction from 2005 by 2020, and 15 percent reduction from 2005 by 2035.²⁸

Local Regulations and Policies

Marin County has not adopted a qualified Climate Action Plan. However, the Marin County Community Development Agency (CDA) developed the *Marin County Greenhouse Gas Reduction Plan*²⁹. The Plan inventoried emissions for both incorporated and unincorporated areas of the County and estimated total countywide GHG emissions as approximately 2.6 million tons in 1990 and 3.1 million tons in 2000. The Plan identified a goal to reduce GHG emissions 15-20 percent below 2000 levels by the year 2020 for internal government and 15 percent countywide. The emissions inventory found that Marin County emissions in 2000 were 15 percent above 1990 levels. Hence, meeting the plan's goal would reduce emissions to 1990 levels. This is consistent with the State's AB 32 goals that are the basis of BAAQMD significance thresholds that were identified in their *2011 CEQA Air Quality Guidelines*. The plan includes measures developed by the CDA and identified in the *Countywide Plan* to reduce GHG emissions. These would apply to new development that is part of *2012 Draft Housing Element*.

In addition, Chapter 19.04 of the Marin County Municipal Code and the "Green Building Standards for Compliance for Residential and Commercial Construction and Remodels" (Green Building Standards)³⁰ require energy use reductions for new residential projects over 500 square feet, all new residential remodels and additions, and all new multi-family construction.

Greenhouse Gas Emissions - Discussion

Greenhouse gas emissions impacts are analyzed in Section 4.3 of the *2007 Countywide Plan EIR*.

Greenhouse gases, as well as climate change adaptation, are discussed in Section 2.7, Atmosphere and Climate, of the Natural Systems & Agricultural Element of the *Countywide Plan*. Goals, policies, and programs to minimize contributions to greenhouse gases as well as to adapt to the impacts of climate change are provided.

The *2012 Draft Housing Element* does not propose any changes to land use that would increase population or vehicle travel above those projections evaluated in the *2007 Countywide Plan EIR*. As a result, GHG emissions would not be more severe. As previously discussed, the *2011 BAAQMD CEQA Air Quality Guidelines* include significance thresholds and procedures for analyzing GHG emissions that constitute new information.

7(a) As discussed in Impact 4.3-6 (*Increase in Greenhouse Gas Emissions*), of the *2007 Countywide Plan EIR*, new land uses and development consistent with the *Countywide Plan* would result in an increase in

²⁸ *Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375* (Staff Report), California Air Resources Board (CARB), August 2010.

²⁹ County of Marin Community Development Agency, *Marin County Greenhouse Gas Reduction Plan*, October 2006.

³⁰ *Marin County Building Code*, Marin County Board of Supervisors, June 2010.

greenhouse gas emissions over existing levels. Even with implementation of Mitigation Measures 4.3-6(a) and 4.3-6(b), this impact was found to be a significant unavoidable impact. The GHG emissions due to the implementation of the *2012 Draft Housing Element* were evaluated using the latest procedures included in the BAAQMD CEQA Air Quality Guidelines.

The California Emissions Estimator Model, Version 2011.1.1 (CalEEMod) was used to estimate greenhouse gas emissions from implementation of the *2012 Draft Housing Element* for each housing site listed in **Exhibits 2.0-4** and **2.0-14**. Default rates for energy consumption and vehicle trip rates were assumed in the model. It was assumed that new development would not include wood-burning fireplaces, but that they may include gas-powered fireplaces. Emissions rates associated with electricity consumption were adjusted to account for Pacific Gas & Electric utility's (PG&E) projected 2020 CO₂ intensity rate. This 2020 rate is based, in part, on the requirement of a renewable energy portfolio standard of 33 percent by the year 2020. CalEEMod uses a default rate of 641.3 pounds of CO₂ per megawatt of electricity produced. The derived 2020 rate for PG&E was estimated at 289.85 pounds of CO₂ per megawatt of electricity delivered and is based on the California Public Utilities Commission (CPUC) GHG Calculator.³¹

The per capita metric was derived by dividing total GHG emissions in **Exhibits 3.0-10** and **3.0-11** by the service population. Service population was calculated based on total number of units multiplied by 2.4, the average Marin County Household size listed in the US Census Bureau, 2000. Results of modeling are shown in **Exhibits 3.0-10** and **3.0-11**, where annual per capita emissions range from 3.0 to 3.2 MT CO₂e.

Implementation of the *2012 Draft Housing Element* would not result in new or substantially more severe significant impacts.

- 7(b) The *2012 Draft Housing Element* is consistent with the population and vehicle travel projections used in the *Countywide Plan*. BAAQMD conducted GHG emissions projections on which its CEQA thresholds of significance were based. The projections included assumptions about population growth based on land uses in local plans. Therefore, since the project would result in GHG emissions consistent with the growth assumptions in BAAQMD's analysis, the project would not conflict with BAAQMD's emission reduction approach used in its CEQA program. In addition, the *Countywide Plan* contains policies that would reduce or minimize GHG emissions. Goal **AIR-4** (*Minimization of Contributions to Greenhouse Gases*) would aim to prepare policies that promote efficient management and use of resources in order to minimize greenhouse gas emissions. Programs **AIR-4.a** (*Reduce Greenhouse Gas Emissions Resulting from Energy Use in Buildings*), **AIR-4.b** (*Reduce Greenhouse Gas Emissions Resulting from Transportation*), **AIR-4.c** (*Reduce Methane Emissions Released from Waste Disposal*), **AIR-4.d** (*Reduce Greenhouse Gas Emissions from Agriculture*), and **AIR-4.e** (*Reduce County Government Contributions to Greenhouse Gas Emissions*) would all be aimed at directly reducing greenhouse gas emissions resulting from energy use in buildings, from transportation, from waste disposal, from agriculture, and from government contributions. The *2012 Draft Housing Element* would be subject to the policies in the *Countywide Plan*. This impact would be less-than-significant.

³¹ California Public Utilities Commissions GHG Calculator version 3c, October 2010, Available on-line at http://ethree.com/public_projects/cpuc2.php, accessed August 2012.

Greenhouse Gas Emissions - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The *2007 Countywide Plan EIR* identified two mitigation measures to reduce identified greenhouse gas impacts.

Mitigation Measure 4.3-6(a) revised Program AIR-4.f (*Establish a Climate Change Planning Process*, to state:

Program AIR-4.f Establish a Climate Change Planning Process. *Continue implementation of the approved Marin County Greenhouse Gas Reduction Plan. Integrate this plan into long range and current planning functions and other related agencies. Establish and maintain a process to implement, measure, evaluate, and modify implementing programs, using the Cities for Climate Protection Campaign as a model.*

Mitigation Measure 4.3-6(b) implements proposed State programs to reduce greenhouse gas emissions including the Renewable Portfolio Standards, California Fuel Efficiency (CAFÉ) standards and a carbon cap and trade programs.

Mitigation Measures 4.3-6(a) and 4.3-6(b) were adopted as a part of the *Countywide Plan*, and as appropriate, future housing projects will need to comply with these measures.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to greenhouse gas emissions would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Greenhouse Gas Emissions - Conclusion

As stated in the discussion of Impact 4.3-6 (*Increase in Greenhouse Gas Emissions*) in the *2007 Countywide Plan EIR*, greenhouse gas emissions impacts due to development that could occur under the *Countywide Plan* would be significant and unavoidable due to the increase in greenhouse gas emissions over existing levels. Previously adopted Mitigation Measure 4.6-4 would reduce this impact, but not to a less-than-significant level, because it is uncertain whether greenhouse gas emissions would be reduced countywide to below existing levels within the timeframe of the *Countywide Plan*. While properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Exhibit 3.0-10
2007-2014 Potential Housing Sites - Estimated Greenhouse Gas Emissions

Site #	Site Name & Address	Total Acres	Total Housing Units	Modeled Use	GHG Emissions (Metric Tons)
1	Marinwood Plaza 100 Marinwood Ave	4.75	85	Apartments, Mid-Rise	603.00
2	Oak Manor 2400 Sir Francis Drive Blvd.	1.58	10	Apartments, Mid-Rise	70.95
3	California Park Woodland Avenue	1.82	50	Apartments, Mid-Rise	354.72
4	Old Chevron Station 204 Flamingo Road	0.79	21	Apartments, Mid-Rise	148.97
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	1,110	221	Apartments, Mid-Rise	1,567.82
6	Easton Point Paradise Drive	110	43	Single-Family Housing	509.39
7	Tamarin Lane 12 Tamarin Lane	6.54	5	Single-Family Housing	59.17
8	Indian Valley 1970 Indian Valley Road	7.7	5	Single-Family Housing	59.17
9	Manzanita mixed use 150 Shoreline Highway	0.56	3	Apartments, Mid-Rise	21.29
10	Grandi Building 11101 State Route 1	2.5	2	Apartments, Mid-Rise	14.20
	Second Units Project – 20 second units project per year (Jan 2012 –July 2014)		50	Single-Family Housing	592.30
11	650 N. San Pedro 650 North San Pedro	16.3	12	Single-Family Housing	142.10
12	Golden Gate Seminary Seminary Drive	73.57	60	Apartments, Mid-Rise	425.66
13	Oak Hill School 441 Drake Ave	3.87	30	Apartments, Mid-Rise	212.84
14	Armstrong Nursery 217 & 221 Shoreline Highway	1.77	53	Apartments, Mid-Rise	375.99
15	Inverness Valley Inn 3275 Sir Francis Drake	26.8	21	Apartments, Mid-Rise	148.97

Site #	Site Name & Address	Total Acres	Total Housing Units	Modeled Use	GHG Emissions (Metric Tons)
16	Grady Ranch Lucas Valley Road	229	240	Apartments, Mid-Rise	1,702.59
17	Roosevelt Street 30 Roosevelt	0.18	2	Single-Family Housing	23.76
TOTAL					7,032.89
MT/SP/yr ^a					3.2
<i>Significance Threshold (MT/SP/year)</i>					<i>4.6</i>
<i>Exceeds Significance Threshold?</i>					<i>No</i>

Notes: ^a Service population is calculated based on total number of units multiplied by 2.4, the average Marin County Household size (US Census Bureau, 2000).

Source: Illingworth & Rodkin, Inc., 2012

Exhibit 3.0-11
Potential Housing Sites for 2014-2022 - Estimated Greenhouse Gas Emissions

Site #	Site Name & Address	Total Acres	Total Housing Units	Modeled Use	GHG Emissions (Metric Tons)
18	Around Manzanita 150 Shoreline	1.48	45	Apartments, Mid-Rise	319.24
19	Tam J retail 237 Shoreline Highway	6.8	60	Apartments, Mid-Rise	425.66
20	Gateway Shopping Center 190 Donohue Street	20.34	150	Apartments, Mid-Rise	1,064.13
21	Strawberry smaller retail Reed Blvd.	2.39	45	Apartments, Mid-Rise	319.24
22	Strawberry Village 900, 950 etc. Redwood Highway	10.99	30	Apartments, Mid-Rise	212.84
23	Tiburon Eastbound Tiburon Blvd.	1.45	43	Apartments, Mid-Rise	305.06
24	Tiburon Westbound Knoll Road	1.44	44	Apartments, Mid-Rise	312.14
25	Tiburon Redwood frontage Central Drive	2.7	81	Apartments, Mid-Rise	574.62
26	College of Marin lot 15 139 Kent Avenue	3.2	45	Apartments, Mid-Rise	319.24
27	Kentfield Eastbound Sir Francis Drake Blvd.	5.14	60	Apartments, Mid-Rise	425.66
28	Kentfield Westbound	2.63	60	Apartments, Mid-Rise	425.66
29	Marin General 250 Bon Air Road	19.7	50	Apartments, Mid-Rise	354.72
30	Ross Valley Self Storage 890 College Ave.	1.56	45	Apartments, Mid-Rise	319.24
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	5.09	60	Apartments, Mid-Rise	425.66
32	3000 SFD- Sunnyside Growing 3000 Sir Francis Drake	7.74	30	Apartments, Mid-Rise	212.84
33	Railroad Ave. Railroad Ave. and Park St.	0.50	4	Apartments, Mid-Rise	28.38
34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	0.54	6	Apartments, Mid-Rise	42.57
35	Los Ranchitos 99-165 Los Ranchitos Drive	13.81	60	Single-Family Housing	710.84

Site #	Site Name & Address	Total Acres	Total Housing Units	Modeled Use	GHG Emissions (Metric Tons)
36	Big Rock Deli & Creekside Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	2.8	80	Apartments, Mid-Rise	567.53
37	Rotary Field 16 Jeanette Prandi Way	12.83	60	Apartments, Mid-Rise	425.66
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	1.49	44	Apartments, Mid-Rise	312.14
39	LDS Church Santa Venetia 220 N. San Pedro Road	5.38	30	Apartments, Mid-Rise	212.84
40	MacPhail School 1565 Vendola Drive	9.52	40	Apartments, Mid-Rise	283.77
41	Marin Farmers Market 70 & 76 San Pablo Ave.	0.6	18	Apartments, Mid-Rise	127.70
42	San Pedro Road San Pedro Road	5.65	30	Apartments, Mid-Rise	212.84
43	Atherton (Novato RV Park) 1530 Armstrong Avenue	2.68	80	Mobile Home Park	507.93
44	Bear Valley Road 10045 State Route 1	1.25	5	Apartments, Mid-Rise	35.47
45	Olema Campground Shoreline Highway	9.94	10	Apartments, Mid-Rise	70.95
46	Feed Lot B St. & 6 th St.	0.92	27	Apartments, Mid-Rise	191.55
47	Pine Cone Diner 60 4 th St.	1.06	4	Apartments, Mid-Rise	28.38
48	Pt. Reyes North 11598 State Route 1	16.89	15	Apartments, Mid-Rise	106.42
49	Red Barn (green barn) 510 Mesa Road	1.53	10	Apartments, Mid-Rise	70.95
50	Kruger Pines	2.45	28	Apartments, Mid-Rise	198.64
51	Homestead Terrace	0.64	73	Apartments, Mid-Rise	517.88
52	Venetia Oaks	1.84	55	Apartments, Mid-Rise	390.19
TOTAL					11,058.58
MT/SP/yr^a					3.0
<i>Significance Threshold (MT/SP/year)</i>					4.6
Exceeds Significance Threshold?					No

a. Service population is calculated based on total number of units multiplied by 2.4, the average Marin County Household size (US Census Bureau, 2000).

Source: Illingworth & Rodkin, Inc., 2012

Hazards and Hazardous Materials

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
8. Hazards and Hazardous Materials. Would the project:					
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Discussed in Section 4.10 Public Services, see Impact 4.10-1.	No	No	No	Yes MM 4.10-1
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Discussed in Section 4.10 Public Services, see Impact 4.10-1.	No	No	No	Yes MM 4.10-1
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Discussed in Section 4.10 Public Services, see Impact 4.10-2.	No	No	No	No, MM 4.10-2 would reduce impact, but still found significant unavoidable. No change from the CWP EIR.
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Discussed in Section 4.10 Public Services, see Impact 4.10-3.	No	No	No	Yes MM 4.10-3

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	Not discussed in EIR	No	No	No	NA
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working on the project area?	Not discussed in EIR	No	No	No	NA
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Determined to be less-than-significant in Initial Study	No	No	No	NA
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	Discussed in Section 4.10 Public Services, see Impact 4.10-10.	No	No	No	NA

Hazards and Hazardous Materials – Updated Setting

Issues related to Hazards and Hazardous Materials are discussed in Section 4.10 Public Services of the *2007 Countywide Plan EIR*.

The setting section contained in the *2007 Countywide Plan EIR* is updated as appropriate for this analysis of hazards and hazardous materials regarding implementation of the *2012 Draft Housing Element* and subsequent future housing development.

Exhibit 4.10-1 in the 2007 Countywide Plan EIR shows hazardous waste and substances sites in Marin County. Updated information for 2012 for Marin County is provided in **Exhibit 3.0-12**.

Exhibit 3.0-12
Hazardous Waste and Substance Site List for Marin County

Site Name	Site Type	Status	Address	City	Listed in 2006?
Fair Anselm Center, Inc.	State Response	Active	709 & 711 Center Blvd	Fairfax	No
Stinson Beach Fire Control Station	Military Evaluation	Active		San Rafael	No
Fort McDowell	Military Evaluation	Active	4 Miles North of San Francisco	Angel Island	Yes
Hamilton Army Airfield, North Antenna Field	State Response	Active	U.S. 101; 3 Miles North of Lucas Valley Road	Novato	Yes
Hamilton GSA Lot 7	State Response	Certified / Operation & Maintenance	U.S. 101; 3 Miles North of Lucas Valley Road	Novato	Yes
Hamilton GSA Phase II	State Response	Active – Restricted Use	U.S. 101; 3 Miles North of Lucas Valley Road	Novato	Yes
Novato DOD Housing	State Response	Active – Restricted Use	U.S. 101; 3 Miles North of Lucas Valley Road	Novato	Yes
Drake’s Bay Range MMRP	Military Evaluation	Active	1 Bear Valley Road (Point Reyes National Seashore)	Point Reyes Station	No
Hamilton Army Airfield BRAC	State Response	Active – Land Use Restrictions	U.S. 101; 3 Miles North of Lucas Valley Road	Novato	No
Bolinas Avenue Center	State Response	Active	4&8 Bolinas Avenue and 21 San Anselmo Ave	San Anselmo	No
RAF Vill Fam Hous Annex	Military Evaluation	Active		Novato	No
Fort Barry	State Response	Active	9 miles northwest of San Francisco in the Golden Gate National Recreation Area	Sausalito	No
Frank Val Mil Res	Military Evaluation	Active		San Francisco	No

Source: DTSC's Hazardous Waste and Substances Site List - Site Cleanup (Cortese List), Department of Toxic Substances Control, EnviroStor Database, http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm, information downloaded October 2012.

Five of the sites listed in Exhibit 4.10-1 of the 2007 Countywide Plan EIR remain listed in 2012, four of the sites are no longer listed. The list has expanded from a total of nine entries in 2006 to 12 entries in 2012. As a part of the assessment of the potential impacts of the 2012 Draft Housing Element on hazards and hazardous materials, the Envirostor³² and Geotracker³³ databases were reviewed and interpreted. The

³² Department of Toxic Substance Control, Envirostor database, <http://www.envirostor.dtsc.ca.gov/public>; Accessed July, October 2012.

databases present their files in a similar format, are up-to-date, and allow for a consistent approach to site evaluation. Along with distance from a site the type, quantity, and duration of hazardous materials released all factor into an evaluation of risk potential. **Exhibits 3.0-13 and 3.0-14** summarizes information on hazards and hazardous materials for each housing site.

Marin County has two general aviation airports (Gross Field County Airport and San Rafael Airport) and one heliport (Richardson Bay Heliport). **Exhibits 3.0-15 and 3.0-16** compare the proposed housing sites with the locations of the airports and heliport to evaluate proximity and potential for hazards from the airports and heliport to affect people residing or working within a two-mile radius of each airport or heliport.

Hazards and Hazardous Materials - Discussion

Hazards and hazardous materials impacts are analyzed in Section 4.10 Public Services of the *2007 Countywide Plan EIR*.

Sections 4.6 Public Safety and 4.10 Environmental Justice of the Socioeconomic Element of the *Countywide Plan* describe issues related to hazardous materials and provide policies and programs to reduce the risks to human and environmental health. Policy **PS-4.1** (*Regulate and Reduce Hazardous Material Use*) and Programs **PS-4.a** through **PS-4.i** regulate land development near hazardous waste sites, address emergency planning for incidents involving hazardous material release, regulate the use of hazardous materials, restrict their transport, educate the public about safe use, transport, and disposal of hazardous materials, and promote the use of ecologically friendly products. Policies **EJ-1.1** (*Identify and Target Impacted Areas*), **EJ-1.2** (*Reduce the Effects of Toxins*), **EJ-1.3** (*Avoid New Toxin Sources*), and **EJ-1.4** (*Encourage County Participation in Decision Making*), and Programs **EJ-1.a**, through **EJ-1.i** are intended to ensure a healthy environment for Marin County by identifying impacted communities and abating toxins. The policies and programs require mapping of areas where known toxins exist (Program **EJ-1.b** calls for creation of a brownfield sites map in Marin County), toxin abatement, and collaborate with State and regional agencies to establish appropriate mechanisms to identify and address concerns about toxins. Section 2.6 Environmental Hazards of the Natural Systems & Agriculture Element describes issues regarding wild land fire. Policies **EH-4.2** (*Remove Hazardous Vegetation*), **EH-4.3** (*Adopt and Implement a Fire Management Plan*), **EH-4.5** (*Regulate Land Uses to Protect from Wildland Fires*) reduce wildland fire risks and enhance emergency procedures. *Countywide Plan* Map 2-13 shows the urban-wild land interface zone, Map 2-14 shows the state responsibility areas and Map 2-15 shows fire risk.

The 52 housing sites were compared to the list of Target Hazardous Facilities in Marin County (from the Marin County Hazardous Materials Plan)³⁴. One of the proposed housing sites (housing site 10, the Grandi Building) is located in very close proximity to DeCarli's Petaluma Butane Distributors facility (possibly adjacent to) and the McPhail Fuel Company (within 500 feet).

³³ State Water Resources Control Board, Geotracker database, <http://geotracker.waterboards.ca.gov/>; Accessed July, October, 2012.

³⁴ *Marin County Hazardous Materials Area Plan*, Marin County Public Works, Waste Management Division, August 2011.

The Department of Toxic Substance Control (DTSC) data management system (EnviroStor)³⁵ was accessed to evaluate the potential for the proposed development sites to be situated on or within a zone of impact by hazardous facilities. None of the facilities listed in Marin County appear sufficiently near a proposed development site to have adversely impacted the proposed development site.

The State Water Resources Control Board (SWRCB) data management system (Geotracker)³⁶ was accessed to evaluate the potential for the proposed housing sites to be situated on or within a zone of contaminated soil or groundwater. As indicated in **Exhibits 3.0-13 and 3.0-14**, 16 sites (housing sites 1, 2, 3, 4, 19, 20, 22, 23, 24, 38, 41, 46, 47, 49, 50, 51) may be affected by impacted soil or groundwater based on a review of that database.

Examination of additional lists (active Cease-and-Desist orders, active Cleanup-and-Abatement orders, listed Solid Waste Disposal Sites) did not reveal any sites located near housing site locations.³⁷

Many of the housing sites appear to have been used for commercial or other non-residential activities in the past. *Countywide Plan* programs, such as Programs **PS-4.a** (*Regulate Development Near Waste Sites*), **PS-4.b** (*Regulate Hazardous Material Use*), and **PS-4.i** (*Hazardous Material Disposal*) promote practices to evaluate situations that require site remediation during site development, and to reduce the risk of potential health concerns for future residents. Similarly, for housing sites that have been remediated and are considered “closed” cases, a file review is recommended to verify the remediation endpoint criteria. The remediation endpoint requirements are less stringent for commercial/industrial properties than for residential properties. SWRCB notification of the change in land use may be required, along with a re-evaluation of the site and additional remediation to bring the site up to code for residential standards.

Improvements to the Gness Field Airport are currently under review and a Draft EIR³⁸ is in process for extending the runway length from 3,300 feet to 4,400 feet with a corresponding increase in the Runway Safety Zone at each end. This assessment considers the runway extension as occurring as planned. Housing site 43 is located within two miles of the Marin County Airport.

Twelve of the housing sites (Sites 1, 5, 11, 35 through 42, and 52) are located within approximately two miles of the San Rafael Airport. Based on available information, the proposed development sites appear to be beyond the runway protection zone and there are no indications that they would be in conflict with an airport land use plan.

Thirteen housing sites (housing sites 12, 13, 14, 18 through 25, 50, and 51) are located within two miles of the Richardson Bay heliport. Two of the housing sites (housing sites 14 and 19) are less than one mile from the heliport. Further verification is recommended to ensure that those two proposed developments do not

³⁵ California Department of Toxic Substance Control EnviroStor Database, Available at <http://www.envirostor.dtsc.ca.gov/public/>, accessed August 2012.

³⁶ California Environmental Protection Agency State Water Resources Control Board GeoTracker Database, Available at <https://geotracker.waterboards.ca.gov/>, accessed August 2012.

³⁷ California Environmental Protection Agency Cortese List Data Resources, Available at <http://www.calepa.ca.gov/sitecleanup/corteselist/>, accessed August 2012.

³⁸ *Gness Field Airport DEIR*, Landrum and Brown, December 2011.

conflict with approach / departure path restrictions, as per an existing land use plan or the FAA Heliport Design Advisory Circular (AC150/5390-2C; dated 24 April 2012).

- 8(a) Adoption of the *2012 Draft Housing Element* and implementation of its policies and programs could lead to future housing development where household hazardous materials are routinely used, transported, and disposed. This would not constitute a significant hazard, because *Countywide Plan* policies and programs are in place to educate the public on proper handling and disposal of household hazardous waste. Implementation of the *2012 Draft Housing Element* would not result in a new impact.
- 8(b) The *2007 Countywide Plan* discussion of Impact 4.10-1 (*Release of Hazardous Materials*) addresses hazards resulting from the accidental release of hazardous materials during transport, use, or disposal. *Countywide Plan* implementation increases the use, transport, and disposal of hazardous materials. And with that, increases the potential for accidental release due to accidents, misuse or natural disasters. Adoption of the *2012 Draft Housing Element* could lead to future housing development subsequent to implementation of Housing Element policies and programs. While residential uses are generally regarded as less regulated, policies and programs are in place that reduce this impact to less-than-significant levels. Future housing that occurs subsequent to the *2012 Draft Housing Element* would be subject to existing regulations in place. The Housing Element does not authorize new development; therefore there would be no new impacts and no increase to the severity of impacts with adoption of the *2012 Draft Housing Element*.
- 8(c) The *2007 Countywide Plan EIR* found that hazardous emissions, materials or waste near school sites would be a significant unavoidable impact (Impact 4.10-2 [*Hazardous Emissions, Materials or Waste Near School Sites*]). This impact was found to remain significant and unavoidable because full funding for Program **EJ-1.a** (*Investigate a Possible Nexus*), was not available at the time of *Countywide Plan* adoption. This program is an entirely new program to compare locations with high levels of toxins and sites of businesses with Hazardous Waste Permits to census tract data on income and ethnicity in order to determine where any correlations may exist between toxins and disproportionately impacted communities. The *2012 Draft Housing Element* does not authorize any new activities that would increase emissions of or amount of hazardous waste or materials at near school sites. Any future housing that would occur following adoption of the *2012 Draft Housing Element* would be consistent with the amount and types of residential development anticipated and considered in the analysis of the *2007 Countywide Plan EIR*, and would not be of the nature of activity that increases risks of exposure to hazardous materials. Therefore, adoption and implementation of the *2012 Draft Housing Element* would not increase the severity of this significant and unavoidable cumulative impact.
- 8(d) The *2012 Draft Housing Element* does not designate any housing sites located where there are known hazardous waste sites. As shown in **Exhibit 3.0-13** and **3.0-14**, some housing sites have circumstances where known hazardous materials exist or potentially could be encountered. Each individual development project would be assessed and mitigated to comply with current regulations.

From a review of the links referenced in the website: ³⁹

- None of the proposed housing sites are listed on the Hazardous Waste and Substances list (DTSC's Envirostor database).

³⁹ California Environmental Protection Agency Cortese List Data Resources, *op. cit.*.

- None of the proposed housing sites are listed on the Solid Waste Disposal Sites list.
- None of the proposed housing sites are listed on the Cease-and-Desist Orders / Cleanup-and-Abatement list
- Five proposed housing sites are listed in the State Water Board database (Geotracker) as having onsite historical releases of hazardous materials. They are:

Site 1 - Marinwood Plaza, 100 Marinwood Ave in Marinwood

Site 2 - Oak Manor, 2400 Sir Francis Drake Blvd in Fairfax

Site 4 - Old Chevron Station, 204 Flamingo Road in Tam Junction

Site 22 - Former Mill Valley Imports, 900 Redwood Highway in Strawberry

Site 38 - Civic Center Service Station, 77 San Pablo in Santa Venetia

Each of the sites listed on Geotracker has been issued a No Further Action (NFA) letter from the Water Board. Issuance of the NFA was predicated on the continued use for commercial or industrial purposes however, not conversion to residential land use. Conversion to residential land use could result in the Water Board requesting additional site assessment and/or remediation. Additionally, any application for development on a listed site must comply with the notification requirements of section (f) of the Cortese Act.

In addition to a fuel underground storage tank, the Marinwood Plaza property also has an open file listed in Geotracker for the active, ongoing remediation of a former dry cleaner on the property.

In the event of future development, the discretionary review of grading permits and other development permit applications would trigger county staff review for compliance with factors to mitigate environmental hazards. At that point outside agencies, including the State Water Board and DTSC, would be consulted.⁴⁰

Implementation of the *2012 Draft Housing Element* would not result in a new impact.

- 8(e) The setting section discusses the proximity of housing sites to airports (see **Exhibits 3.0-15** and **3.0-16**). New housing development that occurs after adoption of the *2012 Draft Housing Element* would occur in areas where residential and commercial development already exists. Each housing project would be required to comply with applicable plans relating to land uses within proximity of an airport. For example, the proximity of housing sites 14 and 19 to the Richardson Bay Heliport may require additional review prior to development of these sites. The Housing Element itself would not create new impacts or increase the severity of existing impacts. Therefore no new impact would occur.
- 8(f) The *2012 Draft Housing Element* does not designate housing sites located within proximity to a private airstrip, and would result in no impact in this regard.
- 8(g) The *2007 Countywide Plan EIR* concluded that the *Countywide Plan* would not impair an adopted emergency response plan or emergency evacuation plan; therefore, there would be no impact. The *2012*

⁴⁰ Nichols • Berman personal communication with Cara Zichelli, Assistant Engineer with Marin County Public Works Department, October 2012.

Draft Housing Element does not propose any changes from the previously analyzed *Countywide Plan* that would impair any response or evacuation plan. This impact would remain insignificant.

- 8(h) The 2007 *Countywide Plan EIR* found that implementation of the *Countywide Plan* would have a less-than-significant impact with regard to wildland fire hazards (Impact 4.10-10 [*Wildland Fire Hazards*]). Future housing that is proposed following adoption of the 2012 *Draft Housing Element* would be subject to individual review for fire safety issues in compliance with Program **EH-4.c**. This impact was found to be less-than-significant in the 2007 *Countywide Plan EIR*. Adoption of the 2012 *Draft Housing Element* would not result in new impacts, and this previously identified less-than-significant impact would remain less-than-significant.

Hazards and Hazardous Materials - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The 2007 *Countywide Plan EIR* identified three mitigation measures to reduce identified hazards and hazardous materials. Mitigation Measures 4.10-1, 4.10-2 and 4.10-3 in the 2007 *Countywide Plan EIR* were adopted as a part of the *Countywide Plan*.

Mitigation Measure 4.10-1(a) added a new program to the Socioeconomic Element that reads as follows:

Program PS-4.h Hazardous Materials Education. Continue to educate the public about the safe use, transport, and disposal of hazardous materials and encourage (e.g., through incentive programs) the use of less-toxic substances in residential and County operations.

Mitigation Measure 4.10-1(b) added a new program to the Socioeconomic Element that reads as follows:

Program PS-4.i Hazardous Materials Disposal. Promote, educate, and encourage the public and businesses to properly dispose of any hazardous materials or waste at the Marin County's permanent household hazardous waste collection facility.

Mitigation Measure 4.10-2(a) revised Policy **EJ-1.1** of the Socioeconomic Element to read as follows:

Policy EJ-1.1 Identify and Target Impacted Areas. Use available measurement data to map locations with known toxins and other health-threatening pollutants.

Mitigation Measure 4.10-2(b) requires revised time frame for implementation of Program **PS-4.a** (*Regulate Development Near Waste Sites*), Program **EJ-1.g** (*Deny Pollution-Source Proposals*), and Program **EJ-1.h** (*Require Pollution Analysis*) to the medium-term or sooner.

Mitigation Measure 4.10-3 is the same as Mitigation Measure 4.10-2(a).

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to hazards and hazardous materials would be necessary for adoption and implementation of the 2012 *Draft Housing Element*.

Hazards and Hazardous Materials - Conclusion

Based on a review of Impact 4.10-1 (*Release of Hazardous Materials*) and Impact 4.10-3 (*Development on a Hazardous Waste Site*) in the *2007 Countywide Plan EIR*, and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would have the same impacts on release of hazardous materials and development on a hazardous waste site as the *Countywide Plan*. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, policies and programs of the *Countywide Plan* would serve to avoid or adequately mitigate potential impacts due to release of hazardous materials and development on a hazardous waste site. Furthermore, previously adopted Mitigation Measures 4.10-1 and 4.10-3 would continue to apply, and would reduce impacts due to release of hazardous materials and development on a hazardous waste site to a less-than-significant level. There would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to release of hazardous materials and development on a hazardous waste site; therefore, no additional analysis is required.

Based on a review of Impact 4.10-10 (*Wildland Fire Hazards*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have an impact on wildland fire hazards. With implementation of *Countywide Plan* policies and programs, residential development that could occur under the *2012 Draft housing Element* would have a less-than-significant impact on wildland fire hazards. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to wildland fire hazards because no new sites are proposed that have increased wildland fire hazards and all proposed new development would be subject to individual review for fire safety; therefore, no additional analysis is required.

As stated in the discussion of Impact 4.10-2 (*Hazardous Emissions, Materials or Waste near School Sites*) in the *2007 Countywide Plan EIR*, impacts due to hazardous emissions, materials, or waste near school sites from development that could occur under the *Countywide Plan* would be significant and unavoidable. Previously adopted Mitigation Measure 4.6-4 would reduce this impact, but not to a less-than-significant level, because the Board of Supervisors found that full funding for Program **EJ-1.a** (*Investigate a Possible Nexus*), was not available at the time of *Countywide Plan* adoption and that the mitigation measure was, therefore, not fully feasible. While properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Exhibit 3.0-13
2007-2014 Potential Housing Sites – Hazardous Materials Considerations

Site #	Site Name & Address	Total Acres	Total Housing Units	Potentially Within an Area of Impacted Environmental Quality	Notes
1	Marinwood Plaza 100 Marinwood Ave	4.75	85	Yes	Residual hydrocarbons likely in soil on site. Ongoing remediation on site for chlorinated hydrocarbons could pose a vapor intrusion risk if development occurs before remediation is completed.
2	Oak Manor 2400 Sir Francis Drive Blvd.	1.58	10	Yes	Residual hydrocarbons likely in soil on site.
3	California Park Woodland Avenue	1.82	50	Yes	Potential soil impact from past railroad operations. Potential vapor intrusion from shallow groundwater impacted by hydrocarbons.
4	Old Chevron Station 204 Flamingo Road	0.79	21	Yes	Residual hydrocarbons likely in soil.
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	1,110	221	No	
6	Easton Point Paradise Drive	110	43	No	
7	Tamarin Lane 12 Tamarin Lane	6.54	5	No	
8	Indian Valley 1970 Indian Valley Road	7.7	5	No	
9	Manzanita mixed use 150 Shoreline Highway	0.56	3	No	
10	Grandi Building 11101 State Route 1	2.5	2	Yes	Within 500 feet of two Target Hazard Facilities, McPhail Fuels and DeCarli's Butane Distributors.
11	650 N. San Pedro 650 North San Pedro	16.3	12	No	

Site #	Site Name & Address	Total Acres	Total Housing Units	Potentially Within an Area of Impacted Environmental Quality	Notes
12	Golden Gate Seminary Seminary Drive	73.57	60	No	
13	Oak Hill School 441 Drake Ave	3.87	30	No	
14	Armstrong Nursery 217 & 221 Shoreline Highway	1.77	53	No	
15	Inverness Valley Inn 3275 Sir Francis Drake	26.8	21	No	
16	Grady Ranch Lucas Valley Road	229	240	No	
17	Roosevelt Street 30 Roosevelt	0.18	2	No	

Source: County of Marin Community Development Agency, June 27, 2012.

Exhibit 3.0-14
Potential Housing Sites for 2014-2022 – Hazardous Materials Considerations

Site #	Site Name & Address	Total Acres	Total Housing Units	Potentially Within an Area of Impacted Environmental Quality	Notes
18	Around Manzanita 150 Shoreline	1.48	45	No	
19	Tam J retail 237 Shoreline Highway	6.8	60	Yes	Shallow groundwater impacted from nearby gas station. Case closed, but remnant volatile organic compounds could pose a potential vapor intrusion risk for residential land use.
20	Gateway Shopping Center 190 Donohue Street	20.34	150	Yes	Former dry cleaner at 190 Donohue Street. Case closed, but remnant volatile organic compounds could pose a potential vapor intrusion risk for residential land use.
21	Strawberry smaller retail Reed Blvd.	2.39	45	No	
22	Strawberry Village 900, 950 Redwood Highway	10.99	30	Yes	900 Redwood Highway is location of former Mill Valley Imports, with documented release of waste oil to soil. Case closed, but residual hydrocarbons may be encountered during development.
23	Tiburon Eastbound Tiburon Blvd.	1.45	43	Yes	Active Chevron station nearby (case closed on release of fuel to soil and groundwater), apparent former gas station across street (unknown operating and regulatory history). Residual fuel hydrocarbons pose a vapor intrusion risk for nearby residential land use.
24	Tiburon Westbound Knoll Road	1.44	44	Yes	Same as above.
25	Tiburon Redwood frontage Central Drive	2.7	81	No	

Site #	Site Name & Address	Total Acres	Total Housing Units	Potentially Within an Area of Impacted Environmental Quality	Notes
26	College of Marin lot 15 139 Kent Avenue	3.3	45	No	College of Marin at 835 Kent Ave with an open assessment on file with the Regional Board. Assumed limited extent with little to no impact at 139 Kent.
27	Kentfield Eastbound Sir Francis Drake Blvd.	5.14	60	No	
28	Kentfield Westbound	2.63	60	No	
29	Marin General 250 Bon Air Road	19.7	50	No	Assumes hospital expansion to increase the number of rooms available.
30	Ross Valley Self Storage 890 College Ave.	1.56	45	No	
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	5.09	60	No	
32	3000 SFD- Sunnyside Growing 3000 Sir Francis Drake	7.74	30	No	
33	Railroad Ave. Railroad Ave. and Park St.	0.50	4	No	
34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	0.54	6	No	Open assessment on file with Regional Board for a location within 1,000 ft of Site 34; however a stream between Site 34 and that location is assumed to act as a barrier for potential hydrocarbon migration to the site.

Site #	Site Name & Address	Total Acres	Total Housing Units	Potentially Within an Area of Impacted Environmental Quality	Notes
35	Los Ranchitos 99-165 Los Ranchitos Drive	13.81	60	No	
36	Big Rock Deli & Creekside Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	2.8	80	No	
37	Rotary Field 16 Jeanette Prandi Way	12.83	60	No	
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	1.49	44	Yes	77 San Pablo was the site of a fuel release from an underground tank (UST). A No Further Action (NFA) letter was issued for remediation activities associated with the removal of the UST only and with the understanding that the current land use was commercial/industrial. In the NFA letter, the Regional Board requested prior notification if the land use status was to change to residential.
39	LDS Church Santa Venetia 220 N. San Pedro Road	5.38	30	No	
40	MacPhail School 1565 Vendola Drive	9.52	40	No	
41	Marin Farmers Market 70 & 76 San Pablo Ave.	0.6	18	Yes	See Site 38.
42	San Pedro Road San Pedro Road	5.65	30	No	
43	Atherton (Novato RV Park) 1530 Armstrong Avenue	2.68	80	No	
44	Bear Valley Road 10045 State Route 1	1.25	5	No	

Site #	Site Name & Address	Total Acres	Total Housing Units	Potentially Within an Area of Impacted Environmental Quality	Notes
45	Olema Campground Shoreline Highway	9.94	10	No	
46	Feed Lot B St. & 6 th St.	0.92	27	Yes	Depending on historical operations, past land use may have degraded soil or groundwater quality and the site may require remediation prior to redevelopment for residential land use.
47	Pine Cone Diner 60 4 th St.	1.06	4	Yes	Historical release of hydrocarbons from two nearby sites. Cases closed, but the potential exists for residual hydrocarbons to be encountered during redevelopment for residential land use.
48	Pt. Reyes North 11598 State Route 1	16.89	15	No	
49	Red Barn (green barn) 510 Mesa Road	1.53	10	Yes	Historical release of hydrocarbons from two nearby sites. Cases closed, but an evaluation of vapor intrusion risk is recommended prior to redevelopment for residential use.
50	Kruger Pines	2.45	56	Yes	See Site 23.
51	Homestead Terrace	0.64	28	Yes	One of the four nearby sites that have released fuel to the soil or groundwater is listed by the Regional Board as an open assessment. Additional evaluation would be required to determine if the property undergoing assessment poses a risk to Site 51.
52	Venetia Oaks	1.84	36	No	

Source: County of Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Exhibit 3.0-15
2007-2014 Potential Housing Sites – Relationship to Airports

Site #	Site Name & Address	Total Acres	Total Housing Units	Distance (miles) and Direction from Gness Field	Distance (miles) and Direction from San Rafael Airport	Distance (miles) and Direction from Richardson Bay Heliport	Potentially Within an Airport Influence Area
1	Marinwood Plaza 100 Marinwood Ave	4.75	85	9 South	2 North-Northwest	12 North	No
2	Oak Manor 2400 Sir Francis Drive Blvd.	1.58	10	15 South-Southwest	5 Southwest	11 North-Northwest	No
3	California Park Woodland Avenue	1.82	50	15 South	6 South	7 North	No
4	Old Chevron Station 204 Flamingo Road	0.79	21	21 South	12 South	1 West	Yes (Richardson Bay Heliport)
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	1,110	221	9 South	2 North-Northwest	12 North	No
6	Easton Point Paradise Drive	110	43	23 South-Southeast	15 South-Southeast	5 East	No
7	Tamarin Lane 12 Tamarin Lane	6.54	5	4.5 Southeast	8 North	18 North	No
8	Indian Valley 1970 Indian Valley Road	7.7	5	5 Southwest	10 Northwest	20 North	No
9	Manzanita mixed use 150 Shoreline Highway	0.56	3	20 South	12 South	1.5 West	No

Site #	Site Name & Address	Total Acres	Total Housing Units	Distance (miles) and Direction from Gness Field	Distance (miles) and Direction from San Rafael Airport	Distance (miles) and Direction from Richardson Bay Heliport	Potentially Within an Airport Influence Area
10	Grandi Building 11101 State Route 1	2.5	2	20 West-Southwest	22 West	28 Northwest	No
11	650 N. San Pedro 650 North San Pedro	16.3	12	12 South-Southeast	1 Southeast	11 North	Yes (San Rafael Airport)
12	Golden Gate Seminary Seminary Drive	73.57	60	23 South-Southeast	14 South-Southeast	5 East	No
13	Oak Hill School 441 Drake Ave	3.87	30	21 South	13 South	1 South	Yes (Richardson Bay Heliport)
14	Armstrong Nursery 217 & 221 Shoreline Highway	1.77	53	21 South	12 South	<1 West	Yes (Richardson Bay Heliport)
15	Inverness Valley Inn 3275 Sir Francis Drake	26.8	21	33 South-Southwest	32 West	39 Northwest	No
16	Grady Ranch Lucas Valley Road	229	240	10 Southwest	4 West	14 North-Northwest	No
17	Roosevelt Street 30 Roosevelt	0.18	2	12 South-Southeast	2 South	9 North	No

Source: County of Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Exhibit 3.0-16
Potential Housing Sites for 2014-2022 – Relationship to Airports

Site #	Site Name & Address	Total Acres	Total Housing Units	Distance (miles) and Direction from Gness Field	Distance (miles) and Direction from San Rafael Airport	Distance (miles) and Direction from Richardson Bay Heliport	Potentially Within an Airport Influence Area
18	Around Manzanita 150 Shoreline	1.48	45	20 South	12 South	1.5 West	No
19	Tam J retail 237 Shoreline Highway	6.8	60	20 South	12 South	<1 West	Yes (Richardson Bay Heliport)
20	Gateway Shopping Center 190 Donohue Street	20.34	150	21 South	12 South	~ 1 South-Southeast	Yes (Richardson Bay Heliport)
21	Strawberry smaller retail Reed Blvd.	2.39	45	20 South	11 South	2 North	No
22	Strawberry Village 900, 950 Redwood Highway	10.99	30	19 South	10 South	2 North	No
23	Tiburon Eastbound Tiburon Blvd.	1.45	43	19 South	10 South	2 North	No
24	Tiburon Westbound Knoll Road	1.44	44	19 South	10 South	2 North	No
25	Tiburon Redwood frontage Central Drive	2.7	81	19 South	10 South	2 North	No
26	College of Marin lot 15 139 Kent Avenue	3.3	45	17 South	8 South-Southwest	7 North-Northwest	No
27	Kentfield Eastbound Sir Francis Drake Blvd.	5.14	60	17 South	8 South-Southwest	7 North-Northwest	No
28	Kentfield Westbound	2.63	60	17 South	8 South-Southwest	7 North-Northwest	No
29	Marin General 250 Bon Air Road	19.7	50	17 South	8 South-Southwest	7 North-Northwest	No

30	Ross Valley Self Storage 890 College Ave.	1.56	45	18 South	8 South-Southwest	7 North-Northwest	No
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	5.09	60	18 South	8 South-Southwest	7 North-Northwest	No
32	3000 SFD- Sunnyside Growing 3000 Sir Francis Drake	7.74	30	15 South-Southwest	4 West-Southwest	12 Northwest	No
33	Railroad Ave. Railroad Ave. and Park St.	0.50	4	19 Southwest	8 West-Southwest	15 Northwest	No
34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	0.54	6	21 Southwest	10 West	17 Northwest	No
35	Los Ranchitos 99-165 Los Ranchitos Drive	13.81	60	12 South	~2.5 Southwest	10 North	No
36	Big Rock Deli & Creskide Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	2.8	80	10 South	~2.5 West	12 North	No
37	Rotary Field 16 Jeanette Prandi Way	12.83	60	11 South	~2.75 West	12 North	No
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	1.49	44	12 South	~2 South	9 North	No
39	LDS Church Santa Venetia 220 N. San Pedro Road	5.38	30	12 South	<2 South	10 North	No
40	MacPhail School 1565 Vendola Drive	9.52	40	12 South	<2 East-Southeast	11 North	No
41	Marin Farmers Market 70 & 76 San Pablo Ave.	0.6	18	12 South	~2 South	9 North	No
42	San Pedro Road San Pedro Road	5.65	30	12 South	~2 South	10 North	No

43	Atherton (Novato RV Park) 1530 Armstrong Avenue	2.68	80	2.09 South	8 North	18 North	No
44	Bear Valley Road 10045 State Route 1	1.25	5	20 Southwest	19 West	~26 Northwest	No
45	Olema Campground Shoreline Highway	9.94	10	20 Southwest	19 West	~26 Northwest	No
46	Feed Lot B St. & 6 th St.	0.92	27	19 Southwest	20 West	~28 Northwest	No
47	Pine Cone Diner 60 4 th St.	1.06	4	19 Southwest	20 West	~28 Northwest	No
48	Pt. Reyes North 11598 State Route 1	16.89	15	19 Southwest	20 West	~28 Northwest	No
49	Red Barn (green barn) 510 Mesa Road	1.53	10	19 Southwest	20 West	~28 Northwest	No
50	Kruger Pines	2.45	56	19 South	10 South	2 North	No
51	Homestead Terrace	0.64	28	20 South	11 South	~2.5 Northwest	No
52	Venetia Oaks	1.84	36	12 South	<2 South	10 North	No

Source: County of Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Hydrology, Water Quality and Flooding Hazard

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
9. Hydrology, Water Quality and Flooding Hazard. Would the Project:					
a. Violate any water quality standards or waste discharge requirements?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, see Impact 4.5-1.	No	No	Yes, but new or more severe significant effects would not occur.	Yes MM 4.5-1
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, see Impact 4.5-3.	No	No	No	Yes MM 4.5-3
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, see Impact 4.5-4.	No	No	No	Yes MM 4.5-4

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, see Impacts 4.5-5 and 4.5.6.	No	No	No	Yes MM 4.5-5, MM 4.5-6
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, see Impacts 4.5-5 and 4.5-6.	No	No	No	Yes MM 4.5-5, MM 4.5-6
f. Otherwise substantially degrade water quality?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, see Impact 4.5-1.	No	No	Yes, but new or more severe significant effects would not occur.	Yes MM 4.5-1
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, see Impact 4.5-7.	No	No	Yes, but new or more severe significant effects would not occur.	No, MM 4.5-7 would reduce impact, but still found significant unavoidable. No change from the CWP EIR.

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, see Impacts 4.5-5 and 4.5-6.	No	No	Yes, but new or more significant effects would not occur.	Yes MM 4.5-5, MM 4.4-6
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	Levee or dam failure not discussed in EIR	Yes	Yes	Yes	No
j. Inundation by seiche, tsunami, or mudflow?	Discussed in Section 4.7 Geology, see Impact 4.7-8.	No	No	Yes, but new or more significant effects would not occur.	No MM 4.7-8 would reduce impact, but still found significant unavoidable. No change from the CWP EIR.

Hydrology, Water Quality and Flooding Hazard – Updated Setting

Existing hydrology, water quality, and flood hazard conditions assessed for the *2007 Countywide Plan EIR* remain essentially unchanged. However, the planning and regulatory context for assessing those similar conditions has been altered in three important respects. First, in 2009 the Federal Emergency Management Agency (FEMA) issued an updated Flood Insurance Study (FIS) and associated Flood Insurance Rate Maps (FIRMs) for Unincorporated Marin County and its incorporated cities and towns.⁴¹ Second, in October

⁴¹ *Flood Insurance Study: Marin County, California and Incorporated Areas, Vol. 1 and 2 (Flood Insurance Study Number 06041CV001,2A)*, Federal Emergency Management Agency, May 2009.

2011 the San Francisco Bay Conservation and Development Commission (BCDC) amended its San Francisco Bay Plan to reflect its assessment of potential flooding impacts resulting from climate-induced sea level rise.⁴² Third, amendments to the federal National Pollutant Elimination System (NPDES) Phase II water quality regulations governing General Permits for construction and land disturbance activity for operators of Municipal Small Separate Sewer Systems (MS4s), including Marin County, were adopted by the San Francisco Bay Regional Water Quality Control.

The 2009 FIS and published FIRM for Marin County included some new information and amended mapping of Special Hazard Flood Areas for the 100-year flood based on revised flooding analyses and updated urbanization and channel conditions. It also compiled County and incorporated areas into a single, two-volume FIS document. FEMA is updating its FIS and FIRMs for portions of the City of Mill Valley and Ross Valley.⁴³ Revised FIRMs for these areas are tentatively to be published in spring 2013.

BCDC conducted its assessment of the causes of sea level rise, possible sea level rise scenarios, altered precipitation and storm characteristics, and vulnerabilities of Bay Area communities to flooding in cooperation with the US Geological Survey.⁴⁴ The BCDC assessment contains sub-regional maps of predicted tidal inundation produced by USGS, based on its hydrodynamic modeling of two sea level rise scenarios for San Francisco Bay: 1) a 16-inch rise in sea level by 2050 and 2) a 55-inch sea level rise by 2099.⁴⁵ Both of these scenarios were within the ranges of sea level rise predicted for these time periods by other research agencies, including the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT). The maps included in the BCDC assessment consist of colored overlays of aerial photos depicting the areal coverage of tidal inundation for both of the sea level rise scenarios. For this environmental review, the 2050 interim assessment was used in determining the risk of tidal flooding for a particular project and its incorporated parcels. As noted in the BCDC assessment, the inundation mapping is approximate and occasionally includes low elevation areas without a direct surface connection to the bay margin and its confluent stream channels, or areas protected by levees or other forms of shoreline flood protection. However, the maps do depict the approximate extent of expected sea level rise impacts. An important aspect of the hydrodynamic modeling and subsequent inundation mapping is that while it accounts for storm surge effects (i.e. implicitly via the statistical analysis of average highest monthly tide data), it neglects storm-induced wave action. It also reflects the sole effect of sea level rise on tidal flooding, and, therefore, does not reflect future flooding levels associated with a combination of higher tide levels and coincident watershed flooding.

The NPDES *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ)* adopted by the State Water Resources Control Board in September 2009 (effective date: July 1, 2010) amended the regulatory requirements for controlling stormwater quality at development sites and in receiving waters. Finally, the Marin County Stormwater Pollution Prevention Program (MCSTOPPP) issued its own updated stormwater requirements for new and

⁴² *San Francisco Bay Plan*, Bay Conservation and Development Commission, Oct. 2011.

⁴³ Ross Valley and Mill Valley Study, <http://www.cityofmillvalley.org/Index.aspx?page=1054>, accessed December 2012.

⁴⁴ *Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline* (Staff Report), Bay Conservation and Development Commission, October 2011.

⁴⁵ *Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline* (Staff Report), Bay Conservation and Development Commission, October 2011.

redevelopment projects in Marin County in conformance with its Phase II NPDES permit for municipal separate storm sewer systems (MS4s).⁴⁶ These more stringent stormwater quality requirements are now applied to such projects by both the County of Marin and the majority of its member municipalities.

