

MARIN COUNTY COMMUNITY DEVELOPMENT AGENCY
PLANNING DIVISION

M E M O R A N D U M

TO: Marin County Board of Supervisors

FROM: Alex Hinds, Director

RE: Supplement to October 16, 2007 Staff Report

DATE: October 16, 2007

This supplement includes clarification to the October 16, 2007 Staff Report for the following items:

ATTACHMENT 1 – ISSUES FOR FINAL CONSIDERATION

Natural Systems And Agriculture Element

GOAL BIO-5

Baylands Conservation. Preserve and enhance the diversity of the baylands ecosystem, including tidal marshes and adjacent uplands, seasonal marshes and wetlands, rocky shorelines, lagoons, agricultural lands, and low-lying grasslands overlying historical marshlands.

The Baylands Corridor is described on Maps 2-5a and 2-5b. While the mapped areas include lands within incorporated cities, the policies, programs, and implementation measures related to the Baylands Corridor apply only within unincorporated Marin County.

The Baylands Corridor consists of areas previously included in the Bayfront Conservation Zones in the 1994 Countywide Plan as well as all areas included in Bayfront Conservation Zone overlays adopted since the 1994 Countywide Plan. The Baylands Corridor consists of land containing historic bay marshlands based on maps prepared by the San Francisco Estuary Institute. Based upon information contained in studies completed during the preparation of this Plan, the Baylands Corridor also includes associated habitat from San Francisco Bay to Highway 101 in the Las Gallinas Planning Area. Except in the Tam Junction area and at the Rowland Boulevard and Highway 101 interchange in Novato, the Baylands Corridor does not extend west of Highway 101.

Where applicable for large parcels (more than two acres in size) which are primarily undeveloped, and based upon site specific characteristics, an additional area of 300 feet or more of associated habitat is included. The inclusion of the 300 foot buffer is consistent with the minimum setback recommendations of the 1999 *Baylands Ecosystem Habitat Goals* report. This portion of the corridor serves to both recognize the biological importance of associated uplands adjacent to remaining tidelands and to provide the opportunity to improve habitat values as part of future restoration of historic tidelands.

Within the Baylands Corridor, potential residential density and commercial floor area ratios shall be calculated at the low end of the applicable ranges. This provision does not apply to small parcels (two acres or less in size) which were legally created prior to January 1, 2007. Within PD-AERA designation, the density and floor area ratios shall be as specified for those areas. Section 22.14.060 of the Development Code should be updated to reflect these policies.

For parcels of all sizes, existing lawful uses are grandfathered. For properties two acres or less in size within the Bayfront Conservation Zone on January 1, 2007, no additional regulations are imposed than previously applied to such lands. Creation of the Baylands Corridor will not subject currently allowed activities to additional County regulation. Such activities include repair and maintenance of bank erosion protection (riprap, plantings, etc.) and docks, levees or dredging of existing dredged channels (such as Novato Creek) including existing dredge disposal sites.

Within the Baylands Corridor, public improvements ~~on airport~~ at Gness Field and immediately adjacent properties pursuant to an approved Airport Master Plan or Airport Land Use Plan will not be subject to additional Baylands protection regulations. Within the Baylands Corridor, improvements at the San Rafael airport, pursuant to an approved Airport Master Plan and the City of San Rafael General Plan and other applicable City regulations and which are consistent with the 1983 Declaration of Restrictions, will not be subject to additional County Baylands protection regulations.

The provisions of TR-1.7, *Direct Aviation Uses to Appropriate Locations*, and TR-1.p, *Limit Aviation Uses*, apply to airport facilities which are within the Baylands Corridor. Efforts to restore or enhance wetlands in the vicinity of the San Rafael Airport-Gness Field shall be consistent with an approved Airport Master Plan or Airport Land Use Plan and applicable FAA regulations. Efforts to restore or enhance wetlands in the vicinity of the San Rafael Airport or Gness Field shall be consistent with the City of San Rafael's General Plan and other applicable City regulations and shall also be consistent with avoid creating possible safety concerns considerations related to aircraft operations. and shall be consistent with applicable FAA guidelines.

