

MARIN COUNTY
COMMUNITY DEVELOPMENT AGENCY
ALEX HINDS, DIRECTOR

March 19, 2007

Marin County Planning Commission
3501 Civic Center Drive
San Rafael, California 94903

SUBJECT: Public Hearing on Draft Marin Countywide Plan Update, Natural Systems and Agriculture Element

Dear Planning Commission Members:

RECOMMENDATIONS:

1. Review the administrative record and conduct a public hearing
2. Complete straw votes on all topics pertaining to the Natural Systems and Agriculture Element
3. Continue the public hearing to Monday, April 9, 2007 at 9:30 a.m.

Today's meeting is the fifth public hearing on the Draft Marin Countywide Plan (CWP) Update. This hearing will focus on continued issues or unresolved topics not previously covered in the *Natural Systems and Agriculture* Element. Subsequent meetings will continue to progress through the CWP Update sequentially with this being the final hearing scheduled for the *Natural Systems and Agriculture* Element.¹

Following today's public hearing, it will be necessary to continue the public hearing to a specific date and time. In order to keep to the schedule to the extent possible, staff is recommending that each topic area be reviewed as follows:

Staff presentation and introduction of topics of discussion

1. Public testimony on today's topics (limited to three minutes or less per individual or 6 minutes or less per organization)
2. Close public testimony and conduct Commission deliberations
3. Conduct straw votes on staff recommendations. Straw votes are non binding and provide direction to staff to return with specific material to present for the Commission's final recommendation.
4. Summary of tentative recommendations (straw votes) from the March 12, 2007 meeting.

Direction is requested from the Commission as each topic is addressed in order for staff to prepare for the finalization of the Commission's recommendation on the CWP and FEIR by July 23, 2007.

The upcoming dates and major topics of discussion include:

¹ Please note where revisions to policy and program language are proposed, some additional editing for clarity, consistency, and the ability to effectively administer may be appropriate prior to the Commission's final recommendation. This is particularly applicable to several mitigations proposed in the Draft Environmental Impact Report (DEIR).

<u>Date</u>	<u>Topic</u>
April 9, 2007	Housing Overlay Designation (HOD), Circulation, Buildout, and Water
April 16, 2007	Other Built Environment Topics
April 23, 2007	Planning Areas, & Ridge and Upland Greenbelt
April 30, 2007	Socioeconomic Element

DISCUSSION

Overview – Natural Systems and Agriculture Element Topics

The Natural Systems and Agriculture Element addresses watershed functions, water quality, streams, riparian habitat, wetlands, baylands, open space, trails, and agriculture. The topics covered in this portion of the Countywide Plan include:

- Biological Resources
- Water Resources
- Environmental Hazards
- Atmosphere and Climate
- Open Space
- Trails
- Agriculture and Food

Discussion of Other Major Natural Systems and Agriculture Issues

This discussion focuses on issues continued from prior hearings and other topics not previously resolved in the earlier *Natural Systems and Agriculture* Element hearings. Each issue will generally include a discussion about key concerns, impacts identified in the Environmental Impact Report, and staff recommendation(s). These issues are as follows:

Issues continued from the February 26 SCA/WCA Planning Commission Hearing:

ISSUE 1 (Prior Issue 1; SCA/WCA): *A. Should undergrounded or culverted creeks (i.e. man-made ditches) be subject to 1 SCA regulations? B. Should a setback be required from culverted creeks? C. Should a minimal setback be required on small lots?*

Discussion

The Planning Commission directed that the following proposals, along with a staff recommendation, be brought back for further consideration *at the March 19th hearing*:

- Addition of a 20 foot setback requirement from undergrounded, culverted or ephemeral creeks if currently required by the Dept. of Public Works; and
- Language modifying the definition of a SCA to capture the concept that if evidence exists that the drainage ditch was once part of a natural drainage system or contains sensitive habitat values, application of SCA policies may be appropriate on a case-by-case basis.