Exhibit 4.5-1 of Section 4.5 Hydrology, Water Quality and Flooding, of the *2007 Countywide Plan EIR* cited impairment constituents for significant waterbodies in Marin County, as they appeared in the EPA’s 303(d) List of Impaired Waterbodies published in 2002. This listing did not change with the most recent update to the 303(d) List issued in 2010. In response to the requirements of Section 303(d) of the federal Clean Water Act, Region 2 of the San Francisco Bay Regional Water Quality Control Board (RWQCB) has adopted action plans, referred to as Total Maximum Daily Loads (TMDLs). TMDL studies examine sources of listed contaminants and identify mechanisms and pathways for their transit to affected waterbodies. TMDLs also recommend actions to control contaminant sources and reduce contaminant loading in receiving waters. In 2007, a single TMDL had been completed for Marin County drainageways and embayments. The TMDL for the pesticide diazanon and other pesticides was completed for all urban creeks within the SF Bay Region, and was titled Urban Creeks Pesticide Toxicity. **Exhibit 3.0-17** lists additional TMDLs completed since the *2007 Countywide Plan EIR* for waterbodies in Marin County. Following adoption of the TMDL for a listed impairment constituent, the RWQCB amends its San Francisco Bay Basin Plan to set forth a regulatory strategy and compliance targets for the constituent.

Exhibit 3.0-17
Marin County TMDLs Completed Since the 2007 Countywide Plan EIR

Waterbody	Completed TMDL
Richardson Bay	Pathogens
San Francisco Bay	Mercury, PCBs
Tomaes Bay	Mercury, Pathogens
Walker Creek	Mercury

Source: State Water Resources Control Board website: Impaired Water Bodies
http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

The *Countywide Plan’s Flooding Background Report*⁴⁷ discussed the flooding potential related to both levee and dam failures and inundation. Bayside levees and inland stormwater pumping stations protecting developed lands from tidal and coincident tidal and watershed flooding are mapped in Exhibit 1 of the *Flooding Background Report*. The Marin County Department of Public Works (DPW) maintains levees and pumping stations within its jurisdiction. The Town of Corte Madera also maintains stormwater pumping stations to protect urban development from flooding near the mouth of Corte Madera Creek. The Marin Municipal Water District and the North Marin Municipal Water District have conducted dam failure studies for several of its water supply reservoirs. Dam failure inundation mapping for the valley reaches

⁴⁶ *Guidance for Applicants: Stormwater Quality Manual for Development Projects in Marin County- A Low Impact Development Approach*. Prepared by MCSTOPPP in cooperation with Marin County and Marin’s cities and towns, Vers. 6, Miller Creek Feb. 2008; and *Requirements for Development Projects*. Pamphlet prepared by MCSTOPPP, Dec. 2008.

⁴⁷ *Flooding Background Report*, March 2002, Updated November 2005, Appendix 1-J of the *Marin Countywide Plan Update Draft Environmental Impact Report*, January 2007.

downstream of the studied reservoirs is on-file with the Marin County CDA. Exhibit 1 of the *Flooding Background Report* indicates the stream corridors that would be subject to inundation in the event of an upstream dam failure. The mapped stream corridors include segments of Lagunitas Creek, Corte Madera Creek and Novato Creek. Dam inundation zones for these creeks have been compiled as a GIS attribute layer as part of MarinMap.

Hydrology, Water Quality and Flooding Hazard - Discussion

Hydrology, water quality and flooding hazard impacts are analyzed in Section 4.5 Hydrology, Water Quality, and Flood Hazards and Section 4.7 Geology of the *2007 Countywide Plan EIR*.

The *2007 Countywide Plan EIR* evaluated hydrology impacts for four identified Housing Overlay Designation (HOD) sites (Marinwood Shopping Center, Strawberry Shopping Center, Fairfax / Oak Manor site, Marin City Shopping Center) plus the St. Vincent's / Silveira properties and the San Rafael Quarry). Three HOD sites (Marinwood Plaza [housing site 1], Oak Manor [housing site 2], and California Park [housing site 3]) are included in the 2007 through 2004 planning period (see **Exhibit 2.0-4**), plus an additional three HOD sites (Strawberry Village [housing site 21], Gateway Shopping Center [housing site 20] and Marin General [housing site 29]) in the 2014-2022 planning period (see **Exhibit 2.0-14**). Although all six HOD sites are included in the *Countywide Plan* (see *Countywide Plan* Figure 3-3), the California Park and Marin General HOD sites were not explicitly included in the *2007 Countywide Plan EIR* analysis.

This assessment of the potential impacts of the *2012 Draft Housing Element* on hydrology, water quality and flooding hazards was performed using data from the *2007 Countywide Plan EIR*, which was updated where necessary, together with interpretation of GIS data available from MarinMap. Online access to current aerial photography was utilized to confirm the land use and development densities of parcels in the vicinity of the project sites and to assess the level of urbanization in the larger watersheds drained by the sites.

Exhibits 3.0-18 and **3.0-19** summarize the results of the hydrology, water quality and flooding hazards assessment for each of the *2012 Draft Housing Element* housing sites compared to existing conditions. Where significant changes were made in baseline environmental or regulatory conditions since 2007, the updated conditions were also considered in the assessment of the previously identified level of significance for an impact.

A majority of the housing sites in the *2012 Draft Housing Element* would result in higher development densities than those of the present land uses. Higher development densities would result in some proportional increase in the percentage of impervious surfaces on a site. Conversion from existing developed uses to higher density uses (e.g., medium to high density) would increase impervious surfaces by 15 percent, compared to a 40 percent increase for development of a previously undeveloped site. The assessment of impact significance considered three factors: the percentage of the encompassing watershed urbanization, the size of the site/parcels relative to the watershed, and the nature of the storm drain systems that would receive stormwater runoff from the sites. Each of these factors influences the computation of a site peak flow rate, as well as that of the larger watershed. The extent of urbanization includes both the percent of impervious surface cover and the degree to which the site and its surrounding area are currently drained by connected storm drain systems. Thus, new or more intensified development in upper watershed zones not currently served by such storm drain systems would have a more significant impact on peak flow rates than infill development within a highly urbanized area served by a dense, connected storm drain network. Finally, in certain cases, proposed sites upslope of existing small storm drain systems in more mildly sloping portions of a riverine floodplain could exceed the capacity of these systems. Typically, County policies for stormwater management, including low-impact development (LID) design guidelines, minimize this risk. Also, project-

specific review of all projects, including an assessment of downstream storm drain impacts, would be undertaken or reviewed by the County Department of Public Works.

The risk of flooding for each of the 2012 Draft Housing Element sites was evaluated for two conditions: 1) the approximate percentage of mapped parcel area depicted on the FEMA FIRMs published for the Marin County and its member municipalities, and 2) the proximity of the sites to predicted areas of mid-21st century tidal inundation mapped by the US Geological Survey (USGS) in cooperation with the BCDC⁴⁸ and adopted as amendments to its San Francisco Bay Plan.⁴⁹ As noted in the setting section above, the scaling and resolution of the USGS mapping of both the mid-century and end-of-century predicted zones of tidal flooding were such that the assessment was only accurate to a level matching that of the mapping. Therefore, a more refined assessment of site/parcel risk of inundation due to tidal flooding would be required for each of the sites identified as being within, or in close proximity to, the mapped zone.

The assessment of potential impact of housing sites listed in **Exhibits 2.0-4** and **2.0-14** on groundwater recharge was based primarily on the site's location relative to the groundwater basins mapped by San Francisco Bay Regional Water Quality Control Board (Region 2) in the San Francisco Bay Basin Plan.⁵⁰ These groundwater basins provide some level of beneficial use for municipal and/or industrial water supply, water quality maintenance or protection against saltwater intrusion. Within Marin County, the principal groundwater basins are the Novato Valley Basin, the San Rafael Valley Basin, the Ross Valley Basin and the Mill Valley Basin. Potential impact significance was determined based on both the extent of additional impervious surface coverage and the site's location within or outside of GIS-mapped zones of valley floor alluvium. Also, if the site was located within the lower lying, filled former baylands, which are underlain by extensive bay mud deposits, the availability of the groundwater resource and recharge potential was deemed insignificant under any development scenario. Groundwater recharge impacts can have more localized effects, particularly on sensitive plants that depend on seasonal or perennial groundwater, or on special status stream habitat for Coho salmon and California Central Coast steelhead. Such site-specific impacts were considered where the affected site area and the extent of proposed development density were judged significant in relation to the encompassing watershed.

Hydrology, water quality and flooding hazard issues are discussed in sections 2.4, Biological Resources, 2.5, Water Resources, and 2.6, Environmental Hazards, of the Natural Systems & Agricultural Element, of the *Countywide Plan*. Section 2.4 includes land use policies related to the maintenance of natural watershed functions and health, and the implications for biological resources, including sensitive species and important riparian and aquatic habitats. Section 2.5 focuses on policies protecting and enhancing natural watershed hydrologic and geomorphic function, drainage system integrity and water quality, as well as policies promoting water conservation. Section 2.6 describes policies for reducing the risk of flooding due to extreme rainstorms, tides, mudslides and earthquake-induced tsunamis, as well as those stressing

⁴⁸ *Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline* (Staff Report), Bay Conservation and Development Commission, October 2011. BCDC, Oct. 6, 2011.

⁴⁹ *Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline* (Staff Report), Bay Conservation and Development Commission, October 2011. BCDC, Oct. 2011.

⁵⁰ *San Francisco Bay Basin Plan Figure 2-10A: Groundwater Basins: Marin/Sonoma/Napa*, San Francisco Bay Regional Water Quality Control Board, plan amendments adopted through 2011, Available at http://www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml, accessed September 2012.

intergovernmental cooperation in developing strategies and actions to counter the effects of climate change and sea level rise.

Hydrology, water quality and flooding hazard policies presented in the *Countywide Plan* applicable to this project are as follows:

Policy BIO-1.8 *Restrict Use of Herbicides, Insecticides, and Similar Materials.* Encourage the use of integrated pest management and organic practices to manage pests with the least possible hazard to the environment.

Policy BIO-3.1 *Protect Wetlands.* Require development to avoid wetland areas so that the existing wetlands and upland buffers are preserved and opportunities for enhancement are retained (areas within setbacks may contain significant resource values similar to those within wetlands and also provide a transitional protection zone).

Policy BIO-4.1 *Restrict Land Use in Stream Conservation Areas.* A Stream Conservation Area (SCA) is established to protect the active channel, water quality and flood control functions, and associated fish and wildlife habitat values along streams.

Policy BIO-4.2 *Comply with SCA Regulations.* Implement established setback criteria for protection of SCAs through established discretionary permit review processes and/or through adoption of new ordinances.

Policy BIO-4.3 *Manage SCAs Effectively.* Review proposed land divisions in SCAs to allow management of a stream by one property owner to the extent possible.

Policy BIO-4.4 *Promote Natural Stream Channel Function.* Retain and, where possible, restore the hydraulic capacity and natural functions of stream channels in SCAs.

Policy BIO-4.5 *Restore and Stabilize Stream Channels.* Pursue stream restoration and appropriate channel redesign where sufficient right-of-way exists that includes the following: a hydraulic design, a channel plan form, a composite channel cross-section that incorporates low flow and bankfull channels, removal and control of invasive exotic plant species, and biotechnical bank stabilization methods to promote quick establishment of riparian trees and other native vegetation.

Policy BIO-4.7 *Protect Riparian Vegetation.* Retain riparian vegetation for stabilization of streambanks and floodplains, moderating water temperatures, trapping and filtering sediments and other water pollutants, providing wildlife habitat, and aesthetic reasons.

Policy BIO-4.9 *Restore Culverted Streams.* Replace storm drains and culverts in SCAs with natural drainage and flood control channels wherever feasible.

Policy BIO-4.11 *Promote Riparian Protection.* Support agencies, organizations, and programs in Marin County that protect, enhance, and restore riparian areas.

Policy BIO-4.14 *Reduce Road Impacts in SCAs.* Locate new roads and roadfill slopes outside SCAs, except at stream crossings, and consolidate new road crossings wherever possible to minimize disturbance in the SCA.

Policy BIO-4.15 *Reduce Wet Weather Impacts.* Ensure that development work adjacent to and potentially affecting SCAs is not done during the wet weather or when water is flowing through

streams, except for emergency repairs, and that disturbed soils are stabilized and replanted, and areas where woody vegetation has been removed are replanted with suitable species before the beginning of the rainy season.

Policy BIO-4.16 *Regulate Channel and Flow Alteration.* Allow alteration of stream channels or reduction in flow volumes only after completion of environmental review, commitment to appropriate mitigation measures, and issuance of appropriate permits by jurisdictional agencies based on determination of adequate flows necessary to protect fish habitats, water quality, riparian vegetation, natural dynamics of stream functions, groundwater recharge areas, and downstream users.

Policy BIO-4.17 *Continue Collaboration with the Marin Resource Conservation District.* Continue to collaborate with, support, and participate in programs provided by the Marin Resource Conservation District and the Natural Resource Conservation Service to encourage agricultural operators who conduct farm or ranch activities within a Streamside Conservation Area to minimize sedimentation and erosion to enhance habitat values.

Policy BIO-4.18 *Promote the Use of Permeable Surfaces When Hardscapes Are Unavoidable in the SCA and WCA.* Permeable surfaces rather than impermeable surfaces shall be required wherever feasible in the SCA and WCA.

Policy BIO-4.19 *Maintain Channel Stability.* Applicants for development projects may be required to prepare a hydraulic and/or geomorphic assessment of on-site and downstream drainageways that are affected by project area runoff.

Policy BIO-4.20 *Minimize Runoff.* In order to decrease stormwater runoff, the feasibility of developing a peak stormwater management program shall be evaluated to provide mitigation opportunities such as removal of impervious surface or increased stormwater detention in the watershed.

Policy BIO-5.5 *Protect Freshwater Habitats.* Preserve and, where possible, expand habitats associated with freshwater streams, seasonal wetlands, and small former marshes to facilitate the circulation, distribution, and flow of fresh water, and to enhance associated habitat values.

Policy WR-1.1 *Protect Watersheds and Aquifer Recharge.* Give high priority to the protection of watersheds, aquifer-recharge areas, and natural drainage systems in any consideration of land use.

Policy WR-1.2 *Restore and Enhance Watersheds.* Support watershed restoration efforts, coordinate County watershed activities with efforts by other groups, and simplify permit acquisition for watershed restoration and enhancement projects.

Policy WR-1.3 *Improve Infiltration.* Enhance water infiltration throughout watersheds to decrease accelerated runoff rates and enhance groundwater recharge.

Policy WR-1.4 *Protect Upland Vegetation.* Limit development and grazing on steep slopes and ridgelines in order to protect downslope areas from erosion and to ensure that runoff is dispersed adequately to allow for effective infiltration.

Policy WR-2.1 *Reduce Toxic Runoff.* Reduce the volume of urban runoff from pollutants — such as pesticides from homes, golf courses, cleaning agents, swimming pool chemicals, and road oil — and of excess sediments and nutrients from agricultural operations.

Policy WR-2.2 *Reduce Pathogen, Sediment, and Nutrient Levels.* Support programs to maintain pathogen and nutrient levels at or below target levels set by the Regional Water Quality Control Board, including the efforts of ranchers, dairies, agencies, and community groups to address pathogen, sediment, and nutrient management in urban and rural watersheds.

Policy WR-2.3 *Avoid Erosion and Sedimentation.* Minimize soil erosion and discharge of sediments.

Policy WR-2.4 *Design County Facilities to Minimize Pollutant Input.* Design, construct, and maintain County buildings, landscaped areas, roads, bridges, drainages, and other facilities to minimize the volume of toxics, nutrients, sediment, and other pollutants in stormwater flows, and continue to improve road maintenance methods to reduce erosion and sedimentation potential.

Policy WR-2.5 *Take Part in Water Quality Education.* Continue to support local stormwater and community watershed group efforts to inform the public about practices and programs to minimize water pollution.

Policy EH-2.1 *Avoid Hazard Areas.* Require development to avoid or minimize potential hazards from earthquakes and unstable ground conditions. When inundation maps become available, address tsunami wave run-up and inundation when reviewing proposed development along coastal areas of Marin County.

Policy EH-3.1 *Follow a Regulatory Approach.* Utilize regulations instead of flood control projects whenever possible to minimize losses in areas where flooding is inevitable.

Policy EH-3.2 *Retain Natural Conditions.* Ensure that flow capacity is maintained in stream channels and floodplains, and achieve flood control using biotechnical techniques instead of storm drains, culverts, riprap, and other forms of structural stabilization.

Policy EH-3.3 *Monitor Environmental Change.* Consider cumulative impacts to hydrological conditions, including alterations in drainage patterns and the potential for a rise in sea level, when processing development applications in watersheds with flooding or inundation potential.

Numerous programs identified in the *Countywide Plan* are described for the achievement of policy objectives, including several that relate specifically to sea level rise and tidal flooding, dam failure inundation, tsunami and seiche hazards:

Policy EH-3.k *Anticipate Sea Level Rise.* Work with the U.S. Geological Survey, the San Francisco Bay Conservation and Development Commission, and other monitoring agencies to track bay and ocean levels; utilize estimates for mean sea level rise to map potential areas subject to future inundation (including by updating information about watershed channel conditions and levee elevations); and amend the Development Code to incorporate construction standards consistent with the policies of BCDC's Bay Plan for any areas subject to increased flooding from a rise in sea level.

Policy EH-3.m *Maintain Flood Controls.* Continue to implement adopted flood control programs, including limitations on land use activities in flood hazard areas and through repair and maintenance of necessary flood control structures.

Policy EH-3.n *Plan for Sea Level Rise.* Consider sea level rise in future countywide and community plan efforts. Consider revising Marin County Development Code standards for new construction and substantial remodels to limit building or require elevated buildings and infrastructure or other applicable

mitigations in areas that may be threatened by future sea level rise as shown on maps released by the San Francisco Bay Conservation and Development Commission in February 2007.

Policy EH-3.o *Seek Levee Assistance.* Pursue funding for levee reconstruction in those areas threatened by sea level rise, including but not limited to Santa Venetia.

Policy EH-2.p *Implement Stability Report Ordinances* Continue to implement ordinances requiring a Stability Report for new construction in areas specified on County slope stability maps, assessment of storm-related landslide damage, and limits to slope steepness. In addition, continue to implement ordinances requiring geological assessment (e.g. Preliminary Soils, Soils Investigation, and Geologic/Geotechnical reports) for new subdivisions and grading permits to identify hazards associated with landsliding.

Policy EH-3.a *Regulate Development in Flood and Inundation Areas.* Continue to require all improvements in Bayfront, Floodplain, Tidelands, and Coastal High Hazard Zones to be designed to be more resistant to damage from flooding, tsunamis, seiches, and related water-borne debris, and to be located so that buildings and features such as docks, decking, floats, and vessels would be more resistant to damage.

Policy EH-3.b *Update Maps.* Annually review those areas covered by the *Countywide Plan* that are subject to flooding, identified by floodplain mapping prepared by the Federal Emergency Management Agency (FEMA) or Department of Water Resources, and update Figure 2-12 and other General Plan maps accordingly. Periodically review and overlay County zoning maps to show flood, tsunami, and inundation hazard areas along the San Francisco Bay, San Pablo Bay, Tomales Bay, and the Pacific Ocean, the Bayfront Conservation Zone, and the Coastal Zone.

Policy EH-3.i *Update Dam Inundation Maps.* Update and make public inundation maps for dam/reservoir complexes where downstream valleys are inhabited and the risk of loss of life and extensive property damage is significant.

Policy EH-3.j *Review and Inspect Dams.* Maintain permit authority over and continue to oversee construction of dams too small to be regulated by the State or federal government.

9(a & f) Housing sites identified in the *2012 Draft Housing Element* would potentially increase pollutant loading on receiving waters relative to that assessed in the *2007 Countywide Plan EIR*, particularly where new projects or substantive changes in the density of prior-identified projects are proposed. However, the *Countywide Plan* incorporated policies and programs designed to mitigate development impacts on the existing water quality standards, which have not changed significantly since 2007. These include Policy **WR-2.1** (*Reduce Toxic Runoff*), Policy **WR-2.4** (*Design County Facilities to Minimize Pollutant Input*), and Policy **BIO-4.2** (Comply with SCA Regulations). The *2007 Countywide Plan EIR* determined that proposed policies and programs were largely sufficient to mitigate any of the identified impacts on water quality standards. One mitigation measure, Mitigation Measure 4.5-1, was adopted to increase the County's ability to monitor the integrity and maintenance of rural septic systems. Implementation of Mitigation Measure 4.5-1 will reduce impacts on water quality standards to a less-than-significant level.

Properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*. Development of most of these properties would constitute infill development within existing urbanized portions of the principal watersheds identified in **Exhibits 3.0-18** and **3.0-19**. Of the 52 housing sites listed in **Exhibits 3.0-18** and **3.0-19** on 34 of the housing sites (sites 3, 4, 9, 13,

14, 16, 17, 18, 19, 21, 23, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, and 49), development would likely involve an increase in site impervious surface percentage. However, only two of the 34 sites identified above, the Bear Valley Road (housing site 44) and Olema Campground (housing site 45) sites proposed along Olema Creek in West Marin, are located outside of existing urban areas. Because proposed increases in development density at these sites would likely be less than ten percent and their total affected area would be approximately 11.2 acres, or 0.1 percent of the 14.5 square-mile Olema Creek watershed, this represents an insignificant percentage of land use change over the planning period.

Increases in water quality impairment for various heavy metals and other contaminants have been shown to occur primarily when the percentage of watershed urbanization exceeds a threshold value typically ranging from 30 to 40 percent.⁵¹ Because, as explained above, infill development does not significantly change this urbanization percentage within a given watershed, implementation of the housing sites listed in the *2012 Draft Housing Element* would have a less-than-significant impact on water quality and water quality standards. Moreover, the fortified water quality protection measures and low-impact development design practices mandated for residential and commercial construction by the Phase II NPDES requirements for Marin County and other operators of MS4s would ensure that the significance of project impacts on water quality and water quality standards would not increase the severity of the impacts previously identified in the *2007 Countywide Plan EIR*.

- 9(b) Housing sites consistent with the *2012 Draft Housing Element* would result in the construction of additional impervious surfaces (e.g., rooftops, streets, parking lots, etc) and the diversion of groundwater to surface water (i.e., through subsurface drainage features or localized dewatering measures), thereby reducing groundwater recharge to Marin County groundwater basins for which beneficial uses have been established in the San Francisco Bay Basin Plan. In Marin County, development on hillsides may require landslide repairs or construction of retaining walls and associated subsurface drainage features that divert intercepted groundwater to storm drain catch basins. Storm drains then discharge directly to surface drainageways, further minimizing local groundwater recharge.

The local character of groundwater recharge and its spatial distribution within the groundwater basin affect the nature of the potential impact. In this context, reduced groundwater recharge could have adverse effects on Marin County groundwater resources, sensitive plant communities and aquatic habitats. For additional discussion of potential impacts to sensitive plant communities, see Environmental Checklist Section 4 Biological Resources.

While the size of individual *2012 Draft Housing Element* sites for which an increase in development density is proposed typically are very small relative to the sizes of their principal watersheds, several sites located within the Miller Creek, Corte Madera Creek and Lagunitas/Olema Creek watersheds would cumulatively account for larger, if still minor portions of these watersheds. Maintenance of late season baseflows in these creeks is important to the sustainability of established salmon and steelhead populations. Cumulatively, 17.6 acres of the Corte Madera Creek watershed (housing sites 26, 27, 30 and 32), 15.6 acres of the Miller Creek watershed (housing sites 36 and 37), and 4.6 acres of the Lagunitas Creek and Olema Creek watersheds would potentially be affected by reduced groundwater recharge due to the introduction of increased impervious surface cover (i.e. relative to the *2007 Countywide Plan*) in areas mapped as valley floor alluvium. Implementation of LID development guidelines and associated MCSTOPPP guidelines for design of new development and redevelopment

⁵¹ *Water Quality Control Plan--San Francisco Bay (Region 2)*, San Francisco Bay Regional Water Quality Control Board (RWQCB), June 1995.

projects adopted in 2008 and later by Marin County and its member municipalities as part of its Phase II NPDES permit requirements for small MS4s would mitigate impacts to both groundwater recharge and base flows in area creeks, by ensuring a dedicated level of on-site collection and/or infiltration of rainfall and stormwater runoff from site impervious surfaces. In addition, adherence to project setbacks set forth in the *2007 Countywide Plan* as part of the Stream Conservation Area policies would provide undeveloped streamside buffers (see Policy **BIO-4.2** *Comply with SCA Regulations*), particularly in less developed watersheds, wherein additional groundwater recharge would occur. Effective monitoring of permitted projects by the federal, state and County regulatory community, including the implementation of MCSTOPPP's aforementioned LID design guidelines for Phase II NPDES stormwater permit compliance, enforcement of County SCA policies, and the oversight of the RWQCB, the US Army Corps of Engineers (Department of Army Fill permits) and California Department of Fish and Game (Section 1600 Lake and Streambed Alteration program), would ensure that the impacts of *2012 Draft Housing Element* projects on groundwater recharge would not increase the severity of the previously identified significant impact in the *2007 Countywide Plan EIR*.

- 9(c) Development consistent with the *2012 Draft Housing Element* would involve construction and grading activities for residential and commercial development that could result in erosion and downstream sedimentation of Marin County waterways. During construction, vegetative cover that stabilizes the soil would be removed by grading and earthmoving activities. Stormwater would mobilize and transport exposed soil to nearby drainageways. Other pollutants, which may be bound to soil particles (e.g., oil, grease, heavy metals), could be transported as well. Sediment delivery from construction sites is a substantial component of nonpoint source pollution. For a substantial number of the housing sites listed in the *2012 Draft Housing Element*, development was previously identified at lower development densities. In these cases, the proposed project site would have been disturbed to a similar extent. In addition, with increases in impervious surface cover, less disturbed land would remain subject to erosion because less soil would remain exposed. Therefore, there would be no significant increase in the areal extent of disturbance, nor would there be an increase in post-project, disturbed area subject to soil erosion.

Environmental Checklist Item 4(a) identifies nine of the housing sites, or portions thereof, that would be constructed on parcels that fully or partially occupy mapped Stream Conservation Areas (SCAs) in the *Countywide Plan*. Development within these SCAs could cause increased rates of sediment and adsorbed contaminant loading to County streams, including those supporting sensitive biotic habitats. Strict adherence to *Countywide Plan* policies governing creek setbacks in SCAs and inspection of these sites during construction and following installation of erosion control measures should minimize any risk of excessive transfer of fine sediments to these streams. The most recent amendment to the NPDES Phase II *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order No. 2009-0009-DWQ), effective July 2010, mandates effluent monitoring and reporting for pH and turbidity at construction sites. It also establishes numerical limits for effluent turbidity and pH for certain high risk sites. Finally, it mandates training and certification requirements for persons assigned to develop stormwater pollution prevention plans (SWPPPs), to inspect site stormwater protection measures and to monitor stormwater permit compliance. Together, implementation of these more stringent permit requirements would reduce the potential for water quality degradation at these project sites. Thus, with the water quality policies and programs contained in the *2007 Countywide Plan*, which include Policy **BIO-4.2** (*Comply with SCA Regulations*), Policy **BIO-4.11** (*Promote Riparian Protection*), Policy **WR-2.1** (*Reduce Toxic Runoff*), and Policy **BIO-4.15** (*Reduce Wet Weather Impacts*), and implementation of the more stringent water quality protection and monitoring measures adopted by the RWQCB and Marin County in association with the NPDES Phase II permit requirements, these impacts would remain less-than-significant after mitigation.

- 9(d) Land uses and development consistent with the *2012 Draft Housing Element* would result in site increases in development density and impervious surface cover, and an alteration of local drainage patterns and/or the modes of stormwater conveyance that could increase watershed and / or site peak flow rates. Increased peak flow rates could exacerbate hillside or channel / floodplain erosion, channel instability and downstream sedimentation.

Implementation of the *2012 Draft Housing Element* would result in additional impervious surface areas that would reduce the *time of concentration* and increase *peak flow rates* in receiving drainageways.^{52 53} Vegetated areas allow stormwater to infiltrate into the ground and slow the delivery of runoff to channels which reduces runoff volumes and peak flows. In contrast, impervious surfaces (e.g., concrete) dramatically reduce local infiltration rates, while storm drains accelerate the delivery of runoff, which cumulatively leads to an increase in runoff volumes and peak flows. The majority of the *2012 Draft Housing Element* housing sites would introduce higher development densities and associated increases in impervious surface coverage, which could be up to 40 percent in some cases. For each of these cases, the extent of watershed urbanization (i.e. percent occupied by higher density development and urban connected storm drain systems) and watershed position were analyzed. For all projects except for those proposed in the Lagunitas and Olema Creek watersheds, the proposed development sites were located within fully or nearly fully urbanized watersheds. Also, except for two sites along Miller Creek (housing sites 36 and 37) and housing site 51 which drains to an heavily urbanized corridor along Arroyo Corte Madera del Presidio, the bayside sites drained to urban storm drain systems, tidal sloughs or embayments (e.g. lower Gallinas Creek, Richardson Bay) or concrete lined segments of major creeks (e.g. Corte Madera Creek).

For these bayside sites, due to their infill development character, none of the sites that would have significant increases in development density would cause a discernible increase in watershed peak flows. Several of the housing sites proposed within the Lagunitas and Olema Creek watersheds are infill sites within developed areas in and around Pt. Reyes Station. Housing sites 44, 45, and 48 lie outside of significant development clusters. However, the *2012 Draft Housing Element* specifies a reduction in development density at the largest of the three sites. For the remaining sites (housing sites 44 and 45) the increase in impervious area coverage would range from seven to eight percent. Implementation of MSCTOPPP design guidelines for LID would have its greatest impact on the more frequent flows (two-year peak flows or less) that are responsible for shaping the geomorphically functional channel. Maintaining these lower magnitude flood discharges at near pre-*2012 Draft Housing Element* levels would minimize any tendencies toward channel instability. In conjunction with the aforementioned SCA setback policies, MCSTOPPP's LID design guidelines for new and redevelopment projects, these relatively minor increases in impervious surface area would have an insignificant effect on watershed peak flow rates, erosion and channel stability in Olema Creek. Note that anticipated increases in peak flow rates for several sites could result in local impacts to existing storm drainage facilities (as described in Impact 4.5-5 [*Stormwater Drainage System Capacities*] in the *2007 Countywide Plan EIR*). These impacts would remain less-than-significant after mitigation.

⁵² Time of concentration is the time it takes for a drop of water to travel from the furthest part of a watershed to the point at which flow rates are being calculated.

⁵³ Peak flow rate is the highest discharge associated with a particular rainstorm, and is registered as the peak of the flood hydrograph for that rainfall event.

- 9(e) Implementation of the *2012 Draft Housing Element* would increase site peak flow rates and related erosion and sedimentation could exceed the capacities of receiving drainageways and / or downstream storm drain system capacities. This would apply, in particular, to sites with increased development densities in small sub-watersheds upgradient of major urban channels that are subject to backwater flooding during high magnitude rainstorms (e.g. >50-year recurrence frequency) under current conditions. Several proposed *2012 Draft Housing Element* sites in the Corte Madera watershed (housing sites 26, 27, 28, 30, and 31) would drain to local segments of storm drain systems, including those along Sir Francis Drake Boulevard, and ultimately be conveyed to the main stem Corte Madera Creek channel. Under existing conditions, the capacities of these storm drain system segments may be exceeded during severe rainstorms, causing local nuisance flooding. Increases in site impervious surfaces would occur with *2012 Draft Housing Element* development. However, in each of these cases, implementation of LID design guidelines and project-level engineering review of drainage calculations and development plans by Marin County Department of Public Works would be sufficient to mitigate any increases in local site peak flows and runoff volumes. This would occur either as a result of the construction of on-site LID measures and / or as a result of provisions for local upgrades to existing storm drain system segments. Thus, these impacts would remain less-than-significant after mitigation.

Development consistent with the *2012 Draft Housing Element* would not require significant expansions of the existing stormwater drainage infrastructure, because the majority of the sites for which increased development density are proposed would be either infill projects or would be located immediately adjacent to the outer limits of existing storm drainage systems. For project sites outside of the existing development clusters, nearly all drainage system elements would be constructed within the boundaries of the sites and would not require off-site expansions of drainage facilities. Rural parcels located outside of small communities served by local storm drain systems, such as Pt. Reyes Station, would likely rely on existing small drainage channels or agricultural ditches for stormwater conveyance and no off-site facilities expansions would likely be necessary. For any rural sites not linked to existing small community storm drain systems, any on-site or immediate off-site drainage features would be subject to County Creek permit requirements, *Countywide Plan SCA* policies such as Policies **BIO-4.1** (*Restrict Land Use in Stream Conservation Areas*), Policy **BIO-4.2** (*Comply with SCA Regulations*), **BIO-4.3** (*Manage SCAs Effectively*), **BIO-4.14** (*Reduce Road Impacts in SCAs*), and **BIO-4.18** (*Promote the Use of Permeable Surfaces When Hardscapes Are Unavoidable in the SCA and WCA*) and project level engineering review, as well as MCSTOPPP's LID design guidelines. Thus these impacts would remain less-than-significant after mitigation.

- 9(f) See discussion for Environmental Checklist Item 9(a), above. As discussed in Environmental Checklist Item 9(a) there would be no new significant impact or a substantial increase in the severity of a previously identified significant impact to water quality.
- 9(g) Implementation of the *2012 Draft Housing Element* could result in the development of residential or commercial structures in existing, FEMA-designated 100-year Special Flood Hazard Areas (SFHAs) or future zones of tidal inundation stemming from predicted mid-century sea level rise, and expose occupants and / or structures to flood hazards. As discussed below, the most recent FEMA flood hazard zone mapping for Marin County did not incorporate the current best estimates of sea level rise into its determinations of 100-year flood elevations and SFHA extents.

One Hundred (100)-year floodplains for streams conveying higher discharge floodflows are usually mapped either by FEMA or by consultants retained by the Marin County Flood Control and Water Conservation District. Predicted 100-year high tides and tsunami run-up elevations are also considered in developing the 100-year mapping of SFHAs published on FEMA Flood Insurance Rate Maps (FIRM). The 100-year floodplain may be separated into different flood hazard zones as defined by FEMA, based on the detail employed in the flood analyses and other factors. As noted in the Setting

section, FEMA published an updated Flood Insurance Study (FIS) and FIRM for Marin County and its incorporated areas in 2009. This updated flood study did not consider future sea level rise scenarios and their potential impacts on tidal or tsunami-induced flooding. Based on this most recent FIRM mapping incorporated into the MarinMaps GIS web portal, portions of 19 of the 52 housing sites (housing sites 3, 4, 5, 9, 10, 14, 18, 19, 20, 26, 27, 30, 36, 37, 40, 44, 45, 46, and 51) in the *2012 Draft Housing Element* would encroach upon designated SFHAs. The estimated percentages of site/parcel areas subject to flooding during the FEMA 100-year base flood event are listed in Exhibits **3.0-18** and **3.0-19**. In the majority of cases, the proposed sites would be located in areas outside of designated floodways.⁵⁴ Outside of the designated floodways flooding depths within the mapped SFHA typically range from one to three feet. The *2007 Countywide Plan* includes floodplain development policies and programs that conform to federal requirements for participation in the National Flood Insurance Program (NFIP). These include Policy **EH-3.2** (*Retain Natural Conditions*), Policy **EH-3.3** (*Monitor Environmental Change*), and programs **EH-3.a**, **EH-3.b**, and **EH-3.m**. Among the federal regulations is a prohibition on development within floodways established by the appropriate FIS, and limits on the extent new floodplain development can substantially affect computed flood elevations in the impact area. Where a project proponent disputes a mapped SFHA boundary or the application of that boundary to a parcel within the SFHA, an appropriate flood analysis and elevation certificate are required for FEMA to remove the property from the SFHA and to eliminate the flood insurance requirement.

As noted in the setting section, in 2011, BCDC published sea level rise inundation maps for bayside and adjoining low-lying lands within the San Francisco Bay watershed. Referencing the Year 2050 inundation maps prepared for Marin County, 15 housing sites or portions thereof (housing sites 3, 4, 9, 10, 14, 18, 19, 20, 26, 27, 28, 29, 30, 31, and 32) could be subject to tidal inundation caused by the projected 16 inch rise in sea level. Several additional sites in the lower Lagunitas and Olema Creek watersheds could also be subject to tidal flooding, although they were not investigated for the BCDC study. USGS hydrodynamic modelers noted that the extents of tidal flooding typically coincided with currently mapped 100-year SFHAs. This environmental analysis determined that portions of four sites in the Lagunitas/Olema Creek watersheds occur in SFHAs and, thus, could be affected by tidal flooding triggered by sea level rise. As noted earlier in this section, the tidal inundation predictions by BCDC and USGS did not include potential wave runup during storm events. Even more importantly, these flooding predictions relate to tidal flooding and storm surge, but do not incorporate coincident watershed flooding, which would increase flood hazards in areas affected by sea level rise and associated increases in tide levels.

The recent *Ross Valley Capital Improvement Plan Study*⁵⁵ modeled the effect of a range of potential sea level rise of 0.67 feet to 1.90 feet, as predicted by the US Army Corps of Engineers (USACE),⁵⁶ on existing flooding conditions on Corte Madera Creek and its major tributaries. As expected, study modeling results showed that the tidal influence on flood elevations diminished with distance upstream. The study authors stated that the computed difference in 100-year flood water levels between (i) existing conditions and the “intermediate” sea level rise scenario and (ii) existing conditions and the “high” rise scenario was only 0.1 feet and 0.3 feet at Bon Air Bridge, respectively. Figure 1.12 of the

⁵⁴ Floodways are the zones along immediate channel corridors that convey the bulk of high magnitude flood discharges.

⁵⁵ *Capital Improvement Plan Study for Flood Damage Reduction and Creek Management in Flood Zone 9/Ross Valley*, Stetson Engineers, Inc. , prepared for the Marin County Flood Control and Water Conservation District, Flood Zone 9, May 2011.

⁵⁶ *Water Resource Policies and Authorities Incorporating Sea-Level Change Considerations In Civil Works Programs*, Engineering Circular (EC) 1165-2-211, U.S. Army Corps of Engineers, 2009.

BCDC tidal flooding vulnerability study suggests that tidal flooding under its mid-century sea level rise scenario of 16-inches would extend much further inland than the Bon Air bridge crossing. The BCDC mapping, which is intended for regional planning use only, would need to be verified at a more refined scale for purposes of flood control planning and implementation. According to the *Ross Valley Capital Improvement Plan Study*,⁵⁷ the USACE is expected to revise the sea level rise and flood predictions for Marin County in the next few years. The Natural Resource Conservation Service (NRCS) is currently updating its storm rainfall distribution curves for California based on an expanded precipitation data base, more refined digital elevation data and improved statistical modeling incorporating orographic effects on storm rainfall.⁵⁸ Since the majority of flood hydrologic modeling now utilizes HEC-HMS,⁵⁹ the USACE flood hydrograph model, and its component “SCS” Type 1A (for Marin and Sonoma counties) storm distribution, future modeling with this precipitation model option could result in potentially significant changes to prior watershed peak flow rates and hydrographs.

Several of the *2012 Draft Housing Element* housing sites are also much closer to the embayments to which they drain, including Richardson Bay, San Rafael Bay, and San Pablo Bay. Thus, the level of influence of a raised sea level on watershed flood elevations would accordingly be greater. The extent of this influence would depend on a variety of factors, such as: the geometry of the valley floor in these zones of bay-watershed confluence; changes to the tidal prism; channel geomorphic response, which could include aggradation (i.e. raising) of the channel bed; and flood and sediment management practices. The individual and collective responses of Bay Area counties and municipalities to this flooding potential are in nascent stages of development. Thus, the potential risk of flooding to low-lying sites from current watershed and/or coincident watershed and tidal flooding, or from future tidal inundation due to sea level rise, constitutes a significant impact. The *Countywide Plan* policies and implementing programs related to addressing future sea level rise and its impacts on flooding were adopted to ensure the County’s active participation in regional and intergovernmental efforts to adapt to the changing climate. These include Policy **EH-3.3** (*Monitor Environmental Change*) and Program **EH-3.k**. Program **EH-3.k** (*Anticipate Sea Level Rise*) requires Marin County to work with U.S. Geological Survey, the San Francisco Bay Conservation and Development Commission, and other monitoring agencies to utilize estimates for mean sea level rise and incorporate data into mapping of areas subject to future inundations. Program **EH-3.k**, as well as program **EH-3.n** (*Plan for Sea Level Rise*) call for consideration of amendments to the Development Code to incorporate construction standards that account for areas subject to increased flooding from a rise in sea level. In response to this new information, four additional mitigation measures are proposed. Implementation of **New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-1**, **New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-2**, **New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-3**, and **New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-4** will ensure that Marin County will be able to adapt its flood hazard policies and programs to the current regional predictions of climate change and associated sea level rise. Impact 4.5-7 (Exposure of People or Structures to Flood Hazards) was previously identified as significant and unavoidable.

⁵⁷ *Capital Improvement Plan Study for Flood Damage Reduction and Creek Management in Flood Zone 9/Ross Valley*, Stetson Engineers, Inc. , prepared for the Marin County Flood Control and Water Conservation District, Flood Zone 9, May 2011.

⁵⁸ Clearwater Hydrology conversation with Greg Norris, NRCS hydraulic engineer in the Petaluma, California, regional office, Spring 2012.

⁵⁹ US Army Corps of Engineers Hydrologic Engineering Center (HEC) - Hydrologic Modeling System (HMS), Version 3.5, 2010, Davis, California.

Impacts due to exposure of people or structures to flood hazards would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

- 9(h) See above discussion to Environmental Checklist Item 9(g) which in part references encroachments in FEMA-mapped floodway and floodplain zones and impacts to local and upstream flood elevations. Based on the discussion in Environmental Checklist Item 9(g) there would be no new significant impact or a substantial increase in the severity of a previously identified significant impact to local upstream flood elevations.
- 9(i) Housing sites within the Lagunitas Creek, Corte Madera Creek and Novato Creek watersheds downstream of the dams were reviewed as a part of this analysis. Five housing sites (housing sites 10, 46, 47, 48 and 49) are located within mapped inundation zones downstream of Alpine, Peters and Nicasio Dams in the Lagunitas Creek watershed. In addition, three sites (housing sites 26, 27 and 30) are located within mapped inundation zones downstream of Phoenix Dam (Corte Madera Creek watershed), and one site (housing site 43) is located within the mapped inundation area below Stafford Dam (Novato Creek watershed). Since all of the proposed housing sites along stream corridors potentially subject to dam inundation flooding are infill development, there would be no new development outside of known inundation zones. As indicated in the *Countywide Plan* programs associated with flood hazards due to levee and dam failures, existing County programs address levee and dam inspection and maintenance, updating of flood inundation mapping, upgrading of related flood control facilities and consideration of rising sea levels. None of these programs relate directly to established policies and programs in the *2007 Countywide Plan* that specifically address potential impacts from flooding resulting from dam failures, which include Policy **EH-3.3** (*Monitor Environmental Change*), and programs **EH-3.i** (*Update Dam Inundation Maps*) and **EH-3.j** (*Review and Inspect Dams*). Thus, the existing policies and programs listed in the *2007 Countywide Plan* are insufficient to address any potential hazards due to flooding triggered by levee or dam failures. Additional mitigation would be required to reduce this impact to a less-than-significant level.
- 9(j) The updated 2009 FEMA FIS for Marin County and its incorporated areas did incorporate earlier predictions of tsunami run-up developed by the USACE.⁶⁰ However, to date, the USACE has not updated its study to incorporate the influence of predicted sea level rise. Therefore, updated tsunami run-up estimates from the USACE will be necessary to assess future tsunami impacts on flooding within Marin County's low-lying jurisdictions, including those housing sites in the *2012 Draft Housing Element*. Impacts of *2012 Draft Housing Element* housing sites on potential flooding due to seiche events will be overshadowed by impacts due to tsunami-induced flooding, since prevailing wind and storm patterns on San Francisco Bay do not produce significant seiche effects along the County's bay shoreline. The infill development that comprises the *2012 Draft Housing Element* housing sites in the City-Centered Corridor should not be affected by mudslides to any greater degree than that identified in the *2007 Countywide Plan*. Mudslides, landslides and other geotechnical hazards are fully addressed by the *2007 Countywide Plan* policies associated with pre-development geotechnical studies, design guidelines and project-level engineering review by the County Department of Public Works such as Policy **EH-2.1** (*Avoid Hazard Areas*), Policy **EH-2.3** (*Ensure Seismic Safety of New Structures*), and Policy **DES-1.1** (*Address Design at the Community Level*). No new significant impact or a substantial increase in the severity of a previously identified significant impact would occur.

⁶⁰ *Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound* (Technical Report H-75-17), Vicksberg, MS., Hydraulics Laboratory, US Army Engineer Waterways Experiment Station, November 1975.

Hydrology, Water Quality and Flooding Hazard - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The 2007 *Countywide Plan EIR* identified several mitigation measures to reduce hydrology and water quality impacts. Mitigation Measures 4.5-1, 4.5-3, 4.5-4, 4.5-5, 4.5-6, 4.5-7 and 4.7-8 of the *Countywide Plan EIR* were adopted as a part of the *Countywide Plan*.

Mitigation Measure 4.5-1(a) revised Program **WR-2.i** to state:

*Program **WR-2.i Establish a Septic Inspection, Monitoring, and Maintenance District.** Establish a countywide Septic Inspection Monitoring and Maintenance District that would include all or portions of unincorporated areas with septic systems. Modify applicable codes to enable the inspection and monitoring of on-site septic systems in a risk-based, comprehensive, cost effective way. Establishment requires a petition or election to put the district in place.*

Mitigation Measure 4.5-1(b) requires Marin County to continue to implement County ordinances addressing nonpoint source pollution, erosion and sediment control, and surface runoff pollution control plans to ensure that project related and cumulative impacts to water quality standards are minimized or avoided through conditions on project approval as required by the ordinances.

Mitigation Measure 4.5-3(a) requires Marin County to revise the timeframe of implementation of Program **PFS-2.o** (*Assess Project Impacts to Surface Water and Groundwater*) to the medium-term or sooner.

Mitigation Measure 4.5-3(b) requires Marin County to continue to implement County ordinances that maintain continued groundwater recharge, require surface runoff pollution control plans and best management practices for new developments and redevelopments to ensure that project related and cumulative impacts to groundwater recharge are minimized or avoided through conditions on project approval as required by the ordinances.

Mitigation Measure 4.5-4(a) became policy **BIO-4.19** that reads as follows:

*Policy **BIO-4.19 Maintain Channel Stability.** Applicants for development projects may be required to prepare a hydraulic and/or geomorphic assessment of on-site and downstream drainageways that are affected by project area runoff. This assessment should be required where evidence that significant current or impending channel instability is present, such as documented channel bed incision, lateral erosion of banks (e.g. sloughing or landsliding), tree collapse due to streambank undermining and/or soil loss, or severe in-channel sedimentation, as determined by the County.*

Characteristics pertinent to channel stability would include hillslope erosion, bank erosion, excessive bed scour or sediment deposition, bed slope adjustments, lateral channel migration or bifurcation, channel capacity and the condition of riparian vegetation. The hydraulic and / or geomorphic assessment shall include on-site channel or drainageway segments over which the applicant has control or access. In the event that project development would result in or further exacerbate existing channel instabilities, the applicant could either propose his/her own channel stabilization program, or defer to the mitigations generated during the required environmental review by the County for the project, which could include maintenance of peak flows at pre- and post-project levels, or less. Proposed stabilization measures shall anticipate project-related changes to the drainageway flow regime.

All project improvements should be designed to minimize flood hydrograph peak flow or flood volume increases into drainage courses. To this end, design features such as porous pavement, pavers, maximizing overall permeability, drainage infiltration, disconnected impervious surfaces, swales, bioretention, green roofs, etc., should be integrated into projects as appropriate. For projects subject to discretionary review the applicant may be required, as appropriate, to submit a pre- and post- project hydrology and hydraulic report detailing the amount of new impervious surface area and accompanying surface runoff from all improvement areas including driveways - with a goal of zero increase in runoff (no net increase in peak off-site run-off). The applicant may be required to participate in a peak stormwater runoff management program developed pursuant to new Program (sic) BIO-4.20.

Mitigation Measure 4.5-4(b) requires Marin County to continue to implement NPDES Phase II permit requirements relating to peak flow controls to ensure that project related and cumulative impacts to peak flows are minimized or avoided through conditions on project approval as required by the ordinances.

Mitigation Measure 4.5-4(c) is the same as Mitigation Measures 4.5-1(b) and 4.5-3(b).

Mitigation Measure 4.5-5 is the same as Mitigation Measures 4.5-1(b), 4.5-3(b) and 4.5-4(b).

Mitigation Measure 4.5-6 is the same as Mitigation Measures 4.5-1(b), 4.5-3(b), and 4.5-4(b).

Mitigation Measure 4.5-7(a) is the same as Mitigation Measures 4.5-3(b), 4.5-4(a) and 4.5-4(b).

Mitigation Measure 4.5-7(b) requires County staff to amend the Marin County Development Code to include construction standards for areas threatened by future sea level rise.

Mitigation Measure 4.5-7(c) requires Marin County to continue to implement County ordinances that regulate floodplain development to ensure that project related and cumulative impacts to flooding are minimized or avoided through conditions on project approval as required by the ordinances.

Mitigation Measure 4. 7-8(a) revised Policy **EH-2.4** and Programs **EH-3.a** and **EH-3.g** as follows:

***Policy EH-2.4 Protect Coastal Areas from Tsunamis.** When inundation maps become available, address tsunami wave run-up and inundation when reviewing proposed development along coastal areas of Marin County.*

***Program EH-3.a Regulate Development in Flood and Inundation Areas.** Continue to require all improvements in Bayfront, Floodplain, Tidelands, and Coastal High Hazard Zones to be designed to be more resistant to damage from flooding, tsunamis, seiches, and related water-borne debris, and to be located so that buildings and features such as docks, decking, floats, and vessels would be more resistant to damage.*

***Program EH-3.g Locate Critical Facilities Safely.** Amend the Development Code to prohibit placement of public safety structures within tsunami inundation nor flood-prone areas.*

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

Through environmental review of the *2012 Draft Housing Element* five new mitigation measures have been identified to reduce hydrology, water quality, and flooding hazards. They are:

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-1 The County shall obtain BCDC's GIS files for Marin County tidal inundation mapping for both the mid-century (2050) and end-of-century (2099) projected sea level rise scenarios and develop GIS layers that can be viewed through the MarinMaps web portal. If the available map data from BCDC and USGS are of insufficient resolution to inform planning efforts, the County shall prepare its own mapping based on the predicted tidal elevations and enhanced topographic data. For applications to build new housing units, the location of the proposed housing site shall be compared to this information to determine the suitability of the site for residential use and the need for design measures or other measures to reduce flooding risks. Implement Mitigation Measure Hydrology, Water Quality and Flooding Hazard-2, if applicable,

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-2 On housing sites for which refined inundation mapping verifies that the site's location is within a 2050 tidal inundation zone, building pads shall be raised to a level that results in finished floor elevations one foot higher than a combination of the projected inundation elevation plus an estimate of wave runup given the particular weather (i.e., wind patterns and velocities) and hydraulic conditions at each site.

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-3 The County shall coordinate with the Federal Emergency Management Agency to incorporate current projections of mid-century sea level rise and potential changes to precipitation characteristics associated with climate change into future flood insurance studies and the Flood Insurance Rate Maps for Marin County and Incorporated Area as new information is developed by the USACE and other federal agencies (e.g. NOAA) involved in climate change monitoring and adaptation.

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard-4 The County shall adopt the regional policies addressing adaptation to predicted sea level rise recently adopted by BCDC as part of its San Francisco Bay Plan and coordinate with other Bay Area counties and regional planning agencies in developing appropriate changes to development codes and flood protection strategies.

New Mitigation Measure Hydrology, Water Quality and Flooding Hazard- 5 The County shall adopt and implement a new *Countywide Plan* policy that addresses new development in mapped dam failure inundation areas that is substantially similar to the following:

Policy EH-(new) Incorporate flood inundation resulting from upstream dam failures when assessing flood hazards for new development and redevelopment projects and implementing associated programs within the County.

Hydrology, Water Quality and Flooding Hazard - Conclusion

Based on a review of Impact 4.5-1 (*Water Quality Standards*), Impact 4.5-5 (*Stormwater Drainage System Capacities*) and Impact 4.5-6 (*Stormwater Drainage System Expansions*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would have the same impacts on water quality standards and stormwater drainage systems

as the *Countywide Plan*. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, policies and programs would serve to avoid or adequately mitigate potential impacts on water quality and stormwater drainage systems. Furthermore, previously adopted Mitigation Measures 4.5-1, 4.5-5 and 4.5-6 would continue to apply and would reduce impacts on water quality standards and stormwater drainage systems to a less-than-significant level. There would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to water quality and stormwater drainage systems; therefore, no additional analysis is required.