Detailed resource mapping and analysis should be undertaken to determine whether it is appropriate to include additional associated habitats located on large primarily undeveloped lands within the 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 baylands; (4) specify criteria and thresholds used in determining the extent of upland habitat essential to the baylands ecosystem; and (5) make recommendations on an appropriate biologically based boundary if the Baylands Corridor is to be expanded; (6) Identify lands that could be restored to provide habitat, or that 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 regulations in effect at that time.

BIO-5.i *Conduct Mapping and Analysis.* Undertake detailed resource mapping and biological analysis to determine whether it is appropriate to include additional associated habitats located on large primarily undeveloped lands within the Baylands Corridor, ~~particularly those areas north of Novato and east of Highway 101.~~ 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 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 baylands; (4) specify criteria and thresholds used in determining the extent of upland habitat essential to

the baylands ecosystem; and (5) make recommendations on an appropriate biologically based boundary if the Baylands Corridor is to be expanded. (6) Identify lands that could be restored to provide habitat, or that 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 regulations in effect at that time.

The language from TR-1.p was repeated while Policy TR-1.7 was inadvertently missing from the staff report. The following correction should be made:

TR-1.7 ~~*Limit Aviation Uses.* Maintain the County Airport at Gness Field as the primary civilian airport facility in the county and limit its use to general aviation, emergency flights and similar public uses, in accordance with the an approved Airport Master Plan or Airport Land Use Plan for Gness Field (1989) and current technological conditions. Continue to allow the private San Rafael Airport facility consistent with the 1993 Declaration of Restrictions and the heliport and seaplane bases in Richardson Bay to provide water-oriented visitor and commercial uses. Any proposed helipad shall be subject to all applicable CEQA requirements prior to consideration.~~

Direct Aviation Uses to Appropriate Locations. Maintain Gness Field as the County's civilian airport facility and limit its use and expansion in accordance with the adopted Airport Master Plan. Continue to allow the private San Rafael Airport consistent with the 1983 1993 Declaration of Restrictions and the Richardson Bay seaplane base and helipad. Require additional aviation facility proposals to conduct site-specific environmental analysis prior to consideration.

TR-1.p *Limit Aviation Uses.* Maintain the County Airport at Gness Field as the primary civilian airport facility in the county and limit its use to general aviation, emergency flights and similar public uses, in accordance with the an approved Airport Master Plan or Airport Land Use Plan for Gness Field (1989) and current technological conditions. Continue to allow the private San Rafael Airport facility consistent with the 1983 1993 Declaration of Restrictions, the San Rafael General Plan and other applicable City land use regulations, and the heliport and seaplane bases in Richardson Bay to provide water-oriented visitor and commercial uses. Any proposed helipad shall be subject to all applicable CEQA requirements prior to consideration.

Biological Resources

BIO-1.7 was tentatively accepted on September 11, 2007 (See Attachment 2.A). Further modifications are highlighted below:

BIO 1.7 Remove Invasive Exotic Plants. Require the removal of invasive exotic species, to the extent feasible, when considering applicable measures in discretionary permit approvals for non-agricultural development projects, **including uses accessory to agriculture**, and include monitoring to prevent re-establishment in managed areas.

Agriculture and Food

AG-1.a was tentatively accepted on September 11, 2007 (See Attachment 2.A). Further modifications are highlighted below:

AG-1.a Residential Building Sizes in Agricultural Areas. The size of residential structures has been or will be dealt with in Community Plans or Specific Plans. Since most agricultural areas are located outside of community plan boundaries and no specific plans are anticipated in agricultural areas, standards concerning residential building sizes are covered in this program. The primary purpose of this program is to ensure that lands designated for agricultural use do not become defacto converted to residential use, thereby losing the long-term productivity of such lands. It is also a purpose of this program to enable the inter-generational transfer of agricultural lands within farm families so that the long-term productivity of such lands is maintained.