Although, SCA setback-related policies currently do not apply to undergrounded or culverted creek segments, several proposed policies encourage restoration of culverted streams, including: Policies **BIO-**

4.4 Promote Natural Stream Channel Function, BIO-4.5 Restore and Stabilize Stream Channels, BIO-4.8 Reclaim Damaged Portions of SCAs, and BIO-4.9 Restore Culverted Streams.

Furthermore, the Department of Public Works administers Section 24.04.560 of the Marin County Code (MCC) which states that structures shall be set back from creeks, channels and other major waterways at least 20 feet from top of bank or 20 feet plus twice the channel depth measured from the toe of the near embankment, whichever is greater. This applies to all structures such as buildings, pools and retaining walls, but does not apply to fences (wood or metal posts), patios and other flat work, etc. that do not need a building permit. An applicant can also apply for an exception (MCC Chapter 24.15) to the provisions of Section 24.04.560 of the MCC.

Section 24.04.560 of the MCC has not been applied to culverts, whether or not the segment was once considered a creek. New structures are typically not allowed on top of culverts to provide for future maintenance. By DPW practice, where a proposed building is to be constructed on top of an existing culvert, that segment of the culvert is typically rerouted around the new building footprint. There is no minimum setback requirement between structures and either an existing or rerouted culvert.

Regarding the issue of protecting modified natural waterways, the definition of Stream Conservation Area (SCA) in the Glossary of the CWP Update reads “A setback from the bank of a natural watercourse, which is intended to protect the active channel, water quality, and flood control functions and associated fish and wildlife habitat values along streams.” The definition of stream reads “A natural drainage channel with an established bed and bank. These include perennial, intermittent, and ephemeral streams. Perennial and intermittent streams, shown as solid or dashed blue lines f(or purple lines) on the most appropriate USGS quadrangle sheets, and ephemeral streams as defined below, are subject to Stream Conservation Area protection policies. See “*Stream Conservation Area (SCA)*.”

Recommendations

Issues 1A and 1B: Staff does not recommend that underground or culverted creek sections be subject to SCA regulations including setbacks, although we do support strengthening **Bio 4.9, Restore Culverted Streams**, to provide additional emphasis on restoring culverted reaches of natural waterways. Requiring restoration of culverted drainages could affect a considerable land area due to the space required to accommodate restored open channels and any proposal to reopen existing culverts must consider the potential erosion and flooding implications, in addition to the benefits of the improved aquatic and terrestrial habitat values. Reopening a culvert could have serious implications on changes in the hydraulic head of the drainage system, which could contribute to severe erosion or flooding unless detailed study provides appropriate design recommendations and demonstrates the restoration would not be problematic. Revisions to Policy **BIO-4.9, Restore Culverted Streams**, are recommended below.

BIO-4.9, Restore Culverted Streams. Replace storm drains and culverts in SCAs with natural drainage and flood control channels whenever feasible. ***Reopening and restoring culverted reaches of natural drainages should be considered as part of review of development applications on parcels containing historic natural drainages where sufficient land area is available to accommodate both the reopened drainage and project objectives. Detailed hydrologic analysis may be required to address possible erosion and flooding implications of reopening the culverted reach and in making appropriate design recommendations. Incentives should be provided to landowners in restoring culverted, channelized or degraded stream segments.*** Where culverts interfere with fish migration but replacement is not possible, modify culverts to allow unobstructed fish passage.

New Program **BIO-4.m**. As part of the expanded SCA ordinance, consider additional policy language to encourage reopening culverted reaches and restoring channelized reaches of natural drainages. This may include adjustments in minimum standard setback distances where site constraints prevent complete compliance along the restored or enhanced channel reach. A detailed analysis may be required to demonstrate restoration feasibility and address possible effects on erosion and flooding potential. Incentives may be available to landowners to encourage restoration and enhancement efforts.

Issue 1C: Staff supports including in the CWP the same minimum setback (20 ft. minimum) required by the Department of Public Works (DPW) to parcels less than .5 acres and will draft more precise language before the March 19th public hearing.

In addition, staff does not support modifying the definition of the SCA at this time to apply to water features that were thought to be once a part of a natural drainage system. Instead, we note that this issue may already be considered on a case by case basis if appropriate during the review of discretionary permits. Finally, further clarification in the development code could be considered at the time it is being updated of the intent to protect stream functions of both natural and modified streams. For example, one of the issues that could be considered at that time would be whether to treat differently features constructed exclusively for storm drainage functions as recommended by DPW.