As stated in the discussion of Impact 4.7-8 (*Tsunamis and Seiches*) in the *2007 Countywide Plan EIR*, impacts due to tsunamis and seiches due to development that could occur under the *Countywide Plan* would be significant and unavoidable. Previously adopted Mitigation Measure 4.6-4 would reduce this impact, but not to a less-than-significant level, because people and development (i.e., structures, critical facilities, lifelines, and emergency access) in low-lying areas could still experience substantial damage, loss, injury, or death in the event of a severe tsunami or seiche event. While properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Impacts due to levee or dam failure were not analyzed in the *2007 Countywide Plan EIR*. The *2012 Draft Housing Element* would have the potential for significant hydrology impacts due to flooding triggered by levee or dam failures. New Mitigation Measure **Hydrology, Water Quality and Flooding Hazard-5** has been identified, which would reduce the impacts of the *2012 Draft Housing Element* due to levee or dam failure to a less-than-significant level.

As stated in the discussion of Impact 4.5-7 (Exposure of People or Structures to Flood Hazards) in the *2007 Countywide Plan EIR*, and the analysis in this Draft SEIR, the development that could occur under the *2012 Draft Housing Element* would have the same impacts with regard to exposure of people or structures to flood hazards as the *Countywide Plan*. Previously adopted Mitigation Measure 4.5-7 would reduce this impact, but not to a less-than-significant level, because the Board of Supervisors found that full funding for Program **AIR-5.c (Prepare Response Strategies)**, was not available at the time of *Countywide Plan* adoption and that the mitigation measure was, therefore, not fully feasible. New information has been made available since certification of the *2007 Countywide Plan EIR*, including an updated Flood Insurance Study and associated Flood Insurance Rate Maps, plus an assessment of potential flooding impacts resulting from climate-induced sea level rise by BCDC. This new information shows revised areas subject to flooding due to factors such as higher flood flows and future sea level rise. Although no new or substantially more severe impacts with regard to exposure of people or structure to flood hazards would occur, new mitigation measures (**Mitigation Measure Hydrology, Water Quality and Flooding Hazard-1, Hydrology, Water Quality and Flooding Hazard-2, Hydrology, Water Quality and Flooding Hazard-3, and Hydrology, Water Quality and Flooding Hazard-4**) have been identified in response to this new information to reduce this significant unavoidable impact by further protecting areas from flooding, but not to a less-than-significant level. While properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, the impacts due to exposure of people or structures to flood hazards, tsunamis, and seiches would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Exhibit 3.0-18

2007 - 2014 Potential Housing Sites - Hydrology, Water Quality and Flooding Considerations

Site #	Site Name & Address	Principal Watershed	Total Acres	Percent Site Impervious: Compared to CWP^a <i>L – Less M- More S- Same</i>	Increase in Watershed Peak Flow Rates (S,I) <i>S-Significant I-Insignificant</i>	Percent Site in FEMA SFHA	Increase in Significance of Water Quality Impairment?	Site Exposed to Tidal Inundation per BCDC Mid-Century Sea Level Rise?^b	Potentially Significant Effect on Groundwater Recharge	Potential Impact on Existing Storm Drainage Facilities?
1	Marinwood Plaza 100 Marinwood Ave	Miller Creek	4.75	S	I	0	No	No	No	No
2	Oak Manor 2400 Sir Francis Drave Blvd.	Corte Madera Creek	1.58	L	I	0	No	No	No, reduce	No
3	California Park Woodland Avenue	San Rafael Creek	1.82	M	I	60-100	No	Yes	No	No
4	Old Chevron Station 204 Flamingo Road	Richardson Bay	0.79	M	I	100	No	Yes	No	Yes
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	Miller Creek	1,110	S	I	5-10	No	No	No	No
6	Easton Point Paradise Drive	N. San Francisco Bay	110	S	I	0	No	No	No	No
7	Tamarin Lane 12 Tamarin Lane	Novato Creek	6.54	S	I	0	No	No	No	No

Site #	Site Name & Address	Principal Watershed	Total Acres	Percent Site Impervious: Compared to CWP^a <i>L – Less M- More S- Same</i>	Increase in Watershed Peak Flow Rates (S,I) <i>S-Significant I-Insignificant</i>	Percent Site in FEMA SFHA	Increase in Significance of Water Quality Impairment?	Site Exposed to Tidal Inundation per BCDC Mid-Century Sea Level Rise?^b	Potentially Significant Effect on Groundwater Recharge	Potential Impact on Existing Storm Drainage Facilities?
8	Indian Valley 1970 Indian Valley Road	Novato Creek	7.7	S	I	0	No	No	No	No
9	Manzanita mixed use 150 Shoreline Highway	Richardson Bay	0.56	M	I	2	No	Yes	No	No
10	Grandi Building 11101 State Route 1	Lagunitas Creek	2.5	S	I	40	No	Yes	No	No
11	650 N. San Pedro 650 North San Pedro	Gallinas Creek	16.3	S	I	0	No	No	No	No
12	Golden Gate Seminary Seminary Drive	Richardson Bay	73.57	L	I	0	No	No	No	No
13	Oak Hill School 441 Drake Ave	Richardson Bay	3.87	M	I	0	No	No	No	No
14	Armstrong Nursery 217 & 221 Shoreline Highway	Coyote Creek	1.77	M	I	100	No	Yes	No	No
15	Inverness Valley Inn 3275 Sir Francis Drake	Lagunitas Creek	26.8	S	I	0	No	No	No	No

Site #	Site Name & Address	Principal Watershed	Total Acres	Percent Site Impervious: Compared to CWP^a <i>L – Less M- More S- Same</i>	Increase in Watershed Peak Flow Rates (S,I) <i>S-Significant I-Insignificant</i>	Percent Site in FEMA SFHA	Increase in Significance of Water Quality Impairment?	Site Exposed to Tidal Inundation per BCDC Mid-Century Sea Level Rise?^b	Potentially Significant Effect on Groundwater Recharge	Potential Impact on Existing Storm Drainage Facilities?
16	Grady Ranch Lucas Valley Road	Miller Creek	229	M	I	0	No	No	No	No
17	Roosevelt Street 30 Roosevelt	Gallinas Creek	0.18	M	I	0	No	No	No	No

- a. Impervious cover data from Table 1 of USGS's open File Report, *Suggested Criteria for Hydrologic Design of Storm-drainage Facilities I the San Francisco Bay Region, California*, S.E. Rantz (1971)
- b. Note that inundation mapping did not consider the presence of existing or future levees or other engineering works related to floodwater evacuation or flood protection.

Source: Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Exhibit 3.0-19

Potential Housing Sites for 2014-2022 – Hydrology, Water Quality and Flooding Considerations

Site #	Site Name & Address	Principal Watershed	Total Acres	Percent Site Impervious Compared to CWP^a <i>L – Less M- More S- Same</i>	Increase in Watershed Peak Flow Rates (S,I) <i>S-Significant I- Insignificant</i>	Percent Site in FEMA SFHA	Increase in Significance of Water Quality Impairment?	Site Exposed to Tidal Inundation per BCDC Mid-Century Sea Level Rise?^b	Potentially Significant Effect on Groundwater Recharge/	Potential Impact on Existing Storm Drainage Facilities ?
18	Around Manzanita 150 Shoreline	Coyote Creek	1.48	M	I	60-100	Yes	Yes	No	No
19	Tam J retail 237 Shoreline Highway	Richardson Bay	6.8	M	I	100	No	Yes	No	No
20	Gateway Shopping Center 190 Donohue Street	Richardson Bay	20.34	L	I	20	No	Yes	No	No
21	Strawberry smaller retail Reed Blvd.	Richardson Bay	2.39	M	I	0	No	No	No	No
22	Strawberry Village 900, 950 etc. Redwood Highway	Richardson Bay	10.99	L	I	0	No	No	No	No
23	Tiburon Eastbound Tiburon Blvd.	Richardson Bay	1.45	M	I	0	No	No	No	No
24	Tiburon Westbound Knoll Road	Richardson Bay	1.44	S	I	0	No	No	No	No

25	Tiburon Redwood frontage Central Drive	Richardson Bay	2.7	M	I	0	No	No	No	No
26	College of Marin lot 15 139 Kent Avenue	Corte Madera Creek	3.2	M	I	45-100	No	Yes	No	Yes
27	Kentfield Eastbound Sir Francis Drake Blvd.	Corte Madera Creek	5.14	M	I	15-50	No	Yes	No	Yes
28	Kentfield Westbound	Corte Madera Creek	2.63	M	I	0	No	Yes	No	Yes
29	Marin General 250 Bon Air Road	Corte Madera Creek	19.7	S	I	0	No	Yes	No	No
30	Ross Valley Self Storage 890 College Ave.	Corte Madera Creek	1.56	M	I	5	Yes	Yes	No	Yes
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	Corte Madera Creek	5.09	M	I	0	No	Yes(fringe)	No	Yes
32	3000 SFD-Sunnyside Growing 3000 Sir Francis Drake	Corte Madera Creek	7.74	M	I	0	Yes	Yes	No	No
33	Railroad Ave. Railroad Ave. and Park St.	Lagunitas Creek	0.50	M	I	0	No	No	No	No

34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	Lagunitas Creek	0.54	M	I	0	No	No	No	No
35	Los Ranchitos 99-165 Los Ranchitos Drive	Gallinas Creek	13.81	M	I	0	No	No	No	No
36	Big Rock Deli & Creekside Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	Miller Creek	2.8	M	I	5	No	No	No	No
37	Rotary Field 16 Jeanette Prandi Way	Miller Creek	12.83	M	I	3	No	No	No	No
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	Gallinas Creek	1.49	M	I	0	No	No	No	No
39	LDS Church Santa Venetia 220 N. San Pedro Road	Gallinas Creek	5.38	M	I	0	No	No	No	No
40	MacPhail School 1565 Vendola Drive	Gallinas Creek	9.52	M	I	0-90	No	No	No	No
41	Marin Farmers Market 70 & 76 San Pablo Ave.	Gallinas Creek	0.6	M	I	0	No	No	No	No
42	San Pedro Road San Pedro Road	Gallinas Creek	5.65	M	I	0	No	No (fringe)	No	No
43	Atherton (Novato RV Park) 1530 Armstrong Avenue	Novato Creek	2.68	M	I	0	No	No	No	No

44	Bear Valley Road 10045 State Route 1	Lagunitas Creek (Olema Ck.)	1.25	M	I	95	Yes	Yes(not mapped)	No	No
45	Olema Campground Shoreline Highway	Lagunitas Creek (Olema Ck.)	9.95	M	I	90	Yes	Yes (not mapped)	No	No
46	Feed Lot B St. & 6 th St.	Lagunitas Creek	0.92	M	I	3	No	No (not mapped)	No	No
47	Pine Cone Diner 60 4 th St.	Lagunitas Creek	1.06	M	I	0	No	No (not mapped)	No	No
48	Pt. Reyes North 11598 State Route 1	Lagunitas Creek	16.89	S	I	0	Yes	No (not mapped)	No	No
49	Red Barn (green barn) 510 Mesa Road	Lagunitas Creek	1.53	M	I	0	Yes	No (not mapped)	No	No
50	Kruger Pines	Richardson Bay	2.45	S	I	0	No	No	No	No
51	Homestead Terrace	Arroyo Corte Madera del Presidio	0.64	S	I	2	Yes	No (trib. Fringe)	No	No
52	Venetia Oaks	Gallinas Creek	1.84	S	I	0	No	No	No	No

a. Impervious cover data from Table 1 of USGS's open File Report, *Suggested Criteria for Hydrologic Design of Storm-drainage Facilities I the San Francisco Bay Region, California*, S.E. Rantz (1971)

b. Note that inundation mapping did not consider the presence of existing or future levees or other engineering works related to floodwater evacuation or flood protect.

Source: Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Land Use and Planning

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
10. Land Use and Planning. Would the project:					
a. Physically divide an established community?	Determined to be less-than-significant in the Initial Study for the 2007 Countywide Plan	No	No	No	NA
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	Discussed in Section 4.1 Land Use, Population, and Housing, see Impact 4.1-1.	No	No	No	NA
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	Discussed in Section 4.6 Biological Resources, see Impact 4.6-6.	No	No	No.	NA

Land Use and Planning – Setting

There have been no significant changes to the Land Use and Planning setting from conditions that were assessed in the *2007 Countywide Plan EIR*. The environmental setting contained in the *2007 Countywide Plan EIR* contains a description of the St. Vincent's / Silveira Properties, Marinwood Shopping Center, Strawberry Shopping Center, Marin City Shopping Center, Fairfax / Oak Manor Shopping Centers.

Marin County is currently updating its Local Coastal Program (LCP), which is intended to ensure that the land use authorized by local governments meet the requirements of the Coastal Act. The LCP consist of two units, each unit encompasses certain communities within the Coastal Zone⁶¹ as follows. Unit I was certified by the California Coastal Commission in 1980, and includes the communities of Muir Beach, Stinson Beach, and Bolinas. Unit II was certified by the California Coastal Commission in 1981, and includes the communities of Olema, Point Reyes Station, Inverness, Dillon Beach, Marshall, and Tomales.

The current LCP contains policies required by the California Coastal Act that include protection and expansion of public access to shoreline and recreational opportunities, protection of environmentally sensitive habitats, protection of agricultural lands, and establishment of urban - rural boundaries and directing new housing and other development into areas with adequate services to avoid urban sprawl. The current Marin LCP is being amended primarily to reconcile differences between Unit I and Unit 2, improve policies, and address newer issues such as sea level rise.⁶²

On February 13, 2012, the Marin County Planning Commission approved a comprehensive set of amendments to the Marin LCP and recommended them to the Board of Supervisors for adoption. The Board of Supervisors began its review of the recommended amendments in August 2012.

Land Use and Planning - Discussion

Land use and planning impacts are analyzed in Section 4.1 Land Use, Population and Housing of the *2007 Countywide Plan EIR*. The topic of whether the *Countywide Plan* would conflict with a habitat conservation plan or natural community conservation plan is discussed in Section 4.6 Biological Resources of the *2007 Countywide Plan EIR*.

Adoption of the *2012 Draft Housing Element* would not authorize new residential development. However, the implementing programs would enact changes to land use designation and policies. The *Countywide Plan* contains a number of policies and programs that guide land use planning and development in the unincorporated areas of Marin County. These include Policy **CD-1.1** (*Direct Land Uses to Appropriate Areas*) and Program **CD-1.a** (*Keep Urban Uses in the City-Centered Corridor*), which are intended to direct urban development to the City Centered Corridor. Affordable housing is addressed in Policy **CD-2.1** (*Provide a Mix of Housing*), Policy **CD-2.10** (*Expand Countywide Efforts to Increase Workforce Housing Rather Than Full Commercial Build-Out*), Policy **CD-2.11** (*Promote Diverse Affordable Housing Strategies*), Program **CD-2.a** (*Increase the Affordable Housing Supply*), Program **CD-2.b** (*Provide a Variety of Housing Types and Prices*), Program **CD-2a** (*Enact Zoning Changes*), Program **CD-2.i** (*Conduct a 10-year Countywide Homeless Plan*), Program **CD-2.n**

⁶¹ The Coastal Zone is defined in Section 30103 of the [Coastal Act](#). The Coastal Zone generally extends inland 1,000 yards from the mean high tide of the line of the sea. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards. The Coastal Zone does not include the area of jurisdiction of the San Francisco Bay Conservation and Development Commission, nor does it include land owned by the Federal Government.

⁶² Marin County Local Coastal Program website available at <http://www.co.marin.ca.us/depts/CD/main/lcp/LCP-index.html>, accessed October 2012.

(*Processing of Affordable Housing Projects*), Program **CD-2.o** (*Revise Affordable Housing Regulations to Retain Housing Stock*), Program **CD-2.q** (*Identify Affordable Housing Sites in Community Plans*). Program (*Exempt Affordable Housing Developments*), Policy **CD-8.7** (*Establish Commercial / Mixed-Use Land Use Categories and Intensities*) contributes to affordable housing by including on-site housing for employees.

New multi-family development that occurs following adoption of the *2012 Draft Housing Element* would be subject to *Countywide Plan* policies that regulate design, particularly Program **DES-1.e** (*Expand Design Guidelines*) which calls for new design guidelines for multi-family residential development. Marin County Community Development Agency is currently working to develop design guidelines for Multi-Family and Mixed Use development,⁶³ with adoption anticipated to occur in early 2013.

Additionally any new development would be subject to the regulations of the Marin County Development Code.

10(a) According to the *2007 Countywide Plan EIR*, implementation of the *Countywide Plan* would not to have a significant impact with regard to physically dividing an established community. Implementation of the Housing Element would follow the guiding framework of the policies and programs of the *Countywide Plan*. The exact development footprint and design of any subsequent residential or mixed use development is unknown at this time. However because policies and programs are in place to promote compatibility between new and existing development, and maintain manageable infrastructure service levels, such as *Countywide Plan* Policy **CD-1.1** and Program **CD-1.a**, adoption of the *2012 Draft Housing Element* would have a less-than-significant effect on established communities. Any subsequent development resulting from the implementation of the Housing Element would occur on properties that are already designated for urban development. No aspect of the adoption and implementation of the *2012 Draft Housing Element* would result in physically dividing an established community, and this would be a less-than-significant impact.

10(b) Marin County's current Housing Element, was last updated in June 2003, and in November 2007 was incorporated into the *Countywide Plan*. The *Countywide Plan* will be amended to incorporate the *2012 Draft Housing Element*. The goals, policies, and programs of the *2012 Draft Housing Element* would not conflict with any established plans. Housing Element policies intended to increase the stock of affordable housing, and other types of housing, are consistent with *Countywide Plan* policies also intended to support a diversity of housing, including affordable housing. These policies include Policy **CD-2.1** (*Provide a Mix of Housing*), Policy **CD-2.10** (*Expand Countywide Efforts to Increase Workforce Housing Rather Than Full Commercial Build-Out*), Policy **CD-2.11** (*Promote Diverse Affordable Housing Strategies*), Program **CD-2.a** (*Increase the Affordable Housing Supply*), and Program **CD-2.b** (*Provide a Variety of Housing Types and Prices*). New development would occur in areas already designated for residential or commercial development. A number of the *2012 Draft Housing Element* policies and programs directly implement *Countywide Plan* policies and programs. For example Program 1.m (*Codify Affordable Housing Incentives Identified in the Community Development Element*) would amend the County Development Code to implement the provisions of the *Countywide Plan* by codifying certain affordable housing incentives. Program 1.n

⁶³ Marin County CDA website: www.marincounty.org/cda, accessed September 2012.

(*Promote Resource Conservation*) would implement several of the *Countywide Plan's* energy and green building programs including Programs **EN-1.b-f**, **EN3.a**, **En-3.e-1**, and **EN-3.k**. Implementation of Housing Element policies and programs are consistent with the *Countywide Plan* and Marin County Development Code. This previously identified less-than-significant impact would remain less-than-significant.

- 10(c) There is no adopted Habitat or Natural Community Conservation Plans in Marin County. The *2012 Draft Housing Element* would have no impact. See Environmental Checklist Item 4(f).

Land Use and Planning - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The *2007 Countywide Plan EIR* did not identify any significant land use and planning impacts that required adoption of mitigation measures.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to land use and planning would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Land Use and Planning - Conclusion

Based on a review of Impact 4.1-1 (*Conflict with Applicable Land Use or Other Plans*), and Impact 4.6-6 (*Conflict with Adopted Habitat or Natural Community Conservation Plans*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not conflict with other adopted plans. There is no adopted Habitat or Natural Community Conservation Plans in Marin County. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to a conflict with applicable land use or other plans, or conflict with an adopted habitat or natural community conservation plans; therefore, no additional analysis is required.

Mineral Resources

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than Significant Level?
11. Mineral Resources. Would the Project:					
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Determined to be less-than-significant in the Countywide Plan Initial Study	No	No	No	NA
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	Determined to be less-than-significant in the Countywide Plan Initial Study	No	No	No	NA

Mineral Resources – Setting

Countywide Plan Map 3-5 shows the location of mineral resource preservation sites in Marin County. There are eight sites in Marin County that the California State Department of Conservation Division of Mines and Geology designate as having significant mineral resources for the North Bay region. In addition to these eight sites, there are four Marin County permitted mineral resource sites (Nicasio Quarry, Lawson’s Landing Quarry, Martinoni Quarry, and Redwood Landfill Quarry). There have been no additional mineral resource sites designated since the adoption of the *Countywide Plan*.

Mineral Resources - Discussion

Mineral resources impacts are analyzed in Section 4.7 Geology of the *2007 Countywide Plan EIR*.

Section 3.7, Mineral Resources, of the Built Environment Element of the *Countywide Plan* describe issues related to mineral resources in the unincorporated areas of Marin County. *Countywide Plan* Goal **MIN-1** (*Properly Conducted Mining*), maintains the viability of mineral resource sites while calling for operations and eventual site reclamation that does not adversely impact public health or the

environment. Policy **MIN-1.1** (*Preserve Mineral Resource Sites*) encourages preservation of mineral resource sites and Policy **MIN-1.3** (*Buffer Extraction Areas and Incompatible Land Uses*) requires sufficient buffers between designated mineral resource sites and incompatible land uses, such as housing. Similarly, Program **MIN-1.f** (*Require Adequate Buffers*) requires adequate buffers within mineral resource overlay zones between mining operations and neighboring land uses.

11(a) It was determined in the *2007 Countywide Plan EIR* that implementation of the *Countywide Plan* would have a less-than-significant impact on the availability of known mineral resources that would be of value to the region and residents of the state. No housing sites designated in the *2012 Draft Housing Element* are located within a Mineral Resources Overlay Zone. The adoption of the *2012 Draft Housing Element* and subsequent implementation of its programs and policies would not increase the severity of impacts above what would occur with implementation of the *Countywide Plan*. This impact would be less-than-significant.

11(b) The *2007 Countywide Plan EIR* determined that with implementation of Policies **MIN-1.1** and **MIN-1.3** implementation of the *Countywide Plan* would have no impact on a mineral resource recovery site. Adoption of the *2012 Draft Housing Element* and subsequent implementation would not affect any mineral resource recovery sites. Therefore no impact would occur.

Mineral Resources - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The *2007 Countywide Plan EIR* did not identify any significant mineral resources impacts that required adoption of mitigation measures.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to mineral resources would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Mineral Resources - Conclusion

Impacts on mineral resources were determined to be less-than-significant in the Initial Study for the *Countywide Plan*, and therefore were not further analyzed in the *2007 Countywide Plan EIR* (Section 2.6 Effects of No Significance). The *2012 Draft Housing Element* would not have the potential for significant impacts on mineral resources because no housing sites designated in the *2012 Draft Housing Element* are located within a Mineral Resource Overlay Zone and policies and programs of the *Countywide Plan* would ensure that there would be no impact on a mineral resource recovery site.

Noise

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
12. Noise. Would the project result in:					
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Discussed in Section 4.4 Noise, see Impacts 4.4-1, 4.4-3, and 4.4-4.	No	No	Yes, but new or more severe significant effects would not occur.	NA
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Not specifically addressed in Countywide Plan EIR.	Yes	Yes	Yes	No
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Discussed in Section 4.4 Noise, see Impacts 4.4-1, 4.4-3, and 4.4-4.	No	No	No	NA
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Discussed in Section 4.4 Noise, see Impact 4.4-5.	No	No	No	No MM 4.4-5 would reduce impact, but still found significant unavoidable. No change from CWP EIR.
e. For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Discussed in Section 4.4 Noise, see Impact 4.4-2.	No	No	Yes, but new or more severe significant effects would not occur.	NA

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	Discussed in Section 4.4 Noise, see Impact 4.4-2.	No	No	No	NA

Noise – Updated Setting

BACKGROUND INFORMATION ON NOISE

Noise is defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (i.e., frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is the amplitude of sound waves combined with the reception characteristics of the ear. Amplitude may be compared with the height of an ocean wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its decibel level. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in **Exhibit 3.0-20**.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level or dBA*. All sound levels discussed in this report utilize the A-weighting scale. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in **Exhibit 3.0-21**. Because sound levels can vary markedly over a short period, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound / noise descriptor is called L_{eq} . The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

Exhibit 3.0-20
Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period. The hourly L_{eq} used for this report is denoted as dBA $L_{eq[h]}$.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 PM to 10:00 PM and after addition of 10 decibels to sound levels in the night between 10:00 PM and 7:00 AM.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 PM and 7:00 AM.
L_{01} , L_{10} , L_{50} , L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Illingworth & Rodkin

Exhibit 3.0-21
Typical Noise Levels in the Environment

<i>Common Outdoor Noise Source</i>	<i>Noise Level (dBA)</i>	<i>Common Indoor Noise Source</i>
	120 dBA	
Jet fly-over at 300 meters		Rock concert
	110 dBA	
Pile driver at 20 meters	100 dBA	
		Night club with live music
	90 dBA	
Large truck pass by at 15 meters		
	80 dBA	Noisy restaurant
		Garbage disposal at 1 meter
Gas lawn mower at 30 meters	70 dBA	Vacuum cleaner at 3 meters
Commercial/Urban area daytime		Normal speech at 1 meter
Suburban expressway at 90 meters	60 dBA	
Suburban daytime		Active office environment
	50 dBA	
Urban area nighttime		Quiet office environment
	40 dBA	
Suburban nighttime		
Quiet rural areas	30 dBA	Library
		Quiet bedroom at night
Wilderness area	20 dBA	
	10 dBA	Quiet recording studio
Threshold of human hearing	0 dBA	Threshold of human hearing

Source: Illingworth & Rodkin

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within approximately plus or minus one dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within approximately plus or minus one to two dBA.

Sensitivity to noise increases during the evening and at night because excessive noise interferes with the ability to sleep; therefore, 24-hour descriptors were developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level, (CNEL)* is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (i.e., 7:00 PM - 10:00 PM) noise levels and a 10 dB addition to nocturnal (10:00 PM - 7:00 AM) noise levels. The *Day/Night Average Sound Level, L_{dn}* is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

The *Countywide Plan* identifies vehicle traffic as the primary source of noise in Marin County, with the highest noise levels occurring along major roadways. Other significant local noise sources include aircraft, trains, mining activity, and construction. *Countywide Plan* Map 3-12 shows existing and future noise contours along the major roadways in Marin County. These data were reviewed to assess the noise and land use compatibility of the *2012 Draft Housing Element* sites.

In addition, a short-term noise monitoring survey was made by noise experts Illingworth & Rodkin, Inc. (noise consultants for this Draft SEIR as well as the *2007 Countywide Plan EIR*) on July 31, 2012 to quantify the existing noise environment at *2012 Draft Housing Element* sites where noise contour information was not available. The noise monitoring survey included six short-term noise measurements (ST-1 through ST-6). **Exhibit 3.0-22** summarizes the results of the short-term noise measurements.

Exhibit 3.0-22
Summary of Short-Term Noise Measurement Data on July 31, 2010^a

Noise Measurement Location	L_{max}	L_{min}	$L_{(1)}$	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	L_{eq}
ST-1: Site 26, ~50 feet from the center of Kent Avenue, Kentfield.	71	41	65	61	49	44	56
ST-2: Site 13, ~50 feet from the center of Drake Avenue, Marin City.	66	45	64	55	48	46	53
ST-3: Site 12, ~50 feet from the center of Seminary Drive, Belvedere.	68	47	64	61	51	49	56
ST-4: Site 23, ~75 feet from the center of Tiburon Boulevard, Tiburon.	72	54	69	65	60	55	62

ST-5: Site 26, ~50 feet from the center of N. San Pedro Road, San Rafael.	68	31	64	57	37	33	52
ST-6: Site 35, ~50 feet from the center of Los Ranchitos Drive, San Rafael.	64	71	49	70	68	63	52

a. Acoustical descriptors are defined in **Exhibit 3.0-20**.

Source: Illingworth & Rodkin, 2012

Exhibits 3.0-23 and **3.0-24** summarize the noise exposure and predominant noise sources affecting each of the housing sites for the 2007-2014 and 2014-2022 planning periods.

Noise - Discussion

Noise impacts are analyzed in Section 4.14 Noise of the *2007 Countywide Plan EIR*.

Section 3.10, Noise, of the Built Environment Element of the *Countywide Plan* describes issues related to noise and provides goals, policies, and programs regarding protection from excessive noise. The *Countywide Plan* also identifies noise and land use compatibility standards for various land uses. *Countywide Plan* Figure 3-41, *Acceptable Noise Levels*, indicates that single-family residential land uses are normally acceptable in noise environments up to 60 dBA L_{dn} and multi-family residential uses are normally acceptable in noise environments up to 65 dBA L_{dn} .

The *Countywide Plan* also identifies policies and programs that the County shall implement during the environmental review of projects in order to minimize noise throughout the community. Programs presented in the *Countywide Plan* applicable to this project are as follows:

Program NO-1.a Enforce Allowable Noise Levels. Through CEQA and County discretionary review, require new development to comply with allowable noise levels.

Program NO-1.b Comply with Acceptable Noise Levels. Require discretionary permits for residential and other noise-sensitive land uses proposed near noise sources that may exceed acceptable noise levels and/or benchmarks to provide acoustical analyses; and, if necessary, commit to measures to comply with the applicable standards set out in Program NO-1.a. Amend the Development Code to include these requirements.

Program NO-1.c Require Project-Specific Noise Mitigation. Require all development to mitigate its noise impacts where the project would:

- raise the L_{dn} by more than 5 dBA;
- raise the L_{dn} by more than 3 dBA and exceed the Normally Acceptable standard; or
- raise the L_{dn} by more than 3 dBA and the Normally Acceptable standard is already exceeded.

Program NO-1.d Set Additional Limits for Housing. Amend the Development Code to require the following maximum noise levels for all new residential units: Exterior – 60 dBA L_{dn} and Interior – 45 dBA L_{dn}

Program NO-1.f Review Projects near Gness Field. Review development proposals within the two-mile referral area of Gness Field for consistency with the noise criteria set forth in the *Countywide Plan* and the adopted Airport Land Use Plan.

Program NO-1.h Anticipate Additional Rail Noise. Once the Sonoma-Marín Area Rail Transit District (SMART) selects a vehicle and evaluates the environmental impacts of proposed regional rail service, including noise impacts, update the Noise Section of the *Countywide Plan* to include a map showing noise contours along the railroad tracks, and work with SMART to determine appropriate mitigation measures necessary to meet acceptable noise levels.

Program NO-1.i Regulate Noise Sources. Sections 6.70.030(5) and 6.70.040 of the Marin County Municipal Code establish allowable hours of operation for construction-related activities. As a condition of permit approval for projects generating significant construction noise impacts during the construction phase, construction management for any project shall develop a construction noise reduction plan and designate a disturbance coordinator at the construction site to implement the provisions of the plan.

- 12(a) New noise-sensitive residential development constructed pursuant to the *2012 Draft Housing Element* would occur in noisy areas such as along major transportation corridors (e.g., US 101), arterial roadways, the Sonoma Marin Area Rail Transit (SMART) corridor, and in the vicinity of public and private airports. *Countywide Plan* noise contour information and data developed as part of the noise monitoring survey were reviewed at each of the sites to determine the noise exposure and predominant noise sources affecting each of the potential sites included in the *2012 Draft Housing Element*. **Exhibits 3.0-23** and **3.0-24** summarize the noise exposure and predominant noise sources affecting each of the potential sites.

Single-family and multiple-family residential developments are considered noise-sensitive land uses. Residential development is sensitive to community noise both outdoors and indoors during the daytime and nighttime. Marin County establishes Noise and Land Use Compatibility Standards for single-family and multiple family residential land uses. The “normally acceptable” noise standard for single-family residential land uses is 60 dBA L_{dn} . Multi-family residential development is somewhat less noise sensitive because uses are primarily indoors, and noise levels are typically mitigated with building design and construction. The “normally acceptable” noise standard for multi-family residential land uses is 65 dBA L_{dn} . As indicated on **Exhibits 3.0-23** and **3.0-24**, noise exposures at the majority of proposed housing sites would exceed the Noise and Land Use Compatibility Guidelines; therefore, acoustical analyses should be conducted to design mitigation that would reduce exterior noise levels to the “normally acceptable” level.

Where exterior noise levels exceed 60 dBA L_{dn} in new residential development areas, interior levels may exceed 45 dBA L_{dn} . Interior noise levels are about 15 dBA lower than exterior levels within residential units with the windows partially open and approximately 20 to 25 decibels lower than exterior noise levels with the windows closed, assuming typical California construction methods. Where exterior day-night average noise levels are 60 to 70 dBA L_{dn} , interior noise levels can typically be maintained below 45 dBA L_{dn} with the incorporation of an adequate forced air mechanical ventilation system in the residential units to allow residents the option of controlling noise by keeping the windows closed. In areas exceeding 70 dBA L_{dn} , the inclusion of windows and doors with high Sound Transmission Class (STC) ratings, and the incorporation of forced-air mechanical ventilation systems, may be necessary to meet 45 dBA L_{dn} .

The implementation of *Countywide Plan* Policy **NO-1.1** (*Limit Noise from New Development*), and Programs **NO-1.a** (*Enforce Allowable Noise Levels*), **NO-1.b** (*Comply with Acceptable Noise Levels*), **NO-1.d** (*Set Additional Limits for Housing*), **NO-1.f** (*Review Projects Near Gness Field*), and **NO-1.h** (*Anticipate Additional Rail Noise*) would require that the compatibility standards be used to determine where noise levels in the community are acceptable or unacceptable, and require noise attenuation measures to achieve the “normally acceptable” noise level standards. Noise analyses of new development proposals are required when appropriate in order to maintain consistency with the *Countywide Plan* noise standards.

Implementation of *Countywide Plan* policies and programs would reduce potential noise and land use compatibility impacts to a less-than-significant level. The previously identified less-than-significant impacts (Impacts 4.4-1 [*Increased Traffic Noise*], 4.4-3 [*Stationary Noise Sources*], and 4.4-4 [*Future Noise Sensitive Development*]) would remain less-than-significant.

12(b) Construction Vibration and SMART Vibration

CONSTRUCTION VIBRATION

Construction activities for proposed sites included in the *2012 Draft Housing Element* would likely include site preparation work, excavation, foundation work, and new building framing. Impact or vibratory pile driving, which typically produces the highest vibration levels, would not be expected for residential housing sites.

For structural damage, the California Department of Transportation uses a vibration limit of 0.5 in/sec, peak particle velocity (PPV) for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec, PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.08 in/sec, PPV for ancient buildings (such as for historic monuments or ruins) or buildings that are documented to be structurally weakened.

Construction activities such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate vibration in the immediate vicinity. The erection of structures is not anticipated to be a source of substantial vibration with the exception of sporadic events such as dropping of heavy objects, which should be avoided to the extent possible. Construction activities may extend over several months, but construction vibration would not be substantial for most of this time except during vibration generating activities (as discussed above). Jackhammers typically generate vibration levels of 0.035 in/sec PPV and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance of 25 feet. Again, vibration levels would vary depending on soil conditions, construction methods, and equipment used. At a distance of 25 feet, construction activities would not likely generate vibration levels exceeding the 0.3 in/sec PPV threshold for buildings that are found to be structurally sound (e.g., adjacent residences).

In areas where vibration would not be expected to cause cosmetic or structural damage, vibration levels may still be perceptible. However, as with any type of construction, this would be anticipated and it would not be considered significant given the intermittent and short duration of the phases that have the highest potential of producing vibration (jackhammers and other high power tools). By use of administrative controls such as notifying adjacent land uses of scheduled construction activities and scheduling construction activities with the highest potential to produce perceptible vibration to hours with least potential to affect nearby residences perceptible vibration can be kept to a minimum and would not result in a significant impact with respect to perception.

SMART VIBRATION

The 2005 *Sonoma-Marin Area Rail Transit (SMART) DEIR*⁶⁴ was reviewed to establish groundborne vibration levels expected from trains traveling along the SMART corridor. The DEIR states that, “Groundborne noise and vibration levels at distances greater than approximately 100 feet from the tracks, would be lower than the level generally perceptible to humans. At distances between 20 feet and 100 feet from the tracks, vibration levels may be perceptible; however, they are expected to be less than the applicable FTA impact significance criteria of 0.01 inches per second RMS vibration velocity.”

Development facilitated by the 2012 *Draft Housing Element* could expose persons at housing sites 3 and 5 to excessive groundborne vibration levels attributable to SMART trains. The proposed locations of buildings and their specific sensitivity to vibration are not known at this time; however, such uses located in close proximity to the SMART tracks could be exposed to ground vibration levels exceeding FTA guidelines.

The *Countywide Plan* does not identify policies or programs to reduce vibration impacts from SMART. Thus, the development of a mitigation measure would be required to ensure that program-level vibration impacts are reduced to a less-than-significant level. In addition, the County will require that individual development projects adjacent to SMART undergo project-specific environmental review. If project-level significant vibration impacts are identified, specific mitigation measures will be required under CEQA.

Implementation of the **New Mitigation Measure Noise-1** (below) would reduce the identified significant impact resulting from the exposure of persons to groundborne vibration levels associated with SMART operations to a less-than-significant level.

- 12(c) Increases in traffic noise gradually degrade the environment in areas sensitive to noise. According to CEQA, “a substantial increase” is necessary to cause a significant environmental impact. The *Countywide Plan* requires all development to mitigate its noise impacts where the project would raise the L_{dn} by more than 5 dBA; raise the L_{dn} by more than 3 dBA and exceed the Normally Acceptable standard; or raise the L_{dn} by more than 3 dBA and the Normally Acceptable standard is already exceeded.

Vehicular traffic on roadways in the County would increase as development occurs and the population increases. These projected increases in traffic would occur over time and would increase noise levels throughout the community. Existing traffic volumes, however, would have to double as a result of the 2012 *Draft Housing Element* in order to yield noise levels 3 dBA L_{dn} greater than existing conditions.

Vehicular traffic generated by the 2012 *Draft Housing Element* would not increase noise levels substantially because the project-generated traffic would make up a small percentage of the total traffic along County roadways. Vehicular traffic noise levels are not expected to increase measurably above existing levels as a result of the project (increase would be less than 1 dBA L_{dn}). This would be a less-than-significant impact, as the noise level increase would not be measurable or perceptible.

⁶⁴ *Sonoma-Marin Area Rail Transit DEIR*, Parsons Brinckerhoff Quade & Douglas, Inc., November 2005.

The previously identified less-than-significant impacts related to noise (Impacts 4.4-1, 4.4-3, and 4.4-4) would remain less-than-significant.

- 12(d) The 2007 *Countywide Plan EIR* found that land uses and development consistent with the *Countywide Plan* would temporarily elevate noise levels at adjacent noise sensitive land uses during construction activities. The 2007 *Countywide Plan EIR* found that although the identified construction noise impact would be mitigated with imposition of Mitigation Measure 4.4-18 it would not be reduced to a less-than-significant level because construction noise would continue to exceed 60 dBA L_{eq} or 80 dBA L_{max} at sensitive receptors.

Implementation of the 2012 *Draft Housing Element* would not result in new or substantially more severe significant impacts.

- 12(e) Exhibits 3.0-15 and 3.0-16 show the distance of each housing site from Gness Field, San Rafael Airport and the Richardson Bay Heliport. Gness Field Airport is located east of U.S. 101 in Novato, California. Housing site 7 is located approximately 4.5 miles southeast of Gness Field Airport. Housing site 43 is located approximately two miles from the Gness Field Airport, but immediately adjacent to U.S. 101. Vehicles traffic along U.S. 101 is the predominant noise source in the vicinity of housing site 43.

The 2011 *Gness Field Airport Environmental Impact Report*⁶⁵ analyzed the effects of extending the existing 3,300-foot long runway by an additional 1,100 feet. Exhibit 4.7-7 of the Gness Field DEIR summarizes the noise exposure contours associated with the proposed runway extension project. A review of this exhibit shows that all proposed housing sites are located outside of the 65 dB CNEL noise contour for Gness Field Airport.

Aircraft noise associated with Gness Field Airport is not the predominant source of noise at either of the two identified housing sites, and implementation of the 2012 *Draft housing Element* would have a less-than-significant impact as aircraft noise exposure would be considered compatible with proposed residential land uses.

The previously identified less-than-significant impact related to airport noise (Impact 4.4-2 [*Increased Noise from Airports and Heliports*]) would remain less-than-significant.

- 12(f) The San Rafael Airport is a private use airport located east of US 101 and south of Smith Ranch Road. *Countywide Plan* Map 3-16 shows San Rafael Airport noise contours as of 2003. The San Rafael Airport is restricted by a Conditional Use Permit to a maximum of 100 based aircraft.⁶⁶ Noise exposure contours associated with this population of aircraft have not changed since 1987. No changes in the aviation use of the airport are expected in the future.⁶⁷

⁶⁵ *Gness Field Airport DEIR*, Landrum and Brown, December 2011.

⁶⁶ Therefore, no more than 100 aircraft can be based at this airport at any one time.

⁶⁷ *San Rafael General Plan 2020 Draft Environmental Impact Report*, City of San Rafael Community Development Department, Nichols • Berman, February 2004, page IV.4-9.

Housing sites 1, 5, 10, 11, 17, 35 to 42, and 52 are located within two miles of the San Rafael Airport. However, aircraft noise associated with San Rafael Airport is not a predominant noise source at any of these sites, and based on a review of *Countywide Plan* Map 3-16 aircraft operations would not expose persons to excessive aircraft noise.

The Richardson Bay Heliport is located northeast of U.S. 101 at the terminus of Bolinas Street. *Countywide Plan* Map 3-15 shows the noise contours for the heliport as of 2005. The Richardson Bay Heliport similarly has not experienced significant changes in activity levels nor are there any proposals to change the level of activity.

Housing sites 4, 9, 12, 13, 14, 18 to 25, 50, and 51 are located within two miles of the Richardson Bay Heliport. As described above, aircraft associated with the heliport is not a predominant noise source at any of the nearby sites, and based on a review of *Countywide Plan* Map 3-15 aircraft operations would not expose persons to excessive aircraft noise.

All proposed housing sites are located outside of the 55 dB CNEL noise contour for both the San Rafael Airport and the Richardson Bay Heliport. Thus, the project would have a less-than-significant impact as aircraft noise exposure would be considered compatible with proposed housing sites.

The previously identified less-than-significant impact related to airport noise (Impact 4.4-2) would remain less-than-significant.

Noise - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The 2007 *Countywide Plan EIR* identified one mitigation measure to reduce temporary construction noise impacts.

Mitigation Measure 4.4-5 revised Program **NO-1.i** to state,

***Program NO-1.i Regulate Noise Sources.** Sections 6.70.030(5) and 6.70.040 of the Marin County Code establish allowable hours of operation for construction-related activities. As a condition of permit approval for projects generating significant construction noise impacts during the construction phase, construction management for any project shall develop a construction noise reduction plan and designate a disturbance coordinator at the construction site to implement the provisions of the plan.*

Mitigation Measure 4.4-5 of the 2007 *Countywide Plan EIR* was adopted as a part of the *Countywide Plan*, and as appropriate, future housing projects will need to comply with Mitigation Measure 4.4-5.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

As a result of this environmental review of the 2012 *Draft Housing Element*, one new mitigation measure has been identified to reduce significant impacts that would result from the exposure of persons to groundborne vibration levels associated with SMART operations.

New Mitigation Measure Noise-1 The County shall use the Federal Transit Administration (FTA) vibration impact criteria to evaluate the compatibility of sensitive uses proposed along the SMART corridor using the best available information (e.g., 2005 SMART DEIR) or site-specific measurements and analyses (assuming active operations). The FTA thresholds for residences are 80 VdB⁶⁸ for frequent events (more than 70 vibration events from the same source per day), 75 VdB for occasional events (30 to 70 vibration events from the same source per day), and 72 VdB for infrequent events (fewer than 30 vibration events from the same source per day). Developers of sensitive uses shall demonstrate that the potential impacts of existing or potential vibration levels have been reduced to levels that are less than or equal to the FTA vibration impact thresholds. The implementation of this measure would reduce the impact to a less-than-significant level.

Noise - Conclusion

Based on a review of Impact 4.4-1 (*Increased Traffic Noise*), Impact 4.4-2 (*Increased Noise from Airports and Heliports*), Impact 4.4-3 (*Stationary Noise Sources*) and Impact 4.4-4 (*Future Noise Sensitive Development*) in the 2007 Countywide Plan EIR and on the analysis in this Draft SEIR, residential development that could occur under the 2012 Draft Housing Element would not have any new or substantially more severe impact on increased traffic noise, increased noise from airports and heliports, stationary noise sources, and future noise sensitive development. Although properties proposed to be included in the AH Combined District and other properties identified in the 2012 Draft Housing Element could be developed at higher densities than were analyzed in the 2007 Countywide Plan EIR, there would be no new or substantially more severe significant impacts requiring major revisions to the 2007 Countywide Plan EIR with regard to increased traffic noise, increased noise from airports and heliports, stationary noise sources, and future noise sensitive development; therefore, no additional analysis is required.

As stated in the discussion of Impact 4.4-5 (*Construction Noise*) in the 2007 Countywide Plan EIR, construction noise impacts due to development that could occur under the Countywide Plan would be significant and unavoidable because new development would temporarily elevate noise levels at adjacent noise sensitive land uses. Previously adopted Mitigation Measure 4.4-5 would reduce this impact, but not to a less-than-significant level, because noise levels due to construction would continue to be elevated at adjacent noise sensitive land uses. While properties proposed to be included in the AH Combined District and other properties identified in the 2012 Draft Housing Element could be developed at higher densities than were analyzed in the 2007 Countywide Plan EIR, previously adopted mitigation measures and Countywide Plan policies and programs would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the 2007 Countywide Plan EIR.

Impacts due to the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels were not analyzed in the 2007 Countywide Plan EIR. The 2012 Draft Housing Element would have the potential for significant impacts resulting from excessive groundborne vibration levels. Residential development of properties identified in the 2012 Draft

⁶⁸ The abbreviation “VdB” is used for vibration decibels to reduce the potential for confusion with sound decibels. The velocity of the ground is expressed on the decibel scale, and the reference velocity is 1 x 10⁻⁶ in. /sec. RMS, which equals 0 VdB. A vibration velocity of 1 in. /sec. equals 120 VdB.

Housing Element could expose persons at housing sites 3 and 5 due to excessive groundborne vibration levels attributable to SMART trains. New Mitigation Measure Noise-1 has been identified, which would reduce the impacts of the *2012 Draft Housing Element* on groundborne vibration to a less-than-significant level.

Exhibit 3.0-23
2007-2014 Potential Housing Sites – Noise Considerations

Site #	Site Name & Address	Total Acres	Total Units	Predominant Noise Source(s)	Noise Exposure dBA, Ldn	Exceeds Residential Noise and Land Use Compatibility Guidelines? ^a	
						Single-Family 60 dBA Ldn	Multiple-Family 65 dBA Ldn
1	Marinwood Plaza 100 Marinwood Ave	4.75	85	US 101, Miller Creek Road	> 65	Yes	Yes
2	Oak Manor 2400 Sir Francis Drive Blvd.	1.58	10	Sir Francis Drake Boulevard	60-65	Yes	No
3	California Park Woodland Avenue	1.82	50	US 101, SMART	> 65	Yes	Yes
4	Old Chevron Station 204 Flamingo Road	0.79	21	Shoreline Highway	60-65	Yes	No
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	1,110	221	US 101, SMART	> 65	Yes	Yes
6	Easton Point Paradise Drive	110	43	Paradise Drive	< 60	No	No
7	Tamarin Lane 12 Tamarin Lane	6.54	5	SR 37	< 60	No	No
8	Indian Valley 1970 Indian Valley Road	7.7	5	Indian Valley Road	< 60	No	No
9	Manzanita mixed use 150 Shoreline Highway	0.56	3	US 101, Shoreline Highway, Adjacent Land Uses	> 65	Yes	Yes
10	Grandi Building 11101 State Route 1	2.5	2	Shoreline Highway	60-65	Yes	No
11	650 N. San Pedro 650 North San Pedro	16.3	12	North San Pedro Road	60-65	Yes	No

Site #	Site Name & Address	Total Acres	Total Units	Predominant Noise Source(s)	Noise Exposure dBA, Ldn	Exceeds Residential Noise and Land Use Compatibility Guidelines? ^a	
						Single-Family 60 dBA Ldn	Multiple-Family 65 dBA Ldn
12	Golden Gate Seminary Seminary Drive	73.57	60	US 101, Seminary Drive	60-65	Yes	No
13	Oak Hill School 441 Drake Ave	3.87	30	US 101, Drake Avenue	60-65	Yes	No
14	Armstrong Nursery 217 & 221 Shoreline Highway	1.77	53	Shoreline Highway, Adjacent Land Uses	60-65	Yes	No
15	Inverness Valley Inn 3275 Sir Francis Drake	26.8	21	Sir Francis Drake Boulevard	60-65	Yes	No
16	Grady Ranch Lucas Valley Road	229	240	Lucas Valley Road	60-65	Yes	No
17	Roosevelt Street 30 Roosevelt	0.18	2	Distant Traffic, Venetia Valley School	< 60	No	No

a. *Countywide Plan* Figure 3-41, Acceptable Noise Levels, indicates that single-family residential land uses are normally acceptable in noise environments up to 60 dBA L_{dn} and multi-family residential uses are normally acceptable in noise environments up to 65 dBA L_{dn}.

Source: Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Exhibit 3.0-24
Potential Housing Sites for 2014-2022 – Noise Considerations

Site #	Site Name & Address	Total Acres	Total Units	Predominant Noise Source(s)	Noise Exposure dBA, Ldn	Exceeds Residential Noise and Land Use Compatibility Guidelines? ^a	
						Single-Family 60 dBA Ldn	Multiple-Family 65 dBA Ldn
18	Around Manzanita 150 Shoreline	1.48	45	US 101	> 65	Yes	Yes
19	Tam J retail 237 Shoreline Highway	6.8	60	Shoreline Highway, Adjacent Land Uses	60-65	Yes	No
20	Gateway Shopping Center 190 Donohue Street	20.34	150	US 101	> 65	Yes	Yes
21	Strawberry smaller retail Reed Blvd.	2.39	45	US 101	> 65	Yes	Yes
22	Strawberry Village 900, 950 etc. Redwood Highway	10.99	30	US 101	> 65	Yes	Yes
23	Tiburon Eastbound Tiburon Blvd.	1.45	43	US 101, Tiburon Boulevard	60-65	Yes	No
24	Tiburon Westbound Knoll Road	1.44	44	US 101, Tiburon Boulevard	60-65	Yes	No
25	Tiburon Redwood frontage Central Drive	2.7	81	US 101	> 65	Yes	Yes
26	College of Marin lot 15 139 Kent Avenue	3.2	45	Kent Avenue	< 60	No	No
27	Kentfield Eastbound Sir Francis Drake Blvd.	5.14	60	Sir Francis Drake Boulevard, Adjacent Land Uses	60-65	Yes	No
28	Kentfield Westbound	2.63	60	Sir Francis Drake Boulevard, Adjacent Land Uses	60-65	Yes	No

Site #	Site Name & Address	Total Acres	Total Units	Predominant Noise Source(s)	Noise Exposure dBA, Ldn	Exceeds Residential Noise and Land Use Compatibility Guidelines? ^a	
						Single-Family 60 dBA Ldn	Multiple-Family 65 dBA Ldn
29	Marin General 250 Bon Air Road	19.7	50	Bon Air Road	60-65	Yes	No
30	Ross Valley Self Storage 890 College Ave.	1.56	45	Sir Francis Drake Boulevard, Adjacent Land Uses	60-65	Yes	No
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	5.09	60	Sir Francis Drake Boulevard	60-65	Yes	No
32	3000 SFD- Sunnyside Growing 3000 Sir Francis Drake	7.74	30	Sir Francis Drake Boulevard	60-65	Yes	No
33	Railroad Ave. Railroad Ave. and Park St.	0.50	4	Local traffic	< 60	No	No
34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	0.54	6	Sir Francis Drake Boulevard	60-65	Yes	No
35	Los Ranchitos 99-165 Los Ranchitos Drive	13.81	60	US 101, Los Ranchitos Road	60-65	Yes	No
36	Big Rock Deli & Creekside Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	2.8	80	Lucas Valley Road	60-65	Yes	No
37	Rotary Field 16 Jeanette Prandi Way	12.83	60	Lucas Valley Road	60-65	Yes	No
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	1.49	44	US 101, North San Pedro Road	60-65	Yes	No
39	LDS Church Santa Venetia 220 N. San Pedro Road	5.38	30	North San Pedro Road	60-65	Yes	No
40	MacPhail School 1565 Vendola Drive	9.52	40	North San Pedro Road	60-65	Yes	No

Site #	Site Name & Address	Total Acres	Total Units	Predominant Noise Source(s)	Noise Exposure dBA, Ldn	Exceeds Residential Noise and Land Use Compatibility Guidelines? ^a	
						Single-Family 60 dBA Ldn	Multiple-Family 65 dBA Ldn
41	Marin Farmers Market 70 & 76 San Pablo Ave.	0.6	18	US 101, North San Pedro Road	60-65	Yes	No
42	San Pedro Road San Pedro Road	5.65	30	North San Pedro Road	60-65	Yes	No
43	Atherton (Novato RV Park) 1530 Armstrong Avenue	2.68	80	US 101	> 65	Yes	Yes
44	Bear Valley Road 10045 State Route 1	1.25	5	Shoreline Highway	60-65	Yes	No
45	Olema Campground Shoreline Highway	9.94	10	Shoreline Highway	60-65	Yes	No
46	Feed Lot B St. & 6 th St.	0.92	27	Local traffic	< 60	No	No
47	Pine Cone Diner 60 4 th St.	1.06	4	Local traffic	< 60	No	No
48	Pt. Reyes North 11598 State Route 1	16.89	15	Shoreline Highway, Point Reyes-Petaluma Road	60-65	Yes	No
49	Red Barn (green barn) 510 Mesa Road	1.53	10	Local traffic	< 60	No	No
50	Kruger Pines	2.45	28	US 101, Tiburon Boulevard	> 65	Yes	Yes
51	Homestead Terrace	0.64	73	Local traffic	< 60	No	No
52	Venetia Oaks	1.84	55	North San Pedro Road	60-65	Yes	No

a. *Countywide Plan* Figure 3-41, Acceptable Noise Levels, indicates that single-family residential land uses are normally acceptable in noise environments up to 60 dBA L_{dn} and multi-family residential uses are normally acceptable in noise environments up to 65 dBA L_{dn}.