- i. Residential development shall not be allowed to diminish current or future agricultural use of the property or convert it to primarily residential use
- ii. Agricultural worker housing, up to 540 square of garage space for each dwelling unit, agricultural accessory structures and up to 500 square feet of office space used as a home occupation in connection with the agricultural operation on the property shall be excluded from this policy.
- iii. Any proposed residential development above 4,000 square feet shall be subject to design review and must ensure that the mass and scale of new or expanded structures respect environmental site constraints and the character of the surrounding area. Such development must be compatible with ridge protection policies (see DES-4.e) and avoid tree-cutting and grading wherever possible.

Such proposed residential development is also subject to discretionary review. The County shall exercise its discretion in light of **some or all of** the following criteria and for the purpose of ensuring that the parcel does not defacto convert to residential use:

- (1) The applicant's history of production agriculture in Marin or the North Bay Region;
 - (2) How the long term agricultural use of the property will be preserved, for example, whether there is an existing or proposed dedication or sale of a permanent agricultural easements or other similar protective agricultural restrictions such as Williamson Act contract or farmland security zone
 - (3) Whether long term capital investment in agriculture and related infrastructure, such as fencing, processing facilities, market mechanisms, agricultural worker housing or agricultural leasing opportunities have been established or are proposed to be established;
 - (4) Whether sound land stewardship practices, such as riparian habitat restoration, water recharge projects, fish friendly farming practices or erosion control measures have been or will be implemented;
 - (5) Whether the proposed residence will facilitate the ongoing viability of agriculture such as through the intergenerational transfer of existing agricultural operations.
- iv. In no event shall a single family residence subject to these provisions exceed 8,500 square feet in size.

The square footage limitations noted in the above criteria represent potential maximum dwelling unit sizes and do not establish a mandatory entitlement or guaranteed right to development.

Trails

GOAL TRL-1

Trail Network Preservation. Preserve existing trail routes designated for public use on the Marin Countywide Trails Plan maps, and expand the public trail network for all user groups, where appropriate. Facilitate trail connections that can be used for safe routes to school and work.

TRL-1.2 Expand the Countywide Trail System. Acquire additional trails to complete the proposed countywide trail system, providing access to or between public lands and enhancing public trail use opportunities for all user groups, including especially multi-use trails, as appropriate.

TRL-1.b Designate Trail Use Consistent with Agency Missions. Consider developing-Determine criteria to determine public use of trails consistent with each agency's mission and policies. Explore and share information on innovative methods for safety and conflict resolution, such as on shared-use trails.

- TRL-2.c *Eliminate Trail Redundancy* Identify, abandon, and restore redundant or otherwise unnecessary trails or trail segments. unless they provide alternate routes that facilitate user safety.
- TRL-1.h *Encourage Sale or Voluntary Dedication.* Encourage project sponsors to sell or grant trail easements and/or the improvement of trails in conjunction with development proposed on lands traversed by trail connections shown on the adopted Marin Countywide Trails Plan maps.
- TRL-2.I *Ensure Trail Maintenance Funding.* Strive to identify and secure consistent sources of funding for trail maintenance. Develop a policy for funding that explores trail sponsorship, trail naming, trail adoption, trail maintenance annuities, jurisdictional cooperation, and other sustainable methodology.

Built Environment Element

Community Development

CD-2.p was initially considered on September 25, 2007 (See Attachment 2.B). Further modifications are highlighted below:

CD-2.p (new) *Encourage Community Based Planning for All Larger Scale Residential Development Issues of Community-Wide Interest. Encourage and support Undertake a community-based planning approach for all larger scale residential development projects with broad community-wide interest. The community-based planning approach-process should promote cooperation and collaboration.*

CD-2.11 **Promote Diverse Affordable Housing Strategies.** Promote a diverse set of affordable housing strategies to convert existing market rate units to permanently convert affordable units in addition to building affordable housing in appropriate locations.