ISSUE 2 (Prior Issue 6: SCA/WCA) 2a. Should additional incentives such as reduced fees be provided to homeowners, who wish to improve habitat within the SCA in the most environmentally sensitive manner possible (2b) and/or apply best management practices to SCA enhancements.

Discussion

The Planning Commission directed additional incentive language be added (see underlining) and that Staff will bring back at the March 19 hearing modifications to recommended mitigation measures **BIO-4.a** and (**Issue 2B**) to clarify that there should be no additional vertical or horizontal incursion into an SCA associated with a building addition. The Planning Commission's concept was as follows:

BIO-4.a *Adopt Expanded SCA Ordinance.* Adopt a new SCA ordinance that would implement the SCA standards for parcels that are subject to conventional zoning designations especially those traversed by or adjacent to a mapped anadromous fish stream and tributary. Such an ordinance could, by way of example, require compliance with the incorporation of best management practices into the proposed project and could consider modest additions to existing buildings that would not result in significant impact to riparian resources, such as additions that do not exceed 500 square feet of total floor area and which do not increase the existing encroachment into the SCA either vertically or horizontally provided a site assessment first confirms the absence of adverse impacts to riparian habitats. Buffer criteria for smaller developed parcels within the City-Centered Corridor should allow flexibility based on site constraints, opportunities for avoidance, presence of sensitive biological resources, and options for alternative mitigation. As part of the new ordinance, consider including additional incentives, such as reduced fees or other similar incentives, to reduce the extent of existing development within a SCA, or improve conditions that may be impacting sensitive resources

Recommendation

Issue 2A. Staff supports the Planning Commission recommendation to consider additional incentives as noted in the underlining above. **Issue 2B.** While Staff does not support this recommendation, wording has been provided at your request to the above revised **BIO-4.a**, that would address the Commission's concern over both vertical and horizontal incursion into an SCA. Please note that not allowing a 500 square foot second story addition could severely constrain the ability for modest additions to very small residences in the SCA.

ISSUE 3 (Prior Issue 10; SCA/WCA): Definition of Wetlands - Use consistent definition east and west Marin.

Discussion

The Planning Commission directed that this issue be brought back at the March 19th hearing along with a recommendation for a consistent definition for wetlands.

The CWP currently defines wetlands as "Areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions..." With the exception of the Coastal Zone, the County defers to the responsible regulatory agencies in defining jurisdictional wetlands, determining the limits of regulatory wetlands, and handling related matters of administration and appeals. Even in the Coastal Zone where the County has adopted the broader definition of wetlands under Title 14, Section 13577(b) of the California Code of Regulations, the California Coastal Commission serves as the final appeals body over the limits of regulated wetlands, and provides oversight through administration of the Coastal Act. In the Coastal Zone, an area is considered a wetland when either hydrophytic soils or wetland indicator plants are present, not a combination of the three criteria of soils, vegetation, and hydrology as is typically required under Corps definitions. This provides for greater protection of certain types of wetlands, particularly where vegetation is lacking and soils are poorly developed or absent as a result of frequent or marked fluctuations in surface water levels and other factors. This broader definition under the Coastal Act also provides for protection of hydrologically isolated wetlands such as seeps or seasonal wetlands, which are now considered exempt from Corps jurisdiction under Supreme Court rulings, but the RWQCB has generally assume regulatory authority for these hydrologically isolated features.

By expanding the definition of wetlands throughout the County, using the Cowardin definition or another broader definitions of wetland habitat, Marin County would be assuming full responsibility for defining, administering, and reviewing all wetland matters. The Corps could still be involved in the wetland verification process and would continue to be a responsible agency for projects involving regulated wetlands, but they would provide no assistance in defining, determining, or regulating wetlands outside their jurisdiction. Towards this end, Marin County could somewhat reduce the burden on its staff by retaining outside consultants to perform work that might otherwise have been performed by the Corps and charging applicants for the cost of those consultants. Staff and the Planning Commission would still be required to review the consultant work product, however.