Source: Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Population and Housing

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
13. Population and Housing. Would the Project:					
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Discussed in Section 4.1 Land Use, Population, and Housing, see Impact 4.1-2.	No	No	No	No MM 4.1-2 would reduce impact, but still found significant unavoidable. No change from CWP EIR.
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	Determined to be less-than-significant in the Initial Study.	No	No	No	NA
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	Determined to be less-than-significant in the Initial Study.	No	No	No	NA

Population and Housing – Setting

Exhibit 3.0-4 in the *2007 Countywide Plan EIR* shows historic and projected population for Marin County as a whole and the unincorporated portion of Marin County for the years 1990, 2000, and 2006 plus a projection for 2030. More recent population figures and projections are provided in **Exhibit 3.0-25**.

**Exhibit 3.0-25
Marin County Population Figures**

Year	Marin County	Unincorporated Marin	Unincorporated Population Percent of Total
1990	230,096	64,099	28
2000	247,289	68,735	28
2006 ^a	253,341	69,239	27
2012 ^b	254,790	67,737	27
2030 Projections ^c	270,900	73,000	27
2035 Projections ^c	274,300	74,300	27

- a State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2006, with 2000 Benchmark. Sacramento, California, May 2006.
- b State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2011 and 2012, with 2010 Benchmark. Sacramento, California, May 2012.
- c ABAG Projections 2009.

Exhibit 3.0-5 in the *2007 Countywide Plan EIR* shows the historic (1980 through 2005) and projected buildout of housing units for the cities and towns, for the unincorporated area of Marin County, and for the County as a whole. More recent data for 2012 and projected buildout is shown in **Exhibit 3.0-26**.

**Exhibit 3.0-26
Housing Units**

Housing Units	2000	2005	2012^a	Projected Buildout
Cities / Towns	77,585	80,671	81,864	89,132
Unincorporated Area	27,405	27,323	29,569	31,623
Countywide Total	104,990	107,994	111,433	120,755

- b. State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2011 and 2012, with 2010 Benchmark. Sacramento, California, May 2012.

Population and Housing - Discussion

Population and Housing impacts are analyzed in the *2007 Countywide Plan EIR* in Section 4.1 Land Use, Population, and Housing. As analyzed in the *2007 Countywide Plan EIR* Impact 4.1-2 (*Growth and Concentration of Population*) was determined to be a significant unavoidable impact under both project and cumulative conditions with the implementation of the *Countywide Plan*.

Section 3.4, Community Development, of the Built Environment Element of the *Countywide Plan* describes issues related to land use development in the unincorporated areas of Marin County and

provides goals, policies, and programs related to such issues as the need to maintain balanced communities that house and employ persons from all income groups. Goal **CD-1** (*Environmental Corridor Land Use Framework*) would establish a land use management framework based on the County's designated environmental corridors. Policy **CD-1.1** (*Direct Land Uses to Appropriate Areas*) and Program **CD-1.a** (*Keep Urban Uses in the City-Centered Corridor*) directs land uses to appropriate areas and concentrates urban development within the City-Centered Corridor. Policy **CD-2.3** (*Establish a Housing Overlay Designation*) establishes a Housing Overlay Designation for potential affordable housing development. For certain Commercial / Mixed Use land use categories the *2007 Countywide Plan EIR* considered residential development up to 30 dwelling units per acre if certain conditions were met. Adoption and subsequent implementation of the *2012 Draft Housing Element* would not induce substantial population growth in an area above what was evaluated for implementation of the *Countywide Plan*, either directly (by proposing new houses or businesses) or indirectly (through extension of roads or other infrastructure) because the total number of housing units would not exceed the anticipated units at buildout. Future housing, including affordable housing projects, on these sites would not displace substantial numbers of existing housing or substantial numbers of people. Buildout of the *Countywide Plan* would result in approximately 31,623 housing units in the unincorporated area (see *Countywide Plan* Figure 3-1a) – an increase of 4,218 housing units over the number of existing units in 2000.⁶⁹ The *2007 Countywide Plan EIR* evaluates a range of total housing units upon buildout of the *Countywide Plan* that differ according to project alternatives as follows: 31,686 housing units for *Alternative 3* to 32,831 housing units for *Alternative 2* (see **Exhibit 2.0-2**). New housing units constructed pursuant to the *2012 Draft Housing Element* would not exceed the number of housing units that the *2007 Countywide Plan EIR* bases its environmental impact evaluations on. With adoption and subsequent implementation of the *2012 Draft Housing Element* the number of housing units that could be constructed would be within the total numbers of housing units considered in the *2007 Countywide Plan EIR* with buildout of the *Countywide Plan*. *Countywide Plan* buildout projects a population of 76,400 persons in unincorporated Marin County in the year 2030.⁷⁰

- 13(a) Implementation of the *2012 Draft Housing Element* would not involve new or substantially more severe impacts related to inducing substantial population growth, either directly or indirectly. The *2007 Countywide Plan* found that Impact 4.1-2 (*Growth and Concentration of Population*) would be significant and unavoidable with implementation of the *Countywide Plan* because growth and population increases would occur in unincorporated areas substantially above the existing conditions at the time of *Countywide Plan* adoption. Adoption and subsequent implementation of the *Housing Element* would not increase the severity of this impact.
- 13(b) Implementation of the *2012 Draft Housing Element* would not displace a significant number of existing housing units. The goals of the *2012 Draft Housing Element* include using land efficiently to meet housing needs and providing a variety of housing choices. The *2012 Draft Housing Element* contains policies to preserve and rehabilitate existing housing, such as *Policy 2.4 (Protect Existing Housing)* which is intended to protect and enhance existing housing and ensure that existing housing remains affordable. In addition several programs such as Program 2.t (*Assist in Maximizing Use of Rehabilitation Programs*) and Program 3.g (*Preserve Existing Housing Stock*) focus on protecting existing housing stock. There are existing dwellings on

⁶⁹ 27,405 housing units in unincorporated Marin County 2000. *2007 Countywide Plan EIR Exhibit 3.0-5*.

⁷⁰ *2007 Countywide Plan EIR*, Marin County, Nichols • Berman, 2007. page 4.1-49.

several of the sites identified for housing in the *Draft 2012 Housing Element*. In some cases, the 2012 Draft Housing Element contemplates intensification of very low densities through redevelopment. In other cases, it contemplates creating housing capacity in addition to existing uses. No net loss of lower income housing units is proposed because all sites contemplate additional housing. This would be a less-than-significant impact.

13(c) Same as Environmental Checklist Item 13(b) (above).

Population and Housing - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The 2007 *Countywide Plan EIR* identified one mitigation measure to reduce identified population and housing impacts. Mitigation Measure 4.1-2 of the 2007 *Countywide Plan EIR* was adopted as a part of the *Countywide Plan*.

Mitigation Measure 4.1-2 added the following policies and programs to the Community Development Section of the Built Environment Element.

Policy CD-5.2 Correlate Development and Infrastructure. *For health, safety and general welfare, new development should only occur when adequate infrastructure is available consistent with the following findings:*

- a. *Project related traffic will not cause level of service established in the circulation element to be exceeded (See TR-1.e);*
- b. *Any circulation improvements or programs needed to maintain the level of service standard have been programmed and funding has been committed;*
- c. *Environmental review of needed circulation improvement projects or programs has been completed;*
- d. *The time frame for completion of the needed circulation improvements or programs will not cause the established level of service standard to be exceeded.*
- e. *Wastewater, water (including for adequate fire flows) and other infrastructure improvements will be available to serve new development by the time the development is constructed.*

Program CD-5.a Review and Correlate Countywide Growth and Infrastructure. *Work with the proposed City-County Committee or a similar collaborative venue (to be established pursuant to Policy CD-4.f) to review the countywide growth, planned land use and traffic and service capacity. As warranted by the monitoring information, encourage all jurisdictions to amend their respective general plans and zoning from allowing “theoretical full buildout” of non-residential uses to allowing “realistic buildout” to ensure correlation of planned land uses and traffic capacity and the capacity of all essential public services.*

Program CD-5.k Monitor Growth and Circulation. *At least every five years review the unincorporated County's growth, planned land use, traffic capacity, funded traffic improvements, traffic mitigation list and traffic fees. Assess growth assumptions and modify land use and circulation policies as needed to ensure adequate circulation capacity to serve development.*

Program CD-5.l Provide Adequate Infrastructure Capacity. *Plan the circulation system and public infrastructure and services to provide capacity for the unincorporated County's realistic buildout.*

Program CD-5.m Development Review. Ensure that policy provisions are evaluated and implemented through the development and environmental review processes. If required by statute or case law, the County Review Authority may waive or modify policy requirements determined to have removed all economically viable use of the property.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to population and housing would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Population and Housing - Conclusion

As stated in the discussion of Impact 4.1-2 (*Growth and Concentration of Population*) in the *2007 Countywide Plan EIR*, impacts regarding growth and concentration of population due to development that could occur under the *Countywide Plan* would be significant and unavoidable because development consistent with the *Countywide Plan* would induce substantial growth within the unincorporated area. Previously adopted Mitigation Measure 4.1-2 would reduce this impact, but not to a less-than-significant level, because substantial growth and concentration of population would still occur in the unincorporated area above existing conditions as a result of development consistent with the *Countywide Plan*. While properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, this would remain a significant unavoidable impact, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Public Services

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
14. Public Services.					
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 governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
a. Fire protection?	Discussed in Section 4.10 Public Services, see Impact 4.10-9.	No	No	No	NA
b. Police protection?	Discussed in Section 4.10 Public Services, see Impact 4.10-11.	No	No	No	NA
c. Schools?	Discussed in Section 4.10 Public Services, see Impact 4.10-12.	No	No	No	NA
d. Parks?	Discussed in Section 4.10 Public Services, see Impact 4.10-13.	No	No	No	NA
e. Other public facilities?	Determined to be less-than-significant in Initial Study.	No	No	No	NA

Public Services – Updated Setting

Exhibits 3.0-27 and **3.0-28** indicate the fire district and school district for each of the housing sites in the 2007-2014 and 2014-2022 planning periods.

Section 4.10 Public Services of the *2007 Countywide Plan EIR* discusses Public Services in terms of service capacity and increased demand for public service facilities, and provides analysis of potential environmental effects that would result from construction for expansion of new facilities. This includes Impact 4.10-9 (*Increased Demand for Fire Protection and Emergency Services Facilities*), Impact 4.10-11 (*Demand for Additional Criminal Justice Facilities*), Impact 4.10-12 (*Demand for Public Education Services*), and Impact 4.10-13 (*Increased Demand for Park and Recreation Services and Facilities*).

Section 3.11, Public Facilities and Services, of the Built Environment Element of the *Countywide Plan* describes public services available to support existing communities in Marin County. *Countywide Plan* Maps 3-17 through 3-30 depict community facilities and the sphere of influence for each community. Map 3-31 show the boundaries of each Marin County fire agency and Map 3-32 shows the boundaries of each Marin County school district.⁷¹ The *Countywide Plan* contains policies that would substantially reduce construction related impacts in the event that public facilities are needed to expand. These policies include **BIO-4.1** (*Restrict Land Use in Stream Conservation Areas*) and **BIO-4.2** (*Comply with Stream Conservation Area (SCA) Regulations*), which would establish setbacks to protect stream corridors from construction impacts, Policies **WR-2.1** (*Reduce Toxic Runoff*), **WR-2.2** (*Reduce Pathogen, Sediment, and Nutrient Levels*), **WR-2.3** (*Avoid Erosion and Sedimentation*), and **WR-2.4** (*Design County Facilities to Minimize Pollutant Input*) reduce water pollution, particularly in run-off, and reduce erosion and sedimentation caused by construction activities. *Countywide Plan* Policy **AIR-1.3** (*Require Mitigation of Air Quality Impacts*) requires incorporation of the best available air quality mitigation into the design of new construction projects. Policies **NO-1.1** (*Limit Noise from New Development*) and **NO-1.3** (*Regulate Noise Generating Activities*) would reduce noise generated from construction and operation of any new community facilities.

Buildout of the *Countywide Plan* would result in approximately 31,623 housing units in the unincorporated area (see *Countywide Plan* Figure 3-1a) – an increase of 4,218 housing units over the number of existing units in 2000.⁷² Upon *Countywide Plan* buildout unincorporated areas of Marin County would have an estimated 4,158,800 square feet of nonresidential floor area.⁷³ The *2007 Countywide Plan EIR* evaluates a range of total housing units upon buildout of the *Countywide Plan* that differ according to project alternatives as follows: 31,686 housing units for *Alternative 3* to 32,831 housing units for *Alternative 2* (see **Exhibit 2.0-2**). New housing units constructed pursuant to the *2012 Draft Housing Element* would not exceed the number of housing units that the *2007 Countywide Plan EIR* bases its environmental impact evaluations on. However, implementation of Housing Element Program 1.a (*Establish Minimum Densities on Housing Element Sites*) and Program 1.c (*Establish and Affordable Housing (AH) Combined Zoning District*) would facilitate increased housing densities on specified properties above densities established by the *Countywide Plan* (see

⁷¹ This series of Maps follows page 3-194 in the *Countywide Plan*.

⁷² *Marin Countywide Plan*, Marin Board of Supervisors, November 6, 2007, Figure 3-1a.

⁷³ *Marin Countywide Plan*, Marin Board of Supervisors, November 6, 2007, Figure 3-1a

Exhibit 2.0-16). Four properties identified for AH zoning designation in the *2012 Draft Housing Element* for the 2007-2014 planning period, which would facilitate affordable housing development at a minimum of 30 housing units per acre, are St. Vincent's / Silveira (housing site 5), Golden Gate Seminary (housing site 12), Oak Hill School (housing site 13), and Grady Ranch (housing site 16).

FIRE PROTECTION AND EMERGENCY SERVICE

There are 16 fire protection districts in Marin County (see *Countywide Plan* Map 3-31). Fire protection services are generally adequate; however in some areas the narrow winding roads make access difficult.⁷⁴ Housing sites identified in the *2012 Draft Housing Element* that are located within a specific district may be serviced by a different agency through contract agreements with the original district. For example the St. Vincent's / Silveira (housing site 5) and Grady Ranch (housing site 16) are located within the jurisdiction of Marin County Fire Department. However through contractual agreements both properties receive basic fire protection and emergency medical response from the Marinwood Fire Department, and both properties are served by San Rafael Fire Department for Advanced Life Support Paramedic Services.⁷⁵ Additionally, automatic aide agreements are in place between agencies for response to multiple alarm fires.⁷⁶

The Marin County Fire Department (MCFD) has recently upgraded its facilities: The Marin City Station was rebuilt in 2000, and the Throckmorton Ridge fire station was rebuilt in 2006.⁷⁷ MCFD is planning to rebuild the Hicks Valley Station and estimates the project will not be implemented for a few years out.⁷⁸ These recent improvements have increased the capacity to house equipment at the respective fire stations.⁷⁹

A description of each Fire District is contained in Section 4.10 of the *2007 Countywide Plan EIR*. This includes a description of the district, general staffing information, and response times. There have been no significant changes to staffing in any of the districts since publication of the *2007 Countywide Plan EIR*.

The *Countywide Plan* contains policies and programs that specifically promote fire safety and reduce the demand for fire protection services. Policy **EH-4.1** (*Limit Risks to Structures*) requires new

⁷⁴ *Community Facilities Element Technical Background Report Provision of Services in Marin County*, The Marin County Community Development Agency, Planning Division, Revised September 2003.

⁷⁵ Nichols • Berman personal communication with Jason Weber, Interim Fire Chief, Marin County Fire District, August, 2012.

⁷⁶ Nichols • Berman personal communication with Tom Roach, Fire Chief, Marinwood Fire Department, August 2012.

⁷⁷ Nichols • Berman personal communication with Jason Weber, Interim Fire Chief, Marin County Fire District, August, 2012.

⁷⁸ Nichols • Berman personal communication with Jason Weber, Interim Fire Chief, Marin County Fire Department, August, 2012.

⁷⁹ Nichols • Berman personal communication with Jason Weber, Interim Fire Chief, Marin County Fire Department, August, 2012.

development and modifications to existing structures have adequate fire protection. Policy **EH-4.2** (*Remove Hazardous Vegetation*) abates vegetative fuels that could fuel fire. Policy **EH-4.3** (*Adopt and Implement a Fire Management Plan*) requires a proactive approach to prevent wildfire losses by identifying hazard risks and enacting effective mitigation strategies. Policy **EH-4.4** (*Ensure Adequate Emergency Response*) is intended to maintain an adequate number of trained and certified emergency medical technicians to address any increase in medical demand. Policy **EH-4.5** (*Regulate Land Uses to Protect from Wildland Fires*) utilizes land use regulations to protect people and property from wildland fires. Subdivision approvals and denials are mentioned in the policy.

POLICE PROTECTION

The Marin County Sheriff's Office is responsible for crime prevention and law enforcement in the unincorporated areas of Marin County. The Sheriff's office has a staff of 207 sworn deputies and 114 law enforcement professionals, and operates on a budget of over 40 million dollars.⁸⁰ The Patrol division operates out of four Sheriff's stations located in Marin City, Kentfield, Point Reyes Station, and the Civic Center.⁸¹ The Marin County Jail is located on the Civic Center grounds and houses both male and female adults, and has an average daily population of 293 inmates.⁸² The jail has a bed capacity of 386 and there are currently no plans for expansion.⁸³

The *Countywide Plan* contains goals, policies, and programs intended to decrease crime and provide adequate criminal justice facilities. Goal **PS-1** (*Safe Neighborhoods*) calls for assurance that county neighborhoods remain safe. Policy **PS-1.1** (*Encourage Community Involvement in Crime Control*) promotes community involvement in crime control. Policy **PS-1.2** (*Improve Infrastructure to Discourage Crime*) calls for improvement to any public facilities where problems might encourage criminal activity.

Marin County has purchased an existing commercial building located at 1600 Los Gamos Drive and is planning to relocate the County's 911/Communication Center, Emergency Operations Center and the Sheriff Department to this location. The anticipated move-in would follow building renovations and is estimated to occur in spring of 2014.⁸⁴ Structural upgrades are planned for the building in order to meet California Essential Services standard. Marin County Sheriff's Department currently maintains patrol deputies to residents service ratio of approximately 7,000 to 7,500 to 1.⁸⁵

⁸⁰ Marin County Sheriff's website, available at www.marinsheriff.org, accessed August 2012.

⁸¹ Nichols • Berman personal communication with Sgt. Mark Hale, Public Information Officer and Investigation Unit at Marin Sheriff's Department, August 2012.

⁸² Marin County Sheriff's website, available at www.marinsheriff.org, accessed September 2012.

⁸³ Nichols • Berman personal communication with Sgt. Scott Harrington, Marin County Detention Facility, September, 2012.

⁸⁴ Nichols • Berman personal communication with Mark Campbell, Ret. with Marin County Sheriff, August, 2012.

⁸⁵ Nichols • Berman personal communication with Mark Campbell, Ret with Marin County Sheriff, August 2012.

PUBLIC EDUCATION SERVICES

There are 19 school districts in Marin County (see *Countywide Plan* Map 3.32). This number consists of 15 elementary school districts, two high school district, and two unified districts. There are 77 public schools in Marin County, including 44 elementary schools, 11 middle / junior high schools, eight high schools, two continuation schools, eight alternative education / independent study schools, and four charter schools. Marin County public school enrollment for K-12 grades has steadily risen over the years. Enrollment for the 2008-2009 academic year was 29,615 students, for 2009-2010 was 30,140 students, for 2010-2011 was 30,574 students, and 2011-2012 was 31,106.⁸⁶

Countywide Plan Policy **EDU-1.1** (*Assist with School Planning*) requires coordinated planning between the county and school districts to determine the appropriate locations and layouts for future facilities. Program **EDU-1.b** (*Preserve Future Facilities Options*) encourages school districts and colleges to lease facilities not currently needed to interim uses that might include child care centers, recreation centers, community meeting places, and private schools, meanwhile reserving those sites for future school needs. Policies **EDU-2.1** (*Supplement Classroom Education*) and **EDU-2.2** (*Expand Adult Education*) enhance preschool, after-school education programs, and adult education.

SB 50 (Government Code § 65955 *et seq.* and Education Code § 17629 *et seq.*) establishes fees for the impacts of development on the need for schools. When new development pays the SB 50 fees, no other CEQA mitigation for impacts on schools may be required. School districts are involved in capacity expansion projects. This includes the Mill Valley Elementary School District reconstruction of the Edna Maguire School.⁸⁷ In 2010 the Ross Valley School District's Measure A was passed to fund campus improvements. Construction of the District's first project, improvements to White Hill Middle School, began in spring 2012.⁸⁸ Novato School District San Ramon Elementary is planning construction for a new multipurpose room.⁸⁹ New residential development is required to pay school development fees to offset the cost of accommodating increased enrollment. For example the San Rafael Elementary and San Rafael High School Districts levy a School Facilities Fee of \$2.97 per square foot of new residential development for the purpose of raising funds to provide classrooms for students generated by new residential construction.⁹⁰ The Dixie Elementary School District, which is governed by San Rafael City Schools and feeds future enrollment into the San Rafael High School District, levies a fee of \$2.06 per square foot of new residential development. The fees are used for modernization, construction, and/or expansion of the District's school sites.

⁸⁶ California Department of Education Data Quest Database, available at <http://dq.cde.ca.gov/dataquest/>, accessed September 2012.

⁸⁷ Mill Valley Elementary School District, *Facilities Modernization*, available at www.mvschools.org, accessed September 2012.

⁸⁸ Ross Valley School District, Measure A/Facilities News Update, Available at www.rossvalleyschool.org, accessed September 2012.

⁸⁹ San Ramon Elementary School, *Multi Purpose Room Update*, www.sanramonelementary.org, accessed September 2012.

⁹⁰ San Rafael City Schools, *San Rafael Elementary and High School District School Facilities Brochure*, available at www.SRCS.org, accessed November 2012.

PARKS

Marin County manages 28 parks with 800 acres of parkland and 925 acres of conservation land, 34 open space preserves with over 15,508 acres of open space.⁹¹ The *Countywide Plan* identifies 932 acres of developed parkland, including city owned parks that are used for active recreation.⁹²

Section 4.14, Parks and Recreation, of the Socioeconomic Element of the *Countywide Plan* describes issues related to parks and recreation in Marin County and provides goals, policies, and programs to ensure that high-quality parks and recreation facilities and programs are available to meet the various needs of all county residents. This includes Policy **PK-1.1** (*Conduct and Coordinate Park Planning*) which calls for coordinated park planning and programs. Program **PK-1.a** (*Update the Parks Master Plan*) required an update to the Parks Master Plan. Program **PK-1e** (*Replace Closed Facilities*) calls for replacement of closed facilities and program **PK-1.f** (*Prepare an Acquisition Plan*) calls for preparation of an Acquisition Plan.

In November 2012 Marin County voters approved a quarter-cent sales tax increase to pay for county parks, open space and farm programs. The sales tax will raise money to fund programs for protection and restoration of existing county parks and open space preserves, and preserve natural lands, farmland preservation, and develop a grant program for maintenance and restoration of existing parks, preserves and recreational areas.

Public Services - Discussion

Public services impacts are analyzed in Section 4.10 Public Services of the *2007 Countywide Plan EIR*.

14(a) The Novato Fire District is planning to relocate one of its fire stations.⁹³ The Marin County Fire Department is currently planning to rebuild its Hicks Valley station. Other facility expansion could occur. As stated in the *2007 Countywide Plan EIR* discussion of Impact 4.10-9 (*Increased Demand for Fire Protection and Emergency Services Facilities*), *Countywide Plan* policies and programs would reduce construction related impacts to a less-than-significant level. The adoption and subsequent implementation of the *2012 Draft Housing Element* policies and programs would not increase the number of housing units above what was projected for *Countywide Plan* buildout. Some housing sites would be designated for higher density development than what was accounted for in the *Countywide Plan*. Grady Ranch (housing site 16) is an example in which implementation of the *2012 Draft Housing Element* would facilitate development of 240 affordable units. Local fire agencies have adequate capacity to serve this

⁹¹ Marin County Parks and Open Space Department Comprehensive Strategic Plan: Existing Conditions Needs and Assessment Report, PMC, June 2007, pages 4-2.

⁹² *Marin Countywide Plan*, Marin County CDA, November 2007, page 4.143 figure 4.41.

⁹³ Nichols • Berman personal communication with Bill Tyler, Battalion Chief, Novato Fire District, August 2012.

site.⁹⁴ Southern Marin Fire District does not foresee any problems continuing to provide fire protection and emergency services within its jurisdiction upon buildout of the *Countywide Plan* and higher density development on Housing Element sites within its jurisdiction.⁹⁵ Additionally, individual development would be reviewed for emergency vehicle access, fire flow, vegetative fuel management, and other site specific design issues that would enhance fire and emergency services on the site. This previously identified less-than-significant impact would remain less-than-significant.

14(b) As discussed above, the Marin County Sheriff's Department is currently working to relocate its operation into an existing building. Other police protective service facility expansions may occur. *Countywide Plan* policies would reduce construction related impacts to a less-than-significant level. Adopting the *2012 Draft Housing Element* would not increase demand for police services in Marin County. New residential construction pursuant to implementation of Housing Element policies and programs would occur at higher densities, and include more mixed use projects on certain housing sites than what was anticipated by the *Countywide Plan*. However the total number of housing units would not exceed residential growth anticipated with implementation of the *Countywide Plan*. The *Countywide Plan* contains policies that reduce construction related impacts to a less-than-significant level. The Marin County Sheriff Department does not anticipate that additional expansion would be needed upon buildout of the *Countywide Plan*.⁹⁶ The previously identified less-than-significant impact related to construction of new police facilities (Impact 4.10-11) would remain less-than-significant.

14(c) As discussed in the *2007 Countywide Plan EIR*, implementation of the *Countywide Plan* would increase demand for public school services beyond the existing public school capacity, resulting in the need for new facilities. *Countywide Plan* policies and programs are in place that would reduce construction related impacts to a less-than-significant level. This previously identified less-than-significant impact related to construction of new school facilities (Impact 4.10-12) would remain less-than-significant.

14(d) The *2007 Countywide Plan EIR* found that increased demand for park and recreational service and facilities upon implementation of the *Countywide Plan* would be a less-than-significant impact. While implementation would require new and/or expanded facilities to achieve recognized planning standards, *Countywide Plan* policies and programs would reduce environmental impact from the construction of these projects to a less-than-significant level. Adoption of the *2012 Draft Housing Element* and subsequent implementation of Housing Element policies and programs would not increase demand for park and recreational facilities above the demand analyzed in the *2007 Countywide Plan EIR*. This previously identified less-than-significant impact would remain less-than-significant.

14(e) Adopting the *2012 Draft Housing Element* would not increase the demand for use of other public facilities, such as libraries, to the extent where new or expanded facilities are needed, the

⁹⁴ Nichols • Berman personal communication with Jason Weber, Interim Fire Chief, Marin County Fire Department, August 2012.

⁹⁵ Nichols • Berman personal communication with Jim Irving, SMFD Fire Chief, August 2012.

⁹⁶ Nichols • Berman personal communication with Mark Campbell, Ret. with Marin County Sheriff, August 2012.

construction of which would have adverse physical impacts on the environment. New residential construction pursuant to the implementation of *2012 Draft Housing Element* policies and programs would not exceed the number of housing units resulting from implementation of the *Countywide Plan*. The impact would be less-than-significant.

Public Services - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The *2007 Countywide Plan EIR* did not identify any significant public services impacts that required adoption of mitigation measures.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to public services would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Public Services - Conclusion

Based on a review of public service impacts (Impact 4.10-9 [*Increased Demand for Fire Protection and Emergency Services Facilities*], Impact 4.10-11 [*Demand for Additional Criminal Justice Facilities*], Impact 4.10-12 [*Demand for Public Education Services*], and 4.10-13 [*Increased Demand for Park and Recreation Services and Facilities*]) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe impact on these public services (fire protection, police protection, schools, and parks). With implementation of *Countywide Plan* policies and programs, residential development that could occur under the *2012 Draft Housing Element* would have a less-than-significant impact on these public services. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to public services (fire protection, police protection, schools, and parks); therefore, no additional analysis is required.

Exhibit 3.0-27
2007-2014 Potential Housing Sites – Public Service and Utilities Considerations

Site #	Site Name & Address	Total Acres	Total Units	Fire District	Water District	Sanitary District	Elementary Dist. High School Dist.
1	Marinwood Plaza 100 Marinwood Ave	4.75	85	Marinwood Community Services District	Marin Municipal Water District	Las Gallinas Valley	possible: Dixie San Rafael High
2	Oak Manor 2400 Sir Francis Drave Blvd.	1.58	10	Fire Service in unincorporated Marin	Marin Municipal Water District	Sanitary District No.01	Ross Valley Tamalpais
3	California Park Woodland Avenue	1.82	50	San Rafael Service Area	Marin Municipal Water District	San Rafael Sanitation	San Rafael Elementary San Rafael High or Terra Linda
4	Old Chevron Station 204 Flamingo Road	0.79	21	Southern Marin Fire Protection District	Marin Municipal Water District	Tamalpais Community Services	Mill Valley Tamalpais School
5	St. Vincent's & Silveira St. Vincent's Dr; Silveira Parkway	1,110	221	Fire Service in unincorporated Marin	Marin Municipal Water District	part Las Gallinas Valley	possible: Dixie San Rafael High
6	Easton Point Paradise Drive	110	43	Tiburon Fire Protection	Marin Municipal Water District	Sanitary District No. 5	Reed Union Tamalpais School
7	Tamarin Lane 12 Tamarin Lane	6.54	5	Novato Fire Protection	North Marin Water	north of Novato Sanitary District	Novato Unified Novato Unified
8	Indian Valley 1970 Indian Valley Road	7.7	5	Novato Fire Protection	North Marin Water	south of Novato Sanitary District	Novato Unified Novato Unified
9	Manzanita mixed use 150 Shoreline Highway	0.56	3	Southern Marin Fire Protection	Marin Municipal Water District	Sausalito-Marín City	Sausalito Tamalpais
10	Grandi Building 11101 State Route 1	2.5	2	Fire Service in unincorporated Marin	North Marin Water	Outside of Sanitary District	Shoreline Unified Shoreline Unified
11	650 N. San Pedro 650 North San Pedro	16.3	12	San Rafael Service Area	Marin Municipal Water District	Las GallinasValley	San Rafael Elementary San Rafael High
12	Golden Gate Seminary Seminary Drive	73.57	60	Southern Marin Fire Protection	Marin Municipal Water District	Richardson Bay	Mill Valley Tamalpais

Site #	Site Name & Address	Total Acres	Total Units	Fire District	Water District	Sanitary District	Elementary Dist. High School Dist.
13	Oak Hill School 441 Drake Ave	3.87	30	Fire Service in unincorporated Marin	Marin Municipal Water District	Sausalito – Marin city	Sausalito Tamalpais
14	Armstrong Nursery 217 & 221 Shoreline Highway	1.77	53	Sothern Marin Fire Protection	Marin Municipal Water District	Tamalpais Community Services	Mill Valley Tamalpais School
15	Inverness Valley Inn 3275 Sir Francis Drake	26.8	21	Inverness Public Utility	Inverness	Sanitary District No. 1	Ross Valley Sir Frances Drake High School
16	Grady Ranch Lucas Valley Road	229	240	Fire Service in unincorporated Marin ⁸	borders Marin Municipal Water District	borders Las Gallinas Valley	Dixie San Rafael High School
17	Roosevelt Street 30 Roosevelt	0.18	2	San Rafael Service Area	Marin Municipal Water District	Las Gallinas Valley	San Rafael Elementary San Rafael High School

Source: Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Exhibit 3.0-28
Potential Housing Sites for 2014-2022 - Public Service and Utilities Considerations

Site #	Site Name & Address	Total Acres	Total Units	Fire District	Water District	Sanitary District	Elementary Dist. High School Dist.
18	Around Manzanita 150 Shoreline	1.48	45	Southern Marin Fire Protection	Marin Municipal Water District	Sausalito- Marin City	Sausalito Tamalpais
19	Tam J retail 237 Shoreline Highway	6.8	60	Southern Marin Fire Protection	Marin Municipal Water District	Tamalpais Community Services	Mill Valley Tamalpais
20	Gateway Shopping Center 190 Donohue Street	20.34	150	Fire Service in unincorporated Marin	Marin Municipal Water District	Sausalito – Marin City	Sausalito Tamalpais
21	Strawberry smaller retail Reed Blvd.	2.39	45	Southern Marin Fire Protection District	Marin Municipal Water District	Richardson Bay	Mill Valley Tamalpais
22	Strawberry Village 900, 950 etc. Redwood Highway	10.99	30	Southern Marin Fire Protection	Marin Municipal Water District	Richardson Bay	Mill Valley Tamalpais
23	Tiburon Eastbound Tiburon Blvd.	1.45	43	Southern Marin Fire Protection	Marin Municipal Water District	Richardson Bay	Mill Valley Tamalpais
24	Tiburon Westbound Knoll Road	1.44	44	Southern Marin Fire Protection	Marin Municipal Water District	Richardson Bay	Mill Valley Tamalpais
25	Tiburon Redwood frontage Central Drive	2.7	81	Southern Marin Fire Protection	Marin Municipal Water District	Alto	Mill Valley Tamalpais
26	College of Marin lot 15 139 Kent Avenue	3.2	45	Kentfield Fire Protection	Marin Municipal Water District	Sanitary District No. 01	Kentfield Tamalpais
27	Kentfield Eastbound Sir Francis Drake Blvd.	5.14	60	Kentfield Fire Protection	Marin Municipal Water District	Sanitary District No. 01	Kentfield Tamalpais
28	Kentfield Westbound	2.63	60	Kentfield Fire Protection	Marin Municipal Water District	Sanitary District No. 01	Kentfield Tamalpais
29	Marin General 250 Bon Air Road	19.7	50	Fire Service in unincorporated Marin	Marin Municipal Water District	Sanitary District No. 01	Kentfield Tamalpais
30	Ross Valley Self Storage 890 College Ave.	1.56	45	Kentfield Fire Protection	Marin Municipal Water District	Sanitary District No. 01	Kentfield Tamalpais

Site #	Site Name & Address	Total Acres	Total Units	Fire District	Water District	Sanitary District	Elementary Dist. High School Dist.
31	Sloat Center and adjacent residential Sir Francis Drake and Edna Court	5.09	60	Kentfield Fire Protection	Marin Municipal Water District	Sanitary District No. 01	Kentfield Tamalpais
32	3000 SFD- Sunnyside Growing 3000 Sir Francis Drake	7.74	30	Fire Service in unincorporated Marin	Marin Municipal Water District	Sanitary District No. 01	Ross Valley Tamalpais
33	Railroad Ave. Railroad Ave. and Park St.	0.50	4	Fire Service in unincorporated Marin	Marin Municipal Water District	Outside of Sanitary District	Lagunitas Tamalpais
34	Castro Street 6921 Sir Francis Drake and 6 Castro St.	0.54	6	Fire Service in unincorporated Marin	Marin Municipal Water District	Outside of Sanitary District	Lagunitas Tamalpais
35	Los Ranchitos 99-165 Los Ranchitos Drive	13.81	60	San Rafael Service Area	Marin Municipal Water District	Las Gallinas Valley	Dixie San Rafael High
36	Big Rock Deli & Creekside Offices 1500 Lucas Valley Road & 7 Mt. Lassen Dr.	2.8	80	Upper Lucas Valley Service Area	Marin Municipal Water District	Las Gallinas Valley	Dixie San Rafael High
37	Rotary Field 16 Jeanette Prandi Way	12.83	60	Fire Service in unincorporated area	Marin Municipal Water District	Las Gallinas Valley	Dixie San Rafael High
38	Bail Bonds 42, 44, 46, N. San Pedro, 69, 77 San Pablo	1.49	44	San Rafael Service Area	Marin Municipal Water District	Las Gallinas Valley	San Rafael Elementary San Rafael High
39	LDS Church Santa Venetia 220 N. San Pedro Road	5.38	30	San Rafael Service Area	Marin Municipal Water District	Las Gallinas Valley	San Rafael Elementary San Rafael High
40	MacPhail School 1565 Vendola Drive	9.52	40	San Rafael Service Area	Marin Municipal Water District	Las Gallinas Valley	San Rafael Elementary San Rafael High
41	Marin Farmers Market 70 & 76 San Pablo Ave.	0.6	18	San Rafael Service Area	Marin Municipal Water District	Las Gallinas Valley	San Rafael Elementary San Rafael High
42	San Pedro Road San Pedro Road	5.65	30	San Rafael Service Area	Marin Municipal Water District	Las Gallinas Valley	San Rafael Elementary San Rafael High
43	Atherton (Novato RV Park) 1530 Armstrong Avenue	2.68	80	Novato Fire Protection District	North Marin Water	Novato Sanitary	Novato Unified Novato Unified
44	Bear Valley Road 10045 State Route 1	1.25	5	Fire Service in unincorporated area	North Marin Water	Outside of Sanitary District	Shoreline Unified Shoreline Unified

Site #	Site Name & Address	Total Acres	Total Units	Fire District	Water District	Sanitary District	Elementary Dist. High School Dist.
45	Olema Campground Shoreline Highway	9.94	10	Fire Service in unincorporated area	North Marin Water	Outside of Sanitary District	Shoreline Unified Shoreline Unified
46	Feed Lot B St. & 6 th St.	0.92	27	Fire Service in unincorporated area	North Marin Water	Outside of Sanitary District	Shoreline Unified Shoreline Unified
47	Pine Cone Diner 60 4 th St.	1.06	4	Fire Service in unincorporated area	North Marin Water	Outside of Sanitary District?	Shoreline Unified Shoreline Unified
48	Pt. Reyes North 11598 State Route 1	16.89	15	Fire Service in unincorporated area	North Marin Water	Outside of Sanitary District	Shoreline Unified Shoreline Unified
49	Red Barn (green barn) 510 Mesa Road	1.53	10	Fire Service in unincorporated area	North Marin Water	Outside of Sanitary District	Shoreline Unified Shoreline Unified

Source: Marin Community Development Agency, June 27, 2012. A detailed list of the available land inventory for both 2007-2014 and 2014-2022 planning periods is available at <http://www.co.marin.ca.us/depts/CD/main/housing/HousingElement.cfm>

Recreation

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-than-Significant Level?
15. Recreation.					
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Discussed in Section 4.10 Public Services, see Impact 4.10-13.	No	No	No	NA
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	Discussed in Section 4.10 Public Services, see Impact 4.10-13.	No	No	No	NA

Recreation – Setting

The environmental setting for recreational services is essentially the same as described in Section 4.10 of the *2007 Countywide Plan EIR*. There are three federal and seven State park, open space and recreation facilities in Marin County.⁹⁷ The Marin County Department of Parks and Open Space manages 28 parks, 800 acres of parkland, and 925 acres of conservation land.⁹⁸

⁹⁷ California Department of Park and Recreation website, available at: <http://www.parks.ca.gov/ParkIndex/>, accessed December 2012.

⁹⁸ *Marin County Parks and Open Space Department Comprehensive Strategic Plan: Existing Conditions Needs and Assessment Report*, PMC, June 2007, pages 4-2.

Recreation - Discussion

Recreation impacts are analyzed along with Parks in Section 4.10 of the *2007 Countywide Plan EIR*. Impact 4.10-13 (*Increased Demand for Park and Recreational Services and Facilities*) discusses increased demand resulting from *Countywide Plan* implementation. Exhibit 4.10-15 in the *2007 Countywide Plan EIR* shows local park acreage surpluses in the Novato, San Rafael Basin, Upper Ross Valley, and Richardson Bay planning areas and deficits in the Las Gallinas, Lower Ross Valley and West Marin planning areas.⁹⁹ Projected population increases resulting from implementation of the *Countywide Plan* were anticipated to reduce parkland surpluses and exasperate deficits for each of the seven planning areas in Marin County.

Section 4.14, Parks and Recreation, of the Socioeconomic Element of the *Countywide Plan* describes issues related to parks and recreation in Marin County and provides goals, policies, and programs to ensure that high-quality parks and recreation facilities and programs are available to meet the various needs of all county residents. This includes Policy **PK-1.1** (*Conduct and Coordinate Park Planning*) which calls for coordinated park planning and programs. Program **PK-1.a** (*Update the Parks Master Plan*) required an update to the Parks Master Plan. Program **PK-1e** (*Replace Closed Facilities*) calls for replacement of closed facilities and Program **PK-1.f** (*Prepare an Acquisition Plan*) calls for preparation of an Acquisition Plan. *Countywide Plan* Figure 4-42 describes County-operated park and recreation facilities. These policies and programs included in the *Countywide Plan* would help ensure that existing and future residents of Marin County have sufficient parks and recreation facilities. In 2007, the County updated the Parks and Open Space strategic plan.¹⁰⁰ The adoption and subsequent implementation of the *2012 Draft Housing Element* would not alter the ability to maintain acceptable levels of parks and recreational services and facilities as defined in the *Countywide Plan*.

Currently in Marin County, lack of funding impedes the maintenance and rehabilitation of existing parks. Funding for Marin County Parks was nearly \$12 million in fiscal year 2012-13.¹⁰¹ In November 2012 Marin County voters approved a quarter-cent sales tax increase to pay for county parks, open space and farm programs. The sales tax will raise money to fund programs for protection and restoration of existing county parks and open space preserves, and preserve natural lands, farmland preservation, and develop a grant program for maintenance and restoration of existing parks, preserves and recreational areas.

15(a) Adoption of the *2012 Draft Housing Element* would facilitate future higher density development on specified properties. This may lead to increased use of existing neighborhood and regional parks. One area in particular, within the Las Gallinas planning area, where affordable housing development could occur on the St. Vincent's / Silveira (housing site 5) and Grady Ranch (housing site 15), would lead to approximately 460 new housing units (of which 340 would be affordable housing units), and increase demand on the existing 61.00 acres of local park acreage in the Las Gallinas planning area. *Countywide Plan* Policy **PK-1.1** requires

⁹⁹ Based on Quimby Act standards which require three to five acres of local parkland for every 1,000 residents.

¹⁰⁰ *Marin County Parks and Open Space Department Comprehensive Strategic Plan: Existing Conditions Needs and Assessment Report*, PMC, June 2007.

¹⁰¹ *First Reading of Ordinance Imposing Temporary Transaction and Use Tax for Park, Open Space, and Farmland Preservation* (Staff Report for Marin County Board of Supervisors), Linda Dahl, July 24, 2012.

development of park and recreation facilities and programs for recreation and preservation of natural resources. Program **PK-1.a** requires an updated Parks Master Plan and program **PK-1.b** (*Assess User Needs*) requires assessment of users needs. In June 2008, Marin County prepared its Parks and Open Space Strategic Plan, which includes a finance plan and performance measures.¹⁰² Continued implementation of *Countywide Plan* policies would reduce impacts resulting from increased demand on park facilities to a less-than-significant level. This impact would remain less-than-significant.

- 15(b) Implementation of the *2012 Draft Housing Element* could lead to higher density residential development in specified areas, although the overall number of residential units that could be developed under the *Countywide Plan* would remain the same. This would not lead to construction of any new parks or other recreational facilities in addition to the increased demand for park and recreation services and facilities discussed in the *2007 Countywide Plan EIR* under Impact 4.10-13, however, because the total number of housing units would not exceed anticipated *Countywide Plan* buildout. With regard to development of new services and facilities, the discussion of Impact 4.10-13 (*Increased Demand for Park and Recreation Services and Facilities*) identifies that *Countywide Plan* implementation would require new or expanded community and neighborhood park facilities. *Countywide Plan* policies, including **BIO-4.1** (*Restrict Land Use in Stream Conservation Areas*) and **BIO-4.2** (*Comply with Stream Conservation Area (SCA) Regulations*), which would establish setbacks to protect stream corridors from construction impacts, Policies **WR-2.1** (*Reduce Toxic Runoff*), **WR-2.2** (*Reduce Pathogen, Sediment, and Nutrient Levels*), **WR-2.3** (*Avoid Erosion and Sedimentation*), and **WR-2.4** (*Design County Facilities to Minimize Pollutant Input*) reduce water pollution, particularly in run-off, and reduce erosion and sedimentation caused by construction activities. *Countywide Plan* Policy **AIR-1.3** (*Require Mitigation of Air Quality Impacts*) requires incorporation of the best available air quality mitigation into the design of new construction projects. Policies **NO-1.1** (*Limit Noise from New Development*) and **NO-1.3** (*Regulate Noise Generating Activities*) would reduce noise generated from construction and operation of any new community facilities. These policies and programs would reduce impacts related to construction of new parks or recreational facilities to a less-than-significant level. This previously identified less-than-significant impact would remain less-than-significant.

Recreation - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The *2007 Countywide Plan EIR* did not identify any significant recreation impacts that required adoption of mitigation measures.

¹⁰² *Marin County Park and Open Space Strategic Plan*, Marin County Parks and Open Space Department, June 2008.

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to recreation would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Recreation - Conclusion

Based on a review of Impact 4.10-13 (*Increased Demand for Park and Recreational Services and Facilities*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any new or substantially more severe impact on parks and recreation services. With implementation of *Countywide Plan* policies and programs, residential development that could occur under the *2012 Draft Housing Element* would have a less-than-significant impact on parks and recreation services. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to parks and recreation services because the overall number of housing units would not change from the number projected in the adopted *Countywide Plan*. Therefore, there would be no increased demand for use of existing recreational facilities or construction of new recreational facilities, and no additional analysis is required.

Transportation/Traffic

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
16. Transportation/Traffic. Would the project:					
a. Conflict with an applicable plan, ordinance or policy with establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?	Discussed in Section 4.1 Land Use, Population, and Housing, see Impact 4.1-1 and Section 4.2 Transportation, Impacts 4.2-1, through 4.2-25.	No	No	Yes, but new or more severe significant effects would not occur.	No MM 4.2-1, MM 4.2-2, MM 4.2-3, MM 4.2-4, MM 4.2-5, MM 4.2-6, MM 4.2-7, MM 4.2-8, MM 4.2-9, MM 4.2-10, MM 4.2-11, MM 4.2-12, MM 4.2-13, MM 4.2-14, MM 4.2-15, MM 4.2-16, MM 4.2-17, MM 4.2-18, MM 4.2-19, MM 4.2-20, MM 4.2-21, MM 4.2-22, MM 4.2-23, and MM 4.2-24 would reduce impacts, but still found significant unavoidable. No change from CWP EIR.

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Discussed in Section 4.1 Land Use, Population, and Housing, see Impact 4.1-1 and Section 4.2 Transportation, Impacts 4.2-1, through 4.2-25.	No	No	Yes, but new or more severe significant effects would not occur.	Same mitigation measures as for checklist Item 16.a.
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	Not specifically discussed in 2007 Countywide Plan EIR.	No	No	No	NA
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Not specifically discussed in 2007 Countywide Plan EIR.	No	No	No	NA
e. Result in inadequate emergency access?	Determined to be less-than-significant in Initial Study.	No	No	No	NA
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Discussed in Section 4.2 Transportation, see Impacts 4.2-26 and 4.2-27.	No	No	No	NA

Transportation – Updated Setting

Section 3.9, Transportation, of the Built Environment Element of the *Countywide Plan* describes issues related to transportation and contains goals, policies, and programs to provide a range of transportation options that meet the needs of residents, business, and travelers, to provide increased bicycle and pedestrian access, and to provide adequate and affordable public transportation.

The traffic analysis in the *2007 Countywide Plan* relied on information and tools that are over five years old and considered dated; therefore, this analysis utilized more recent and accurate tools to quantify traffic projections.

Since certification of the *2007 Countywide Plan EIR*, Marin County has adopted a more recent traffic model (the Marin Countywide P09 Model, discussed below) that incorporates Association of Bay Area Governments (ABAG) *Projections 2009*¹⁰³ and the Metropolitan Transportation Commission (MTC) *Regional Transportation Plan 2035*¹⁰⁴ assumptions. This analysis utilizes these models and more up to date tools for projecting traffic growth and identifying cumulative impacts associated with implementation of the *2012 Draft Housing Element*.

The traffic forecasting methodology used in this Draft SEIR relied on the most current Marin Countywide P09 Model. An earlier version of this model with *ABAG Projections 2003* was utilized in the *2007 Countywide Plan EIR*. The Marin Countywide P09 Model utilizes *ABAG Projections 2009* socio-demographic data and includes a more recent base year 2009 calibration and a 2035 cumulative horizon year.

For the analysis in this Draft SEIR, the Marin Countywide P09 model was implemented without-Project and with-Project (the *2012 Draft Housing Element*) conditions. Results were extracted from the model for two scenarios in year 2035;

- 2035 Cumulative Baseline (no-project), and
- 2035 Cumulative Baseline plus *2012 Draft Housing Element*

Weekday AM and PM peak hour roadway segment volumes were analyzed at 19 key locations, called screenlines. These screenlines contain roadway segments most likely to be significantly impacted by development. These are the same screenlines evaluated in the *2007 Countywide Plan EIR*. The 19 screenlines are listed in **Exhibit 3.0-29** and a map of the screenline locations is presented in **Exhibit 3.0-30**. The roadway link volumes were incorporated into a Highway Capacity Manual (HCM) analysis spreadsheet to evaluate level of service conditions at 19 key screenlines that coincide with Congestion Management Plan (CMP) roadways.

¹⁰³ *ABAG Projections 2009*, ABAG, August 2009.

¹⁰⁴ *Final Transportation 2035 Plan for the San Francisco Bay Area – Change in Motion – Transportation 2035*, Metropolitan Transportation Commission, April 2009.