Policy **CD-2.3** was tentatively accepted on September 25, 2007 (see Attachment 2.B). Further modifications are highlighted below:

CD-2.3 Establish a Housing Overlay Designation

Traffic Impact Areas as Determined by Screenlines and HOD Site Criteria (See Exhibit 5.0-16)	HOD Unit Potential for Traffic Impact Areas (including Density Bonus Units)	Suggested Qualifying Sites Within Traffic Impact Areas
Screenline 7:	Up to 110	<ul style="list-style-type: none"> ○ Marinwood Shopping Center (up to 50 - 100 units) ○ Idylberry School (up to 10 units) ○ Other qualifying sites
Screenline 8:	Up to 25	<ul style="list-style-type: none"> ○ Gallinas Elementary School ○ Other qualifying sites
Screenline 23:	Up to 88	<ul style="list-style-type: none"> ○ College of Marin (up to <u>25</u> units = limited to student or workforce employees of the College ○ Marin General Hospital (up to 50 total units if associated with reconstruction or reuse, of which up to 25 units must be designated senior housing and up to 25 units designated for, and limited to 25 senior, affordable, workforce employees, or special needs housing) ○ Toussin (up to 13 units) ○ Other qualifying sites
Screenline 22:	Up to 10	<ul style="list-style-type: none"> ○ Oak Manor ○ Other qualifying sites
Screenline 13:	Up to 50	<ul style="list-style-type: none"> ○ California Park (San Rafael) ○ Other qualifying sites
Screenline 17:	Up to 100	<ul style="list-style-type: none"> ○ Strawberry Shopping Center ○ Other qualifying sites
Screenline 19:	Up to 50	<ul style="list-style-type: none"> ○ Fireside Motel
Screenline 21:	Up to 150	<ul style="list-style-type: none"> ○ Marin City Shopping Center ○ Other qualifying sites
	Up to 583	Units on named HOD sites
	Total: Up to 658	Total Potential HOD Units including Density Bonus Units

Community Design

Modifications to *DES-4.e* are highlighted below to ensure adjustments can be made to the Ridge and Upland greenbelt as appropriate.

DES-4.e *Protect Views of Ridge and Upland Greenbelt Areas.* Employ a variety of strategies to protect views of Ridge and Upland Greenbelt areas, including the following:

- Identifying any unmapped ridgelines of countywide significance, both developed and undeveloped, and **adjusting the adding them to the adopted County Ridge and Upland Greenbelt Areas map as appropriate;**
- Amending the Development Code and County zoning maps to designate a suburban edge on all parcels contiguous to the City-Centered Corridor that abut the Ridge and Upland Greenbelt, and requiring that those parcels develop at rural densities with visually sensitive site design;
- Rezoning Ridge and Upland Greenbelt lands to the Planned District category and adjacent buffer areas to a transitional district, thereby subjecting them to County Design Review Requirements that include hillside protection;
- Requiring buildings in Ridge and Upland Greenbelt areas to be screened from view by wooded areas, rock outcrops, or topographical features (see DES-3.b); and
- Calculating density for Ridge and Upland Greenbelt subdivisions at the lowest end of the General Plan designation range.

Transportation

TR-3.i (new) was initially considered on September 25, 2007 (see Attachment 2.B). Further modifications are highlighted below:

TR-3.i (new) Provide Shuttle Service to Transit. Support the creation of shuttle service, **corridor trolleys**, and/or jitneys to collect riders for public transit (see AIR-3.1, AIR-4.b) Consider providing such service for inter city-county streets.

Planning Areas

St. Vincent's and Silveira

An issue has arose whether **Map 3-34**, *St. Vincent's and Silveira Environmental Features*, contains the most up to date information regarding environmental hazards. As a result, staff now recommends **removing Map 3-34** from the Countywide Plan.

SV-2.5 **Establish Land Use Categories.** The St. Vincent's/ and Silveira **area properties are is** assigned the Planned Designation—Agricultural and Environmental Resource Area land use category. Potential uses include agriculture and related uses, residential development, education and tourism, places of worship, institutional, and small-scale hospitality uses, as described more fully in SV-2.3.

In addition to existing uses, a total of up to 221 dwelling units for the combined St. Vincent's and Silveira sites may be allowed consisting of up

to 121 market-rate dwelling units plus up to 100 additional dwelling units for very low and/or low income households. ~~Senior units may include a combination of apartment style and congregate care units at varying degrees of affordability. The senior units shall be within the total allowable (with density bonus) dwelling unit cap of 221 units.~~ Dwelling units shall be allocated proportionally to the respective St. Vincent's and Silveira areas based on the total acreage of the St. Vincent's and Silveira sites as determined by the County at the time of the first application for development of more than four units or their equivalent.