The Corps methodology in delineating wetlands is not without problems, but it does consider all three criteria in making a determination on the limits of jurisdiction. Using only a single criteria of either vegetation or soils, as currently suggested by some, would greatly extend the limits of potential jurisdictional wetlands. This could have substantial implications on land use throughout the County, and should be more fully understood before drafting any policy changes. Alternatively, the County could consider using the approach used by San Mateo County. That County uses the Coastal Commission's regulatory definition of wetlands in both its LCP and the General Plan. The

regulatory definition is somewhat narrower than the statutory definition. The San Mateo County definition is as follows:

"...an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally grow in water or wet ground Wetlands include fresh or salt water marshes, mud flats, brackish, tidal or seasonal wet areas and can occur along the margins of streams, lakes and ponds."

Recommendation

Staff, consistent with the advice of our consultant, continues to recommend against this suggestion to use the Coastal Zone or Cowardin definition² of wetlands throughout Marin County because it would require the County to assume responsibility for definition, determination, administration, and appeal of all regulated wetlands. In addition, the expanded wetlands protections proposed in the draft CWP were not based on the Cowardin definition and could result in restrictions that are very difficult to administer and result in increased litigation in some instances. Furthermore, there is no legal problem with using two definitions. The Corps and State RWQCB are the appropriate agencies to handle this complicated and time consuming responsibility outside the Coastal Zone, and will continue to make adjustments in the extent of their jurisdiction as definitions are revised based on the latest science, court decisions, and new legislation. However, as requested, a consistent definition (used by San Mateo County for both the coastal and inland areas) is provided for your Commission's consideration. In this event, applicants would be required to pay for a qualified biologist to perform the delineation.

ISSUE 4 (Prior Issue 12; SCA/WCA): Acquisition of Martin Brothers Triangle.

Discussion

Following public comment on which parcels should be prioritized for open space acquisition, the Commission directed Staff to bring back **OS-2.3, *Balance Shoreline Protection and Access to Water Edge Lowlands***, with the addition of the Caltrans Right of Way to the list of open space targeted for acquisition if appropriate and modifications to proposed Policy **OS-2.3** in underlining (see below).

Recommendation

Staff supports revising Policy **OS-2.3** as follows:

Policy OS-2.3: *Balance Shoreline Protection and Access to Water Edge Lowlands*. Consider tideland ecosystem health, habitat protection, and passive and active recreation in pursuing acquisition of additional marsh and other bay margin open space areas:

² In 1979, a comprehensive classification system of wetlands and deepwater habitats was developed for the U.S. Fish and Wildlife Service (Cowardin et al. 1979). Wetlands are defined by plants (hydrophytes), soils (hydric soils), and frequency of flooding. Ecologically related areas of deep water, traditionally not considered wetlands, are included in the classification as deepwater habitats.

Targeted water edge lowlands in the Baylands and City Centered Corridors include:

Richardson Bay. These sections of shoreline should be acquired or otherwise protected: Manzanita Green, connecting Marin City with the bay, Strawberry Cove, and the Martin Brothers Triangle adjacent to Bothin Marsh. Portions of Bothin Marsh and adjacent Cal Trans right-of-way (with the exception of the Martin Brothers Triangle), most of the Tiburon shoreline, and most of the headwaters of Richardson Bay have been acquired. While these properties are recommended for acquisition, the plan treats them in the same manner as similar property as regards to development policies. That is, plan policies apply to these properties as if no acquisition recommendation had been made.

ISSUE 5 (Prior Issue 13; SCA/WCA) : **Is it appropriate to reduce the 2:1 on-site wetland mitigation requirement when suitable “in-kind” wetland types would enhance the quantity but not the quality of overall habitat value? Should the mitigation include restoration of a seasonal wetland with the expansion of an existing tidal marsh wetlands and conversion of an adjacent uplands habitat area at a 1:1 ratio?**

Discussion

The Planning Commission directed that this issue be brought back at the March 19th hearing with clarification of the issue and policy modification as needed to **BIO-3.2, Require Through Mitigation** and **BIO-3.d Wetland Avoidance**.