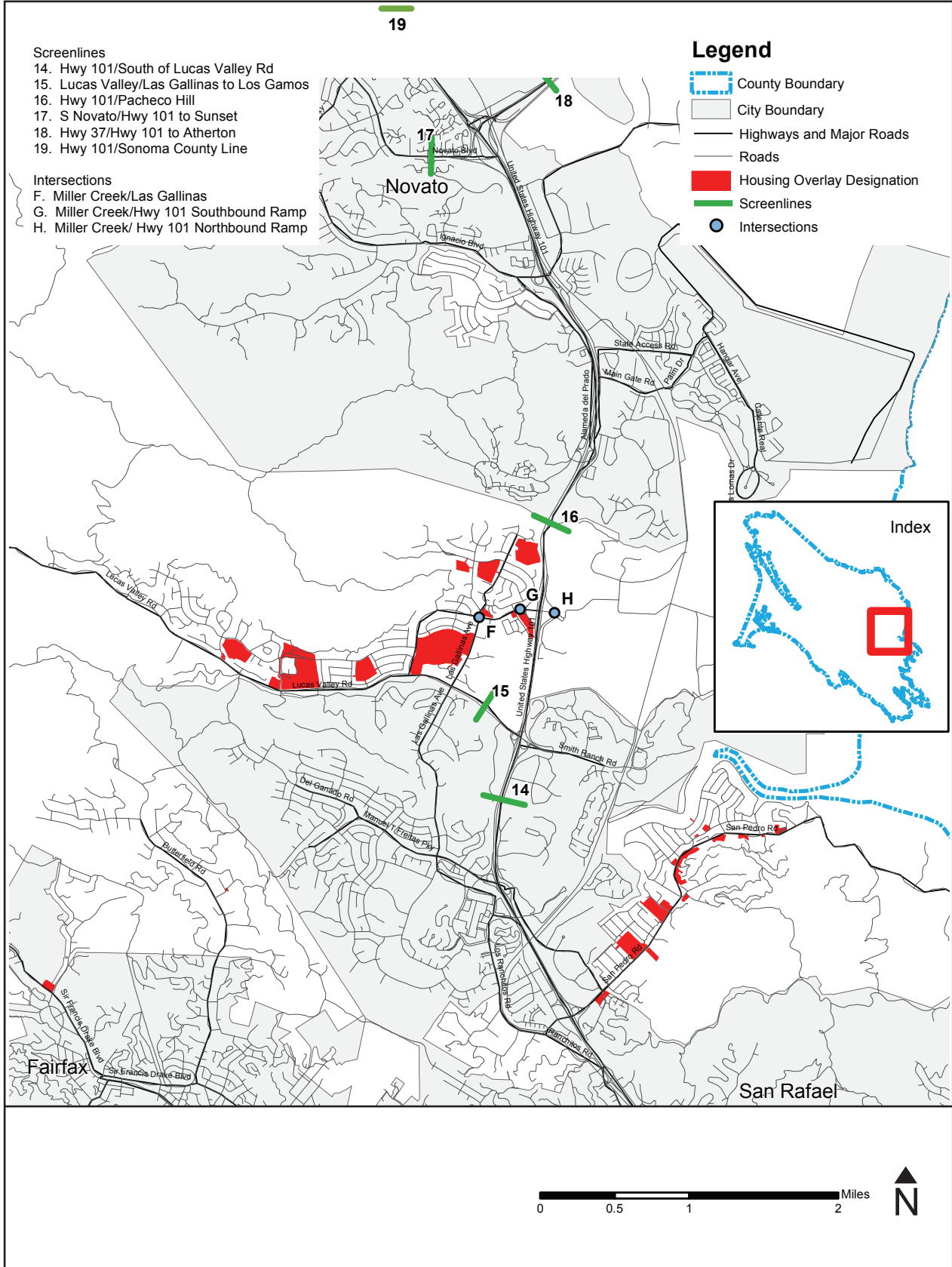
Exhibit 3.0-29
Screenline Locations

No.	Screenline Locations
1.	U.S. 101 at Golden Gate Bridge
2.	Bridgeway Blvd. between Gate 5 and Gate 6 Rd.
3.	SR-1 between U.S. 101 and Almonte Blvd.*
4.	SR-131 between U.S. 101 and Strawberry Dr.
5.	U.S. 101 (Alto Hill) between Paradise Dr. and SR-131*
6.	Sir Francis Drake Blvd. between Bon Air Road and Wolfe Grade*
7.	Sir Francis Drake Blvd. between U.S. 101 and Eliseo Dr.*
8.	E. Sir Francis Drake Blvd. between Larkspur Ferry and San Quentin*
9.	I-580 at Richmond Bridge
10.	I-580 between E. Sir Francis Drake Blvd. and Bellam Blvd.*
11.	U.S. 101 (Cal Park Hill) between I-580 and Sir Francis Drake Blvd.*
12.	U.S. 101 between 2 nd Street and I-580*
13.	3 rd Street (in San Rafael) at Union St.
14.	U.S. 101 between Lucas Valley Rd. and Freitas Parkway*
15.	Lucas Valley Road between Las Gallinas Ave. and Los Gamos
16.	U.S. 101 (Pacheco Hill) between Nave Dr. and Miller Creek
17.	South Novato Blvd. between U.S. 101 and Sunset Parkway
18.	SR-37 between U.S. 101 and Atherton Ave.
19.	U.S. 101 at Sonoma/Marin County Line*

* Roadway segments “grandfathered” by the 2005 Marin County Congestion Management Program.

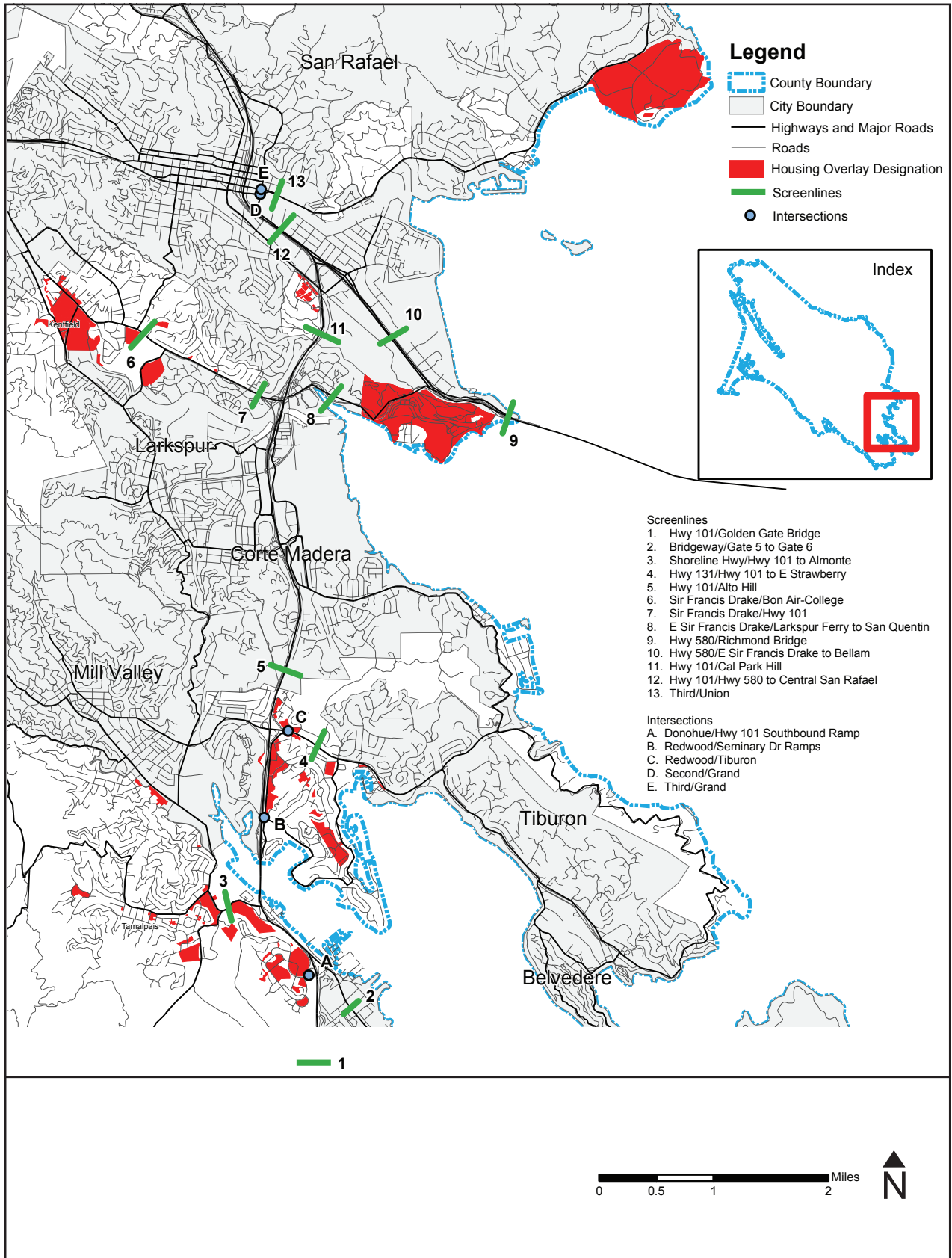
Source: County of Marin Community Development Agency, 2006.

Exhibit 3.0-30(a)
Screenlines and Intersections



Source: County of Marin Community Development Agency, February 2006

Exhibit 3.0-30(b)
Screenlines and Intersections



Source: County of Marin Community Development Agency, February 2006

Weekday AM and PM peak hour intersection volumes were also evaluated at eight intersections. These are the same intersections evaluated in the *2007 Countywide Plan EIR*. The eight intersection locations are listed in **Exhibit 3.0-31** and a map of the intersection locations is presented in **Exhibit 3.0-30**. The intersections volumes were incorporated into the TRAFFIX© LOS software to determine Levels of Service (LOS) using the Highway Capacity Manual methods.

Results at the roadway segments and intersections were compared for the same locations from the *2007 Countywide Plan EIR*.

Exhibit 3.0-31
Intersection Locations

Intersection	Intersection Locations
A.	Bridge Blvd. at U.S. 101 SB off-ramp (Marin City)
B.	Redwood Highway Frontage Rd./De Silva Island Dr. at U.S. 101 NB on/off ramps (Strawberry)
C.	Tiburon Blvd. (SR-131) at Redwood Highway Frontage Rd. (Strawberry)
D.	2 nd St. at Grand Ave. (San Rafael)
E.	3 rd St. at Grand Ave. (San Rafael)
F.	Miller Creek Rd. at Las Gallinas Ave. (Marinwood)
G.	Miller Creek Rd. at U.S. 101 SB off-ramp (Marinwood)
H.	Miller Creek Rd. at U.S. 101 NB off-ramp (Marinwood)

Source: County of Marin Community Development Agency, 2006.

LOS METHODOLOGY

Level of service (LOS) is a qualitative indication of the level of delay and congestion experienced by motorists using a roadway segment or intersection. Levels of Service are designated by the letters A through F, with A having the best operating conditions and F the worst (high delay and congestion).

Roadway Segments

The LOS criteria for roadway segments are determined using volume to capacity ratios as summarized in **Exhibit 3-0-32**.

Exhibit 3.0-32
Level of Service Threshold for Screenlines (Freeways and Local Streets)

Freeways		Local Streets	
Level of Service	Volume-to-Capacity Ratio	Level of Service	Volume-to-Capacity Ratio
A	0.00 - 0.35	A	0 - 0.6
B	0.36 - 0.54	B	0.61 - 0.70
C	0.55 - 0.77	C	0.71 - 0.80
D	0.78 - 0.93	D	0.81 - 0.90
E	0.94 - 1.00	E	0.91 - 1.00
F	>1.00	F	>1.00

Source: Marin County Performance Measures Monitoring Report, 2005.

Intersections

The LOS evaluation of traffic conditions at the eight study intersections was performed using the most current TRAFFIX© software (version 8.0). The 2000 Highway Capacity Manual methodology was used to analyze signalized and unsignalized intersections. The criteria used for signalized intersections are summarized in **Exhibit 3.0-33**, the criteria for unsignalized and all-way stop-controlled intersections are shown in **Exhibit 3.0-34**. The LOS at signalized intersections and unsignalized intersections is based on the weighted average delay for all intersection legs.

LOS Thresholds

This transportation analysis of the *2012 Draft Housing Element* utilized the same CEQA significance criteria used in the *2007 Countywide Plan EIR*.

Exhibit 3.0-33
Highway Capacity Manual Level of Service Criteria for Signalized Intersections

Level of Service	Average Delay (seconds/vehicle)	Description
A	≤ 10	Very Low Delay: This level of service occurs when progression is extremely favorable and most vehicles arrive during a green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10 and ≤ 20	Minimal Delays: This level of service generally occurs with good progression, short cycle lengths, or both. More vehicles stop than at LOS A, causing higher levels of average delay.
C	> 20 and ≤ 35	Acceptable Delay: Delay increases due to fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level of service. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.
D	> 35 and ≤ 55	Approaching Unstable Operation/Significant Delays: The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume / capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55 and ≤ 80	Unstable Operation/Substantial Delays: These high delay values generally indicate poor progression, long cycle lengths, and high volume / capacity ratios. Individual cycle failures are frequent occurrences.
F	> 80	Excessive Delays: This level, considered unacceptable to most drivers, often occurs with oversaturation (that is, when arrival traffic volumes exceed the capacity of the intersection). It may also occur at high volume / capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2000, Chapter 16 (Signalized Intersections)

Exhibit 3.0-34
Highway Capacity Manual Level of Service Criteria for Unsignalized Intersections

Level of Service^a	Average Delay (seconds/vehicle)	Description
A	≤ 10	Very Low Delay
B	> 10 and ≤ 15	Minimal Delays
C	> 15 and ≤ 25	Acceptable Delay
D	> 25 and ≤ 35	Approaching Unstable Operation and/or Significant Delays
E	> 35 and ≤ 50	Unstable Operation and/or Substantial Delays
F	> 50	Excessive Delays

a LOS for all-way stop-controlled intersections is based on the weighted average, while LOS at side-street stop-controlled intersections is based on the approach with the highest delay.

Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2000, Chapter 17 (Unsignalized Intersections)

Transportation - Discussion

Transportation impacts are analyzed in Section 4.2 Transportation of the *2007 Countywide Plan EIR*.

16(a) Below is a discussion of transportation impacts for both roadway segments and intersections with adoption and implementation of the *2012 Draft Housing Element* compared to the findings of the *2007 Countywide Plan EIR*.

ROADWAY SEGMENTS

The LOS results for roadway segments are shown in **Exhibit 3.0-35** for year 2035 AM Peak conditions, and **Exhibit 3.0-36** for year 2035 PM Peak conditions. These exhibits summarize results for each scenario and for the 19 screenlines, including screenline location, direction, traffic volume, volume to capacity ratio (V/C), and LOS. For comparison, each exhibit includes the results from Alternative 4 (Mitigated Alternative) from the *2007 Countywide Plan EIR*.¹⁰⁵

¹⁰⁵ Alternative 4 (Mitigated Alternative) was chosen because it included the mitigation measures identified in the *2007 Countywide Plan Draft EIR* to reduce identified significant impacts. Alternative 4 (Mitigated Alternative) formed the basis of the *Countywide Plan* adopted by the Board of Supervisors in November 2007.

Exhibit 3.0-35

**Level of Service Summary for Cumulative Baseline and with Project Scenarios - 2035 AM
Peak Hour Model Volumes**

Screen Line Segment	Direction	Year 2030			Year 2035					
		Alternative 4			Cumulative Baseline			Cumulative with Project		
		VPH	V/C	LOS	VPH	V/C	LOS	VPH	V/C	LOS
1. Highway 101 at Golden Gate Bridge	N/B	4,159	1.04	F	3,410	0.85	D	3,350	0.84	D
	S/B	8,787	1.10	F	8,376	1.05	F	8,837	1.10	F
2. Bridgeway Blvd. Gate 5 & Gate 6 Rd.	N/B	461	0.24	A	415	0.22	A	433	0.23	A
	S/B	1,089	0.57	A	937	0.49	A	952	0.50	A
3. State Route 1 U.S. 101 to Almonte Blvd.	N/B	459	0.57	A	245	0.31	A	253	0.32	A
	S/B	1,334	1.67	F	1,221	1.53	F	1,277	1.60	F
4. State Route 131 U.S. 101 & Strawberry Drive.	E/B	1,306	0.68	B	1,262	0.66	B	1,294	0.67	B
	W/B	1,617	0.84	D	951	0.50	A	1,060	0.55	A
5. Highway 101 - Alto Hill Paradise Dr. to SR 131	N/B	4,950	0.50	B	4,866	0.49	B	4,914	0.50	B
	S/B - MFL	6,406	0.83	D	7,325	0.95	E	7,429	0.96	E
	S/B - HOV	1,808	0.82	D	1,822	0.83	D	1,850	0.84	D
6. Sir Francis Drake Blvd. Bon Air Road to Wolfe Grade	E/B	2,143	0.89	D	1,920	0.80	C	1,991	0.83	D
	W/B	1,592	0.66	B	1,446	0.60	A	1,417	0.59	A
7. Sir Francis Drake Blvd. U.S. 101 to Eliseo Dr.	E/B	2,917	1.22	F	2,706	1.13	F	2,785	1.16	F
	W/B	2,630	1.10	F	1,694	0.71	C	1,660	0.69	B
8. E. Sir Francis Drake B. Larkspur Ferry to San Quentin	E/B	728	0.76	C	492	0.51	A	578	0.60	A
	W/B	1,096	1.14	F	740	0.77	C	751	0.78	C
9. I-580 at Richmond Bridge	E/B	4,041	0.92	D	3,233	0.73	C	3,711	0.84	D
	W/B	4,113	0.93	D	3,828	0.87	D	3,717	0.84	D
10. I-580 SFD Blvd. to Bellam Blvd.	E/B	2,985	0.68	C	2,695	0.61	C	3,074	0.70	C
	W/B	3,000	0.68	C	2,892	0.66	C	2,765	0.63	C
11. Highway 101-Cal Park Hill from I-580 to SFD Blvd.	N/B	5,041	0.51	B	5,151	0.52	B	5,281	0.53	B
	S/B - MFL	8,187	1.24	F	6,654	1.01	F	6,672	1.01	F
	S/B - HOV	1,907	0.87	D	1,476	0.67	C	1,493	0.68	C
12. Highway 101 - n/o I-580 from 2nd Street to I-580	N/B	6,836	0.69	C	7,229	0.73	C	7,271	0.73	C
	S/B - MFL	9,330	1.21	F	7,900	1.03	F	8,177	1.06	F
	S/B - HOV	1,795	0.82	D	1,841	0.84	D	1,854	0.84	D
13. 3rd Street (in San Rafael) at Union Street	E/B	316	0.16	A	245	0.13	A	252	0.13	A
	W/B	1,202	0.63	B	701	0.37	A	739	0.38	A
14. Highway 101 - s/o LV Rd. Lucas Valley Rd. to Freitas Pkwy.	N/B	6,281	0.63	C	7,418	0.75	C	7,604	0.77	C
	S/B - MFL	7,824	1.02	F	7,506	0.97	E	7,649	0.99	E
	S/B - HOV	1,677	0.76	C	1,660	0.75	C	1,663	0.76	C
15. Lucas Valley Road Las Gallinas Ave. and Los Gamos	E/B	1,058	1.32	F	773	0.97	E	867	1.08	F
	W/B	338	0.42	A	597	0.75	C	632	0.79	C
16. Highway 101-Pacheco Hill Nave Dr. and Miller Creek	N/B	6,282	0.63	C	7,387	0.75	C	7,634	0.77	C
	S/B - MFL	7,400	0.96	E	7,516	0.98	E	7,627	0.99	E
	S/B - HOV	1,658	0.75	C	1,768	0.80	D	1,765	0.80	D
17. South Novato Blvd. U.S. 101 to Sunset Parkway	N/B	167	0.17	A	199	0.21	A	203	0.21	A
	S/B	507	0.53	A	312	0.33	A	331	0.34	A

Screen Line Segment	Direction	Year 2030			Year 2035					
		Alternative 4			Cumulative Baseline			Cumulative with Project		
		VPH	V/C	LOS	VPH	V/C	LOS	VPH	V/C	LOS
18. State Route 37 U.S. 101 and Atherton Ave.	E/B	2,969	0.67	C	1,718	0.39	B	1,840	0.42	B
	W/B	2,531	0.58	C	2,778	0.63	C	2,659	0.60	C
19. Highway 101 at Sonoma/Marin County Line	N/B	4,045	0.61	C	3,490	0.53	B	3,597	0.55	C
	S/B - MFL	4,936	1.12	F	4,704	1.07	F	4,670	1.06	F
	S/B - HOV	1,122	0.51	B	1,056	0.48	B	1,040	0.47	B

Source: Kittelson & Associates, Inc., 2012

Exhibit 3.0-36

**Level of Service Summary for Cumulative Baseline and with Project Scenarios - 2035 PM
Peak Hour Model Volumes**

Screen Line Segment	Direction	Year 2030			Year 2035					
		Alternative 4			Cumulative Baseline			Cumulative with Project		
		VPH	V/C	LOS	VPH	V/C	LOS	VPH	V/C	LOS
1. Highway 101 at Golden Gate Bridge	N/B	9,142	1.14	F	9,052	1.13	F	9,319	1.16	F
	S/B	4,409	1.10	F	4,929	1.23	F	4,940	1.24	F
2. Bridgeway Blvd. Gate 5 & Gate 6 Rd.	N/B	1,525	0.79	C	768	0.40	A	796	0.41	A
	S/B	1,288	0.67	B	616	0.32	A	648	0.34	A
3. State Route 1 U.S. 101 to Almonte Blvd.	N/B	1,544	1.93	F	1,042	1.30	F	1,101	1.38	F
	S/B	873	1.09	F	399	0.50	A	408	0.51	A
4. State Route 131 U.S. 101 & Strawberry Dr.	E/B	2,123	1.11	F	1,754	0.91	E	1,825	0.95	E
	W/B	1,607	0.84	D	1,000	0.52	A	1,031	0.54	A
5. Highway 101 - Alto Hill Paradise Dr. to SR 131	N/B -MFL	7,067	0.92	D	8,037	0.97	E	8,101	0.98	E
	N/B - HOV	1,677	0.76	C	1,661	0.76	C	1,740	0.79	D
	S/B	8,122	0.82	D	8,210	0.83	D	8,314	0.84	D
6. Sir Francis Drake Blvd. on Air Road to Wolfe Grade	E/B	1,846	0.77	C	1,796	0.75	C	1,821	0.76	C
	W/B	2,157	0.90	D	1,658	0.69	B	1,779	0.74	C
7. Sir Francis Drake Blvd. U.S. 101 to Eliseo Dr.	E/B	2,375	0.99	E	2,079	0.87	D	2,098	0.87	D
	W/B	2,987	1.24	F	2,044	0.85	D	2,168	0.90	E
8. E. Sir Francis Drake B. Larkspur Ferry to San Quentin	E/B	1,002	1.04	F	717	0.75	C	713	0.74	C
	W/B	1,172	1.22	F	926	0.96	E	933	0.97	E
9. I-580 at Richmond Bridge	E/B	4,188	0.95	E	4,198	0.95	E	4,130	0.94	E
	W/B	4,479	1.02	F	4,756	1.08	F	4,898	1.11	F
10. I-580 SFD Blvd. to Bellam Blvd.	E/B	2,576	0.59	C	2,488	0.57	C	2,442	0.56	C
	W/B	3,570	0.81	D	3,526	0.80	D	3,580	0.81	D
11. Highway 101-Cal Park Hill from I-580 to SFD Blvd.	N/B -MFL	7,512	0.98	E	7,726	1.00	F	7,811	1.01	F
	N/B - HOV	1,392	0.63	C	1,199	0.55	C	1,184	0.54	B
	S/B	8,232	0.94	E	7,220	0.82	D	7,424	0.84	D
12. Highway 101 - n/o I-580 from 2nd Street to I-580	N/B -MFL	8,447	1.10	F	8,218	1.07	F	8,372	1.09	F
	N/B - HOV	1,466	0.67	C	1,597	0.73	C	1,584	0.72	C
	S/B	9,230	0.93	E	7,705	0.78	D	7,906	0.80	D
13. 3rd Street (in San Rafael) at Union Street	E/B	1,177	0.61	B	701	0.37	A	730	0.38	A
	W/B	614	0.32	A	241	0.13	A	250	0.13	A
14. Highway 101 - s/o LV Rd. Lucas Valley Rd. to Freitas Pkwy.	N/B -MFL	6,880	0.89	D	7,633	0.99	E	7,657	0.99	E
	N/B - HOV	1,633	0.74	C	1,650	0.75	C	1,651	0.75	C
	S/B	8,242	0.83	D	7,213	0.73	C	7,445	0.75	C
15. Lucas Valley Road Las Gallinas Ave. and Los Gamos	E/B	741	0.93	E	607	0.76	C	669	0.84	D
	W/B	764	0.96	E	701	0.88	D	817	1.02	F
16. Highway 101-Pacheco Hill Nave Dr. and Miller Creek	N/B -MFL	6,665	0.87	D	7,661	0.99	E	7,623	0.99	E
	N/B - HOV	1,633	0.74	C	1,877	0.85	D	1,870	0.85	D
	S/B	8,499	0.86	D	7,216	0.73	C	7,468	0.75	C

Screen Line Segment	Direction	Year 2030			Year 2035					
		Alternative 4			Cumulative Baseline			Cumulative with Project		
		VPH	V/C	LOS	VPH	V/C	LOS	VPH	V/C	LOS
17. South Novato Blvd. U.S. 101 to Sunset Parkway	N/B	984	1.03	F	306	0.32	A	327	0.34	A
	S/B	443	0.46	A	217	0.23	A	225	0.23	A
18. State Route 37 U.S. 101 and Atherton Ave.	E/B	4,523	1.03	F	3,329	0.76	C	3,212	0.73	C
	W/B	3,007	0.68	C	2,638	0.60	C	2,765	0.63	C
19. Highway 101 at Sonoma/Marin County Line	N/B -MFL	5,632	1.28	F	4,458	1.01	F	4,397	1.00	E
	N/B - HOV	1,151	0.52	B	1,130	0.51	B	1,132	0.51	B
	S/B	5,793	0.88	D	3,077	0.47	B	3,183	0.48	B

Source: Kittelson & Associates, Inc., 2012

Significant impacted locations are shown in bold text and as shaded grey in **Exhibits 3.0-35** and **3.0-36** (LOS E and F conditions for arterials and LOS F conditions for freeways). Based on the results of the traffic model, significant cumulative impacts with the *2012 Draft Housing Element* would occur at the following screenlines in the AM peak hour:

- U.S. 101 at the Golden Gate Bridge – southbound (Screenline #1)
- State Route 1 from U.S. 101 to Almonte Boulevard – southbound (Screenline #3)
- Sir Francis Drake Boulevard from U.S. 101 to Eliseo Drive – eastbound (Screenline #7)
- U.S. 101 from I-580 to Sir Francis Drake Boulevard – southbound mixed flow lane (Screenline #11)
- U.S. 101 from Second Street to I-580 – southbound mixed flow lane (Screenline #12)
- Lucas Valley Road from Las Gallinas Avenue to Los Gamos Drive – eastbound (Screenline #15)
- U.S. 101 at the Sonoma/Marin County Line – southbound mixed flow lane (Screenline #19)

Based on the results of the traffic model, significant cumulative impacts with the *2012 Draft Housing Element* would occur at the following screenlines in the PM peak hour:

- U.S. 101 at the Golden Gate Bridge – northbound and southbound (screenline #1)
- State Route 1 from U.S. 101 to Almonte Boulevard – northbound (screenline #3)
- State Route 1 from U.S. 101 to Strawberry Drive – eastbound (Screenline #4)
- Sir Francis Drake Boulevard from U.S. 101 to Eliseo Drive – westbound (screenline #7)
- East Sir Francis Drake Boulevard from Larkspur Ferry to San Quentin westbound (screenline #8)

- I-580 at the Richmond Bridge – westbound (screenline #9)
- U.S. 101 from I-580 to Sir Francis Boulevard – northbound mixed flow lane (Screenline #11)
- U.S. 101 from Second Street to I-580 – northbound mixed flow lane (screenline #12)
- Lucas Valley Road from Las Gallinas Avenue to Los Gamos Drive – westbound (Screenline #15)
- U.S. 101 at the Sonoma/Marin County Line – northbound mixed flow lane (screenline #19)

As seen on **Exhibits 3.0-35** and **3.0-36** compared to the year 2007 analysis for Alternative 4, screenlines show similar or improved conditions. With implementation of the *2012 Draft Housing Element* no new significant impacts or any increase in the severity of a previously identified significant impact at the 19 locations studied would occur.

INTERSECTIONS

The LOS results for intersections are shown in **Exhibit 3.0-37** for year 2035 AM and PM Peak conditions. Impacted locations are shown in bold text and as shaded (LOS E and F conditions). Based on the results of the traffic model, significant cumulative impacts with the *2012 Draft Housing Element* would occur at the following intersections:

- Intersection C - Redwood Highway Frontage Road at De Silva Drive (US 101 NB on-ramps), with LOS E during the AM Peak hour.
- Intersection G – US 101 SB off-ramp at Miller Creek Road, with LOS F during the AM Peak hour
- Intersection H – US 101 NB off-ramp at Miller Creek Road, with LOS F during the AM and PM Peak hours

The *2007 Countywide Plan EIR* identified significant impacts at the following intersections:

- Intersection C (Redwood Highway Frontage Road at De Silva Drive [US 101 NB on-ramps]) – AM and PM peak hour
- Intersection D (Second Street and Grand Avenue) – PM peak hour
- Intersection E (Third Street and Grand Avenue) – AM and PM peak hour
- Intersection F (Miller Creek Road and Las Gallinas Avenue) – AM and PM peak hour
- Intersection G (US 101 SB off-ramp at Miller Creek Road) – AM and PM peak hour
- Intersection H (US 101 NB off-ramp at Miller Creek Road) – AM and PM peak hour

As seen on **Exhibit 3.0-37**, compared to the year 2007 analysis, intersections show similar or improved conditions. Fewer locations are impacted with implementation of the *2012 Draft Housing Element* than were identified in the *2007 Countywide Plan EIR*. With implementation of

the 2012 Draft Housing Element no new significant impacts or any increase in the severity of a previously identified significant impact at the eight intersections studied would occur.

Exhibit 3.0-37

Intersection Level of Service Summary for Cumulative Baseline and With-Project Scenarios based on 2035 Peak Hour Intersection Volumes

Intersection ^a	Traffic Control ^b	Peak-Hour	No Build		Project	
			LOS ^c	Delay	LOS	Delay
A. US 101 SB off-ramp at Donahue Street	Signal	AM	A	9.2	A	9.7
		PM	B	10.1	B	10.3
B. Redwood Highway Frontage Road at De Silva Drive (at US 101 NB on/off-ramps)	Signal	AM	A	8.9	A	8.4
		PM	B	15.2	B	15.2
C. Redwood Highway Frontage Road at Tiburon Boulevard (SR-131)	Signal	AM	D	52.4	E	58.9
		PM	D	39.0	D	43.3
D. Grand Avenue at 2nd Street	Signal	AM	B	16.9	B	17.3
		PM	B	16.6	B	16.8
E. Grand Avenue at 3rd Street	Signal	AM	A	7.7	A	8.4
		PM	B	14.7	B	14.5
F. Las Gallinas Avenue at Miller Creek Road	AWS	AM	B	14.6	C	16.5
		PM	C	15.5	C	19.7
G. US 101 SB off-ramp at Miller Creek Road	SSS	AM	E	45.3	F	59.8
		PM	C	6.7	C	7.9
H. US 101 NB off-ramp at Miller Creek Road	SSS	AM	F	>60	F	>60
		PM	F	>60	F	>60

a. Intersections were analyzed using the 2000 Highway Capacity Manual (HCM). Delay shown is the weighted average delay in seconds per vehicle. For signal and AWS, LOS is based on delay for all intersection approaches. For SSS, LOS is based on the intersection approach with the highest delay.

b. **Signal** = Signalized intersection; **AWS** = All-Way Stop-Controlled intersection; **SSS** = Side-Street Stop-Controlled intersection.

c. **LOS** = Level of Service, LOS is based on delay for all intersection approaches.

Source: Kittelson & Associates, Inc. using TRAFFIX 8.0, 2012

Affordable Housing Impacts

Exhibits 2.0-4 and **2.0-14** show the capacity of each housing site for affordable housing units. It is acknowledged that affordable housing projects have the potential for lower trip generation per household compared to market-rate housing. While this may be quantified at the project-specific level, the amount of trip reduction is difficult to reflect using the Marin Countywide Travel Demand Model, which relies on socio-demographic inputs at a coarse traffic analysis zone level. Therefore, this analysis did not account for potential trip reduction per affordable household and overall vehicle miles travelled reduction, and is therefore considered conservative.

- 16(b) Since certification of the *2007 Countywide Plan EIR*, the Transportation Authority of Marin has developed a year 2011 update to the Congestion Management Program.¹⁰⁶ See above discussion to Environmental Checklist Item 16(a) which in part uses *2011 Marin County CMP* level of service standards for designated roadways and highways. Based on the discussion in Environmental Checklist Item 16(a) there would be no new significant impact or a substantial increase in the severity of a previously identified significant impact to transportation impacts for both roadway segments and intersections.
- 16(c) While a change in air patterns was not discussed in the *2007 Countywide Plan EIR*, the *2012 Draft Housing Element* would not result in a change in air traffic patterns, including either a substantial increase in traffic levels or a change in location that results in substantial safety risks. This impact would be less-than-significant.
- 16(d) While a substantial increase in hazards due to a design feature was not specifically discussed in the *2007 Countywide Plan EIR*, the *2012 Draft Housing Element* would not contribute to an increase in hazards due to any design features or incompatible uses. That is because none of the proposed housing sites affects a transportation facility, and all new transportation facilities that would be constructed as a result of the *Countywide Plan* would comply with all applicable federal, state and local design and safety requirements. This impact would be less-than-significant.
- 16(e) As previously determined in the Initial Study for the *2007 Countywide Plan EIR*, the *2012 Draft Housing Element* would not contribute to any inadequate emergency access. This impact would remain less-than-significant.
- 16(f) While development in the *2012 Draft Housing Element* has the potential to increase demand for public transit, bicycle, or pedestrian services, implementation of policies identified in the *2007 Countywide Plan EIR* would ensure that the *2012 Draft Housing Element* would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. This impact would remain less-than-significant.

¹⁰⁶ *Marin Congestion Management Program 2011 Update – Amended Draft*, Transportation Authority of Marin, DKS Associates, October 2011.

Transportation - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

The *2007 Countywide Plan EIR* identified mitigation measures to reduce traffic impacts at all impacted locations. Mitigation Measures 4.2-1, 4.2-2, 4.2-4, 4.2-5, 4.2-6, 4.2-8, 4.2-9, 4.2-10, 4.2-11, 4.2-12, 4.2-13, 4.2-14, 4.2-15, 4.2-16, 4.2-17, 4.2-18, 4.2-19, 4.2-20, 4.2-21, 4.2-22, and 4.2-23 of the *2007 Countywide Plan EIR* were adopted as a part of the *Countywide Plan*. Mitigation Measures 4.2-3, 4.2-7, and 4.2-24 were rejected by the Board of Supervisors.

ROADWAY SEGMENTS

The *2007 Countywide Plan EIR* identified mitigation measures to reduce traffic impacts at all impacted screenlines. No new additional impacted roadway screenlines were identified in this Draft SEIR. The mitigation measures identified in the *2007 Countywide Plan EIR* for the screenline locations would still be required.

INTERSECTIONS

The *2007 Countywide Plan EIR* identified mitigation measures to reduce traffic impacts at all impacted intersections. The LOS analysis for intersections identified the following impacted locations that were able to be reduced to a less-than-significant level using the previously identified mitigations. The LOS after mitigation is shown in **Exhibit 3.0-38**.

- Intersection C - Redwood Highway Frontage Road at De Silva Drive (U.S. 101 NB on-ramps), with LOS E during the AM Peak hour. **Mitigation – add eastbound through and northbound right turn lanes.**
- Intersection G – U.S. 101 SB off-ramp at Miller Creek Road, with LOS F during the AM Peak hour. **Mitigation – Signalize.**
- Intersection H – U.S. 101 NB off-ramp at Miller Creek Road, with LOS F during the AM and PM Peak hours. **Mitigation – Signalize and add eastbound left and northbound left turn lanes.**

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to transportation would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Exhibit 3.0-38

Intersection Level of Service Summary for Cumulative Baseline, With-Project Scenarios, and Mitigated Project Scenario based on 2035 Peak Hour Intersection Volumes

Intersection ^a	Traffic Control ^b	Peak-Hour	No Build		Project		Mitigated		Mitigation ^d
			LOS ^c	Delay	LOS	Delay	LOS	Delay	
A. US 101 SB off-ramp at Donahue Street	Signal	AM	A	9.2	A	9.7	-	-	
		PM	B	10.1	B	10.3	-	-	
B. Redwood Highway Frontage Road at De Silva Drive (at US 101 NB on/off-ramps)	Signal	AM	A	8.9	A	8.4	-	-	
		PM	B	15.2	B	15.2	-	-	
C. Redwood Highway Frontage Road at Tiburon Boulevard (SR-131)	Signal	AM	D	52.4	<i>E</i>	58.9	D	50.1	Add EBT lane & NBR lane (Tiburon General Plan)
		PM	D	39.0	D	43.3	D	43.2	
D. Grand Avenue at 2nd Street	Signal	AM	B	16.9	B	17.3	-	-	
		PM	B	16.6	B	16.8	-	-	
E. Grand Avenue at 3rd Street	Signal	AM	A	7.7	A	8.4	-	-	
		PM	B	14.7	B	14.5	-	-	
F. Las Gallinas Avenue at Miller Creek Road	AWS	AM	B	14.6	C	16.5	-	-	
		PM	C	15.5	C	19.7	-	-	
G. US 101 SB off-ramp at Miller Creek Road	SSS	AM	<i>E</i>	45.3	<i>F</i>	59.8	C	20.8	Signalize (Per Oakview EIR)
		PM	C	6.7	C	7.9	C	22.7	
H. US 101 NB off-ramp at Miller Creek Road	SSS	AM	<i>F</i>	>60	<i>F</i>	>60	B	15.6	Signalize w/ EBL lane & NBL lane pockets (Per Oakview EIR)
		PM	<i>F</i>	>60	<i>F</i>	>60	C	32.8	

- Intersections were analyzed using the 2000 Highway Capacity Manual (HCM). Delay shown is the weighted average delay in seconds per vehicle. For signal and AWS, LOS is based on delay for all intersection approaches. For SSS, LOS is based on the intersection approach with the highest delay.
- Signal** = Signalized intersection; **AWS** = All-Way Stop-Controlled intersection; **SSS** = Side-Street Stop-Controlled intersection.
- LOS** = Level of Service, LOS is based on delay for all intersection approaches.
- EBT** = East Bound Through, **EBL** = East Bound Left, **NBR** = North Bound Right, **NBL** = North Bound Left

Source: Kittelson & Associates, Inc. using TRAFFIX 8.0, 2012

Transportation - Conclusion

As stated in Section 4.2 Transportation in the *2007 Countywide Plan EIR*, the following significant unavoidable transportation impacts would occur under the *Countywide Plan*:

- Impact 4.2-1** Increase in Vehicle Miles Traveled (project and cumulative)
- Impact 4.2-2** Unacceptable LOS on U.S. 101 at Golden Gate Bridge (project and cumulative)
- Impact 4.2-3** Unacceptable LOS on State Route 1 from U.S. 101 to Almonte Boulevard (project and cumulative)
- Impact 4.2-4** Unacceptable LOS on State Route 131 from U.S. 101 to Strawberry Drive (project and cumulative)
- Impact 4.2-6** Unacceptable LOS on Sir Francis Drake Boulevard from U.S. 101 to Eliseo Drive (project and cumulative)
- Impact 4.2-7** Unacceptable LOS on East Sir Francis Drake Boulevard from Larkspur Ferry to San Quentin (cumulative)
- Impact 4.2-8** Unacceptable LOS on I-580 at the Richmond Bridge (cumulative)
- Impact 4.2-9** Unacceptable LOS on U.S. 101 from I-580 to Sir Francis Drake Boulevard (cumulative)
- Impact 4.2-10** Unacceptable LOS on U.S. 101 from Second Street to I-580(cumulative)
- Impact 4.2-11** Unacceptable LOS on South Novato Boulevard from U.S. 101 to Sunset Parkway (cumulative)
- Impact 4.2-12** Unacceptable LOS on Lucas Valley Road from Las Gallinas Avenue to Los Gamos (project and cumulative)
- Impact 4.2-13** Unacceptable LOS on U.S. 101 at the Sonoma / Marin County Line (project and cumulative)
- Impact 4.2-14** Unacceptable LOS at Intersection of State Route 131 (Tiburon Boulevard) and Redwood Highway Frontage Road (cumulative)
- Impact 4.2-15** Unacceptable LOS at Intersection of Second Street and Grand Avenue (cumulative)
- Impact 4.2-16** Unacceptable LOS at Intersection of Third Street and Grand Avenue (cumulative)
- Impact 4.2-17** Unacceptable LOS at Intersection of Miller Creek Road and Las Gallinas Avenue (cumulative)
- Impact 4.2-18** Unacceptable LOS at Intersection of Miller Creek Road and U.S. 101 southbound off-ramp (cumulative)

Impact 4.2-19 Unacceptable LOS at Intersection of Miller Creek Road and U.S. 101 northbound off-ramp (cumulative)

Impact 4.2-20 St. Vincent's / Silveira / Marinwood Traffic Impacts (project and cumulative)

Impact 4.2-21 San Rafael Rock Quarry Traffic Impacts (cumulative)

Impact 4.2-22 Kentfield Traffic Impacts (project and cumulative)

Impact 4.2-23 Strawberry Traffic Impacts (project and cumulative)

Impact 4.2-24 Tam Valley / Almonte Traffic Impacts (project and cumulative)

Previously adopted Mitigation Measures 4.2-1, 4.2-2, 4.2-4, 4.2-5, 4.2-6, 4.2-8, 4.2-9, 4.2-10, 4.2-11, 4.2-12, 4.2-13, 4.2-14, 4.2-15, 4.2-16, 4.2-17, 4.2-18, 4.2-19, 4.2-20, 4.2-21, 4.2-22, and 4.2-23 would reduce these impacts, but not to a less-than-significant level. Mitigation Measures 4.2-3, 4.2-7, and 4.2-24 were rejected by the Board of Supervisors.

As noted earlier, the analysis in this Draft SEIR is based on new traffic modeling with updated assumptions for socio-demographic data and transportation supply. As a result the model recalibration has predicted some different travel patterns than were predicted in the *2007 Countywide Plan EIR* and as a result some previously impacted locations are no longer significantly affected. Based on the analysis conducted for this Draft SEIR, therefore, previously identified significant unavoidable impacts would *no longer* occur at the following four locations:

Impact 4.2-11 South Novato Boulevard from U.S. 101 to Sunset Parkway - Screenline #17 (the new traffic model has forecasted a shift of vehicles to the U.S. 101/Rowland Boulevard interchange resulting in a reduction of traffic on Novato Boulevard).

Impact 4.2-15 Intersection of Second Street and Grand Avenue (Intersection D) (cumulative)

Impact 4.2-16 Intersection of Third Street and Grand Avenue (Intersection E) (cumulative)

Impact 4.2-17 Intersection of Miller Creek Road and Las Gallinas Avenue (Intersection F) (cumulative)

Based on the analysis conducted for this Draft SEIR, the residential development that could occur under the *2012 Draft Housing Element* would continue to have a significant unavoidable impact as identified in the *2007 Countywide Plan EIR* at the remaining screenlines and intersections plus the projected increased in vehicle miles traveled.

Based on a review of Impact 4.2-26 (*Increased Demand for Bicycle and Pedestrian Facilities and Impacts on Safety and Access*) and Impact 4.2-27 (*Increased Demand for Public Transit Services*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have any impact on the demand for bicycle and pedestrian facilities or impacts on safety and access or increase demand for public transit services. With implementation of *Countywide Plan* policies and programs, residential development that could occur under the *2012 Draft Housing Element* would have a less-than-significant impact on these transportation impact areas. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or

substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to the demand for bicycle and pedestrian facilities or impacts on safety and access or on increase demand for public transit services because the overall number of housing units would not change from the number projected in the adopted *Countywide Plan*; therefore, no additional analysis is required.

Utilities and Service Systems

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
17. Utilities and Service Systems. Would the Project:					
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Discussed in Section 4.10 Public Services, see Impacts 4.10-4 and 4.10-5.	No	No	No	Yes MM 4.10-4
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Discussed in Section 4.10 Public Services, see Impact 4.10-5 and Section 4.9 Water Supply and Demand, see Impact 4.9-3.	No	No	No	NA
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Discussed in Section 4.5 Hydrology, Water Quality, and Flood hazards, see Impact 4.5-6.	No	No	No	Yes MM 4.5-6
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	Discussed in Section 4.9 Water Supply and Demand, see Impacts 4.9-1 and 4.9-2.	No	No	No	No MM 4.9-1 would reduce impact, but still found significant unavoidable. No change from the CWP EIR.

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Discussed in Section 4.10 Public Services, see Impacts 4.10-4 and 4.10-5.	No	No	No	Yes MM 4.10-4
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Discussed in Section 4.10 Public Services, see Impact 4.10-6.	No	No	No	NA
g. Comply with federal, state, and local statutes and regulations related to solid waste?	Not specifically discussed in Countywide Plan EIR.	No	No	No	NA

Utilities and Service Systems – Setting

WASTEWATER

West Marin relies heavily on septic systems. Seven sewer agencies operate eight wastewater treatment plants that receive effluent from 20 sanitary districts in Marin County.¹⁰⁷ The service population, current sewage flows and capacities are shown in Exhibit 4.10-2 of Section 4.10 Public Services of the *2007 Countywide Plan EIR*. Updated information is provided in **Exhibit 3.0-39**.

¹⁰⁷ *2007 Marin Countywide Plan EIR*, Marin County, Nichols • Berman, January 2007, page 4.10-13

Exhibit 3.0-39
Agency Service Populations and Sanitary Treatment Plant Design Capacities^a

Agency	Service Population^b	Capacity (MGD)^c	Flows^b (MGD)	Capacity Remaining (percent)	Capacity Reached (Year)
Sausalito / Marin City Sanitary District	18,000	1.80	1.50	16.7	N/A
Sewerage Agency of Southern Marin	28,000	3.60	2.50	30.6	N/A
SD No. 5 Main Plant	3,500 households	0.98	0.683	30.3	N/A
SD No. 5 Paradise Cove Treatment Plant		0.40	.015	96.3	N/A
Central Marin Sanitation Agency	120,000	30.0	11.0	63.3	N/A
Las Gallinas Valley Sanitary District	32,000	2.92	2.33	20.2	Estimated 2035
Novato Sanitary District (Novato)	60,000	4.53	1.6	64.7	N/A
Bolinas Public Utilities District ^d	1,500	0.065	0.035	54	2000

a Dry-weather Capacities

b Population and flow numbers current in 2012

c Million gallons per day

d The Bolinas Community Public Utility District currently has a moratorium on additional wastewater hookups because of lack of treatment capacity and limitations on water.

Source: Marin Countywide Community Facilities Element Technical Background Report Provision of Services in Marin County, The Marin County Community Development Agency, Planning Division, January 2003. Updated numbers obtained from service district websites and personal communication with Nichols • Berman.

Several of the housing sites, including Marinwood Plaza (site 1), a portion of St. Vincents & Silveira (site 5), and 10 other housing sites, are within the Las Gallinas Valley Sanitary District (LGVSD). Grady Ranch (site 16) is adjacent to the boundary of the LGVSD. The LGVSD has experienced a reduced dry weather flow due to programs that reduce inflow/infiltration in the sewer systems among the sanitation districts that pump sewage to the treatment plant.¹⁰⁸ During summertime, reclaimed wastewater is used for pasture irrigation, filling storage ponds, storage pond evaporation.¹⁰⁹

¹⁰⁸2007 Countywide Plan EIR, Marin County, Nichols • Berman, January 2007.

¹⁰⁹Las Gallinas Valley Sanitary District website, *Reclamation*, Available at www.LGVSD.org/reclamation.shtml, accessed August 2012.

The Tamalpais Community Services District provides collection services for jurisdictions that include three housing sites identified in the *2012 Draft Housing Element*, including Old Chevron Station (site 4), the Armstrong Nursery Site (site 14), and Tam J Retail (site 19). The Tamalpais Community Services district sends its sewage to the Mill Valley Treatment Plant, which is operated by the Sewerage Agency of Southern Marin (SASM). The Tamalpais Community Service District has summer / dry weather flows of 300,000 gallons per day.¹¹⁰ SASM uses reclaimed water to irrigate Bay Front Park.

WATER

Marin County's water supplies include surface water, groundwater, recycled water and imported water. Imported water is from the Sonoma County Water Agency (SCWA). Generally, groundwater supplies in Marin County are limited due to the large number of existing private wells for domestic and irrigation use, low yields, and seawater intrusion. The Marin Municipal Water District (MMWD) and North Marin Water District (NMWD) are the principal service providers, managing and delivering water to Marin County. The MMWD serves central and southern Marin County, and the NMWD serves the City of Novato and the Point Reyes area of West Marin,

Smaller community water districts that provide water service in western Marin County include the Bolinas Community Public Utility District (BCPUD), Stinson Beach County Water District (SBCWD), Inverness Public Utility District (IPUD), and Muir Beach Community Services District (MBCSD). The community of Dillon Beach is served by two small independent water companies.

Recycled water is provided by the Novato Sanitary District (NSD) in the NMWD, and three wastewater agencies in the MMWD service area, which are the LGVSD, SASM, and Richardson Bay Sanitary District. The NMWD and MMWD import water through an agreement with SCWA that principally provides water from the Russian River.

SOLID WASTE

Redwood Landfill is the only active disposal site for solid waste in Marin County. The Redwood Landfill is located north of Novato, west of the Petaluma Valley. The landfill site is approximately 420 acres, of which 222.5 acres is dedicated to solid waste disposal. The remaining land is used for composting, recycling, and business operations. There is also open space and a fresh water lagoon on the site.¹¹¹ Redwood Landfill is permitted as a Class III facility for non-hazard materials, and can accept 2,130 tons of solid waste daily. The landfill is regulated by the California Regional Water Quality Control Board, the Bay Area Air Quality Management District, California Department of Resources Recycling and Recovery (CalRecycle), and the Marin County Environmental Health Services Division as the State-designated Local Enforcement Agency. In Marin County, the average

¹¹⁰Nichols • Berman personal communication with Bob Bunce, Public Works Superintendent, Tamalpais Community Service District, August 2012.

¹¹¹Waste Management, Inc. Redwood Landfill Website: Available at www.redwoodlandfill.wm.com, accessed August 2012.

person disposes 3.8 pounds of solid waste per day.¹¹² In 2011, Redwood Landfill received 199,235 tons of solid waste from Marin County.¹¹³

Utilities and Service Systems - Discussion

Utilities and service systems impacts are analyzed in Section 4.5 Hydrology, Water Quality, and Flood Hazards, Section 4.9 Water Supply and Demand, and Section 4.10 Public Services of the *2007 Countywide Plan EIR*.

Exhibits 3.0-27 and 3.0-28 show the water district and sanitary district in which each housing site is located. Wastewater treatment and solid waste disposal impacts are discussed in Section 4.10 Public Services of the *2007 Countywide Plan EIR*. Water Supply impacts are discussed in Section 4.9 Water Supply and Demand. Stormwater Drainage is discussed in Section 4.5 Hydrology, Water Quality, and Flood Hazards.

Section 3.11, Public Facilities and Services, of the Built Environment Element of the *Countywide Plan* describes public services available to communities in Marin County, and provides goals, policies, and programs to ensure the availability of public services, including wastewater, water supply and solid waste management. Policy **PFS-1.1** (*Require Cost-Sharing*) requires that new development pay for infrastructure and the public services needed to serve the development, and Program **PFS-1.a** (*Require Fair Share Contributions*) establishes development impact fees based on the cost of providing public services to new development. Program **PFS-1.b** (*Plan for Service Expansion*) requires coordinated planning from Marin Local Agency Formation Commission (LAFCo), cities, and special districts to ensure adequate water supply and necessary public facilities are in place prior to occupancy of new development, and adequately funded. Policy **CD-5.2e** (*Correlate Development and Infrastructure*) requires wastewater, water, and other infrastructure be in place to serve new development by the time development is constructed. Policy **PFS-1.4** (*Reduce Demand on Public Facilities*) and programs **PFS-1.d** and **PFS-2.b** reduce demands for water and wastewater treatment and enhance stormwater management by means of integrated resource management and planning, integrated and cost-effective design, use of technology, and applying reduction standards to new development and redevelopment projects. Policy **PFS-4.1** (*Reduce Solid Waste Stream*) is intended to reduce solid waste disposal by promoting the highest and best use of discarded materials through redesign, reuse, composting, and shared producer responsibility.

Pursuant to *Countywide Plan* Policy **CD-1.3** (*Reduce Potential Impacts*) and Program **CD-1.c** (*Reduce Potential Impacts*) for that portion of any property with sensitive habitat or within sensitive habitat, Ridge and Upland Greenbelt, or the Baylands corridor, and for properties that lack public water or sewer systems, residential densities shall be calculated at the lowest end of the applicable density range, except for multi-family parcels identified in a certified housing element.

¹¹²Nichols • Berman personal communication with Alex Soulard, Waste Management Specialist, County of Marin Public Works Department, August 2012.

¹¹³California Department of Resources Recycling, and Recovery (CalRecycle) website, *Data Central*: Available at www.calrecycle.ca.gov/DataCentral/, accessed August 2012.

In regards to water use and conservation, both Sections 3.11, Public Facilities and Services, of the Built Environment Element, and 2.5, Water Resources, of the Natural Systems and Agriculture Element of the *Countywide Plan* contain applicable policies and programs. Policies **WR-3.1** (*Conserve Water and Develop New Sustainable Sources*) **PFS-2.1** (*Conserve Water and Utilize Sustainable Sources*) and Programs **WR-3.a**, **WR-3.b**, and **PFS-2.a** reduce water demand through conservation efforts, use of new technology, and design and management practices. Policies **WR-3.2** (*Mitigate Water Demand in New Development*) and **PFS-2.2** (*Mitigate Increased Water Demand in New Development*) and Programs **WR-3.a** and **WR-3.b** call for mitigating new development's demand on water supply.