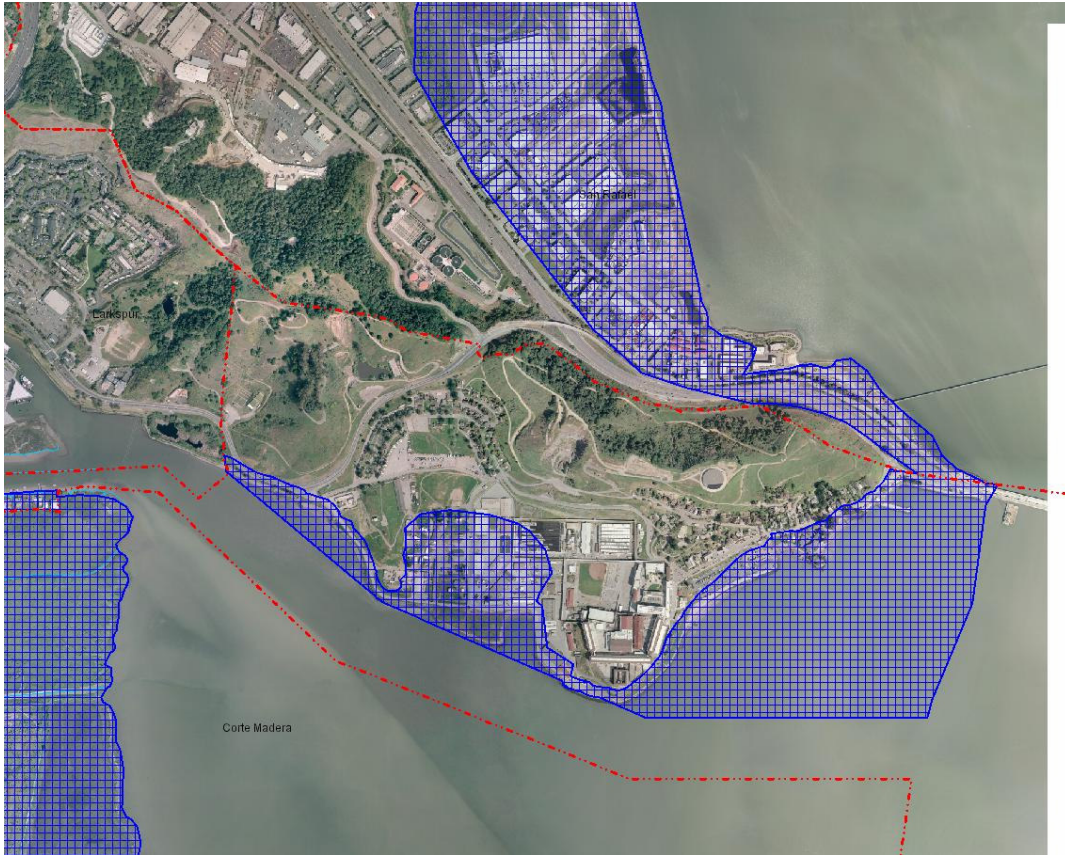
Within these standards, the Master Plan approval process will determine the specific development suitable for these properties taking into consideration environmental constraints and the community benefits associated with providing a higher ratio of housing affordable to low and very low income persons and smaller residential unit sizes. Pursuant to the PD-Agricultural and Environmental Resource Area land use category, non-residential uses, assisted senior housing, or other senior care facilities may be permitted in lieu of some dwelling units, provided that the impacts of the senior care and other non-residential development on peak hour traffic do not exceed those projected for ~~the~~ all residential development being replaced plus existing baseline trips.

Policy SV-5.2 has been modified to reflect the statement by representatives of the St. Vincent property that - in order to meet the need of our aging population and to reduce vehicle trips - they propose to limit their proposed market rate housing units to seniors and to also include below market rate housing for both employees and seniors. Thus the following revised text is recommended to clarify that a diverse supply of housing will be provided for seniors at all income levels, in addition to serving a range of supportive care needs as follows:

SV-5.2 **Encourage Senior Housing.** Anticipate the aging of Marin by creating a vibrant senior community serving a range of housing **and income from very low to market rate** supportive care needs.