The following proposed language clarifies that there should be no net loss of “wetland area, wetland function and habitat value” in both the policy and the program.

Recommendation

Staff supports revising **BIO-3.2, Require Through Mitigation**, and Program **BIO-3.d, Wetland Avoidance**, only as follows:

BIO-3.2 **Require Thorough Mitigation.** Where complete avoidance of wetlands is not possible, require provision of replacement habitat on-site through restoration and/or habitat creation at a minimum ratio of two acres for each acre lost (2:1 replacement ratio) for on-site mitigation and a minimum 3:1 replacement ratio for off-site mitigation, provided that, to the maximum extent feasible, no net loss of wetland area, wetland ~~acreage~~, functions, and habitat values occurs. Mitigation shall also be required for incursion within the minimum WCA setback distance where direct or significant indirect impacts on wetland functions or values would occur as a result of the incursion.

BIO-3.d *Prioritize Wetland Avoidance.* Amend the Development Code to require development to avoid wetland areas to the extent feasible. Where complete avoidance of wetlands is not possible, require provision of replacement habitat on-site through restoration and/or habitat creation, provided that no net loss of wetland acreage, function, and habitat values occurs. On-site wetlands mitigation shall be provided at a minimum ratio of two 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 ~~acreage~~, wetland functions and values would occur and that on-site mitigation is not possible or would result in isolated wetlands of extremely limited value. In those rare instances when on-site wetlands loss is unavoidable and on-site replacement is infeasible, require that a

minimum of three acres be provided through mitigation for each acre lost (3:1 replacement ratio), preferably of the same habitat type as the wetland area that would be lost.

ISSUE 6 (Prior Issue 14; SCA/WCA): Increased watershed peak flow rates, floodplain erosion and downstream sedimentation.

Discussion

The Commission directed staff to bring back a revised policy to address channel stability with consideration of Commissioner Julin’s proposal (see below), and Policy BIO-4.(new), *Maintain Channel Stability* has been clarified as to what constitutes “evidence” to the County as follows:

Such evidence would likely be produced either by the applicant's own civil engineer/hydrologist/geologist as part of the applicant's design plan, or through the CEQA assessment, i.e. IS, Mit. Neg. Dec., or EIR is

BIO-4 (new)¹ Project applicants for new development / redevelopment projects shall, where evidence *that significant current or impending channel instability is present, i.e. 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, is* presented to the County demonstrating the need for an assessment, be required to prepare a hydraulic and / or geomorphic assessment of on-site and downstream drainageways that are affected by project area runoff. 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 and access. In the event that project development would result in or further exacerbate existing channel instabilities, the applicant could either propose their own channel stabilization program, or defer to the mitigations generated during any environmental review required by the County for the project, which could include *maintenance of peak flows at pre-project levels* [Holland clarification]. Any proposed stabilization measures shall anticipate any project-related changes to the drainageway flow regime.

Consider including Julin’s language for inclusion in this or another policy:

Commissioner Julin:

San Rafael Condition: For all frequency storm events up to 100-year, all project improvements shall minimize flood hydrograph peak flow or flood volume increases into drainage courses. To this end, design features including, but not limited to: porous pavement, pavers, maximizing overall permeability, drainage infiltration, disconnected impervious surfaces, swales, bioretention, green roofs, etc., shall be integrated into all projects. Increases in peak flow shall be integrated into all projects. Increases in peak flow shall be held to less than 1 (one) percent.

Before issuance of any Design Review approval, grading permits, building permits, or approval of improvement plans, the applicant shall submit a pre-and post-project hydrology and hydraulic report detailing the amount of new impervious surface area and accompanying surface runoff from all

¹ Please note where revisions to policy and program language are proposed, some additional editions for clarity, precision, consistency, and the ability to effectively administer may be appropriate prior to the Commission’s final recommendation. This is particularly applicable to several DEIR mitigations.

improvement areas including driveways, to confirm that increases in peak flow shall be held to less than 1 (one) percent.