17(a) As stated in the discussion of Impact 4.10-4 (*Increased Wastewater Treatment Demand*), providers of wastewater management have sufficient capacity to accommodate increases in wastewater brought on by implementation of the *Countywide Plan*, with exception of the BCPUD which was determined to be a significant impact. It is noted that the Grady Ranch (housing site 16) would be required to be annexed into the LGVSD for wastewater service. Implementation of *2012 Draft Housing Element* Program 1.a (*Establish Minimum Densities on Housing Element Sites*) and Program 1.c (*Establish an Affordable Housing Combined Zoning District*) potentially could lead to residential development at higher densities than analyzed in the *2007 Countywide Plan EIR*, which would result in an increase in wastewater discharge and treatment demand on respective wastewater treatment plants. However, the total number of housing units would not exceed the housing numbers anticipated with buildout of the *Countywide Plan* and increased demand would be within the treatment capacities of the various districts. *Countywide Plan* policies and programs, such as Policy **CD-5.2e** (*Correlate Development and Infrastructure*), Policy **PFS-1.4** (*Reduce Demand on Public Facilities*) and Program **PFS-1.b**, Program **PFS-1.d**, and **PFS-2.d** would help reduce wastewater treatment demand. The BCPUD continues to have capacity issues and does not accept new sewer line hook-ups.¹¹⁴ In the *2007 Countywide Plan EIR* an impact to the Bolinas Public Utilities District was identified. None of the housing sites, however, are located within the boundaries of the Bolinas Utilities District. As indicated in **Exhibit 3.0-39**, the remaining wastewater treatment plants have adequate capacities to accommodate increased wastewater flows. This previously identified less-than-significant impact would remain less-than-significant.

17(b) As stated above any increase in wastewater treatment demand resulting from the implementation of the *2012 Draft Housing Element* would fall within available capacities of the respective treatment plants. Exhibit 4.10-2 in the *2007 Countywide Plan EIR* indicates that anticipated treatment plan capacities would not be reached within the planning period of the *2012 Draft Housing Element* or the 2007 to 2014 planning period, and would not require expansion of facilities.

17(c) Mitigation Measure 4.5-6 in the *2007 Countywide Plan EIR* addressed the secondary hydrology and water quality impacts of storm drainage facilities expansion required for the development considered in the *Countywide Plan*. These impacts would be reduced to a less-than-significant level with imposition of Mitigation Measures 4.5-1, 4.5-3(b), and 4.5-4(b). The majority of the residential development that could occur under the *2012 Draft Housing Element* would occur as infill development and, therefore, would not require either the construction of new storm drainage facilities or expansion of existing storm drainage facilities. A limited

¹¹⁴Nichols • Berman personal communication with Bill Pierce, Bolinas Public Utilities District, August 2012.

number of housing sites, primarily sites 44 (Bear Valley Road) and 45 (Olema Campground) in the Olema area of West Marin, would be developed in rural areas that are not served by existing storm drain facilities. For these sites, in-situ drainage facilities, including LID facilities to reduce the effects of hydro-modification in accordance with MCSTOPPP's guidelines for new and redevelopment projects, would be constructed, eliminating the need for drainage facilities expansions and impacts related to such construction.

17(d) The *2007 Countywide Plan EIR* discusses the adequacy of water supply to meet increased demand resulting from the implementation of the *Countywide Plan* in Section 4.9. Impact 4.9-1 (*Adequacy of Water Supply During a Normal Year*), Impact 4.9-2 (*Adequacy of Water Supply During a Drought and Multi Drought Years*), Impact 4.9-4 (*Impacts to Groundwater Supply*), Impact 4.9-5 (*Interference with or Degradation of Water Supply*) were identified as significant unavoidable impacts. However, implementation of the policies and programs of the *2012 Draft Housing Element* would not increase the severity of these impact as housing numbers, and demand on water supplies, would not exceed the levels anticipated with the implementation of the *Countywide Plan*. The NMWD has planned for and would continue to provide supplies adequate for its jurisdiction upon the buildout of the *Countywide Plan*.¹¹⁵ It is noted that the Grady Ranch (housing site 16) would be required to be annexed into the MMWD for water service. The MMWD continues to provide water supply to meet demand. Additionally, continued ongoing conservation efforts have succeeded in reducing the demand on water supply.¹¹⁶ Implementation of the *2012 Draft Housing Element* would not increase the severity of the significant unavoidable impacts discussed in the *2007 Countywide Plan EIR*. The *Countywide Plan* contains policies and programs that would mitigate environmental impacts associated with construction of new water supply facilities. This previously identified less-than-significant impact would remain less-than-significant upon implementation of the *2012 Draft Housing Element*.

17(e) Residential development that could occur subsequent to implementation of the *2012 Draft Housing Element* would have the same impacts on wastewater treatment demand as the *Countywide Plan*, including that new growth would mostly rely on sanitary treatment districts serving the City-Centered Corridor. **Exhibit 3.0-39** shows that the seven main wastewater treatment agencies continue to operate within treatment capacity. Future wastewater treatment capacities may be affected by funding limitations, permit restrictions, and environmental requirements, which may constrain future development. However the policies and programs of the *Countywide Plan* would serve to avoid or adequately mitigate potential impacts on increased wastewater treatment capacity and stormwater drainage systems capacities, such as Policy **PFS-1.4** (*Reduce Demand on Public Facilities*) and Programs **PFS-1.d** and **PFS-2.b**, and Policy **CD-5.2e** (*Correlate Development and Infrastructure*), which require wastewater, water, and other infrastructure be in place to serve new development by the time development is constructed. Additionally, sanitary codes typically require that new development mitigate its demand on wastewater infrastructure. For example if housing densities change within the jurisdiction of the Ross Valley Sanitary District, where housing sites 26 thru 32 are located (see **Exhibit 3.0-28**), causing impacts to the sewer system, the District Sanitary Code requires enhancement of the

¹¹⁵Nichols • Berman personal communication with Chris DeGabriele, General Manager NMWD, August 2012.

¹¹⁶Marin Municipal Water District website: www.marinwater.org, accessed August 2012.

sewer system to accommodate flows.¹¹⁷ This less-than-significant impact would remain less-than-significant. There would be no new or substantially more severe significant impacts requiring major revisions to the 2007 Countywide Plan EIR with regard to increased wastewater treatment demand, therefore, no additional analysis is required.

17(f & g) Implementation of the 2012 Draft Housing Element would not increase disposal of solid waste beyond what was anticipated with the implementation of the Countywide Plan. The 2007 Countywide Plan EIR identifies that the projected increase in solid waste disposal demand would be a less-than-significant impact (Impact 4.10-6 [Increased Solid Waste Disposal Demand]). The Redwood Landfill has an estimated closure date of 2028, which is beyond the planning period of the 2012 Draft Housing Element. An EIR has been prepared for the future planned expansion of the Redwood Landfill.¹¹⁸ Any subsequent development projects would be required to comply with federal, state, and local statutes related to solid waste disposal. This previously identified less-than-significant impact would remain less-than-significant upon implementation of the 2012 Draft Housing Element.

Utilities and Service Systems - Mitigation Measures

2007 COUNTYWIDE PLAN EIR MITIGATION MEASURES

Mitigation Measures 4.5-6, 4.9-1, and 4.10-4 of the 2007 Countywide Plan EIR were adopted as a part of the Countywide Plan. Mitigation Measure 4.10-4 only applies to the Bolinas Community Public Utilities District where no new housing sites are proposed and is therefore not listed below.

Mitigation Measure 4.9-1(a) revised Programs **PFS-2.c, PFS-2.d, PFS-2.g, PFS-2.h, PFS-2.j, PFS-2.m, PFS-2.o, PFS-2.p, PFS-2.q, WR-2.k, and WR-3.b** as follows:

***Program PFS-2.c Promote Ahwahnee Principles for Water Supply.** Support guidelines for local water providers to enact programs that promote the Ahwahnee Principles for water supply. These should include investigations of new sustainable sources such as groundwater, surface water, recycled water, graywater or desalination facilities that match water quantity and quality to the beneficial uses and the perfection or securing of additional water rights for the water purveyors.*

***Program PFS-2.d Support Water Demand Planning.** Provide Countywide Plan buildout information in the form of letters to water supply purveyors to use in the development of their respective Urban Water Management Plans (UWMPs). Assist the water purveyors in the preparation of these UWMPs by reviewing these documents and providing comments. Initiate discussion with or letters to small water systems, which are not required by the California Water Code to prepare UWMPs because they have fewer than 3,000 connections, urging them*

¹¹⁷Nichols • Berman personal communication with Randell Ishii, District Engineer with Sanitary District No. 1 of Marin County, August 2012.

¹¹⁸Nichols • Berman personal communication with Jessica Jones, General Manager at Redwood Landfill, August 2012.

to adopt use of the UWMP format for planning. The water shortage contingency plan portion of the UWMP would provide the means to identify shortages on a consistent basis, to define water shortage stages and appropriate response measures, and to develop relevant ordinances, resolutions, or rules to manage water shortages.

Program PFS-2.g Promote Xeriscaping and Native Plants. Amend the Development Code to require site appropriate, drought-tolerant, low water use, native landscaping and ultra-efficient irrigation systems where appropriate for all development applications and re-landscaping projects. For parcels adjacent to publicly managed open space, appropriate landscaping will also be non-invasive and have low flammability, and be prepared in strict conformance with the County's list of appropriate plants. Limit the amount of water intensive landscaping, particularly lawn area allowed, in order to reduce the amount of water needed for irrigation.

Program PFS-2.h Promote Site Appropriate, Low-water Use and Drought Tolerant Native Plants in Public Facilities. Restore and promote the native plants garden at the Civic Center and the development of similar landscaping for all public facilities. Create a Landscaping Master Plan for Public Facilities that specifies appropriate species, methods, and technologies for water-wise landscaping.

Program PFS-2.j Upgrade West Marin Systems. Promote assistance to water service providers to upgrade the water delivery systems in West Marin to reduce the incidence of saltwater intrusion and leakage by reviewing plans and initiating discussion among West Marin water providers of viable programs. The County should promote the upgrade and improvement of water supply development (e.g., wells), water treatment, water delivery and water storage facilities for the purpose of providing supplemental and backup water supplies for peaking and emergency purposes. Upgrade of water systems should be consistent with the Ahwahnee Principles for water supply that encourage a diverse water portfolio, matching of water supply with intended use, protection of natural systems and water resources, and evaluation of the multiple benefits of a water system upgrade program, among others.

Program PFS-2.m Promote Onsite Rainwater Capture and Retention. Encourage use of on-site rainwater capture, storage, and infiltration for irrigation and other non-potable uses, and work with Environmental Health Services and water service providers to establish standards for rainwater quality and use. Ensure that catchments do not adversely affect habitat dependent on in-stream flow.

Program PFS-2.o Assess Project Impacts to Surface Water and Groundwater. Require documentation that new development projects (including installation of wells) with the potential to degrade or deplete surface water or groundwater resources will not adversely affect a basin or subbasin, including in-stream flows for aquatic habitat.

Program PFS-2.p Investigate and Consider Appropriate Small-Scale Wastewater Reduction, Treatment Use Technologies. Work with water agencies to resolve conflicting regulations regarding pre-treated septic drip dispersal systems and appropriate graywater use, to evaluate the potential of small-scale portable graywater converter systems as possible sources for landscaping water, and to modify regulations as necessary to encourage safe graywater use (such as dual systems that employ graywater to support landscaping). (Also see Water Resource policies and programs). Evaluate the potential to use waterless urinals, NSF-approved composting toilets, and other appropriate water saving technologies.

Program PFS-2.q Adopt Tiered Billing Rates. Encourage all Marin County water agencies to adopt the California Urban Water Conservation Council's Best Management Practice of tiered billing rates to encourage water conservation. Encourage the establishment of tiers that are based on conserving levels of per capita water use, rather than those based on historical non-conserving levels. Offer comprehensive conservation incentive programs to assist customers to achieve conserving levels of use.

Program WR-2.k Establish Educational Partnerships to Protect Water Quality. Initiate discussions with the Regional Water Quality Control Boards, Marin Resource Conservation District, University of California Cooperative Extension, Natural Resources Conservation Service, Marin County Stormwater Pollution Prevention Program, watershed groups, the public, stakeholders and other interested parties to develop and implement public education programs and provide technical assistance to find alternatives and minimize erosion and sedimentation, pathogen and nutrient, and chemical sources of water pollution. This would begin with letters to establish a lead agency to direct the effort. It would include soliciting input from local, State, and federal recreation management agencies to educate boaters and other recreational groups regarding proper management and disposal of human waste.

Program WR-3.b Support and Integrate Water District Conservation Efforts. Assist the efforts of the water districts to reduce waste and increase reuse through integrated planning of programs and complementary land use and building regulations. Assess and remove barriers to integrated water planning and mitigate the demand for water in new development. Assess the degree of demand hardening. (Also, see policies and programs under Goals AG-1 in the Agricultural and Food section of this Element, and PFS-2 in the Public Facilities and Services section of the Built Environment Element).

Mitigation Measure 4.9-1(b) Added the following programs to the Public Facilities and Services section of the Built Environment Element.

Program PFS-2.r Offset New Water Demand. In water districts where there is insufficient water to serve new development, construction or uses requiring an additional water meter or increased water supply as determined by the district or Marin County, the County shall require new construction or uses development to offset demand so that there is no net increase in demand. One or more of the following measures may be required to achieve no net increase in demand: use of reclaimed water; water catchments and reuse on site; water retention serving multiple sites; retrofits of existing uses in the district to offset increased demand; other such means. These measures should be achieved in partnership with the applicable water district and shall serve as evidence that an adequate, long-term, and sustainable water supply is available to serve the project.

Program PFS-2.s Require Sustainable Water Supply. No new development project construction or uses requiring an additional water meter or increased water supply as determined by the appropriate district shall be approved without a specific finding, supported by facts in the administrative record, that an adequate, long-term, and sustainable water supply is available to serve the project. These measures should be achieved in partnership with the applicable water district.

Mitigation Measure 4.9-1(c) required Marin County to obtain funding for Programs **PFS-2.e**, **PFS-2.k**, **PFS-2.n**, **PFS-2.p**, **WR-2.k**, **WR-3.a**, and **WR-3.b**, set the priority of **PFS-2.k** and **WR-2.k** to "medium" or higher, and revise the time frame of implementation of **PFS-2.f**, **PFS-2.n**, **PFS-2.o**, and **WR-2.k** to the medium-term or sooner.

Mitigation Measure 4.5-6 is the same as Mitigation Measures 4.5-1(b), 4.5-3(b), and 4.5-4(b). See Checklist Section 9 (Hydrology, Water Quality and Flooding Hazard).

2012 DRAFT HOUSING ELEMENT MITIGATION MEASURES

No additional mitigation measures related to utilities and service systems would be necessary for adoption and implementation of the *2012 Draft Housing Element*.

Utilities and Service Systems - Conclusion

Based on a review of Impact 4.10-4 (*Increased Wastewater Treatment Demand*) and Impact 4.5.6 (*Stormwater Drainage Systems Capacities*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would have the same impacts on wastewater treatment capacity and stormwater drainage systems capacities as the *Countywide Plan*. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, policies and programs of the *Countywide Plan* would serve to avoid or adequately mitigate potential impacts on wastewater treatment capacity and stormwater drainage systems capacities. Furthermore, previously adopted Mitigation Measures 4.10-4 and 4.5-6 would continue to apply and would reduce impacts on wastewater treatment capacity and stormwater drainage systems capacities to a less-than-significant level. There would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to wastewater treatment capacity and stormwater drainage systems capacities; therefore, no additional analysis is required.

Based on a review of Impact 4.10-5 (*New or Expanded Wastewater Facilities*), Impact 4.9-3 (*Require New or Expanded Water Supply Facilities*), and 4.10-6 (*Increased Solid Waste Disposal Demand*) in the *2007 Countywide Plan EIR* and on the analysis in this Draft SEIR, residential development that could occur under the *2012 Draft Housing Element* would not have a new or substantially more severe impact on these utilities and service systems impact areas. With implementation of *Countywide Plan* policies and programs, residential development that could occur under the *2012 Draft housing Element* would have a less-than-significant impact on utilities and service system impact areas. Although properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, there would be no new or substantially more severe significant impacts requiring major revisions to the *2007 Countywide Plan EIR* with regard to new or expanded wastewater facilities, new or expanded water supply facilities, or increased solid waste disposal demands because the overall number of housing units would not change from the number projected in the adopted *Countywide Plan*; therefore, no additional analysis is required.

As stated in the discussion of Impact 4.9-1 (*Adequacy of Water Supply During a Normal Year*), Impact 4.9-2 (*Adequacy of Water Supply During a Drought and Multi-Drought Years*), Impact 4.9-4 (*Impact to Groundwater Supply*), Impact 4.9-5 (*Interference with or Degradation of Water Supply*), and Impact 4.9-6 (*Secondary Impacts*), impacts to water supply due to development that could occur under the *Countywide Plan* would be significant and unavoidable because due to the increase in the demand for water, water supplies would be insufficient to serve some of the unincorporated and incorporated areas of the County in both normal rainfall and dry years. Previously adopted Mitigation Measures 4.9-1, 4.9-2, 4.9-4, 4.9-5, and 4.9-6 would reduce these impacts, but not to a less-than-significant

level, because it would not fully reduce the impact of increasing water demands. While properties proposed to be included in the AH Combined District and other properties identified in the *2012 Draft Housing Element* could be developed at higher densities than were analyzed in the *2007 Countywide Plan EIR*, previously adopted mitigation measures and *Countywide Plan* policies and programs would continue to apply. Therefore, these would remain significant unavoidable impacts, but would not be substantially more severe than the impact analyzed in the *2007 Countywide Plan EIR*.

Mandatory Findings of Significance

Environmental Issue Area	Where Impact was Analyzed in 2007 Countywide Plan EIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do 2007 Countywide Plan EIR Mitigation Measures Reduce Impacts to a Less-Than-Significant Level?
18. Mandatory Findings of Significance.					
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Discussed in individual impact sections 4.1 through 4.12. See discussion above.	Yes	No	Yes, but new or more severe significant effects would not occur.	Relevant mitigation measures contained in the 2007 Countywide Plan EIR discussed in sections above.
b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when view in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Discussed in Section 6.2 Cumulative Impacts plus individual impact sections. See discussion above.	Yes	Yes	Yes	Relevant mitigation measures contained in the 2007 Countywide Plan EIR discussed in sections above.
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Discussed in Chapter 4.0.	Yes	Yes	Yes	Relevant mitigation measures contained in the 2007 Countywide Plan EIR discussed in sections above.

Mandatory Findings of Significance Mandatory Findings of Significance - Discussion

- 19(a) Based on the analyses above, adoption and implementation of the *2012 Draft Housing Element* would not result in new significant impacts or substantially more severe impacts to biological resources or cultural resources.
- 19(b) Section 2.4 of the *2007 Countywide Plan EIR* explains that implementation of the *Countywide Plan* would result in significant impacts that cannot be mitigated to a level of insignificance if the *Countywide Plan* is implemented. Chapter 6 of the *2007 Countywide Plan EIR* addresses cumulative impacts as required by Section 15130 of the *State CEQA Guidelines*. The *2007 Countywide Plan EIR* identifies significant direct, indirect and cumulative impacts associated with the *Countywide Plan* in the areas of land use, population and housing, transportation, air quality, noise, hydrology, water quality and flood hazards, biological resources, geology, agriculture, water supply and demand, public services, and visual resources, which will remain significant even after implementation of mitigation measures identified in the *2007 Countywide Plan EIR*. Based on the analyses above, these cumulative impacts would remain significant and unavoidable for purposes of the analysis of the *2012 Draft Housing Element* in this Draft SEIR, but would not be substantially more severe than the impacts analyzed in the *2007 Countywide Plan EIR*.
- 19(c) Based on the analyses above, new significant impacts could occur related to air quality; hydrology, water quality and flood hazard, and noise. With regard to air quality, new residences developed as a part of the *2012 Draft Housing Element* could expose new sensitive receptors to significant TAC levels. A second new significant impact would result from the location of housing sites within mapped dam inundation areas below certain Marin County dams. A third new significant impact would result from the exposure of persons to groundborne vibration levels associated with SMART operations. New mitigation measures identified in this Draft SEIR would address these impacts, and would reduce them to a less-than-significant level.

4.0 REPORT PREPARATION

4.0 REPORT PREPARATION

4.1 PERSONS RESPONSIBLE FOR REPORT PREPARATION

This EIR was prepared by an environmental study team lead by Nichols•Berman. The analyses were coordinated by the Marin County Community Development Agency staff including: Rachel Warner, Interim Environmental Coordinator; and Stacey Laumann, Planner.

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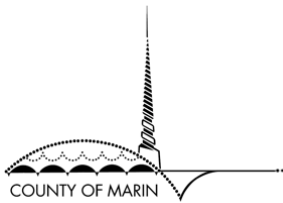
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APPENDIX A
NOTICE OF PREPARATION



**NOTICE OF PREPARATION AND
 NOTICE OF PUBLIC SCOPING MEETING AND
 NOTICE OF PUBLIC WORKSHOP FOR THE
 2012 DRAFT MARIN COUNTY HOUSING ELEMENT
 SUPPLEMENT TO THE 2007 COUNTYWIDE PLAN ENVIRONMENTAL IMPACT REPORT**

Marin County will be preparing a Draft Supplement to the Countywide Plan Environmental Impact Report (EIR) for the *2012 Draft Marin County Housing Element*, as proposed by the Marin County Community Development Agency (CDA). The 2012 Draft Housing Element is an update of the County's State-certified Housing Element that was adopted initially in November 1991, readopted with the Countywide Plan Update in January 1994, updated in June 2003, and then readopted with the Countywide Plan Update in November 2007. The 2012 Draft Housing Element addresses the requirements of California Government Code 65583, for the planning period from 2007 to 2014.

The 2012 Draft Housing Element consists of several main sections, each of which addresses a major subject area, including a review of constraints on housing development, an inventory of potential housing sites, and a set of policies and programs to support housing at all income levels.

The *Sites Inventory and Analysis* provides an inventory of potential housing sites. For the purposes of this environmental review, the *Available Land Inventory* provides both the 2007-2014 and the 2014-2022 housing element planning periods. Although the 2012 Draft Housing Element is for the 2007-2014 planning period, the EIR Supplement analysis that will be prepared will include an analysis of potential housing sites for the 2014-2022 planning period. It is anticipated that inclusion of the potential sites for the 2014-2022 cycle will expedite the review and approval of the housing element for that planning period.

The *Goals, Policies and Programs* section contains programs that should be implemented in the 2007-2014 planning period. The programs focus on three objective areas, including efficient land use, providing housing choice, and ensuring institutional capacity to respond to the community's housing needs. Policy initiatives and amendments to zoning regulations are considered in this section.

The actions contemplated by this EIR Supplement include Countywide Plan land use changes, amendments to Marin County Development Code standards, and rezoning of certain properties. The EIR Supplement will also evaluate potential zoning or Countywide Plan land use designation changes for three existing housing sites to address conformance with the existing uses.

Marin County is the lead agency, pursuant to the State Guidelines for the California Environmental Quality Act (CEQA Guidelines Section 15050) for the preparation of a Supplement to the *EIR for the Countywide Plan*, certified in 2007. This EIR Supplement is being prepared by the County of Marin in accordance with CEQA, the State of California CEQA Guidelines, and County Environmental Impact Review Guidelines. The 2007 Final EIR is available for review at the Marin County Community Development Agency. In addition, a copy is available for review online at <http://www.co.marin.ca.us/depts/CD/main/fm/eir.cfm>. The EIR Supplement will evaluate the project with respect to all of the following topical issues, but will focus on some issues more than others.

1) Land Use & Planning	6) Transportation/Traffic	12) Utilities & Service Systems
2) Population & Housing	7) Biological Resources	13) Aesthetics/Visual Resources
3) Geology and Soils	8) Energy & Natural Resources	14) Cultural Resources
4) Hydrology and Water Quality	9) Hazards and Hazardous Materials	15) Agriculture and Forestry Resources
5) Air Quality	10) Noise	16) Greenhouse Gas Emissions
	11) Public Services and Recreation	17) Mineral Resources

To ensure that the EIR Supplement for this project is thorough and adequate, and meets the needs of all agencies reviewing it, we are soliciting comments on specific issues to be included in the environmental review. Public comments on the scope of issues to be evaluated in the EIR Supplement are also encouraged. Details of the proposed project are on file with the office of the Marin County Community Development Agency, 3501 Civic Center Drive, Suite 308, San Rafael, CA 94903-4157, and are available for public review between the hours of 8:00 a.m. to 4:00 p.m., Monday through Thursday.

So that the EIR Supplement will address any additional issues that may be of concern to the public for this proposed project, the County will also conduct a public scoping meeting on **Thursday, August 2, 2012 from 6:30 p.m. to 8:30 p.m., in the Planning Commission Chambers (Suite #328 – Administration Building) Civic Center, San Rafael, California**. Public Agencies, Community Groups and interested members of the

public are invited to attend this meeting and present oral or written comments on the proposed project EIR Supplement. Hard copies of the scoping session materials will not be distributed in advance of the meeting. However, the scoping session materials can be found on the Environmental Planning website at <http://www.co.marin.ca.us/depts/CD/main/comdev/eir.cfm> and will be available in hard copy at the scoping session.

In addition, a Workshop on the Draft Housing Element content will be held on **Wednesday, August 29, 2012 from 6:30 p.m. to 8:30 p.m. at the Marin City Senior Center, 630 Drake Avenue, Marin City, CA 94965.** At this Workshop, staff will discuss some key aspects of the 2012 Draft, answer questions and take comments from the public on the data, programs or sites contained in the Draft. Please be advised that the Workshop is a separate event from the CEQA scoping session on this project and is not intended for the purpose to receive scoping comments on the EIR Supplement.

Please note that you have received a paper copy of this notice because you are currently on the distribution list to receive notices for this project in hard copy, however as of July 2012, our policy regarding distributing paper copies has been enhanced to align with our Countywide Plan goals of conserving resources. Under our new noticing program, you can continue to receive notifications about this project by subscribing to receive cyber-notices that will be sent to the email address of your choosing. There is no fee to subscribe, and you will receive the notices as soon as they are publicly released. Please sign up at www.marincounty.org/HousingElement; this page also contains the 2012 Draft Housing Element. Should you choose to opt out of the free on-line subscription, please contact Tammy Taylor at (415) 473-7873 or ttaylor@marincounty.org in order to receive paper copies of the notices in the future. Otherwise, this is the only notice that will be distributed for this project in hard copy, unless otherwise formally requested by you.

If you wish to comment during the Notice of Preparation (NOP) comment period, or if you cannot attend the scoping meeting, we will accept written comments about the scope of the environmental report until the close of the NOP comment period at **4:00 p.m. on Monday, August 13, 2012.** Commentors are advised to mail written comments postmarked on or before August 13, 2012 to the attention of Rachel Warner, Interim Environmental Coordinator at 3501 Civic Center Drive, Suite 308, San Rafael, CA 94903. Comments can also be submitted via email to envplanning@marincounty.org before the end of the comment period deadline. If you have any questions, or need additional information concerning the scoping meeting or would like to request a hard copy of the scoping session materials, please contact Tammy Taylor, Environmental Planning Aide, CDA, at (415) 473-7873. Please direct questions about the project merits or the merits workshop to Stacey Laumann, Planner at (415) 473-2698.

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Update\HEUNOPScopingNOT.docx
07/13/12

Rachel Warner,
Interim Environmental Coordinator



The Planning Commission Chambers and the Marin City Senior Center are accessible to persons with disabilities. If you require American Sign Language interpreters, assistive listening devices, or if you require this document in an alternate format (example: Braille, Large Print, Audiotape, CD-ROM), or if you require other accommodations to participate in this meeting, you may request them by calling (415) 473-2255 (voice/TTY) or 711 for the California Relay Service or e-mailing disabilityaccess@marincounty.org at least **four working days** in advance of the event.

***APPENDIX B
RESPONSES TO NOP AND DISPOSITION OF NOP RESPONSES***

Written Responses to the July 2012 Notice of Preparation

Marin County prepared a Notice of Preparation (NOP) for the *2012 Draft Housing Element* in July 2012, which was sent to public agencies, organizations, and individuals with an interest in or jurisdiction over the project in order to provide early consultation on the scope of the Draft SEIR. The NOP was issued on July 13, 2012.

Exhibit 1 presents a summary of the public comments received on the NOP during the review period together with an indication of where each issue is addressed in this Draft SEIR. In some cases, a comment is not addressed in the Draft SEIR because it does not concern environmental issues. For any such comments, the reason that the comment is not addressed in the Draft SEIR is provided below.

The comment letters received on the NOP follow Exhibit 1.

Exhibit 1 Disposition of Notice of Preparation Comments

Date	Commentor(s)	Comment or Topic	Draft SEIR Section
	<i>Name Organization</i>	<i>Summarize comment</i>	<i>EIR Section that addresses comments</i>
7/16/2012	Scott Morgan State Clearinghouse and Planning Unit	Transmittal letter for State comments.	No response is necessary
7/23/2012	Chris DeGabriele General Manager	Regarding Countywide Plan's organization of demographic data for West Marin.	Population and housing are discussed under Chapter 3.0 Environmental Checklist Section 13. Comment relates to organization of the CWP, and not an environmental issue.
		Asserts demographic data provided in the <i>2012 Draft Housing Element</i> would be utilized by the NMWD for water supply planning.	Water supply is discussed under Chapter 3.0 Environmental Checklist Section 17 Utilities and Service Systems. Remainder of comment is noted.
8/13/2012	Susan Stompe Marin Conservation League	The Draft SEIR should have a clear project description.	Section 2.4 Description of the <i>2012 Draft Housing Element</i> .

		<p>Will Draft SEIR evaluate the impacts of each housing planning period separately?</p>	<p>As stated in Section 1.1 Project Background, the environmental review evaluates potential housing sites for both planning periods at the same level of analysis, and does not differentiate between each planning cycle. This accounts for implementation of Housing Element Program 1.b(c), which requires the affordable housing sites inventory for the next Housing Element Cycle. It should be noted the housing site inventory for the 2014 through 2022 planning cycle is subject to separate review by the State Department of Housing and Community Development. Additionally, each individual housing site will separately and subsequently receive additional review, pursuant to CEQA, if and when individual development applications are received by Marin County.</p>
		<p>What are the base present and future condition years used to analyze impacts?</p>	<p>Chapter 3.0 Environmental Checklist, see environmental setting for each environmental topic as pertinent to the changed conditions evaluated in the Draft SEIR.</p>
		<p>Will evaluation of significant and unavoidable impacts differentiate between the contributions of each housing cycle?</p>	<p>Chapter 3.0 Environmental Checklist: As stated above the topical analysis contained in Chapter 3.0 does not differentiate between each planning cycle. The analysis for</p>

			each environmental topic includes a conclusion section which summarizes significant and unavoidable impacts and any changes that would occur upon implementation of the <i>2012 Draft Housing Element</i> .
		What thresholds are used to determine any changes to the status of significant and unavoidable impacts.	Chapter 3.0 Environmental Checklist uses the thresholds from the <i>2007 Countywide Plan EIR</i> plus relevant updates.
		Address expectations for implementation of Countywide Plan programs	This Draft SEIR relies upon program implementation information provided in the Countywide Plan as authorized by the determinative findings for the Countywide Plan adopted by the Board of Supervisors.
		Draft SEIR should provide clear and useful descriptions of each housing site.	Chapter 2.0 Description of the Proposed Project. Exhibits 2.0-4 and 2.0-15 list each housing site and include descriptive information. Maps of the housing sites are found in Exhibits 2.0-5 through 2.0-12.
		Environmental review for subsequent / future development of housing sites identified in the Potential Housing Element Available land inventory.	As stated in Section 1.1 Environmental Review of the Proposed Project, this Draft SEIR is a program EIR under Section 15168 of the <i>State CEQA Guidelines</i> , and focuses on the overall effects of implementing the <i>2012 Draft Housing Element</i> , providing an analysis which is considered the first tier of environmental review based on program level information and data

			about each housing site. Proposals to develop each housing site will receive appropriate review, pursuant to CEQA, if and when individual development applications are received by Marin County.
		Air quality related to housing located near freeways.	Chapter 3.0 Environmental Checklist Section 3 Air Quality.
		Adequately describe biological resources and identify and mitigate impacts.	Chapter 3.0 Environmental Checklist Section 4 Biological Resources.
		Hydrology – Address sea level rise, identify impacts and provide mitigation.	Chapter 3.0 Environmental Checklist Section 9 Hydrology, Water Quality and Flooding Hazard.
		Transportation analysis should data and forecasts updated since the <i>2007 Countywide Plan EIR</i> .	Chapter 3.0 Environmental Checklist Section 16 Transportation / Traffic.
		Greenhouse Gas Emissions – BAAQMD updated CEQA Guidelines	Chapter 3.0 Environmental Checklist Section 7 Greenhouse Gases.
		Water supply	Chapter 3.0 Environmental Checklist Section 17 Utilities and Service Systems.
8/02/2012	Susan & Thomas Monahan	Grady Ranch is a viable site for Affordable Senior Housing pending compatible design, impact mitigation, and compliance with existing zoning.	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
		Increased housing density at Grady Ranch	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
		Proposed density increases (Grady Ranch) inconsistency with Countywide Plan policies.	Chapter 3.0 Environmental Checklist Section 10 Land Use and Planning.

		Proposal of 240 affordable housing units at Grady Ranch is not efficient use of land.	This comment is on the merits of the <i>2012 Draft Housing Element</i> and not the scope of the Draft SEIR.
		Higher density affordable housing at St. Vincent's / Silveira Property.	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
		Potential for affordable senior housing at Grady Ranch site.	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
8/07/2012	Stephen Nestel, Walk/Bike Marinwood-Lucas Valley	Distribution of housing units. The number of affordable housing units proposed for the Marinwood-Lucas Valley area is substantially higher than other areas. Marinwood-Lucas Valley will suffer the severest impact of any community in Marin County.	The distribution of affordable housing units is related to the <i>2012 Draft Housing Element</i> . For impact analysis see Chapter 3.0 Environmental Checklist.
		Is there adequate infrastructure for proposed housing sites?	Chapter 3.0 Environmental Checklist Sections 14 Public Services, 16 Transportation / Traffic, and 17 Utilities and Service Systems.
		Potential mixed-use development at Marinwood Plaza (Housing Site 1) would adversely affect commercial development in area.	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
		Draft SEIR impacts should be based on net change of land uses proposed by <i>2012 Draft Housing Element</i> .	The Draft SEIR evaluates changed conditions that would result from the proposed <i>2012 Draft Housing Element</i> . See Section 3.1 Explanation of Checklist Evaluation Categories and Section 3.2 Discussion and Mitigation Sections.

		Lucas Valley could be developed for ecotourism and provide better commercial services for the current residents. Commentor continues to state that if government housing is built on every available piece of property as planned, the ability to have a sustainable community that does not rely on the car for vital services, would be permanently lost.	This comment relates to the designation of properties in Lucas Valley for affordable housing/residential uses and loss of potential for commercial development, which is a comment on the housing element itself, and not on an environmental issue. However Chapter 3.0 Environmental Checklist Section 16 discusses vehicle use and transportation/traffic impacts.
8/10/2012	Julie Lavezzo	How will high density affordable housing address that wages in Marin are not keeping up with the cost of living?	This comment relates to economic issues and not an environmental issue.
		Architectural design of housing	Chapter 3.0 Environmental Checklist Section 1 Aesthetics.
		Inadequate guidelines for design of Multi-Family housing.	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
8/02/2012	Ann Spake, Sustainable Tam Almonte Executive Committee	Transportation impacts: LOS F at Tamalpais Junction.	Chapter 3.0 Environmental Checklist Section 16 Transportation / Traffic.
		Air quality impacts near highways, freeways and major roads.	Chapter 3.0 Environmental Checklist Section 3 Air Quality
		Development within floodplain and sea level rise.	Chapter 3.0 Environmental Checklist Section 9 Hydrology, Water Quality and Flooding Hazard.

		Impact to special status species.	Chapter 3.0 Environmental Checklist Section 4 Biological Resources
		Baylands Corridor.	Chapter 3.0 Environmental Checklist Section 4 Biological Resources.
		Seismic hazards, liquefaction, subsidence, mud displacement.	Chapter 3.0 Environmental Checklist Section 6 Geology and Soil.
		Insufficient Services and Infrastructure.	Chapter 3.0 Environmental Checklist Sections 14 Public Services and 17 Utilities and Service Systems.
		Water supply and water conservation.	Chapter 3.0 Environmental Checklist Section 17 Utilities and Service Systems.
		Aesthetic, land use, biological, and water quality impacts resulting from high density development in semi-rural community.	Chapter 3.0 Environmental Checklist Sections 1 Aesthetics, 4 Biological Resources, 9 Hydrology, Water Quality and Flooding Hazard, and 10 Land Use and Planning.
		Air quality impacts (freeway source) on sensitive receptors.	Chapter 3.0 Environmental Checklist Section 3 Air Quality
8/11/2012	Tamalpais Planning Area Bayfront Coalition	Zoning Changes.	Chapter 3.0 Environmental Checklist Section 10 Land Use and Planning.
		Traffic in the Tamalpais planning area.	Chapter 3.0 Environmental Checklist Section 16 Transportation / Traffic
		Selection of Housing Sites.	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
		Stream Conservation Area and liquefaction.	Chapter 3.0 Environmental Checklist Sections 9 Hydrology, Water Quality and Flooding Hazard, and 6 Geology and Soils.

		Special-status species.	Chapter 3.0 Environmental Checklist Section 4 Biological Resources.
		CEQA review for future housing.	Future development of identified housing sites would be required to meet CEQA requirements at that time.
8/13/2012	Liz Dale	Traffic impacts.	Chapter 3.0 Environmental Checklist Section 16 Transportation / Traffic
		Greenhouse Gas Emissions.	Chapter 3.0 Environmental Checklist Section 7 Greenhouse Gas Emissions.
		Consistency with CWP.	Chapter 3.0 Environmental Checklist Section 10 Land Use and Planning.
		Residential density in relation to flooding, landslide hazards, emergency evacuation requirements, and emergency services.	Chapter 3.0 Environmental Checklist Sections 13 Population and Housing, 9 Hydrology, Water Quality and Flooding Hazard, 6 Geology and Soils, 8 Hazards and Hazardous Materials, and 14 Public Services.
		Impacts on resources – water supply.	Chapter 3.0 Environmental Checklist Section 17 Utilities and Service Systems.
		The Draft SEIR should include a fiscal impact analysis.	Economic and social effects are not environmental issues. <i>CEQA Guidelines</i> Section 15131.
		Consistency with existing housing element policies.	The proposed project consists of changes to the existing Housing Element.
		ESA impacts (impacts to endangered species).	Chapter 3.0 Environmental Checklist Section 4 Biological Resources.

8/13/2012	Margaret Kettunen Zegart	Draft SEIR should evaluate impacts to Baylands Corridor, Ridge and Upland Corridor, Hydrology and Water Quality impact in-lieu of dismissed forthcoming environmental review (SB 375)	Chapter 3.0 Environmental Checklist Sections 4 Biological Resources, 9 Hydrology, Water Quality and Flooding Hazard and 1 Aesthetics.
		Air quality/ greenhouse gas impacts along HWY 1, additional air quality review should be done for HOD and affordable housing sites.	Chapter 3.0 Environmental Checklist Section 3 Air Quality.
		Traffic impacts.	Chapter 3.0 Environmental Checklist Section 16 Transportation / Traffic.
		Aesthetic review for diversified reality site.	Chapter 3.0 Environmental Checklist Section 1 Aesthetics.
		Environmental review all Tamalpais Planning geology and soils, biological and natural resource, transportation and aesthetic/visual impacts.	Chapter 3.0 Environmental Checklist Sections 6 Geology and Soils, 4 Biological Resources, 16 Transportation / Traffic, and 1 Aesthetics.
		Population growth.	Chapter 3.0 Environmental Checklist Section 13 Population and Housing.
		Seismic hazards, utilities, and noise.	Chapter 3.0 Environmental Checklist Sections 6 Geology and Soils, 17 Utilities and Service Systems, and 12 Noise.



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX
DIRECTOR

Notice of Preparation

July 16, 2012

To: Reviewing Agencies
Re: 2012 Draft Marin County Housing Element
SCH# 2012072028

Attached for your review and comment is the Notice of Preparation (NOP) for the 2012 Draft Marin County Housing Element draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Rachel Warner
Marin County Comm. Development Agency
3501 Civic Center Drive, Room 308
San Rafael, CA 94903

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,


Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2012072028
Project Title 2012 Draft Marin County Housing Element
Lead Agency Marin County

Type **NOP** Notice of Preparation

Description The 2012 Draft Housing Element is an update of the County's' State-certified Housing Element that was adopted initially in November 1991, readopted with the Countywide Plan Update in January 1994, updated in June 2003, and then readopted with the Countywide Plan Update in November 2007. The 2012 Draft Housing Element addresses the requirements of California Government Code 65583, for the planning period from 2007 to 2014. The 2012 Draft Housing element consist of several main sections, each of which addresses a major subject area, including a review of constraints on housing development, an inventory of potential housing sites, and a set of policies and programs to support housing at all income levels.

Lead Agency Contact

Name Rachel Warner
Agency Marin County Comm. Development Agency
Phone (415) 499-6269 **Fax**
email
Address 3501 Civic Center Drive, Room 308
City San Rafael **State** CA **Zip** 94903

Project Location

County Marin
City
Region
Cross Streets Countywide
Lat / Long
Parcel No.
Township

Range	Section	Base
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Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Economics/Jobs; Fiscal Impacts; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Fish and Game, Region 3; Native American Heritage Commission; California Highway Patrol; Department of Housing and Community Development; Caltrans, District 4; Regional Water Quality Control Board, Region 2

Document Details Report
State Clearinghouse Data Base

Date Received 07/16/2012

Start of Review 07/16/2012

End of Review 08/14/2012

Resources Agency

Resources Agency

Nadell Gayou

Dept. of Boating & Waterways
Nicole Wong

California Coastal Commission
Elizabeth A. Fuchs

Colorado River Board
Gerald R. Zimmerman

Dept. of Conservation
Elizabeth Carpenter

California Energy Commission
Eric Knight

Cal Fire
Dan Foster

Central Valley Flood Protection Board
James Herola

Office of Historic Preservation
Ron Parsons

Dept of Parks & Recreation Environmental Stewardship Section

California Department of Resources, Recycling & Recovery
Sue O'Leary

S.F. Bay Conservation & Dev't. Comm.
Steve McAdam

Dept. of Water Resources Agency
Nadell Gayou

Fish and Game

Dept. of Fish & Game
Scott Flint

Environmental Services Division

Fish & Game Region 1
Donald Koch

Fish & Game Region 1E
Laurie Hamsberger

Fish & Game Region 2
Jeff Drongesen

Fish & Game Region 3
Charles Armor

Fish & Game Region 4
Julie Vance

Fish & Game Region 5
Leslie Newton-Reed
Habitat Conservation Program

Fish & Game Region 6
Gabrina Gatchel
Habitat Conservation Program

Fish & Game Region 6 /IM
Brad Henderson
Inyo/Mono. Habitat Conservation Program

Dept. of Fish & Game M
George Isaac
Marine Region

Other Departments

Food & Agriculture
Sandra Schubert
Dept. of Food and Agriculture

Dept. of General Services
Public School Construction

Dept. of General Services
Anna Garbeff
Environmental Services Section

Dept. of Public Health
Bridgette Binning
Dept. of Health/Drinking Water

Delta Stewardship Council
Kevan Samsam

Independent Commissions, Boards

Delta Protection Commission
Michael Machado

Cal EMA (Emergency Management Agency)
Dennis Castrillo

Native American Heritage Comm.
Debbie Treadway

Public Utilities Commission
Leo Wong

Santa Monica Bay Restoration
Guangyu Wang

State Lands Commission
Jennifer Deleong

Tahoe Regional Planning Agency (TRPA)
Cherry Jacques

Business, Trans & Housing

Caltrans - Division of Aeronautics
Philip Crimmins

Caltrans - Planning
Terri Pencovic

California Highway Patrol
Suzann Ikeuchi
Office of Special Projects

Housing & Community Development
CEQA Coordinator
Housing Policy Division

Dept. of Transportation

Caltrans, District 1
Rex Jackman

Caltrans, District 2
Marcelino Gonzalez

Caltrans, District 3
Gary Arnold

Caltrans, District 4
Erik Alm

Caltrans, District 5
David Murray

Caltrans, District 6
Michael Navarro

Caltrans, District 7
Dianna Watson

Caltrans, District 8
Dan Kopulsky

Caltrans, District 9
Gayle Rosander

Caltrans, District 10
Tom Dumas

Caltrans, District 11
Jacob Armstrong

Caltrans, District 12
Marlon Registerd

Cal EPA

Air Resources Board

Airport/Energy Projects
Jim Lerner

Transportation Projects
Douglas Ito

Industrial Projects
Mike Tolstrup

State Water Resources Control Board
Regional Programs Unit
Division of Financial Assistance

State Water Resources Control Board
Student Intern, 401 Water Quality Certification Unit
Division of Water Quality

State Water Resources Control Board
Phil Crader
Division of Water Rights

Dept. of Toxic Substances Control
CEQA Tracking Center

Department of Pesticide Regulation
CEQA Coordinator

RWQCB 1
Cathleen Hudson
North Coast Region (1)

RWQCB 2
Environmental Document Coordinator
San Francisco Bay Region (2)

RWQCB 3
Central Coast Region (3)

RWQCB 4
Teresa Rodgers
Los Angeles Region (4)

RWQCB 5S
Central Valley Region (5)

RWQCB 5F
Central Valley Region (5)
Fresno Branch Office

RWQCB 5R
Central Valley Region (5)
Redding Branch Office

RWQCB 6
Lahontan Region (6)

RWQCB 6V
Lahontan Region (6)
Victorville Branch Office

RWQCB 7
Colorado River Basin Region (7)

RWQCB 8
Santa Ana Region (8)

RWQCB 9
San Diego Region (9)

Other _____

Conservancy



JUL 24 2012 AM 11:05 Planning

999 Rush Creek Place
P.O. Box 146
Novato, CA 94948

PHONE
415.897.4133

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info@nmwd.com

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www.nmwd.com

July 23, 2012

Rachael Warner, Interim Environmental Coordinator
County of Marin
3501 Civic Center Drive, Suite 308
San Rafael, CA 94903

Re: Notice of Preparation 2012 Draft Marin County Housing Element Supplement to the
2007 Countywide Plan Environmental Impact Report

Dear Ms. Warner:

It's noted that the 2007 Countywide Plan separated the county into seven planning areas that define Marin County. The Novato planning area essentially covers all of North Marin Water District (NMWD) service territory in our Novato water service area; however, the West Marin planning area is huge, and it would be beneficial if the County would subdivide demographic data in West Marin so that it can be more readily used for service providers including NMWD.

NMWD provides water service in West Marin to the communities of Point Reyes Station, Olema, Bear Valley, Inverness Park and Paradise Ranch Estates. Additionally, NMWD provides sewer service to the community of Oceana Marin adjacent to Dillon Beach.

The demographic data provided by the County is useful in water supply planning, and the housing element update will be utilized so that water supply planning will be consistent with the land use objectives of the County. It's noted that there are several other service providers in West Marin including Tomales Community Service District, Inverness Public Utility District, Bolinas Public Utility District, Stinson Beach County Water District, and others.

Sincerely,

A handwritten signature in blue ink that reads "Chris DeGabriele".

Chris DeGabriele
General Manager

CD/rr

t:\gm\2012 misc\draft county housing supplement ltr.doc

August 13, 2012

Rachel Warner
Interim Environmental Coordinator
Community Development Agency
County of Marin
3501 Civic Center Drive
San Rafael, CA 94903



via email: rwarner@marincounty.org

Subject: 2012 Draft Marin County Housing Element – Scoping Comments for EIR

Dear Ms. Warner:

Marin Conservation League wishes to submit comments to be considered in scope of the 2012 Draft Marin County Housing Element EIR (“project”). As we understand the County’s process, this will be a Supplemental EIR (SEIR), tiering off the 2007 Countywide Plan Final EIR. Unfortunately scoping comments are being requested prior to a full workshop explanation of this very complex “project,” for which the public scoping session on August 2 provided only a cursory review. It is virtually impossible to extract a clear “project description” from the 2012 Draft Housing Element. Therefore, it will be incumbent on the SEIR to provide such. With that caveat, we offer several general comments that should be explained in the Draft SEIR for the purpose of informing public review. On the assumption that this will be a full-scope SEIR, we offer a few brief suggestions for specific topics that should be covered in a comprehensive SEIR.

General Comments and Questions

1. It is not clear whether or how the SEIR will distinguish between impacts of the 2012 RHNA cycle (773 units) and the 2014-2022 cycle (total units not shown in the table handed out on August 2.). Will “project” and “cumulative-with-project” impacts embrace the two cycles as a totality, or separate them into two time periods?
2. What are the base present and future condition years that will be used to analyze individual and cumulative impacts, such as for traffic, for which the CWP EIR identified 24 significant unavoidable impacts under hypothetical build-out?
3. The Marin CWP EIR identified 42 significant unavoidable impacts that would result from future development under the Plan and could not be eliminated or reduced to insignificant levels by mitigation. Will the SEIR allocate a portion of significant unavoidable impacts projected at build-out to the two housing cycles (which would not, in themselves, represent full build-out in the unincorporated county)? What thresholds will be used to conclude whether significant impacts of the project do or do not remain unavoidable in 2014 or 2022, for example?
4. The Marin CWP EIR referred in many instances to policies and programs in the Plan

PHONE: 415.485.6257
FAX: 415.485.6259

EMAIL: mcl@marinconservationleague.org
URL: www.marinconservationleague.org

ADDRESS: 1623–A Fifth Avenue
San Rafael, CA 94901



that would mitigate significant impacts to levels of insignificance. Without conducting an exhaustive review, we can assume that many of the identified programs have not been implemented yet. What assumptions will the SEIR make as to a realistic expectation that these programs will in fact be implemented in the future and, therefore, that significant impacts will be mitigated?

5. It is our understanding that all of the identified and potential sites for a range of housing choices will be covered at an equal level of detail. Theoretically this could include 52 sites that represent a great variety in size, environmental conditions, and existing documentation. Some of these have been addressed in previous documents, such as under HODs in the 2007 CWP EIR or environmental documents on St. Vincent's/Silveira ranch, or in ongoing environmental analysis for the Easton Pt. (to name a few examples). We request that *the SEIR provide clear and useful description of each site*, with minimum dependence on other documents incorporated by reference. We recognize that CEQA Guidelines encourage reduction of paper and support incorporation by reference, but this also places a huge burden on the public to locate and read the other documents (all of which would have to be provided for review by the County).

6. The 2012 Draft Housing Element contains considerable discussion on Governmental Constraints (to affordable housing), including environmental review. The CWP and other recent Supervisors' directives encourage streamlining the environmental review process. This presents a dilemma, in that the proposed SEIR will be programmatic in scope, tiering off an even broader program document – the CWP EIR. It is assumed that each individual project identified in the inventory of housing sites will receive adequate and site-specific environmental review. *This must be assured in the SEIR, and the process for subsequent review outlined!*

Selected Topics to be addressed in the SEIR

1. **Air Quality.** The CWP EIR identifies freeways as sources of toxic air contaminants and that this presents potentially significant impact for sensitive receptors within 150 feet of a freeway. Housing is a sensitive receptor. The impact of locating housing within 150 feet of a freeway would be mitigated by conducting a health risk assessment. A number of housing sites in the inventory are located near freeways. Merely conducting a health risk assessment does not constitute adequate mitigation for protecting the health of residents of multi-family housing next to a freeway. Other mitigation measures, such as adequate setbacks, should be provided in the SEIR.

2. **Biological Resources.** Because the sites represent such a wide range of conditions—many are already developed, but a few are essentially “green” sites—the SEIR must adequately describe biological resources of sites and their immediate context, to ensure that both direct and indirect impacts of increased human activity (i.e., long-term occupancy) as well as short-term construction are identified and mitigated.

3. **Hydrology.** A number of sites are proposed in areas that could be subject to future sea level rise. The SEIR must provide current FEMA maps that include projected sea level rise to show clearly where housing sites might be impacted. Mitigation measures must be

outlined, with avoidance as the preferred strategy.

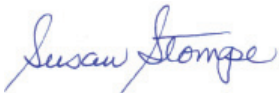
4. **Transportation.** Traffic data and forecasts will need to be updated from the CWP EIR to reflect present and future base cases for the two RHNA cycles. We agree with others who have commented, that trip generation factors for affordable multi-family housing units should reflect realistic demographic characteristics of residents that may have an effect on traffic and transportation, such as lesser-than-average number of vehicles owned, reduced vehicle miles traveled, and greater reliance on public transit.

5. **Greenhouse Gas Emissions.** The SEIR must include new significance thresholds established for GHG emissions and evaluate the significant cumulative impacts of emissions according to these thresholds. GHG emissions were identified as a significant unavoidable impact in the CWP EIR. The County has not prepared or adopted a Climate Action Plan. The status of other CWP programs intended to reduce such emissions should be identified.