San Quentin and the Baylands Corridor

Portions of the San Quentin site were in the 1994 Bayfront Conservation Zone. These areas were subsequently added to the Baylands Corridor when the Planning Commission recommended that all areas previously in the Bayfront Conservation Zone (General Plan designation and zoning) be added to the Baylands Corridor. The map below shows the proposed location of the Baylands Corridor in the vicinity of San Quentin including historic baylands that have since been filled.



Baylands – San Quentin

IMPLEMENTATION CHARTS

In consultation with the Department of Public Works, the following changes to bicycle and pedestrian programs in the Transportation Program Implementation chart are proposed for clarification:

Program	Responsibility	Potential Funding	Priority	Time Frame
TR-2.a - Encourage Bicycling.	DPW, TAM, CDA, H&HS, <u>M.C.T.D.</u>	Existing budget, grants, transportation sales tax ³	High	Ongoing
TR-2.b - Adopt Standards for Pedestrian and Bicycle Access.	CDA	Existing budget	Medium	Medium term
TR-2.c - Support Bicycle Stations and Consider Attended Parking.	DPW, CDA <u>MCBC</u>	General fund, grants, transportation sales tax ³	Medium	Ongoing
TR-2.d - Fund Projects.	DPW, TAM, <u>M.C.T.D.</u>	General fund, grants, transportation sales tax ³	FBD Medium	Ongoing
TR-2.e - Prioritize Completion of the North-South and East-West Bikeways.	DPW, TAM, SMART, CalTrans, <u>MCBC</u> , Cities and Towns	Grants, transportation sales tax ³ <u>general fund</u>	Medium	Long term

TR-2.f - Develop “Rails with Trails.”	DPW, TAM, SMART, Cities and Towns	Will require additional grants or other revenue ²	TBD Medium	Long term
TR-2.g - Add Bicycle Lanes.	DPW, TAM	Will require additional grants or other revenue ²	TBD Medium	Long term
TR-2.h - Encourage Innovative Bicycle Lane Design.	DPW, TAM	General fund, grants, traffic mitigation fees, ³ transportation sales tax ³	Medium	Ongoing
TR-2.i - Renovate Tunnels Along the Planned North-South Bikeway into Multi-Use Pathways.	DPW, TAM	Federal funding and will require additional grants or other revenue ²	TBD Medium	Long term
TR-2.j - Ensure Safe Routes to Schools.	DPW, TAM, <u>M.C.T.D.</u>	Transportation sales tax and will require additional grants or other revenue ²	TBD High	Long term
TR-2.k - Consider Pedestrian Needs.	DPW, TAM	Federal funding and will require additional grants or other revenue ²	TBD Medium	Long term
TR-2.l - Consider Non-motorized Access in Transportation Projects.	DPW, TAM	Will require additional grants or other revenue ²	TBD High	Long term
TR-2.m - Explore Funding Options.	DPW, TAM, <u>M.C.T.C.</u>	General fund, grants, ³ transportation sales tax ³	High	Ongoing
TR-2.n - Implement Non-Motorized Pilot Transportation Program.	DPW, TAM	TAM, federal, State, and local funding Transportation sales tax	TBD High	Long term Ongoing
TR-3.a - Increase Bus and Ferry Services.	Marin County Transit District, Golden Gate Bridge Transit District	Will require additional grants or other revenue ²	TBD	Long term

FLOODING

Staff has also received inquires as to how the Plan addresses flooding issues in light of AB 162 and similar legislation. Map 2-12, *Flooding*, shows the area of the 100 year floodplain and areas between limits of the 100 year and 500 year floodplain. In addition, the following goals, policies, and programs from the Countywide Plan address the issue of development in the floodplain as well as how sea level rise will be incorporated into the planning process.

NATURAL SYSTEMS & AGRICULTURE ELEMENT

Environmental Hazards

GOAL EH-3 Safety from Flooding and Inundation. Protect people and property from risks associated with flooding and inundation. (Also see the Public Facilities and Water Resources sections.)