6. **Water Supply.** Marin's water districts all face capacity concerns given current supplies. Some alternatives are mentioned in the Draft Housing Element as capable of augmenting supplies. For example, the Element asserts that the MMWD Board of Directors approved a 5-million-gallon-per day-desalination facility in 2009. This is not correct. The board approved further expenditures to *plan* for a possible desalination facility, subject to public vote on whether it could be constructed. Given the strong opposition by some sectors of the public to the environmental impacts and high cost of desalination, it should not be assumed that this is a realistic alternative. Nor are increased supplies viable from Sonoma County Water Agency, a major supplier for North Marin Water District and lesser supplier for MMWD.

In conclusion, against a backdrop of political pressure for increased CEQA streamlining and efficient permit review, MCL is particularly concerned that individual housing sites will not receive adequate environmental attention or opportunity for public engagement in future years. At the necessary programmatic level of this SEIR, environmental review will not be able to address conditions or public needs and views as they change over time. This can only be done at the time when individual projects are proposed. While we acknowledge the need for affordable housing and greater housing choices in Marin, it should not be at the expense of very real environmental constraints or loss of transparency and public involvement in governmental decisions.

Sincerely yours,



Susan Stompe
President

SUSAN & THOMAS MONAHAN
2200 Lucas Valley Road
San Rafael CA 94903

County Of Marin Planning Commission
c/o Debra Stratton
Community Development Agency
3501 Civic Center Drive Room #308
San Rafael, CA 94903

August 2, 2012

Attn: Katherine Crecelius
Mark Ginalski
Don Dickenson
Joan Lubamersky
Randy Greenberg
Wade Holland
Peter Theran

**RE: 2012 Draft Marin County Housing Element
Grady Ranch Site**

Dear Planning Commissioners,

This letter is in regard to the Commission's consideration of the Grady Ranch Property as a potential location for future affordable housing. Our home abuts the Grady Ranch site. We believe that this location may be a viable site for Affordable Senior Oriented Housing if a future proposed project is of a small scale, designed appropriately, mitigates environmental impacts, complies with the existing zoning, existing density, and is consistent with the character of the surrounding community. We encourage the Commission to support such a project and include that description in the revised Housing Element of the Countywide Plan.

Unfortunately, the current Draft Housing Element proposes "spot zoning" at Grady Ranch which would increase the allowed density by 500%, which is unprecedented in all of Marin County and clearly not appropriate for this rural location. The previous Lucas Film Studio proposal pointed out the sensitive environmental constraints on this property and its limited development potential.

The Draft 2012 Marin County Housing Element contains 17 locations including 560 units of future affordable housing. The 240 affordable units being considered for Grady Ranch constitutes almost half

of all housing units in one location. This concentration is highly inappropriate and against the long standing existing policies to not concentrate affordable units, but scatter them throughout the County. Additionally, this concentration in a rural corridor conflicts directly with the County Wide Plan, which calls for lower densities while traveling west on Lucas Valley Road.

The First Stated Goal of the 2012 Housing Element is “Use Land Efficiently” and to implement smart and sustainable development principals. The “Purpose” of the 2012 Housing Element states that; “The built environment and commute patterns are major contributors to greenhouse gas emissions. A strategic infill approach that supports affordable housing for members of the work force at selected mixed-use locations near existing jobs and transit...” “...Offers Marin Communities a way to carry out the (3) E’s of sustainability.” The Draft Housing Element to add 240 Units at the edge of a residential/rural interface, 5 miles from Highway 101 and public transportation, jobs, services, is not consistent with “smart growth” and is in direct conflict with the stated goal of the Housing Element.

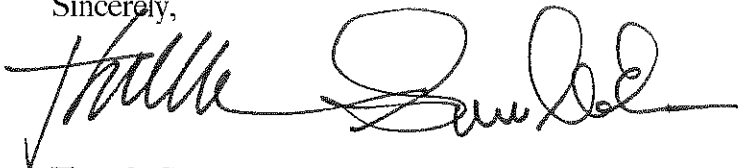
The Silveira Ranch site, which is located adjacent to Highway 101 and within walking distance to public transit, is proposed to have only 221 Units (110 of which are proposed to be low income) in comparison to proposed 240 units at Grady Ranch. Silveira Ranch is over 4 times larger than the Grady Site and is adjacent to higher density multifamily housing where Grady Ranch is adjacent to open space and single-family homes. The Silveira Ranch site is the clearly a superior location for higher density affordable housing. The Silveira Ranch site will also have less environmental impacts, and traffic impacts, due to it’s close proximity to Highway 101 and will serve the needs of future residents better than the Grady Ranch Site.

Recently the April 11, 2012 Marin Independent Journal Article regarding Grady Ranch (attached for your reference) Brian Crawford director of Marin County’s Community Development Agency was quoted as saying that; “under current zoning regulations, a maximum of 45 housing units could be built on the 240-acre property.” The article quoted Leelee Thomas who oversees Marin County’s affordable housing program stating that, “due to it’s (Grady Ranch) distance from public transportation and other public services, the site would be less competitive for housing tax credits, which are a major source of funding for affordable housing. So that is a barrier.”

In spite of all the obstacles and impacts in the way of developing Grady Ranch, we feel that a small well designed project for Senior Affordable Housing that respects the current zoning with a maximum of 45 units, would be appropriate for the surrounding community. The Rotary Valley Senior Village (located at 10 Jeannette Prandi Way) is an 80-unit low income senior apartment complex which is a good example of a development in Lucas Valley that is consistent with the surrounding community. The Rotary Valley Senior Village is a clustered housing development, which is sited well, and whose building design is consistent with the surrounding community. We would be supportive of a future development at Grady Ranch that model itself on the criteria mentioned above.

Please direct the Community Development Department to abandon the proposed rezoning and density increase at Grady Ranch and look to more appropriate locations to fulfill the County's affordable housing quota.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom & Susan Monahan". The signature is written in a cursive, flowing style with a long horizontal line extending to the right.

Tom & Susan Monahan

Zoning at Grady Ranch owned by George Lucas would permit low-income housing but location poses challenges

By Richard Halstead
Marin Independent Journal

Posted: 04/11/2012 05:45:22 PM PDT

County planning officials said Tuesday that the zoning on the Grady Ranch property would allow construction of low-income housing units there; but the site's remote location would make financing such a project difficult.

George Lucas announced Tuesday that he was dropping plans to build a digital media production facility at his Lucas Valley site due to complications securing regulatory approvals and opposition from some neighbors.

"We plan to sell the Grady property, expecting that the land will revert back to its original use for residential housing," Lucasfilm said. "We hope we will be able to find a developer who will be interested in low-income housing since it is scarce in Marin."

Brian Crawford, director of Marin County's Community Development Agency, said under current zoning regulations, a maximum of 45 housing units could be built on the 240-acre property. The units could be either detached single-family homes or attached structures containing apartments, condominiums or town houses, Crawford said. Individual units could range in size from a studio apartment to a four-bedroom house, he said.

Under a master plan approved by Marin County supervisors in 1996, Lucas was initially granted permission to build as many as 137 units on the Grady Ranch property. But Marin County planner Neal Osborne, who has been supervising the new Grady Ranch proposal, said following the filmmaker's dedication of 800 acres to County Open Space, the number was reduced.

And it is unclear how feasible development of any low-income housing at the site would be.

Marin county Planning Commissioner Don Dickenson said, "That is going to be a very expensive site to develop. I don't think the economics make sense for below-market-rate housing, which has to be heavily subsidized."

Dickenson said factors likely to add cost include: a history of landslides on the property, several creeks in the area, and a lack of both water and sewer service.

Clark Blasdel, chief executive of Northbay Family Homes, an affordable housing developer, said, "There are a lot of infrastructure issues — sewer, water, streets, and creeksides — that need to be attended to."

Leelee Thomas, who oversees Marin County's affordable housing program, said due to its distance from public transportation and other public services, the site "would be less competitive for housing tax credits, which are a major source of funding for affordable housing. So that is a barrier."

Blasdel agreed, "All of the public support systems for low-income housing, generally speaking, require service by a public transportation process. As far as I know, there is no bus that runs up to Lucas Valley."

Liz Dale, president of the Lucas Valley Estates Homeowners Association, which is located near Grady Ranch, said the proposal by Lucas to build low-income housing on the property is "a strange, different vision for the valley." But she said that since the property is zoned for housing, "It seems as though that would be a logical alternative use for the site."

Dale said that the Rotary Valley Senior Village, an 80-apartment development for low-income seniors, is already located close by at 10 Jeannette Prandi Way.

She said, "I personally think it's a beautiful development."

Contact Richard Halstead via e-mail at rhalstead@marinij.com

Stephen Nestel
Walk/Bike Marinwood-Lucas Valley
San Rafael, CA 94903
savemarinwood@gmail.com

Tuesday, August 07, 2012

RE: Comments for the Draft EIR for Countywide Plan

Rachel Warner
Interim Environmental Coordinator
350 Civic Center Drive, Suite 308
San Rafael, CA 94903

Dear Ms. Warner

I was at the presentation for the public workshop for the 2012 Marin Housing element on August 2, 2012. It raises some serious environmental considerations if the plan is implemented for Marinwood-Lucas Valley-St Vincents /Silvera Ranch.

Over 72% of all government subsidized housing is being planned for development in Marinwood-Lucas Valley-St Vincents/Silvera Ranch in 2012. We have 425 units planned vs. ten units each for Mill Valley and Fairfax. In 2014 we will be asked to absorb another 144 units. Our community will suffer the severest impact of any community in Marin County.

Our population will increase by at least 1000 people in our suburban-rural community of 6000 residents. This will mean the loss of valuable ecosystem, increased pollution, traffic congestion, new demands for water, sewage, schools police and fire services. Do we even have the infrastructure for all of this growth?

Aside from the devastating economic and political burden, our community will permanently lose all viable commercial properties for development forcing 100% of the 7000 residents to shop for essential services by car or public transit. Our only currently viable commercial property, Marinwood Plaza situated at a convenient exit off the 101 freeway will be lost forever to government housing/ and a few small commercial spaces unsuitable for modern retailing. It has suffered long neglect because of the lack of freeway visibility, outdated design and poor parking. A shared commercial/housing plan as is currently proposed will make the property even LESS attractive to successful retailers since it will reduce the parking and reduce the commercial space. The environmental result of this short sighted project will be fatal for our community who wants a walk/bike friendly sustainable community.

In other words, the EIR for the Marin Housing element must not only measure the impact of the proposed development but also measure the loss of existing land uses. Only the NET effect of the change should be under consideration for judging the true environmental impact.

Lucas Valley is the gateway to West Marin/the Sonoma/Napa wine counties. It could be developed for ecotourism and provide better commercial services for the current residents. If we build government housing on every available piece of property as planned, we will permanently lose the ability to have a sustainable community that does not rely on the car for vital services.

Sincerely,



Stephen Nestel

Taylor, Tammy

From: julie lavezzo <jlavezz@gmail.com>
Sent: Friday, August 10, 2012 12:19 AM
To: EnvPlanning
Subject: Comments on the Housing Element Update EIR Supplement ATTN Rachel Warner

Dear Ms. Warner and the representatives of the Marin County Community Development Agency,

A discussion about housing is incomplete without including the issue of jobs and wages

According to the Marin County Housing Element 2012 draft, the 2012 median income for a Marin County family of four was \$103,000. In the same report it is written that "The housing type best suited for the workforce of Marin, those with an income of 37,000, is often multifamily rental housing."

The real issue is that wages in Marin are not keeping up with cost of living. As a result, many Marin residents are commuting out of the area for high paying jobs, and those residents that do find jobs in the county are not working for a living wage.

My question is how will high density affordable housing address that basic economic conundrum?

I voted for SMART. Philosophically I support transit oriented development (TOD) that actually enhances a community. The more I come to know about the reality of how TOD is designed and funded, my naïve bubble has certainly burst. When CEQA is gutted and environmentalists are pitted against housing advocates, something is deeply wrong.

I find it facetious to actually to assume that residents of affordable housing in Marin would prefer to live in five story high density housing next to a freeway. Is that the best we can offer? I live in a development that includes affordable housing. This housing is, as it should be, indistinguishable from it's neighbors. The residents of the community are well served and the design harmony of the area is supported.

The legacy of Frank Lloyd Wright is that development must mirror and enhance the attributes of its environment. To create "density bonuses" for developers is not anti-sprawl, but blatantly pro-development. The development model that is represented in the Marin County Housing Element is a cookie cutter approach based on statewide mandates. Marin can do better. Marin can maintain a strong commitment to the environment that make living in the county good and healthy for all.

Thanks to the foresight of its citizens and leaders, Marin has not experienced the type of hideous sprawl development that has occurred in the Central Valley and Contra Costa County, so the anti-sprawl protections of the housing element are less applicable here.

In fact, the report itself points out the many successes that the county has had in exceeding its very low, low- and moderate income allocation by an average of 145% (p. I-9)

Marin's challenge is to develop an economic model that supports living wages for the residents and lower density, lower height housing that accomplishes the mandates of affordability without compromising the essential qualities of the landscape.

As a committed voter and Marin resident, I strongly urge Agency to develop models that are intrinsic to this County at this time. Economic forecast and growth forecasts need to accurately reflect current economic conditions. RHNA forecasts must be thoroughly vetted in light of economic and growth projections.

A newspaper article quoted Corte Madera resident, Diane Furst, "What has not received any press coverage is that a regional planner on ABAG's staff admitted in a public meeting the housing numbers for Corte Madera were "a mistake" and were too high. He also stated this would be "**corrected**" **with accurate numbers for the upcoming housing mandate cycle (from 2015-2023)**. These quotas are projected to be lower and more appropriate for our small town."

Making sweeping zoning changes at a time of economic uncertainty can have disastrous impact on the development of the Cities and County of Marin. My feedback on the 2012 Marin County Housing Element is that it does not do enough to strongly advocate for appropriate vernacular design in order to preserve for the County, the Bay Area region and the State a model that leads the way in development that is harmonious for residents and the environment.

Julie Lavezzo

63 Vista Marin

San Rafael, CA 94903

415 456-6437

Marin County Community Development

Agency

Planning Division : Public Scoping Session

2012 Draft Marin County Housing Element

Supplement To The 2007 Countywide Plan

Environmental Impact Report

Written Comment August 2, 2012

Name / Affiliation: Ann Spake, on behalf of Sustainable TamAlmonte Executive Committee

Address : 215 Julia Avenue, Mill Valley, Ca. 94941 Phone : 415-388-6828

In regard to the environmental effects of developing the proposed Tam Valley/Almonte "Affordable Housing Opportunity Sites" listed below and in the 2012 Draft Marin County Housing Element Supplement to the 2007 Marin Countywide Plan Environmental Impact Report (EIR), the Sustainable TamAlmonte Executive Committee has the following concerns, comments and recommendations. These have relevance to land use changes, development standards, and zoning in highly constrained semi-rural Tamalpais Planning Area indicated for potential sites.

Site # 4: Old Chevron Station, 204 Flamingo Rd, Tam Junction

Site # 9: Manzanita Mixed Use, 150 Shoreline Hwy, Tam Junction

Site #14: Armstrong Nursery, 217 & 221 Shoreline Ave., Tam Junction

Site #18: Around Manzanita (150 Shoreline Ave.), Tam Junction

Site #19: Tam Junction Retail, 237 Shoreline Ave. etc., Tam Junction

History :

In 1992 an EIR on the Tamalpais Community Area Plan identified multiple significant impacts of future growth based on geology, plant and animal life, air quality, land use and population, vehicle movement, parking and traffic hazards, public services, utilities, aesthetics and recreation, and flood control.

The realities that existed then have been exacerbated since then, further limiting mitigation potential.

The 2007 Marin Countywide Plan (CWP) EIR also found that implementation of the Countywide Plan would result in unmitigable significant impacts in the Tamalpais Community area.

Any significant increase in housing as proposed would not be appropriate, potentially placing vulnerable people in vulnerable places jeopardizing public health and safety as well as adversely impacting the environment.

Summary of scoping concerns :

Significant constraints of Almonte and Tam Valley lowlands include LOS 'F' traffic, health risks from proximity to major roads and freeways as well as insufficient services and infrastructure and a finite water supply. The environmental constraints also include

historic marshland, subsidence due to 80' deep bay mud and landfill, creeks and bay shoreline (Stream Conservation Area and future Baylands Corridor) with presence of sensitive and endangered species, floodplain with current flooding and predicted sea level rise inundation, potential liquefaction due to high seismic hazard and limited emergency access and egress necessary for our upland high fire risk area. Compatibility with existing semi-rural neighborhood is an additional constraint.

LOS 'F' Traffic, Parking, Public Transit, Access and Egress :

The 'F' level traffic is constantly growing worse, backing up on freeways and interfering with egress and access for residents. This is particularly serious in a personal emergency or general disaster such as a wildfire in our upland high fire risk area. Over a million visitors a year attempt to pass through the narrow entrance to our semi-rural valley for recreation on Mount Tamalpais, Muir Woods, Muir and Stinson Beaches as well as the Golden Gate National Recreation Area and Mill Valley. In addition to Unincorporated Mill Valley, the City of Mill Valley, Muir Beach, Stinson Beach and Bolinas also use Hwy. 1 as their regular commuter route to get to Hwy. 101. As these jurisdictions grow, their additional commuters will intensify the Tam Junction traffic.

The public transit service does not reduce this significant impact as it is inadequate to even serve local residents needing to get to important facilities such as the College of Marin or Marin General Hospital. Parking at bus hubs is already exceeded with commuters overflowing onto streets further discouraging use of public transit. The assumption that low income people will not drive especially in a poor service area creates a flawed analysis which underestimates the additional driving and the impacts that implementation of the Housing Element will cause. Regardless of attempted mitigation, any additional traffic worsens the impacts on autos, bikers and pedestrians in an already hazardous area, especially increasing the safety risks for children traveling in and out of the area to school.

Health Risks from Proximity to Highways, Freeways and Major Roads :

There is the potential health risk from proximity to major roads and freeways which has been well documented in a multitude of major studies. The significant risks of lung impairment in children (such as illustrated by the California Department of Public Health studies by Janice Kim MD, MPH and the UCSC study, Gauderman et al.), increased cardiac risks in seniors, premature miscarriage in young mothers, and cancer cannot be made insignificant by mitigations such as minor improvements in present traffic conditions or adjustments only in indoor air standards. The area identified for development is in the crossroads, i.e. convergence, of Highway #1, Highway #101 and Shoreline Highway! It is also a major truck route to Mill Valley and for vehicles using the construction materials business on Shoreline Highway. The standard in the current Countywide Plan is inadequate in protecting future residents (sensitive receptors) from development which is sited too close to such pollutant sources, especially diesel. (EPA/CARB). Inconsistency with (i.e. excellence of) the Bay Area Air Quality Management District's ("BAAQMD") guidelines and thresholds for air pollution is considered a significant unmitigable environmental impact. Unsupportable statements in the 2007 CWP's DEIR that someday soon there will be less traffic and less pollutants are not an adequate analysis of what the levels of pollutants will actually be after the

Housing Element is implemented and they do not address the cumulative health impacts (from pollution and noise) of future residents living at sites in close proximity to freeways and major roads.

100 Year Floodplain, Flooding and Predicted Sea Level Rise :

Flooding continues to occur with the tides even in August with no rain. The parcels proposed for development or redevelopment whether they be in the Tam Junction Shopping Center west of Shoreline Highway or parcels east of Shoreline Highway or other low lying areas of Tamalpais Valley are predicted to be under water within 100 years or sooner due to global climate change. Sea level rise is expected to come soon and higher than previously known at the review of the CWP EIR. Were development allowed on the land adjacent to Bothin Marsh (which was once part of this marsh) any chance of restoring it to marshland would be significantly impaired creating an irreversible impact and impeding our valley's ability to adapt to sea level rise.

Placing new housing within the 100 year floodplain and those likely to be in the future floodplain should be prohibited so there will not be an increase in the number of residents and properties at risk. (Locations for housing which will not be vulnerable to these hazards should be sought.) Also Increasing housing density in flood prone areas might significantly increase the risk of flooding due to increased soil compaction and displacement. Serious mitigation would involve preservation of open space, protection of wildlife habitat and creation of a buffer zone for wildlife upland retreat to respond to current flooding and future sea inundation; such community priority has been requested yet ignored for at least 35 years !

Endangered Special Status Species :

Bothin Marsh and adjacent areas including Coyote Creek are inhabited by special status species, the California clapper rail and the salt marsh harvest mouse therefore there would need to be an analysis of the potential impacts of loss of populations or essential habitat due to development and increased human impact proposed. Impact from proximity to habitat of endangered species is too irreversible to override.

Baylands Corridor :

After the analysis and mapping of historic wetlands mandated by Goal Bio - 5 Baylands Conservation in the 2007 CWP is completed, Site #9, Manzanita Mixed Use and Site #18, around Manzanita, are expected to be included in the Baylands Corridor and therefore would be inappropriate for high-density housing development.

Excerpt from the 2007 Marin CWP; 2-40 Biological Resources

What are the Desired Outcomes? Goal Bio-5 Baylands Conservation, Baylands Corridor

Small parcels not currently subject to tidal influence should be subject to mapping and analysis to determine

whether they should be added to or omitted from the Baylands Corridor. In particular, historic marshland in the Richardson Bay and Bothin Marsh area should be included in the resource mapping and analysis to determine if these parcels meet the criteria for

inclusion in the Baylands Corridor.

This mapping and analysis should do the following: (1) identify existing vegetative cover and sensitive features, such as streams, wetlands, and occurrences of special-status species; (2) use focal species and other similar ecological tools to determine the interrelationship between baylands and uplands; (3) identify methods to maintain connectivity between sensitive habitat features and badlands; (4) specify criteria and thresholds used in determining the extent of upland habitat essential to the badlands ecosystem; (5) make recommendations on an appropriate biologically based boundary if the Baylands Corridor is to be expanded; and (6) identify lands that provide habitat, could be restored to provide habitat, or provide protection from sea level rise.

Completion of the analysis does not require on-site evaluations.

All parcels added to the Baylands Corridor as a result of this study are subject to Baylands Corridor regulations in effect at that time.

High Seismic Hazard, Liquefaction, Subsidence, Mud Displacement :

The proposed Tam Junction Affordable Housing Opportunity Sites sit on deep bay mud and landfill and are in a high seismic activity zone. During even moderate seismic activity, the filled land is susceptible to liquefaction, subsidence and mud displacement. Placing housing on these seismically active sites could put the residents at risk of injury or death. The EIR of the Marin Countywide Plan states that implementation of the CWP would have significant unmitigable impacts to persons living in new or redeveloped buildings due to risk of injury or death from even moderate seismic activity. The CWP's EIR then describes the areas in which the danger is greatest, which includes Tamalpais Valley and more specifically, the referenced Tam Junction Affordable Housing Opportunity Sites. Selecting such sites that are seismically unsafe, such as those in Tam Junction, is in direct conflict with CWP Policy EH-2.1 - that seeks to avoid development in seismically hazardous areas. Rather such findings should direct development to safer areas underlain with bedrock rather than bay mud and landfill.

Insufficient Services and Infrastructure :

Schools, Shopping (Retail), and Medical Care

Some services are already exceeded such as the overcrowded local elementary school which cannot serve all the residents here who must therefore leave to go to school outside the area. There are a minimum of neighborhood-serving businesses; residents must leave the area to shop for basic needs such as food and clothes, medical care and education. Increased housing will generate more traffic to access services (and employment) outside the community and result in increasing Green House Gases.

Water Supply :

We are conserving water, however, we must still live within the limits of our finite watershed. Mitigations that would require actions not within the authority of the County, but lie instead within the authority of other agencies, such as Caltrans or MMWD cannot be considered feasible, according to the past CWP DEIR. In relation to water supply, increased development cannot assume unlimited water availability as current supply is dependent on enforcement of 'no net water increase' by the MMWD (which affordable housing may be exempt from) and current voluntary success in water conservation. No development projects can assume available water from Desal (using the most toxic Bay in California) because it would be subject to a vote of the residents

of Marin. Additional water demand also affects ground water supply. water supply quantity and quality as well as having secondary environmental impacts to in-stream flow regimes and aquatic habitat which would require adequate evaluation and mitigation.

High Density Development in Semi-Rural Community :

The projected high-density development on sites identified in this constrained area is incompatible with existing development and the adjacent neighborhood based on scale and appearance, FAR, height and setbacks. Urban development and overdevelopment by private developers has consistently been considered both inappropriate and unsustainable and has therefore been opposed by the community for decades. County-sponsored intense development in our semi-rural area, likewise, would have an adverse unmitigated impact on both the current and future residents as well as aggravating the human impact on the sensitive and threatened creek, marsh and Bayland Corridor environment.

Specific Sites :

The environmental considerations in the Housing Element already reference traffic impacts on Hwy. #1 for sites #4 Old Chevron Station and #14 Armstrong Nursery. They fail to reference the impact of the highway on the health of future residents (sensitive receptors) and particularly the issue of environmental injustice of accelerated density allowed beyond the low end of density (differentially) for low income residents. Additionally the Armstrong Nursery site is in the Stream Conservation Area and the Manzanita sites may be included in the Baylands Corridor.

Conclusion :

Therefore, any Housing Element Affordable Opportunity Sites and related land use, development standards and zoning which propel housing development in spite of known adverse conditions identified through this EIR scoping process should be rejected. Instead of attempting to override such significant impacts there should be more sustainable alternative urban locations sought to provide for such high density land use. It is also essential that thorough, in-depth analysis of any development proposal be assured by maintaining full CEQA evaluation which is the primary tool to ensure communities have adequate information about the environmental and community impacts of construction projects, especially when they are growth-inducing with potential cumulative impacts.

Tamalpais Planning Area Bayfront Coalition
P.O. Box 1446
Mill Valley
94942

August 11, 2012

Marin County Community Development Agency-Planning Division
3501 Civic Center Drive, Room 308
San Rafael, CA 94903

The Tamalpais Planning Area Bayfront Coalition wishes to comment on the 2012 Draft Housing Element Supplement to the 2007 Countywide Plan's Environmental Impact Report re:

- Site # 4: Old Chevron Station, 204 Flamingo Rd, Tam Junction
 - Site #9: Manzanita Mixed Use, 150 Shoreline Hwy, Tam Junction
 - Site #14: Armstrong Nursery, 217 & 221 Shoreline Ave., Tam Junction
 - Site #18: Around Manzanita (150 Shoreline Ave.), Tam Junction
 - Site #19: Tam Junction Retail, 237 Shoreline Ave. etc., Tam Junction
1. Zoning: Changing the current zoning to accommodate high density housing is not appropriate for our area for many reasons, which include environmental issues, building on a flood plain, filled land in a large part of the valley floor, already substantiated subsidence, anticipated sea level rise, and very importantly, the lack of water which is already an issue.
 2. Traffic: This area is subject to level F and worse traffic. No longer is the traffic problem confined to weekends. On many days during the week, there are long lines of traffic often reaching to Highway 101 and beyond. It must be realized that our area is the gateway to the GGNRA, Mt. Tamalpais, Muir Beach, Stinson Beach and the parks of West Marin. This level of traffic is already extremely dangerous in times of fire and emergency.
 3. Poor selection of building sites: Planning to build on environmentally sensitive sites is unacceptable. For instance, the Armstrong Nursery site is in the Stream Conservation Area, making it unsuitable for dense housing or any housing. In addition, any structure in this location would be built on bay mud making it a good candidate for liquefaction in an earthquake and the first place to suffer from sea level rise.
 4. Endangered Species: We are home to two endangered animal species, the California Clapper Rail and the Salt Marsh Harvest Mouse. Concentrated building would quite likely disturb their habitat.

5. Lack of CEQ oversight: In an area of such environmental sensitivity, ignoring CEQA would be a terrible mistake. In the end, this may be the most important issue. Any proposed development must be subject to a full CEQA evaluation. Anything less is a disservice to the current and future residents of the Tamalpais Planning Area and should not be tolerated.

In conclusion, we feel that the county should be responsive to our concerns and work with the citizens to provide realistic solutions to the perceived problem of lack of housing. There should be no favors granted to nonprofit developers or anyone else. Current development standards should be upheld and any proposed projects should be subject to rigorous design, density, and environmental studies.

Sincerely,

Tamalpais Planning Area Bayfront Coalition Board Members:

Curry Eckelhoff, President Tamalpais Valley Improvement Club
forcurry@comcast.net

Stan Barbarich, President Harbor Equity Group, Inc.
stan@floatinghouse.net

Linda Johnson, Tamalpais Valley resident
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Linda Rames, Almonte resident
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Margaret "Kett" Zegart, Almonte resident
kettz@aol.com

August 13, 2012

To: Rachael Warner, Interim Environmental Coordinator
Stacey Laumann, Planner
Marin County Planning Department
Marin County Civic Center, San Rafael, CA 94903
Via email to: envplanning@marincounty.org, slaumann@marincounty.org

RE: Draft Housing Element Report 2012 – Public Comments – EIR Scoping

Dear Ms. Warner and Ms. Laumann,

I would like to submit these comments on the Scope of the EIR for the proposed Revisions to the Housing Element report. The EIR should include studies of the Impacts these revisions will have on:

- 1- County transportation services and traffic: the traffic impact studies of the EIR should include both the new site local traffic impacts and cumulative traffic impacts of all proposed new inventory sites for impacts on entire county traffic flows and on major transportation arteries. The draft Housing Element report proposes the largest number of new inventory sites and increase in units and population in one concentrated area of the County which has only one or two feeder on-ramp access point to the primary County N-S corridor route of Highway 101, where traffic bottlenecks already exist. The total traffic impact of all these additional sites on Highway 101 should be studied. The environmental impact of greenhouse gas emissions from slowed traffic at bottlenecks should also be considered in the EIR that proposes a significant increase in population and traffic at one on-ramp location of the Highway 101 transit corridor.
- 2- Land use impacts, impacts on the County-wide Plan; should include study of consistency with prevailing design standards, density and current Plan policy, which calls for decreasing densities of development in locations traveling westward from Highway 101.
- 3- Zoning density per parcel should be subject to review in context of site conditions, such as flood and landslide hazards, emergency evacuation requirements and availability and accessibility of fire, ambulance and all other emergency services.
- 4- Cumulative impacts on finite county resources, such as county water supply, should be studied.
- 5- The EIR should include a fiscal impact analysis of individual and the cumulative total of all inventory sites, which should include study of the net fiscal impacts by County, by County District and by local service area. The fiscal impact study should review both feasibility and appropriate county-wide distribution, of long term net fiscal impacts of the draft report.
- 6- Impacts on the pre-existing Housing Element policy goals, which called for equitable distribution of inventory sites around county and among all county local taxpayer and service areas, should be included in the EIR.
- 7- Finally, the ESA impacts of proposed development of all new inventory sites should be included.

Thank you for this opportunity to submit comments and suggestions for the Scope of the draft Housing Element EIR.

Liz Dale

Taylor, Tammy

From: kettz@aol.com
Sent: Monday, August 13, 2012 3:35 PM
To: EnvPlanning
Cc: Crawford, Brian; jterijan@marincount.org; Lai, Thomas
Subject: SCOPING 2012 DRAFT MARIN COUNTY HOUSING ELEMENT SUPPLEMENT TO THE COUNTY WIDE PLAN ENVIRONMENTAL IMPACT REPORT

Margaret Kettunen Zegart
kettz@aol.com
118 Highland Lane
Mill Valley, CA 94941

August 13, 2012

Raachel Warner, Interim Environmental Coordinator
3501 Civic Center Drive, Suite 308
Community Development Agency Planning Division
San Rafael, CA 94903

RE: DEIR COUNTY WIDE HOUSING ELEMENT SUPPLEMENT

Land Use and Planning:

Affordable Housing Planning strategies to remove affordable housing by exceptions and waivers from the 207 Marin Countywide Plan's(CWP) established environmental protections for safe home site selections, setbacks from, Bayfront lands, Creek and Hillside; transit serviced arterials and to facilitate streamlining of approvals of affordable housing were adopted by the Marin County Board of Supervisors' Ordinance to adopt Amendments to Marin County Title 22 Development Codes as submitted on December 13, 2011. Although at least two subsequent and critical and use environmental impacts: Climate Change sea rise inundation and tsunami mapping, storm surge increased creek flows and county sites mapping of urban interface fire hazards have been identified since the 2007 Plan approval. A process requested environmental impact assessment of related land use amendments in Title 22 was not done.

The State removed in Senate Bill SB 375 the California Environmental Quality Act (CEQA) review process for affordable housing which would have provided impact analysis and mitigations for the identified significant adverse impacts and alternatives (affordable housing sites which would provide public health and safe and environmentally appropriate locations). Therefore, this EIR should evaluate waived setbacks in the Baylands Corridor the Ridge and Upland Corridor RUG. identified parcels regarding **Hydrology and Water Quality and Biological Resources** since they are lacking any forthcoming CEQA review.

Air Quality data in the CWP evaluated 101 traffic impacts on peak hour weekday traffic but did not review greenhouse gas adverse impacts along Shoreline Highway 1 and its congestion on-ramps, with stalled traffic increased ratios for air contaminants on sunny days and weekends and varying 101 commute hour bumper to bumper along 101 and Richardson Bridge near Manzanita sites. Adverse health impacts in small units (100 feet allowable) with little air circulation are increased risks for seniors and young families. Additional EIR review should be done to review accurate impacts on designated HOD and Affordable Housing sites.

It is important that this housing supplement environmental review provides tools and process for county review of HOD and affordable housing sites. For example Sites #4 204 Flamingo,(Parrish - former Chevron, at congested Shoreline Highway / Flamingo stoplight intersection and shopping center access to #14 - adjacent to Coyote Creek (217 & 221 Shoreline (underutilized McCray and including Parrish 1.77 acres and # 19 (237 Shoreline) are on deep mud up to 80' depth, lateral mud displacement adversely affecting neighboring "settled" parcels, these "Tam Junction" designated affordable housing sites have site's access subject to variable settlement to structures on piles and these and designated parcels #18 (150 Shoreline) and #9 Manzanita are within the CWP Bayland Corridor designation.

Open Space by code amendment permits employee housing. A revision (Code Table 2-7- Allowable uses and permit requirements) for small commercial zoned Diversified Realty site are in the Baylands Corridor and their proposed hotel and office development parcels particularly require **aesthetics and visual resource** review since they are visioned from

Richardson Bay, downhill Waldo Grade (101), and are on entrance Gateway to Mill Valley, Tamalpais Valley, and West Marin, recreation areas and National and State Parks.

Since recent Marin County permit review efficiencies acceleration removed zoning compliance for housing densities within the 2007 County Wide plan, these intense developments may not be appropriate . There should be environmental review on all parcels in the Tamalpais planning area **for geology and soils**, seismic; fire prone map updating required, slides, slopes and natural springs on bay mud and **(biological and natural resources and aesthetic and visual impacts)**. Affordable housing and dense development requires **realistic and / or or functioning level of transit for development should be required** since these have density based on **transit availability** within .5 miles and provided 24 hour safe multi-model circulation level of service (LOS) E or better.

Population growth forecasts need EIR reassessment and correction downward. the addition of all county rural, rural suburban and village communities to make an urban designated population by the Associated Bay Area Governments (ABAG) have been assigned urban (large city needs). Most incorporated towns and cities in Marin have a 20% density housing allocation while the unincorporated areas havhave an urban city redevelopment needs a 30% density requirement. An alternative might be to have sphere of interest allocation of housing for towns / cities adjacent areas and rural designation for farm lands and open space and recreational. lands. Affordable Housing sites should be retained in perpetuity - an analysis of growth and available housing stock. 2011.C.2.

Hazards of seismic vulnerable slopes and presently lands filled and adjacent to rising tide and storm surges need to be assessed. Increased; **subsiding utilities** , and underground utility installation costs and risk assessment, repair costs and flood insurance for low income and other residents need to be reviewed. For imposed dense population growth along Highway 1 and 101 - including Marin City and the Tamalpais Planning Area - (unincorporated Marin County) **Noise** and adverse health **Hazards** need to be assessed. Circulation congestion limits public emergency and other services.

Streamlining and waivers and exemptions for affordable housing 2011 Development Code Amendments / Incentives and exemptions including from Master Plan Review.

Sincerely,
Margaret Kettunen Zegart

Written Responses to Comments Made at Public Scoping Meeting

As a part of the Notice of Preparation (NOP) scoping process for the *2012 Draft Housing Element Supplemental EIR*, on August 2, 2012 Marin County conducted a public scoping session regarding the proposed project. The purpose of the meeting was to help identify environmental issues related to the proposed project so that these issues could be evaluated in the Draft SEIR.

A summary of the public scoping session is provided below. Specific comments and concerns identified at the scoping meeting were taken into account in the analyses for the Draft SEIR. After each comment there is a discussion as to where the topic is addressed. In some cases, a comment is not addressed in the Draft SEIR because it does not address an environmental issue. For any such comments, the reason that the comment is not addressed in the Draft SEIR is provided below.

Exhibit 1 Disposition of Scoping Meeting Comments

Commentor(s)	Comment or Topic	Draft SEIR Section
<i>Name Organization</i>	<i>Summarize comment</i>	<i>EIR Section that addresses comments</i>
Nona Dennis Marin Conservation League	The commentor summarized written comments submitted by the Marin Conservation League dated August 13, 2012.	See response to NOP comment letter submitted by Susan Stompe, Marin Conservation League.
Carolyn Lenert, North San Rafael Coalition of Residents	Concerned about impact increased densities would have on water supply. What source would provide water supply?	Chapter 3.0 Environmental Checklist Item 17 Utilities and Service Systems.
	What water conservation measures are proposed?	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
	Transportation infrastructure does not exist at some housing sites.	Chapter 3.0 Environmental Checklist Item 16 Transportation/Traffic.
	How are fire safety and police services sustained if affordable housing is exempt from taxes (development fees)?	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
	How will CEQA streamlining proposals in the CDA affect the housing element processes and why?	As discussed in Section 1.2 Environmental Review of the Proposed Project, this Draft SEIR is a program EIR under Section 15168 of the <i>State CEQA Guidelines</i> , and

Commentor(s)	Comment or Topic	Draft SEIR Section
		focuses on the overall effects of implementing the <i>2012 Draft Housing Element</i> , providing an analysis which is considered the first tier of environmental review based on program level information and data about each housing site. Proposals to develop each housing site will receive appropriate review, pursuant to CEQA, if and when individual development applications are received by Marin County.
	Housing allocation numbers are based on an assessment of demographic projections provided by ABAG. Commentor states ABAG does not reveal how it made calculations and there is no realistic projection of growth for Marin County.	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
	Marin County offers substantial recreation for the entire Bay Area. This could be the highest and best use (did not clarify if statement intended for County as a whole, or housing element sites). Commentor does not see coordination between counties for determining the highest and best use.	Recreation is discussed in Chapter 3.0 Environmental Checklist Section 15 Recreation. The Draft SEIR evaluates the potential environmental effects that could result from implementation of the <i>2012 Draft Housing Element</i> . This comment relates to planning issues regarding Parks, Open Space, and Recreation, which is outside the scope of the Draft SEIR.
	Commentor speaks about the public comment process, where time allowed for public comment is reduced, and believes that staff and consultant time should be equally reduced for a level playing field.	The comment pertains to the County's public hearing process, and does not raise an environmental issue.

Cela O'Connor	How will the issue of sea level rise affect affordable housing sites?	Chapter 3.0 Environmental Checklist Section 9 Hydrology, Water Quality and Flooding Hazard.
	Firefighters and police officers (emergency service providers) live outside of the County. What happens if a disaster occurs?	Chapter 3.0 Environmental Checklist Section 14 Public Service.
	How will fast track permitting (CEQA streamlining) for affordable housing impact streams, wetlands, and other environmental issues/concerns?	As discussed in Section 1.2 Environmental Review of the Proposed Project, this Draft SEIR is a program EIR under Section 15168 of the <i>State CEQA Guidelines</i> , and focuses on the overall effects of implementing the <i>2012 Draft Housing Element</i> , providing an analysis which is considered the first tier of environmental review based on program level information and data about each housing site. Proposals to develop each housing site would separately and subsequently receive appropriate review, pursuant to CEQA, if and when individual development applications are received by Marin County.
	The EIR should discuss the FishNet 4C program.	As stated in Chapter 3.0 Environmental Checklist Section 4, Mitigation Measure 4.6-1 became <i>Countywide Plan Program BIO-2e</i> (Participate in the FishNet 4C program). FishNet 4C is the Fishery Network consisting of six California coastal counties including Marin, formed in response to the declining presence of Coho Salmon and Steelhead Trout. The evaluation of project impacts on biological resources did not reveal potential impacts to

		these species, or any foreseeable obstruction to continued implementation of the FishNet 4C program.
	Reduce the extent of golf courses to save water.	This comment relates to land use issues outside the scope of the <i>2012 Draft Housing Element</i> and the Draft SEIR. Water supply is discussed in Chapter 3.0 Environmental Checklist Section 17 Utilities and Service Systems.
David Coury	Discuss disaggregated impacts evaluating effects of affordable housing development on water supply, traffic, and air quality compared to effects of market rate housing.	These environmental topics are discussed in Chapter 3.0 Environmental Checklist within Sections 16 Transportation/Traffic, 17 Utilities and Service Systems, and 3 Air Quality. As a supplement to the <i>2007 Countywide Plan EIR</i> this document contains information and analysis necessary for the previous environmental document to adequately address changed conditions that would result from implementation of the <i>2012 Draft Housing Element</i> .
	Consider increased densities along Highway 101 (City-Centered corridor)	This is a comment on the <i>2012 Draft Housing Element</i> and not on an environmental issue.
	Mitigation Measures will be critical.	New mitigation measures have been identified for three environmental issue areas found in Chapter 3.0 Environmental Checklist: Sections 3 Air Quality, 9 Hydrology, Water Quality and Flooding Hazard, and 12 Noise.
	Impacts to air quality.	Chapter 3.0 Environmental Checklist Section 3 Air Quality.
	Impacts to water supply.	Chapter 3.0 Environmental Checklist Section 17 Utilities and Service Systems.

	If workers were to live in Marin, vehicle miles traveled would be lower than if they live elsewhere.	Chapter 3.0 Environmental Checklist Section 16 Transportation/Traffic.
Stephen Nestel, Walk/Bike Marinwood – Lucas Valley	Comments made regarding the commercial viability of Marinwood Plaza and reliance of vehicle transportation. The commentor also submitted expanded written comments dated August 7, 2012 that include these issues.	See response to NOP comment letter submitted by Stephen Nestel, Walk/Bike Marinwood – Lucas Valley.
Lee Ann Bernick, Coalition of Residents for a Quiet and Safe San Rafael	How does the <i>2012 Draft Housing Element</i> affect the farmers market?	At the scoping meeting it was clarified that while housing site 41 is named Marin Farmers Market, located at 70 & 76 San Pablo Avenue, it is not the location where the farmers market is held, but rather where the offices are located. It was further clarified this site was identified for its potential for reuse upon relocation of farmers market offices. No affects to the farmers market are anticipated with implementation of the housing element.
	Raised concerns about expediting CEQA review. States federal laws do not allow expedition of CEQA analysis for projects where wetlands and endangered species are concerns.	As stated in Section 1.2 Environmental Review of the Proposed Project, this Draft SEIR is a program EIR under Section 15168 of the <i>State CEQA Guidelines</i> , and focuses on the overall effects of implementing the <i>2012 Draft Housing Element</i> , providing an analysis which is considered the first tier of environmental review based on program level information and data about each housing site. Proposals to develop each housing site will separately and subsequently receive appropriate review, pursuant to CEQA, if and

		when individual development applications are received by Marin County. Impacts to wetlands and special status species are discussed under Chapter 3.0 Environmental Checklist Section 4 Biological Resources.
	Request fiscal analysis for mixed-use proposals. How will mixed-used development be justified when there is currently a vacancy problem with existing commercial tenant spaces?	This comment relates to economic impacts and not to environmental issues.
Jeanean LaRoche, Coalition of Residents for a Quiet and Safe San Rafael	Higher density housing may change the character of Marin County.	Chapter 3.0 Environmental Checklist Section 1 Aesthetics.
	Impact on Open Space	Chapter 3.0 Environmental Checklist Section 15 Recreation.
	Impact on Aesthetics	Chapter 3.0 Environmental Checklist Section 1 Aesthetics.

APPENDIX C
2012 DRAFT HOUSING ELEMENT GOALS, POLICIES AND PROGRAMS

2012 Draft Housing Element Goals, Policies and Programs

Goal 1 Use Land Efficiently

Use Marin's land efficiently to meet housing needs and implement smart and sustainable development principles.

Policy 1.1 Land Use

Enact policies that encourage efficient land use regulations which foster a range of housing types in our community.

Policy 1.2 Housing Sites

Recognize developable land as a scarce community resource. Protect and strive to expand the supply and residential capacity of housing sites, particularly for lower income households.

Policy 1.3 Development Certainty

Promote development certainty and minimize discretionary review for affordable and special needs housing through amendments to the Development Code.

Policy 1.4 Design, Sustainability, and Flexibility

Enact programs that facilitate well designed, energy efficient development and flexibility of standards to encourage outstanding projects.

Implementing Programs

1.a Establish Minimum Densities on Housing Element Sites. The County shall not approve development on sites identified in the Housing Element with fewer units than shown in the Site Inventory Analysis, unless physical or environmental constraints preclude development at the minimum density and the findings in Government Code Section 65863 can be made. If development on a site is to occur over time, the applicant must show that the proposed development does not prevent subsequent development of the site to the density shown in the Site Inventory Analysis. If a reduction in residential density for any parcel would render the sites inventory inadequate to accommodate the County's Regional Housing Need Allocation, the County must identify sufficient additional, adequate, and available sites with an equal or greater residential density in the jurisdiction so that there is no net loss of residential unit capacity.

1.b Conduct a Comprehensive Affordable Housing Sites Inventory. Involve the community in a planning exercise to designate appropriate sites for future housing by initiating a Housing Sites Inventory in preparation for the next Housing Element cycle. The process may include:

- a. Convene a Housing Sites Inventory Taskforce representing a wide segment of the community, including affordable housing advocates, environmentalists, and people of a range of incomes, backgrounds, and geographic areas. The Taskforce should undertake a detailed planning exercise.

- b. The Taskforce should evaluate appropriate zoning, environmental and site characteristics, access to public services and amenities, potential environmental issues, and adjacent land uses.
- c. Develop a sites inventory that will include enough sites to meet the projected housing needs of the community over the next two RHNA cycles.

1.c *Establish an Affordable Housing Combined Zoning District.*

- a. Amend the Development Code to establish an affordable housing combined zoning district that increases residential density on certain sites specified in the housing element to 30 dwelling units per acre. Incentives would also be established by the combined zoning district standards.
- b. Amend the Countywide Plan land use section to add a cross reference to the combined zoning district.

1.d *Streamline the Review of Affordable Housing.* Encourage the development of housing for low, very low and extremely low income households by making the review process more efficient and clarifying permitted density. Amend the Development Code to do the following:

- a. Exempt deed-restricted housing developments that are affordable to extremely low, very low and low income households from the Master Plan and Precise Development Plan review and permit procedures. Qualifying projects are subject to design review and other state law requirements.
- b. Allow the density of deed-restricted housing developments that are affordable to extremely low, very low or low income households to be established by the maximum Marin Countywide Plan density range in zones that allow residential uses, subject to all applicable Countywide Plan policies.

1.e *Study Ministerial Review for Affordable Housing.* Study the implications and opportunities for establishing a ministerial review process for affordable housing. A ministerial process could employ multi-family design guidelines and incorporate environmental protection measures consistent with the Countywide Plan. Upon completion of the study, either permit affordable housing projects ministerially or through a streamlined process of discretionary design review.

1.f *Develop Multi-family Design Guidelines.* Develop multi-family and residential mixed-use design guidelines to establish clear and comprehensive design recommendations for multi-family residential development in the unincorporated communities of Marin.

- a. Multi-family design guidelines should emphasize essential principles of development, particularly site planning, preservation of natural features, resource conservation, compatibility with neighboring development, location of buildings in relationship to pedestrian paths and streets, landscaping, general building form, massing, and scale and standards which will increase the feasibility of housing affordable to lower income households.
- b. Develop clear design criteria to help expedite the permit review process for developers, planners, and the public.
- c. Develop standards to facilitate some ministerial permit review of multi-family, transitional, and supportive housing developments.
- d. Allow duplexes through ministerial review within R2 and multi-family zones by applying streamlining thresholds, and apply similar design review triggers as single-family homes.

1.g *Undertake Adjustments to Second Unit Development Standards.* Consistent with SB1866, continue to enable construction of well-designed second units in both new and existing residential neighborhoods as an important way to provide workforce and special needs housing. Also pursue the following:

- a. Consider permitting larger sized second units of up to 1000 square feet to increase flexibility and to provide housing for families and for individuals in need of in-home care services.
- b. Reduce fees for second units in recognition of their small size and the low impact of second units. Pursue reductions in road impact and traffic fees, coastal permit fees, and design review fees.
- c. Consider developing standards to allow the height limit for primary residences to be applied to second units that are located over detached garages.
- d. Develop standards to allow flexibility of second unit parking requirements, such as off-site parking, and curb and shoulder parking along a property's frontage.
- e. Consider adjustments in septic standards for second units.
- f. Require second units as part of new single-family developments where three or more new units are proposed.
- g. Amend the Development Code Section 22.32.140 G to insure consistency with State Law in all planning areas, and eliminate the prohibition in Bolinas related to water adequacy for primary units.

1.h *Allow Rental of Detached Accessory Structures.* In order to encourage efficient land use in existing neighborhoods and to increase the stock of homes affordable to a range of incomes, allow long-term rental of detached accessory structures.

1.i *Review and Update Parking Standards.* Analyze the parking needs of infill, transit-oriented, mixed-use, special needs, group homes, convalescent homes, multi-family, senior and affordable housing developments. In order to facilitate these housing types and to reduce vehicle dependence, amend Marin County Code Title 24 to reduce parking standards wherever appropriate. Possible amendments could include but are not limited to: reduction of onsite vehicular ratios for multi-family housing; allowance of tandem parking and other flexible solutions such as parking lifts; allowance of off-site parking, such as on-street parking and use of public parking, to satisfy a portion of the parking needs for new housing units, particularly affordable units; and establishment of parking standards for mixed-use developments such as shared parking.

1.j *Zone and Provide Appropriate Standards for SRO Units.* Establish opportunities for development of SROs in appropriate locations as lower cost rental alternatives for one-person and extremely low income households.

- a. Review and revise zoning regulations to identify Single Room Occupancy (SRO) units as a permitted residential use in multi-family and mixed-use areas.

1.k *Zone and Provide Appropriate Standards for Homeless Shelters.* Consistent with SB 2, amend the Development Code to allow the development of Homeless Shelters as a permitted, non-conditional (permitted) use in Commercial Planned (CP) and Retail Business (C1) districts. This amendment will ensure that emergency shelters are subject to the same development standards as other residential and commercial uses within the same zone. Establish appropriate parking, development, and management standards.

1.l *Enable Transitional and Supportive Housing.* Add to the Development Code definitions of transitional housing and supportive housing as a residential use to further simplify existing practice,

clarify the zoning code, and aid in the development of design guidelines. These definitions can be found within this Housing Element update in *Section IV: Sites Analysis*.

1.m *Codify Affordable Housing Incentives Identified in the Community Development Element.* Amend County Code to implement the provisions of the Countywide Plan by codifying certain affordable housing incentives. These should include:

- a. Allow additional units of senior housing on a Housing Overlay Designation (HOD) site if the units are affordable to low and very low income households, and if the projected peak hour traffic impacts of the total project fall within the maximum peak hour traffic level permissible on the site. (CD-2.d.7)
- b. Adjust parking requirements for senior and affordable housing using criteria established in the URBEMIS model to encourage transit-oriented development. (CD-2.d.8)
- c. Exempt affordable housing projects and second units from paying the full cost of impact fees. (CD-5.j)
- d. Allow housing for low and very low income households to exceed the FAR on mixed-use sites. Allow moderate income housing to exceed the FAR on mixed-use sites within areas of acceptable levels of traffic service. (CD-8.7.5).
- e. Identify incentives to strongly encourage residential and mixed-use development in commercial zoning districts. (DES-2.c)
- f. For affordable housing projects, mixed-use projects that include affordable housing, second units, and projects developed in accordance with the Housing Overlay Designation, allow densities above the low end of the range in areas with LOS D, E and F.

1.n *Promote Resource Conservation.* (EN-1.b-f, EN-3.a, EN-3.e-i and EN-3.k) Continue to promote development and construction standards for new and rehabilitated dwellings that encourage resource conservation through materials selection, water conservation, community design, energy efficiency, and the use of renewable energy through the following:

- a. Adopt green building requirements for new single-family and multi-family residential construction projects, additions, and remodels that require compliance with energy efficiency and conservation requirements that exceed State standards. Require verification of these measures.
- b. Consistent with the Countywide Plan, adopt Leadership in Energy and Environmental Design (LEED) Gold certification requirements for development and major remodels of public buildings where feasible.
- c. Evaluate the feasibility of carbon neutral construction for new single family dwellings.
- d. Continue to enforce the Single-Family Dwelling Energy Efficiency Ordinance that requires new residential projects, additions, and remodels to exceed Title 24 requirements by a minimum of 15%.
- e. Explore a program consistent with AB 811 that provides to homeowners loans repayable through the property tax bill for energy efficiency, water conservation, and renewable energy generation upgrades.
- f. Work with the Marin Housing Authority to provide applicants for rehabilitation loans for upgrading their residences with green materials and energy conserving measures.
- g. Continue to provide free technical assistance to architects, developers, green businesses, homeowners, and other agencies

1.o *Simplify Review of Residential Development Projects in Planned Districts.*

- a. Consider amending the Development Code to establish criteria for ministerial review of residential development projects in planned zoning districts. Criteria may be established for characteristics such as setbacks, height limits, floor area ratios, buffers from sensitive habitats, and slope constraints, among others.
- b. Consider amendments that would allow Master Plans to establish site specific criteria for ministerial review of subsequent development projects.

1.p *Adjust Height Limits for Multi-family Residential Buildings.* Amend the Development Code to increase the allowable height for multi-family residential development. Consider allowing increases to height limits depending on certain side yard setbacks.

Goal 2 Meet Housing Needs Through a Variety of Housing Choices.

Respond to the broad range of housing needs in Marin County by supporting a mix of housing types, densities, affordability levels, and designs.

Policy 2.1 Special Needs Groups

Promote the development and rehabilitation of housing for special needs groups, including seniors, people living with disabilities, agricultural workers, individuals and families who are homeless, people in need of mental health care, single-parent families, large families, extremely low income households and other persons identified as having special housing needs in Marin County. Link housing to programs in the Department of Health and Human Services to coordinate assistance to people with special needs.

Policy 2.2 Housing Choice

Promote policies that facilitate housing development and preservation to meet the needs of Marin County's workforce and low income population.

Policy 2.3 Incentives for Affordable Housing

Continue to provide a range of incentives and flexible standards for affordable housing in order to ensure development certainty and cost savings for affordable housing providers.

Policy 2.4 Protect Existing Housing

Protect and enhance the housing we have and ensure that existing affordable housing will remain affordable.

Implementing Programs

2.a. *Encourage Housing for Special Needs Households.* Continue to work with affordable housing providers and funders on opportunities to construct or acquire a variety of types of affordable housing appropriate for special needs groups and extremely low income households. Specific types of housing include:

- Smaller, affordable residential units, especially for lower income single person households.

- Affordable senior housing to meet the expected needs of an aging population, including assisted housing and board and care (licensed facilities).
- Affordable units with three or more bedrooms for large-family households.
- Affordable housing that can be adapted for use by people with disabilities (specific standards are established in California Title 24 Accessibility Regulations for new and rehabilitation projects).

2.b. Enable Group Residential Care Facilities. Continue to comply with State and Federal law by allowing group homes with special living requirements consistent with the County's land use regulations.

2.c. Make Provisions for Multi-family Housing Amenities. Continue to ensure that adequate provisions are made in new developments for families with children, including consideration of amenities such as tot lots, play yards, and childcare.

2.d. Foster Linkages to Health and Human Services Programs. Continue to seek ways to link services for lower income people to provide the most effective response to homeless or at-risk individuals.

2.e. Support Efforts to House the Homeless. Support Countywide programs to provide for a continuum of care for the homeless, including emergency shelter, transitional housing, supportive housing, and permanent housing. Participate in efforts and allocate funds, as appropriate, for County and non-profit programs providing emergency shelter and related support services.

2.f. Engage in a Countywide Effort to Address Homeless Needs. Continue to actively engage with other jurisdictions in Marin to provide additional housing and other options for the homeless, supporting and implementing *Continuum of Care* actions in response to the needs of homeless families and individuals.

2.g. Ensure Reasonable Accommodation. Consistent with SB 520 enacted January 1, 2002, reduce barriers in housing for individuals with disabilities through the following actions:

- a. Establish a written Reasonable Accommodation procedure in the Development Code for providing exceptions in zoning and land use for housing for persons with disabilities.
- b. Amend the Development Code to clarify that retrofitted access ramps are permitted in setback areas.
- c. Develop guidelines and a model ordinance encouraging the principles of universal design. Evaluate possible incentives to developers who incorporate principles of universal design and advance visibility.
- d. Consider allowing up to 50% reduction in parking requirements for disabled housing, as allowed for senior housing.

2.h. Require Non-discrimination Clauses. Continue to provide nondiscrimination clauses in rental agreements and deed restrictions for housing constructed with either County participation.

2.i. Modify Development Code to Reflect Williamson Act. Modify the Development Code to reflect the section of the Williamson Act (Section 51230.2) that allows landowners to subdivide up to 5 acres of the preserved land for sale or lease to a nonprofit organization, a city, a county, a housing authority, or a state agency in order to facilitate the development and provision of agricultural worker housing. This section of the Williamson Act requires that the parcel to be sold or leased must be contiguous to

one or more parcels that allow residential uses and are developed with existing residential, commercial, or industrial uses.

2.j. *Promote the Development of Agricultural Worker Units in Agricultural Zones.* Pursue policy changes that promote the development of agricultural worker units in agricultural zones.

- a. Consider ministerial review of applications for agricultural worker units in order to expedite the permitting process and facilitate the development of legal agricultural worker units.
- b. As the County undertakes an update of the Local Coastal Program(LCP), revise the C-APZ zoning district to allow certain agricultural worker housing as a permitted agricultural use, demonstrating consistency with California Health and Safety Code Section 17021.6.
- c. Consider a program to facilitate the legalization of agricultural worker housing units.
- d. Seek funding opportunities to assist with rehabilitation and replacement of agricultural worker housing units.

2.k. *Promote and Ensure Equal Housing Opportunity.* Continue to promote equal housing opportunities for all persons and assure effective application of fair housing laws. To the extent possible, the County will ensure that individuals and families seeking housing in Marin County are not discriminated against on the basis of race, color, religion, marital status, disability, age, sex, family status (presence of children), national origin, or other arbitrary factors, consistent with the Fair Housing Act.

a. Provide written material at public locations and on the County's public website. Information regarding equal housing opportunity laws shall be made available to the public. A pamphlet on equal housing opportunity shall be prepared and distributed to the public at the Civic Center and government outlets.

b. Continue to collaborate with Fair Housing of Marin, such as ongoing representation on the Fair Housing Task Force by a member of the County staff.

c. Conduct public outreach and complete an Analysis of Impediments to Fair Housing to identify private and public barriers to fair housing choice.

2.l. *Deter Housing Discrimination.* Continue to refer discrimination complaints to Fair Housing of Marin or other appropriate legal services, County or State agencies.

2.m. *Implement the Inclusionary Housing Policy.* Continue to implement Development Code Section 22.22 regarding inclusionary housing for low income households in order to increase affordable housing construction, as follows:

a. Apply flexibility to allow for maximum affordable housing outcomes (either units or funds).

b. Maintain targets for very low income rental units and low income ownership units, such as 30% to 60% AMI for rental units, and 50% to 80% AMI for ownership units.

c. Inclusionary units shall be deed-restricted to maintain affordability on resale to the maximum extent possible (preserve existing policy of in perpetuity or at least 55 years).

d. Update Section 22.22 to reflect the 2009 California Court of Appeal decisions commonly referred to as Palmer and Patterson.

2.n. *Apply Long-Term Housing Affordability Controls.* The County or its designee(s) will continue to apply resale controls and rent and income restrictions to ensure that affordable housing provided through local funding, incentives, or as a condition of development approval remains affordable over time to the income group for which it is intended.

2.o. *Encourage Land Acquisition and Land Banking.* Encourage land acquisition and land banking for future affordable projects as a way to assist development of affordable housing.

2.p. *Expedite Permit Processing of Affordable and Special Needs Housing Projects.* Define fast-tracking and establish milestones for expedited permit processing for affordable housing projects, as well as green projects, childcare facilities, special needs housing, and agricultural worker housing projects. Specific timelines for fast-tracked projects that will result in expedited review will be established. Coordinate this process with appropriate County departments and outside agencies to establish clear and specific timelines for review. Employ updated information technology to track turn-around times and monitor the permitting process.

2.q. *Consider CEQA Expedited Review.* Consider an area-wide Environmental Assessment or Program EIR assessing area-wide infrastructure and other potential off-site impacts to expedite the processing of subsequent affordable housing development proposals.

2.r. *Encourage First-Time Homebuyer Programs.* Continue to support first-time homebuyer programs for low and moderate income households, as funding is available, and combine such programs with housing counseling programs whenever possible.

2.s. *Link Code Enforcement with Public Information Programs.* Continue to implement housing, building, and fire code enforcement to ensure compliance with basic health and safety building standards. Provide referrals to rehabilitation loan programs and subsidized housing programs for use by qualified residents.

2.t. *Assist in Maximizing Use of Rehabilitation Programs.* Continue to promote use of low-income homeowners' assistance for housing rehabilitation. Utilize Federal Community Development Block Grant (CDBG) funds, administered by the Marin Housing Authority, that are available for this purpose, or other sources to the extent possible, given program funding criteria and local need.

2.u. *Monitor Rental Housing Stock.* Ensure that existing subsidized housing is conserved as part of the County's affordable housing stock, including State, Federal and locally-assisted developments. (See Figure IV-4 on page IV-7 for more detail about the Ridgeway Apartments conversion.)

a. Identify and monitor affordable properties at risk of conversion to market rate.

b. Continue to work with and provide technical assistance to property owners and non-profit organizations to acquire and rehabilitate affordable rental housing units in order to maintain ongoing affordability of the units and to convert market rate units to affordable units.

c. Provide support and committed funding to purchasers of the Ridgeway Apartments to facilitate conversion of 153 units of market rate rental housing to long-term deed restricted units affordable to low income households.

d. Commit to provide relocation assistance in the event of displacement of residents of the Ridgeway Apartments as well as any other residents who may be displaced as a result of conversion from market rate to long-term affordable housing with committed assistance from the County.

e. Ensure that all units receiving committed assistance from the County for conversion from market rate to affordable carry affordability restrictions of 55 years, including the Ridgeway Apartments.

f. Submit a written report to the Board Supervisors and the California Department of Housing and Community Development documenting progress towards and committed assistance to the conversion of the Ridgeway Apartments. This report will be provided during the third year of the planning period (2012) in conjunction with the annual report on housing element progress.

GOAL 3 ENSURE LEADERSHIP AND INSTITUTIONAL CAPACITY

Build and maintain local government institutional capacity and monitor accomplishments to respond to housing needs effectively over time.

Policy 3.1 Coordination

Take a proactive approach in local housing coordination, policy development, and communication. Share resources with other agencies to effectively create and respond to opportunities for achieving housing goals.

Policy 3.2 Research, Monitoring, and Evaluation

Perform effective management of housing data relating to Marin County housing programs, production, and achievements. Monitor and evaluate housing policies on an ongoing basis, and respond effectively to changing housing conditions and needs of the population over time.

Policy 3.3 Funding

Actively and creatively seek ways to increase funding resources for lower income and special needs housing.

Implementing Programs

3.a. Explore Housing at the Civic Center. Work with the City of San Rafael to consider affordable housing at the Civic Center site. Collaborate with San Rafael and HCD to facilitate possible sharing of affordable units for the RHNA process between the County and San Rafael.

3.b. Advance Organizational Effectiveness. Continue to seek ways to organize and allocate staffing resources effectively and efficiently to encourage and implement effective housing policy Countywide. Opportunities to enhance Marin County's capabilities may include:

- Sharing or pooling resources and coordinating tasks among multiple jurisdictions in implementing common housing programs.
- Initiate regular dialogue with Marin jurisdictions related to affordable housing policies, practices, and development updates.
- When requested, provide technical assistance related to housing development and funding to local Marin jurisdictions.
- Enhancing relationships and partnerships with non-profit service providers.

3.c. *Provide and Promote Opportunities for Community Participation in Housing Issues.* Continue to undertake effective and informed public participation from all economic segments and special needs communities in the formulation and review of housing issues. Include the following:

- a. Coordinate community meetings. Strongly encourage developers to hold community meetings with stakeholders and County staff as part of any major development pre-application process.
- b. Conduct community outreach activities. Provide ongoing outreach and a forum for discussion of housing issues through presentations and increased awareness of housing programs.
- c. Provide public information to improve awareness of housing needs, issues, and programs through websites, fact sheets, and presentations.
- d. Coordinate with interested groups including local businesses, housing advocacy groups, and neighborhood groups to build public understanding and support for workforce and special needs housing.

3.d. *Perform Regional Transportation and Housing Activities.* Continue to coordinate with regional planning bodies, such as the Association of Bay Area Governments, Congestion Management Agency, Transportation Authority of Marin, Sonoma Marin Area Rapid Transit, and Metropolitan Transportation Commission to facilitate transit-oriented housing development by using the incentives and other means provided through regional transportation plans.

3.e. *Coordinate with Other Agencies.* Coordinate with other regulatory agencies and special districts to facilitate and streamline the development of affordable and special needs housing. Pursue fee waivers and expedited review.

- a. Pursue fee waivers and expedited review for affordable and special needs housing.
- b. Coordinate with pertinent departments in their efforts to amend the Safety and Conservation Elements of the Countywide Plan to include analysis and policies regarding flood hazard and flood management information.

3.f. *Promote Countywide Collaboration on Housing.* Work with Marin cities and towns to address regional planning and housing issues.

3.g. *Preserve Existing Housing Stock.* Strive to protect existing housing stock that offers a range of housing choice and affordability.

- a. Work with residents, property owners, agencies, and non-profit groups to seek ways to assist in the long-term protection of rental and low cost housing, including mobile homes, mobile home parks, and manufactured housing.
- b. Consider an ordinance to require developers to provide relocation assistance for current residents when units are converted to other uses.
- c. Conduct a comprehensive analysis of legal non-conforming multi-family properties to establish the extent to which the County's existing rental stock may be compromised by the underlying zoning. If determined appropriate, institute a program whereby legal non-conforming properties intensity on the property, and encourage income restrictions for affordable housing through incentives (CD-2.o).

d. Identify funding and other resources to preserve affordable units at risk of conversion to market rate.

3.h. *Monitor Inclusionary Housing Programs.* Regularly evaluate the progress and effectiveness of the inclusionary housing programs in the Development Code.

a. Monitor the residential inclusionary programs in Development Code Chapter 22.22 for their effectiveness, including the number of units constructed and amount of fees collected and deposited in the Affordable Housing Trust Fund.

b. Update on a regular basis the in-lieu fees for residential development (Development Code Section 22.22.080.C).

c. Continue to monitor the Jobs/Housing Linkage Ordinance (Development Code Section 22.22.095), and ensure that commercial and industrial projects provide either on-site employee housing or fees to develop housing.

d. Update on a regular basis the in-lieu participation fees for commercial and industrial development.

3.i. *Undertake Housing Element Monitoring, Evaluation, and Revisions.* The County will establish a regular monitoring and annual update process to assess housing needs and achievements and to provide a process for modifying policies, programs, and resource allocations as needed in response to changing conditions.

a. Undertake housing element updates as required, in accordance to State law.

b. Conduct an annual housing element review.

3.j. *Provide and Participate in Local Affordable Housing Training and Education.* Continue to encourage and participate in training sessions with local groups, decision makers, and staff to review potential constraints on and opportunities for creating affordable housing. Issues may include housing needs, financing, density, developmental delays, and management.

3.k. *Update Affordable Housing Trust Fund Operating Procedures.* Update Trust Fund operating procedures.

a. Publish application and funding guidelines on the County website. Specify that monies paid into the fund will be used to develop or rehabilitate units affordable to very low and low income households.

b. Periodically report Affordable Housing Trust Fund activities and status to the Director. Include total amount of funds available, recent use of funds, and details of deed restrictions that ensure that housing costs are affordable to lower income persons.

3.l. *Provide Leadership to the Marin Workforce Housing Trust.* Participate on the Board of the Marin Workforce Housing Trust. Continue to ensure that housing for extremely low income and special needs populations is prioritized in funding.

3.m. *Assist with Local Funding for Affordable Housing.* Continue to seek ways to reduce housing costs for lower income workers and people with special needs by continuing to utilize local, State, and Federal assistance to the fullest extent possible to achieve housing goals and by increasing ongoing local resources. This would include efforts to:

- a. Provide technical and financial resources to support development of affordable housing in the community, especially housing that meets the needs of the local workforce, people with special housing needs, and people with extremely low incomes.
- b. Partner with philanthropic organizations to help finance affordable housing developments and continue to participate in other rental assistance programs.

3.n. *Raise Funds from a Variety of Sources.* Maintain and monitor existing and seek additional streams of financing to add to or match Housing Trust funds. Work with community and elected leaders to identify potential revenue sources, considering the following:

- In-lieu fee payments under inclusionary requirements (residential and non-residential developments).
- Transient Occupancy Tax increase.
- Affordable Housing Impact Fee on single-family homes.
- Document Transfer Fee.
- Transfer Tax increase.

3.o. *Coordinate Among Project Funders.* Continue to ensure access to, and the most effective use of, available funding in Marin County by providing a mechanism for coordination among local affordable housing funders. Include regular meetings of local funders such as:

- Marin Community Foundation
- Federal Grants
- Marin Workforce Housing Trust
- Marin County Housing Trust
- Transportation Authority of Marin

3.p. *Utilize Federal Grants Division Funding.* Continue funding activities through the Federal Grants Division for affordable housing purposes throughout eligible Marin jurisdictions.

- a. Fund the Rehabilitation Loan Program that allows low and very low income homeowners to access forgivable loans to upgrade their homes.
- b. Fund affordable housing projects through the CDBG and HOME programs.
- c. Administer the Housing Opportunities for Persons with Aids Program (HOPWA) to provide ongoing deep rental subsidies for individuals and families throughout the County.

APPENDIX D
SPECIAL-STATUS ANIMAL SPECIES KNOWN OR SUSPECTED FROM
MARIN COUNTY
SPECIAL-STATUS PLANT AND LICHEN SPECIES KNOWN OR SUSPECTED FROM
MARIN COUNTY

Exhibit A**Special-Status Animal Species Known or Suspected from Marin County¹**

Common Name Scientific Name	Status Federal / State	Habitat Characteristics	Number of Documented Occurrences in Marin County/Number in State²
Amphibians / Reptiles			
Northwestern pond turtle <i>Actinemys marmorata marmorata</i>	- / SSC	Streams / ponds / lakes	13 / 379
California tiger salamander <i>Ambystoma californiense</i>	FT / SSC	Breeds in pools; adults occupy surrounding grasslands and open woodlands	NA ³
Loggerhead sea turtle <i>Caretta caretta</i>	FT / -	Open ocean	NA
Green sea turtle <i>Chelonia mydas</i>	FT / -	Open ocean	NA
Leatherback sea turtle <i>Dermochelys coriacea</i>	FE / -	Open ocean	NA
Olive (=Pacific) ridley sea turtle <i>Lepidochelys olivacea</i>	FT / -	Open ocean	NA
California horned lizard <i>Phrynosoma coronatum frontale</i>	- / SSC	Forests / woodlands / grasslands with loose soil	NA
Northern red-legged frog <i>Rana aurora aurora</i>	- / SSC	Forests / woodlands / grasslands along streamsides	NA
California red-legged frog <i>Rana aurora draytonii</i>	FT / SSC	Forests / woodlands / grasslands along streamsides	22 / 993

¹ Sources: CDFG 2012 and USFWS 2012.

² The number of occurrences includes those reported in the CNDDDB and presumed extant as of March 1, 2009. Occurrences that may be extirpated are shown in parentheses.

³ NA = Not applicable. Includes those species suspected to possibly occur in Marin County; however, no documented occurrences have been reported by CNDDDB.

Common Name Scientific Name	Status Federal / State	Habitat Characteristics	Number of Documented Occurrences in Marin County/Number in State²
Foothill yellow-legged frog <i>Rana boylei</i>	- / SSC	Streams with rocky substrate	5 / 464
Western spadefoot toad <i>Spea hammondi</i>	- / SSC	Grasslands / open woodlands with seasonal pools	NA
Birds			
Tricolored blackbird <i>Agelaius tricolor</i> (nesting colony)	- / SSC	Freshwater marsh and surrounding fields	5 / 424
Golden eagle <i>Aquila chrysaetos</i>	- / SSC; FP	Open grasslands / woodlands	NA
Great egret <i>Ardea alba</i> (rookery)	- / -*	Colonial nester in large trees	5 / 34
Great blue heron <i>Ardea herodias</i> (rookery)	- / -*	Colonial nester in trees, cliff-sides, marshes	10 (1) / 131
Burrowing owl <i>Athene cunicularia</i> (burrow sites)	- / SSC	Open grasslands / scrub	5 / 1182
Marbled murrelet <i>Brachyramphus marmoratus</i>	FT / SE	Old growth forest / coastal estuaries / open ocean	NA
Western snowy plover <i>Charadrius alexandrinus nivosus</i> (nesting)	FT / SSC	Nesting along sandy beaches and shorelines	5 / 116
Northern harrier <i>Circus cyaneus</i> (nesting)	- / SSC	Nesting in marsh and low shrubs	1 / 42
Back swift <i>Cypseloides niger</i> (nesting)	- / SSC	Nesting on cliffs and behind falls	3 / 46
Yellow warbler <i>Dendroica petechia brewsteri</i> (nesting)	- / SSC	Nesting in willows and riparian cover	1 / 58
Short-tailed albatross <i>Diomedea albatrus</i>	FE / -	Forages widely across the north Pacific. Nests on two islands in Japan.	NA
Snowy egret <i>Egretta thula</i> (rookery)	- / -*	Colonial nester in trees, cliff-sides, near marshland	1 / 15

Common Name Scientific Name	Status Federal / State	Habitat Characteristics	Number of Documented Occurrences in Marin County/Number in State²
White-tailed kite <i>Elanus leucurus</i> (nesting)	- / FP	Nesting in grassland / marshland with trees	1 / 111
Tufted puffin <i>Fratercula cirrhata</i>	- / SSC	Colonial nester on off-shore islands and cliffs	1 / 17
Salt marsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	- / SSC	Salt and brackish water marsh	19 / 110
Bald eagle <i>Haliaeetus leucocephalus</i>	- / SE	Open water of lakes, bays, and ocean shoreline	NA
Loggerhead shrike <i>Lanius ludovicianus</i>	- / SSC	Open grassland and scrub	NA
California black rail <i>Laterallus jamaicensis coturniculus</i>	- / ST; FP	Coastal saltmarsh	15 / 159
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	- / SSC	Salt marshes	13 / 41
Black-crowned night-heron <i>Nycticorax nycticorax</i> (rookery)	- / -*	Colonial nester in trees / shrubs near marshland	1 / 25
Ashy storm-petrel <i>Oceanodroma homochroa</i> (rookery)	- / SSC	Colonial nester on off-shore islands	NA
Osprey <i>Pandion haliaetus</i> (nesting)	- / SSC	Nesting in trees associated with water bodies	1 / 433
California brown pelican <i>Pelecanus occidentalis californicus</i>	FE / SE; FP	Coastal / bay shorelines and open water	NA
California clapper rail <i>Rallus longirostris obsoletus</i>	FE / SE; FP	Salt and brackish marsh	11 (1) / 90
California least tern <i>Sterna antillarum browni</i>	FE / SE; FP	Coastal / bay shorelines and open water	NA
Northern spotted owl <i>Strix occidentalis caurina</i>	FT / -	Forest and woodland	NA
Fish			
Green sturgeon <i>Acipenser medirostris</i>	T / SSC	Brackish water, marsh / bays	NA

Common Name Scientific Name	Status Federal / State	Habitat Characteristics	Number of Documented Occurrences in Marin County/Number in State²
Tidewater goby <i>Eucyclogobius newberryi</i>	FE / SSC	Brackish water, marsh / bays	3 (4) / 116
Tomales roach <i>Lavinia symmetricus ssp. symmetricus</i>	- / SSC	Tributaries of Tomales Bay	4 / 4
Coho salmon – central California coast <i>Oncorhynchus kisutch</i>	FE / SE	Spawns in freshwater streams	2 / 11
steelhead – central California coast <i>Oncorhynchus mykiss irideus</i>	FT / CSC	Spawns in freshwater streams	1 / 29
Chinook salmon – central valley fall-run <i>Oncorhynchus tshawytscha</i>	SC / SSC	Spawns in freshwater streams	NA
Invertebrates			
Tomales isopod <i>Caecidotea tomalensis</i>	- / -*	Freshwater marsh / ponds	2 / 6
Marin blind harvestman <i>Calicina diminua</i>	- / -*	Serpentine grassland	1 / 1
San Bruno elfin butterfly <i>Callophrys (=Incisalia) mossii bayensis</i>	FE / -	Coastal scrub with stonecrop host plant	2 / 10
Marin elfin butterfly <i>Callophrys mossii marinensis</i>	- / -*	Redwood forest	1 / 1
Globose dune beetle <i>Cicindela globosus</i>	- / -*	Coastal dunes	1 / 30
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	- / -*	Estuaries / mud flats	3 / 34
Monarch butterfly <i>Danaus plexippus</i> (winter colonies)	- / -*	Over winters in nonnative Monterey cypress and eucalyptus forests	24 (2) / 334
Black abalone <i>Haliotes cracheriodii</i>	FE / -	Rocky intertidal zone and ocean waters	NA
White abalone <i>Haliotes sorensoni</i>	FE / -	Rocky intertidal zone and ocean waters	NA
Williams' bronze shoulderband <i>Helminthoglypta arrosa williamsi</i>	- / -*	Known only from Hogg Island	NA
Peninsula coast range shoulderband snail <i>Helminthoglypta nickliniana awania</i>	- / -*	Known only from Point Reyes headland	1 / 1
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	- / -*	Aquatic habitat / pools and ponds	1 / 13

Common Name Scientific Name	Status Federal / State	Habitat Characteristics	Number of Documented Occurrences in Marin County/Number in State²
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	FE / -	Shrubs / grasslands with lupine host	1 / 14
San Francisco forktail damselfly <i>Ischnura gemina</i>	- / -*	Ponds and ditches	3 / 6
Bumblebee scarab beetle <i>Lichnanthe ursina</i>	- / -*	Coastal dunes	4 / 8
Tiburon micro-blind harvestman <i>Microcina tiburona</i>	- / -*	Serpentine outcrops near spring / seeps	2 / 2
Point Reyes blue butterfly <i>Plebejus icarioides parapheres</i>	- / -*	Stabilized sand dunes	2 / 2
Robust walker <i>Pomatiopsis binneyi</i>	- / -*	Freshwater wetland and streams under leaf litter	2 / 2
Myrtle's silverspot butterfly <i>Speyeria zerene myrtleae</i>	FE / -	Scrub / grassland with larval host	6 / 16
California freshwater shrimp <i>Syncaris pacifica</i>	FE / SE	Freshwater streams with undercut banks	4 / 18
Ubick's gnaphosid spider <i>Talanites ubicki</i>	- / -*	Serpentine habitats	1 / 1
A leaf-cutter bee <i>Trachusa gummifera</i>	- / -*	None available	1 / 2
Mimic tryonia (=California brackishwater snail) <i>Tryonia imitator</i>	- / -*	Coastal lagoons / estuaries / salt marshes	2 / 34
Marin hesperian <i>Vespericola marinensis</i>	- / -*	Coastal brush / chaparral	23 / 23
Mammals			
Pallid bat <i>Antrozous pallidus</i>	- / SSC	Roosts in protected locations	9 (3) / 398
Point Reyes mountain beaver <i>Aplodontia rufa phaea</i>	- / SSC	Springs / seeps with dense cover	5 (4) / 9
Guadalupe fur seal <i>Arctocephalus townsendi</i>	FT / ST; FP	Open ocean, beaches	NA
Sei whale <i>Balaenoptera borealis</i>	FE / -	Open ocean	NA
Blue whale <i>Balaenoptera musculus</i>	FE / -	Open ocean	NA
Finback whale <i>Balaenoptera physalus</i>	FE / -	Open ocean	NA

Common Name Scientific Name	Status Federal / State	Habitat Characteristics	Number of Documented Occurrences in Marin County/Number in State²
Townsend's western big-eared bat <i>Corynorhinus townsendii townsendii</i>	- / SSC	Roosts in protected locations	3 / 234
Southern sea otter <i>Enhydra lutris nereis</i>	FT / FP	Nearshore marsh habitat	1 / 2
Grey whale <i>Eschrichtius robustus</i>	FE / -	Open ocean	NA
Right whale <i>Eubalaena glacialis</i>	FE / -	Open ocean	NA
Steller sea-lion <i>Eumetopias jubatus</i>	FT / -	Open ocean, beaches	NA
Greater western mastiff-bat <i>Eumops perotis californicus</i>	- / SSC	Roosts in protected locations	NA
Silver-haired bat <i>Lasionycteris noctivagans</i>	- / -*	Coastal montane forest	2 / 138
Western red bat <i>Lasiurus blossevillii</i>	- / SSC	Forest / woodland	1 / 117
Hoary bat <i>Lasiurus cinereus</i>	- / -*	Varied mosaic of open habitats with access to trees and water	7 / 235
Humpback whale <i>Megaptera novaengliae</i>	FE / -	Open ocean	NA
Long-eared myotis bat <i>Myotis evotis</i>	- / -*	Woodland and forested habitats	NA
Fringed myotis bat <i>Myotis thysanodes</i>	- / -*	Grassland and woodland habitats	NA
Long-legged myotis bat <i>Myotis volans</i>	- / -*	Forested habitats	NA
Yuma myotis bat <i>Myotis yumanensis</i>	- / -*	Near water in valleys along mountainous areas	NA
Sperm whale <i>Physeter catodon</i>	FE / -	Open ocean	NA
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE / SE; FP	Coastal saltmarsh	9 (1) / 137
Angel Island mole <i>Scapanus latimanus isularis</i>	- / SSC	Coastal scrub / prairie on Angel Island	1 / 1
American badger <i>Taxidea taxus</i>	- / SSC	Variety of habitats with friable soils	7 / 413

Common Name Scientific Name	Status Federal / State	Habitat Characteristics	Number of Documented Occurrences in Marin County/Number in State²
Point Reyes jumping mouse <i>Zapus trinotatus orarius</i>	- / SSC	Coastal scrub / grassland from Point Reyes	5 / 5

Exhibit B

Special-Status Plant and Lichen Species Known or Suspected from Marin County⁴

Common Name Scientific Name	Status: Federal/ State/CNPS	Habitat	Number of Documented Occurrences in Marin County/Number in State⁵
Pink sand-verbena <i>Abronia umbellata</i> ssp. <i>breviflora</i>	- / - / 1B	Coastal dunes / stand	11 / 54
Blasdale's bent grass <i>Agrostis blasdalei</i>	- / - / 1B	Coastal dunes / scrub / prairie	17 / 45
Point Reyes bent grass <i>Agrostis clivicola</i> var. <i>punta- reyesensis</i>	- / - / -*	Coastal scrub / prairie / coniferous forest	11 / 13
Sonoma alopecurus <i>Alopecurus aequalis</i> var. <i>sonomensis</i>	FE / - / 1B	Freshwater marsh / riparian scrub	9 / 22
Napa false indigo <i>Amorpha californica</i> var. <i>napensis</i>	- / - / 1B	Forest / chaparral / woodland	5 / 45
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	- / - / 1B	Coastal bluff scrub / woodland / grassland	5 / 50
Mt. Tamalpais manzanita <i>Arctostaphylos hookeri</i> ssp. <i>montana</i>	- / - / 1B	Chaparral / grassland	16 / 16
Marin manzanita <i>Arctostaphylos virgata</i>	- / - / 1B	Coniferous forest / chaparral	23 / 23
Coastal marsh milk-vetch <i>Astragalus pynostachyas</i> var. <i>p.</i>	- / - / 1B	Dunes / marshes / swamps	11 / 25
Point Reyes blennosperma <i>Blennosperma nanum</i> var. <i>robustum</i>	- / SR / 1B	Coastal prairie / scrub	16 / 17
Small groundcone <i>Boschniakia hookeri</i>	- / - / 2	Coniferous forests	4 / 15
Thurber's reed grass <i>Calamagrostis crassiglumis</i>	- / - / 2	Coastal scrub / freshwater marsh	7 / 11
Tiburon mariposa lily <i>Calochortus tiburonensis</i>	FT / ST / 1B	Serpentine grassland	1 / 1
Coastal bluff morning-glory <i>Calystegia purpurata</i> ssp. <i>saxicola</i>	- / - / 1B	Dunes / coastal scrub	9 / 30

⁴ Sources: CDFG 2012, CNPS 2012, and USFWS 2012.

⁵ The number of occurrences includes those reported in the CNDDDB and presumed extant as of August 10, 2012. Occurrences that may be extirpated are shown in parentheses.

Common Name Scientific Name	Status: Federal/ State/CNPS	Habitat	Number of Documented Occurrences in Marin County/Number in State⁵
Swamp harebell <i>Campanula californica</i>	- / - / 1B	Bogs / ferns / marshes in coniferous forest	22 (1) / 119
Flaccid sedge <i>Carex leptalea</i>	- / - / 2	Bogs / fens / meadows / seeps	(1) / 8
Lynngbye's sedge <i>Carex lynngbyei</i>	- / - / 2	Marshes / swamps	4 / 26
Tiburon indian paintbrush <i>Castilleja affinis</i> ssp. <i>neglecta</i>	FE / ST / 1B	Serpentine grassland	6 / 9
Humbolt Bay owl's clover <i>Castilleja ambigua</i> ssp. <i>humboldtiensis</i>	- / - / 1B	Coastal salt marsh	5 / 27
Mt. Vision ceanothus <i>Ceanothus gloriosus</i> var. <i>porrectus</i>	- / - / 1B	Coniferous forest / coastal scrub / prairie	17 / 17
Mason's ceanothus <i>Ceanothus masonii</i>	- / SR / 1B	Chaparral / serpentine	6 / 6
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	- / - / 1B	Coastal scrub / prairie / dunes	4 / 20
Woolly-headed spineflower <i>Chorizanthe cuspidata</i> var. <i>villosa</i>	- / - / 1B	Coastal scrub / prairie / dunes	8 / 9
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE / - / 1B	Maritime chaparral / openings in woodlands / coastal dunes / scrub	5 / 23
Sonoma spineflower <i>Chorizanthe valida</i>	FE / SE / 1B	Coastal prairie	3 / 6
Franciscan thistle <i>Cirsium andrewsii</i>	- / - / 1B	Forest / coastal bluff scrub / prairie / coastal scrub	19 / 27
Mt. Tamalpais thistle <i>Cirsium hydrophilum</i> var. <i>vaseyi</i>	- / - / 1B	Forest / chaparral	12 / 12
Raiche's red ribbons <i>Clarkia concinna</i> ssp. <i>raichei</i>	- / - / 1B	Coastal bluff scrub	1 / 1
Round-headed chinese houses <i>Collinsia corymbosa</i>	- / - / 1B	Coastal dunes	NA
Point Reye's bird's beak <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	- / - / 1B	Coastal salt marsh / dunes	33 (3) / 61
Soft bird's beak <i>Cordylanthus mollis</i> sp. <i>mollis</i>	FE / SR / 1B	Coastal salt marsh	(1) / 27

<p>Common Name Scientific Name</p>	<p>Status: Federal/ State/CNPS</p>	<p>Habitat</p>	<p>Number of Documented Occurrences in Marin County/Number in State⁵</p>
<p>Baker's larkspur <i>Delphinium bakeri</i></p>	<p>FE / SE / 1B</p>	<p>Broadleafed upland forest / coastal scrub / grassland</p>	<p>1 (1) / 3</p>
<p>Golden larkspur <i>Delphinium luteum</i></p>	<p>FE / SR / 1B</p>	<p>Chaparral / coastal scrub / prairie</p>	<p>5 (1) / 12</p>
<p>Western leatherwood <i>Dirca occidentalis</i></p>	<p>- / - / 1B</p>	<p>Forest / chaparral / woodland</p>	<p>5 / 46</p>
<p>Koch's cord moss <i>Entosthodon kochii</i></p>	<p>- / - / 1B</p>	<p>Woodland</p>	<p>1 / 4</p>
<p>Supple daisy <i>Erigeron supplex</i></p>	<p>- / - / 1B</p>	<p>Coastal bluff scrub / prairie</p>	<p>(1) / 21</p>
<p>Minute pocket-moss <i>Fissidens pauperculus</i></p>	<p>- / - / 1B</p>	<p>Forest floor along coast</p>	<p>17 / 19</p>
<p>Marin checker lily <i>Fritillaria affinis</i> var. <i>tristulis</i></p>	<p>- / - / 1B</p>	<p>Coastal bluff scrub / prairie</p>	<p>27 / 28</p>
<p>Fragrant fritillary <i>Fritillaria liliacea</i></p>	<p>- / - / 1B</p>	<p>Coastal scrub / prairie / grassland</p>	<p>13 / 59</p>
<p>Dune gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i></p>	<p>- / - / 1B</p>	<p>Dunes / coastal scrub</p>	<p>15 (2) / 29</p>
<p>Woolly-headed gilia <i>Gilia capitata</i> ssp. <i>tomentosa</i></p>	<p>- / - / 1B</p>	<p>Coastal bluff scrub / outcrops</p>	<p>3 (2) / 11</p>
<p>Dark-eyed gilia <i>Gilia millefoliata</i></p>	<p>- / - / 1B</p>	<p>Coastal dunes</p>	<p>12 / 41</p>
<p>San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i></p>	<p>- / - / 1B</p>	<p>Coastal bluff scrub / coastal scrub / grassland</p>	<p>NA</p>
<p>Diablo helianthella <i>Helianthella castanea</i></p>	<p>- / - / 1B</p>	<p>Forest / chaparral / woodland / coastal scrub / grassland</p>	<p>1 / 82</p>
<p>Pale yellow hayfield tarplant <i>Hemizonia congesta</i> ssp. <i>congesta</i></p>	<p>- / - / 1B</p>	<p>Coastal scrub / grassland</p>	<p>11 / 33</p>
<p>Short-leaved evax <i>Hesperovax sparsiflora</i> var. <i>brevitolia</i></p>	<p>- / - / 1B</p>	<p>Coastal bluff scrub / dunes</p>	<p>8 / 33</p>
<p>Marin western flax <i>Hesperolinon congestum</i></p>	<p>FT / ST / 1B</p>	<p>Chaparral / serpentine grassland</p>	<p>11 (1) / 28</p>
<p>Santa Cruz tarplant <i>Holocarpha macradenia</i></p>	<p>FT / SE / 1B</p>	<p>Coastal prairie / coastal scrub / grassland</p>	<p>1 (1) / 37</p>
<p>Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i></p>	<p>- / - / 1B</p>	<p>Coniferous forest / coastal scrub / chaparral</p>	<p>1 / 38</p>

Common Name Scientific Name	Status: Federal/ State/CNPS	Habitat	Number of Documented Occurrences in Marin County/Number in State⁵
Point Reyes Horkelia <i>Horkelia marinensis</i>	- / - / 1B	Coastal scrub / prairie / dunes	11 / 26
Thin-lobed horkelia <i>Horkelia tenuiloba</i>	- / - / 1B	Coastal scrub / chaparral	5 / 27
Baker's goldfields <i>Lasthenia californica</i> ssp. <i>bakeri</i>	- / - / 1B	Coniferous forest / coastal scrub	2 / 14
Perennial goldfields <i>Lasthenia californica</i> ssp. <i>macrantha</i>	- / - / 1B	Coastal bluff scrub / dunes / coastal scrub	14 / 38
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE / - / 1B	Grassland / vernal pools / woodland	1 / 32
Beach layia <i>Layia carnosa</i>	FE / SE / 1B	Coastal dunes	5 (1) / 22
Coast yellow leptosiphon <i>Leptosiphon croceus</i>	- / - / 1B	Coastal bluff scrub / coastal prairie	(1) / 4
Rosa leptosiphon <i>Leptosiphon rosaceus</i>	- / - / 1B	Coastal bluff scrub	17 (1) / 25
Tamalpais lessingia <i>Lessingia micradenia</i> var. <i>micradenia</i>	- / - / 1B	Chaparral / grassland in serpentine	4 / 4
Maison's lilaepsis <i>Lilaepsis masonii</i>	- / SR / 1B	Fresh and brackish marsh	(1) / 55
Coast lily <i>Lilium maritimum</i>	- / - / 1B	Forest / prairie / coastal scrub / marshes / swamps	3 / 69
Point Reyes meadowfoam <i>Limnanthes douglasii</i> ssp. <i>sulphurea</i>	- / SE / 1B	Freshwater marsh / vernal pool / coastal prairie / seeps	11 / 12
Large-flowered linanthus <i>Linanthus grandiflorus</i>	- / - / 4*	Coastal bluff scrub	NA
Tidestrom's lupine <i>Lupinus tidestromii</i>	FE / SE / 1B	Coastal dunes	9 (1) / 19
Marsh microseris <i>Microseris paludosa</i>	- / - / 1B	Forest / woodland / coastal scrub / grassland	12 / 31
Elongate copper moss <i>Mielichhoferia elongata</i>	- / - / 2	Woodland	1 / 20
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	- / - / 1B	Woodland / seeps / pools / grassland / forest	1 / 45
Marin County navarretia <i>Navarretia rosulata</i>	- / - / 1B	Coniferous forest / chaparral	10 / 13

Common Name Scientific Name	Status: Federal/ State/CNPS	Habitat	Number of Documented Occurrences in Marin County/Number in State⁵
White-rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE / SE / 1B	Cismontane woodland / grassland (often on serpentine)	1 (5) / 14
North Coast phacelia <i>Phacelia insularis</i> var. <i>continentis</i>	- / - / 1B	Coastal bluff scrub / dunes	6 / 14
Point Reyes rein orchid <i>Piperia elegans</i> ssp. <i>decurtata</i>	- / - / 1B	Coastal bluff scrub only from Point Reyes National Seashore	2 / 2
Hairless popcorn flower <i>Plagiobothrys glaber</i>	- / - / 1A	Meadows / seeps / marshes / swamps	(1) / 9
North Coast semaphore grass <i>Pleuropogon hooverianus</i>	- / ST / 1B	Broadleafed upland forest / meadows and seeps / coniferous forest (open areas, mesic)	1 (4) / 20
Oregon polemonium <i>Polemonium carneum</i>	- / - / 2	Coastal prairie / coastal scrub / lower montane coniferous forest	3 / 16
Marin knotweed <i>Polygonum marinense</i>	- / - / 3	Marshes / swamps	13 / 17
Tamalpais oak <i>Quercus parvula</i> var. <i>tamalpaisensis</i>	- / - / 1B	Coniferous forest only on Mt. Tamalpais	9 / 9
California beaked-rush <i>Rhynchospora californica</i>	- / - / 1B	Bogs / marshes / seeps / coniferous forest	1 / 9
Point Reyes checkerbloom <i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	- / - / 1B	Marshes / swamps	21 / 31
Marin checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	- / - / 1B	Chaparral	3 / 7
Purple-stemmed checkerbloom <i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	- / - / 1B	Forest / prairie	2 / 19
Santa Cruz microseris <i>Stebbinsoseris decipiens</i>	- / - / 1B	Forest / chaparral / coastal scrub and prairie	2 (1) / 16
Tamalpais jewel-flower <i>Streptanthus batrachopus</i>	- / - / 1B	Coniferous forest / chaparral	5 / 5
Mt. Tamalpais jewel-flower <i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i>	- / - / 1B	Chaparral / grassland	16 / 16
Tiburon jewel-flower <i>Streptanthus niger</i>	FE / SE / 1B	Serpentine grassland	2 / 2
Thamnolia lichen <i>Thamnolia vermicularis</i>	- / - / -*	Chaparral / grassland	1 / 1

Common Name Scientific Name	Status: Federal/ State/CNPS	Habitat	Number of Documented Occurrences in Marin County/Number in State⁵
Two-fork clover <i>Trifolium amoenum</i>	FE / - / 1B	Grassland (sometimes serpentine) / coastal bluff scrub	3 (4) / 23
San Francisco owl's clover <i>Triphysaria floribunda</i>	- / - / 1B	Coastal prairie / grassland	32 / 41
Coastal triquetrella <i>Triquetrella californica</i>	- / - / 1B	Coastal bluff scrub / coastal scrub	2 / 11

Status Designations

Federal: FE = Listed as "endangered" under the federal Endangered Species Act.
FT = Listed as "threatened" under the federal Endangered Species Act.
SC = Species of Concern with National Marine Fisheries Service

State: SE = Listed as "endangered" under the California Endangered Species Act.
SR = Listed as "rare" under the California Endangered Species Act.
ST = Listed as "threatened" under the California Endangered Species Act.
FP = California fully protected species; individual may not be possessed or taken at any time.
SSC = Considered a California Species of Special Concern by the CDFG.

CNPS: 1A = Plants of highest priority; plants presumed extinct in California.
1B = Plants of highest priority; plants rare and endangered in California and elsewhere.
2 = Plants rare or endangered in California but more common elsewhere.
3 = Plants requiring additional information; a review list.
4 = Plants of limited distribution; a watch list.

* = Species with an asterisk are considered to meet the definition of special-status because they are maintained on the CDFG list of Special Animals or Special Plants and have a CNDDDB Element Ranking of 3 or less, or the CDFG has indicated that they may be of a relatively common bird species but their communal roost locations are considered a sensitive resource by the CDFG.

APPENDIX E
SOIL UNIT TYPES

Soil Unit Types

Soil Unit No.	Soil Unit Type
101	Ballard gravelly loam, 2 to 9 percent slopes
102	Ballard-Urban land complex, 0 to 9 percent slopes
105	Blucher-Cole complex, 2 to 5 percent slopes
109	Bressa Variant-McMullin Variant complex, 30 to 50 percent slopes
114	Cortina gravelly sandy loam, 0 to 5 percent slopes
129	Henneke stony clay loam, 15 to 50 percent slopes
143	Los Osos-Urban land-Bonnydoon complex, 15 to 30 percent slopes
144	Los Osos-Urban land-Bonnydoon complex, 30 to 50 percent slopes
148	Olompali loam, 2 to 9 percent slopes
149	Olompali loam, 9 to 15 percent slopes
150	Olompali loam, 15 to 30 percent slopes
158	Reyes clay
161	Saurin-Bonnydoon complex, 2 to 15 percent slopes
162	Saurin-Bonnydoon complex, 15 to 30 percent slopes
163	Saurin-Bonnydoon complex, 30 to 50 percent slopes
164	Saurin-Bonnydoon complex, 50 to 75 percent slopes
165	Saurin-Urban land-Bonnydoon complex, 15 to 30 percent slopes
168	Sheridan Variant coarse sandy loam, 30 to 50 percent slopes
169	Sheridan Variant coarse sandy loam, 50 to 75 percent slopes
179	Tocaloma-McMullin complex, 30 to 50 percent slopes
180	Tocaloma-McMullin complex, 50 to 75 percent slopes
181	Tocaloma-McMullin-Urban land complex, 15 to 30 percent slopes
182	Tocaloma-McMullin-Urban land complex, 30 to 50 percent slopes
185	Tocaloma-Saurin association, extremely steep
202	Urban land-Xerorthents complex, 0 to 9 percent slopes
203	Xerorthents, fill
204	Xerorthents-Urban land complex, 0 to 9 percent slopes

Source: United States Department of Agriculture, Natural Resources Conservation Service (NRCS)

APPENDIX F
COUNTY OF MARIN CWP LAND USE AND ZONING DESIGNATIONS

County of Marin CWP Land Use and Zoning Designations

Countywide Plan Land Use Designations	
Acronym	Meaning
MF2	Multiple Family Residential – 1-4 units/acre
MF4	Multiple Family Residential – 11-30 units/acre
PF	Public Facility
PD-Agriculture	Planned Designation – Agriculture and Environmental Resource Area are subcategories of the Planned Designation land use category, which is intended to enable the planning of reuse project through a master plan process that are consistent with policies promoting affordable housing, and innovative, environmentally friendly, transit-oriented and energy efficient designs.
Environmental Resource	
HOD	Housing Overlay Designation - 30 units/acre
PR	Planned Residential – 1 unit/1-10 acres
SF6	Single Family Residential – 4-7 units/acre
SF3	Single Family Residential – 1 unit/1-5 acres
SF4	Single Family Residential – 1-2 units/acre
SF5	Single Family Residential – 2-4 units/acre
GC	General Commercial - Floor Area Ratio 0.10 to 0.35
OC	Office Commercial/Mixed Use – F.A.R. = 0.10 to 0.35
OS	Open Space
NC	Neighborhood Commercial – 1-20 units/acre & F.A.R. 0.10 to 0.30
RC	Recreational Commercial – F.A.R. = 0.25 to 0.35
Zoning Districts	
Acronym	Meaning
CP	Planned Commercial: The CP zoning district provides for lower-intensity commercial areas for retail shopping, office facilities, and residential uses, in pleasing and harmonious surroundings, through the control of building coverage, height, parking and landscaping.
C1	Retail Business: The C1 zoning district provides for community shopping areas where retail stores and shops are the primary land use, together with similar and related compatible uses, including residential uses.
AP	Administrative and Professional: The AP zoning district provides for lower intensity commercial areas emphasizing offices, and similar and related compatible uses, including residential uses.
RCR	Resort and Commercial Recreation: The RCR zoning district is intended to create

	and protect resort facilities in pleasing and harmonious surroundings with emphasis on public access to recreational areas within and adjacent to developed areas.
RMP	Residential, Multiple Planned: The RMP zoning district is intended for a full range of residential development types within the unincorporated urban areas of the County, including single-family, two-family dwellings, multi-family residential development, and limited commercial uses in suburban settings, along with similar and related compatible uses, where site or neighborhood characteristics require particular attention to design detail provided through the Master Plan process (Chapter 22.44 (Master Plans and Precise Development Plans)).
B	Minimum Lot Size: The Minimum Lot Size “-B” combining district is intended to establish lot area, setback, height, and floor area ratio (FAR) requirements for new development that are different from those normally applied by the primary zoning district applicable to a site; and to configure new development on existing lots, where desirable because of specific characteristics of the area. Minimum lot sized are as follows” B1 6,000 sq.ft., B2 10,000 sq.ft., B3 20,000 sq.ft., B4 1 acre, B5 2 acres, B6 3 acres.
VCR	Village Commercial Residential: The VCR zoning district is intended to maintain the established historical character of village commercial areas; promote village commercial self-sufficiency; foster opportunities for village commercial growth; maintain a balance between resident-serving and non-resident-serving commercial uses; protect, without undue controls, established residential, commercial, and light industrial uses; and maintain community scale.
RE	Residential, Estate: The RE zoning district is intended for single-family residential areas where small-scale agriculture accessory to residential uses can be accommodated.
RMPC	Residential/Commercial Multiple Planned: The RMPC zoning district is primarily a residential district that allows commercial uses. The RMPC district is applied to areas identified by the Marin Countywide Plan as capable of accommodating increased density.
RA	Residential, Agriculture: The AP zoning district provides for lower intensity commercial areas emphasizing offices, and similar and related compatible uses, including residential uses.
RSP	Residential, Single-Family Planned: The RSP zoning district is intended for areas suitable for single-family residential neighborhood development in a suburban setting, along with similar and related compatible uses, where site or neighborhood characteristics require the attention to design detail provided through the Master Plan process (Chapter 22.44 (Master Plans and Precise Development Plans)).
R1	Residential, Single-Family: The R1 zoning district is intended for areas suitable for single-family residential neighborhood development in a suburban setting, along with similar and related compatible uses.
OP	Planned Office: The OP zoning district provides for lower-intensity commercial areas for administrative, professional office and residential uses, in pleasing and harmonious surroundings, through the control of building coverage, height, parking and landscaping.
PF	Public Facilities: The PF zoning/combining district is applied to land suitable for public facilities and public institutional uses, where a governmental, educational, or other institutional facility is the primary use of the site.
R2	Residential, Two-Family: The R2 zoning district is intended for single-family and two-family dwellings in suburban settings, along with similar and related compatible uses.

RX	Residential, Mobile Home Park: The RX zoning district is intended for areas of the County best suited for mobile homes within a mobile home park or mobile home subdivision with shared recreational and open space facilities, together with similar and related compatible uses.
A2	Agriculture, Limited: The A2 zoning district identifies areas suitable for commercial agricultural operations, and similar and compatible uses. The A2 zoning district is consistent with the Agriculture 3 land use category and several residential land use categories of the Marin Countywide Plan.
ARP	Agricultural, Residential Planned: The ARP zoning district identifies agricultural areas suitable for residential development, with varied housing types designed without the confines of specific yard, height, or lot area requirements, where the amenities resulting from this flexibility in design will benefit the public or other properties in the community.
OA	Open Area: The OA zoning district is intended for areas of the County committed to open space uses, as well as environmental preservation.

Source: Marin County Code Title 22 Development Code, 2012