- 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
- 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.
- 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.
- 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.
- EH-3.b** *Update Maps.* 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.
- EH-3.c** *Revise Regulations.* Consider expanding the F-1 and F-2 Floodway Districts to include areas of the unincorporated county that lie within primary and secondary floodways, and/or establishing an ordinance that will ensure that land use activities in flood hazard areas will be allowed only in compliance with federal standards.
- EH-3.d** *Alert Property Owners.* Notify owners of property in areas with inundation or flooding potential regarding those hazards when they seek development review or other related County services.
- EH-3.e** *Restrict Development in Flood Prone Areas.* Continue to regulate development in Special Flood Hazard areas by applying the County's Floodplain Management Ordinance, Federal Emergency Management Agency regulations, and environmental review pursuant to the California Environmental Quality Act (CEQA).
- EH-3.g** *Locate Critical Facilities Safely.* Amend the Development Code to prohibit placement of public safety structures within tsunami inundation or flood-prone areas.
- 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.

- 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.
- 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.
- 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.
- EH-3.p** *Assess the Cumulative Impacts of Development in Watersheds on Flood Prone Areas.* Consider the effects of upstream development, including impervious surfaces, alteration of drainage patterns, reduction of vegetation, increased sedimentation and others on the potential for flooding in low-lying areas. Consider watershed studies to gather detailed information.
- EH-3.q** *Develop Watershed Management and Monitoring Plans.* Develop watershed-specific, integrated watershed management and monitoring plans that include development guidelines, natural flood mitigation measures, biomechanical technologies, and the enhancement of hydrological and ecological processes. The guiding principles of the watershed plans shall equally consider habitat and species protection and monitoring as well as the protection of human life and property.

Atmosphere and Climate

- AIR-5.b** *Study the Effect of Climate Change.* Determine how climate change will affect the following:

Natural Systems: Changes in water availability, shifting fog regimes (and the effect on coastal redwoods and fire ecology), temperature changes and shifting seasons.

Biological Resources: Changes in species distribution and abundance in estuary ecosystems resulting from salinity changes and flooding. For marine ecosystems determine changes in distribution and abundance resulting from warmer waters, rising sea level, and changes in ocean currents and freshwater inflows.

Environmental Hazards: Runoff, fire hazards, floods, landslides and soil erosion, and the impact on coastal and urban infrastructure.

Built Environment: Effect of flooding and rising sea level on sewage systems, property and infrastructure.

Water Resources: Runoff, changes in precipitation, increases and decreases in drought, salinity changes, sea level rise and shifting seasons.

Agricultural and Food Systems: Food supply, economic impacts and effect on grazing lands.

Public Health: Temperature-related health effects, air quality impacts, extreme weather events, and vector-, rodent-, water-, and food-borne diseases.

AIR-5.h *Implement Floodplain Ordinances.* Continue to implement ordinances that regulate floodplain development to ensure that project-related and cumulative flooding impacts are minimized or avoided through conditions of project approval as required by the ordinances.

AIR-5.i *Modify Construction Standards.* Amend the Marin County Code to include construction standards for areas threatened by future sea level rise.

Biological Resources

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 subject to County approval or defer to the mitigations generated during the required environmental review 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 runoff). The applicant may be required to participate in a peak stormwater runoff management program developed pursuant to new Program BIO-4.20.

Water Resources

GOAL WR-1 Healthy Watersheds. Achieve and maintain proper ecological functioning of watersheds, including sediment transport, groundwater recharge and filtration, biological processes, and natural flood mitigation, while ensuring high-quality water.

WR-1.3 Improve Infiltration. Enhance water infiltration throughout watersheds to decrease accelerated runoff rates and enhance groundwater recharge. Whenever possible, maintain or increase a site's predevelopment infiltration to reduce downstream erosion and flooding.

Conclusion: After reviewing the existing policies and programs in light of the new legislation, staff has determined that this issue is more than adequately covered in the Draft CWP. However, should your Board wish to further address this topic, **Program EH.3.b** could be revised as underlined below to more closely track this legislation.

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.