Recommendation

Staff and consultants support revising **BIO-4(new)** as generally noted above. However, upon the advice of our consultant, and due to technical concerns, we do not support the language as proposed by Commissioner Julin at this time. According to the Department of Public Works if site conditions are conducive to the implementation of stormwater detention measures such as the ones listed, a specific design storm (e.g. 10-yr., 6-hr, or 20-yr., 6-hr.) for volume detention would be more practical than the standard proposed.

Alternatively, the Commission may determine that it is more appropriate to defer development of detailed standards and specifications to the NPDES process. The NPDES Permit requirements imposed by the Regional Water Quality Control Board are leading toward eventual changes in the Development Code, with implications for stormwater and water quality management, as well as project applicants' design processes.

DPW has indicated that it would be unable to administer a a mandate for peak flow management (such as the recommended 1% maximum increase) unless a credible technical study was first prepared demonstrating that peak flow increases of more than 1% would create threshold conditions for channel instability, as this provision would govern both single lot and larger subdivision development. Overall, a project by project approach should be sufficient to manage volume and peak flow increases where such increases can be expected to create problems for downstream channel instability. The CEQA analysis can recommend maintenance of pre-project peak flow rates in specific circumstances where channel instability is likely, based on observed conditions .

ISSUE 7 (Prior Issue 17; SCA/WCA): Language related to “Buffers” proposed by Commissioner Greenberg (see Attachment 7)

Discussion

The Planning Commission directed that this issue be addressed at the March 19 hearing. An issue was also raised about the explicit and implied descriptions of upland habitat as “buffers” for stream and wetland areas in the Draft CWP In regards to her attached letter, Commissioner Greenberg is correct that the upland “buffers” around SCAs, WCAs, Baylands, and other resources with a definitive boundary can be biologically important. These buffer areas provide important filtration functions for stormwater runoff before entering the identified resource, contain protective cover, often provide refuge during severe storm events, and serve other biological functions related to the wetland, stream, or tidelands. They also provide habitat exclusively for species associated with uplands, but their recognized higher value is the interrelationship to the sensitive resource and importance in buffering these resources from the potential direct and indirect impacts of any nearby development or habitat modifications.

Policies **BIO-3.1 Protect Wetlands**, **BIO-4.1 Restrict Land Use in Stream Conservation Areas**, and Programs **BIO-3e Establish Clear Mitigation Criteria**, **BIO-3f Establish Criteria for Setbacks**, and **BIO-3g Provide Landowner Education** all make reference to buffers in protecting wetlands and streams. Policy **BIO-2.4, Preserve Ecotones**, recognizes the importance of the transitional areas between habitat types. Edits were made previously to distinguish physical setbacks from buffers, but the fact is the setback areas functionally serve as buffers around sensitive resources. Again, this is not intended to diminish their value. The detailed site assessment required by the CWP where incursion into a SCA or

WCA is proposed would address the functions and values of the buffer area, adequacy of proposed avoidance in protecting the mapped resource, and need for any required mitigation.

Recommendation

Staff does not recommend any changes, but notes that the current policies and programs recognize the importance of providing adequate setbacks from locationally specific resources, such as wetlands, streams, and tidelands.

ISSUE 8 (Prior Issue 18; SCA/WCA): Technical Corrections proposed by Commissioner Holland items 19, 20, 21, 22 (attached)

Discussion

The Planning Commission directed that the corrections be brought back at the March 19th hearing with clarification. Commissioner Holland identified a number of corrections and more substantive issues in reviewing the revised CWP Update in his written comments of February 26, 2007. Most of these edits provide improved clarity and accuracy in policy and program language. Substantive Issue 19 refers to the use of the word “significantly disturb” in Policy **BIO-4.1** in the last line on page 2-29 of the CWP Update, which he believes is too rigorous. The word “significantly” was used for consistency with the standards used in the CEQA Guidelines. Substantive Issue 20 refers to the use of the phrase “Development on any portion of the parcel outside the SCA” under subsection (2) of Policy **BIO-4.1** on page 2-32, which he believes provides a possible loophole. Substantive Issue 21 refers to Policy **BIO-4.15** on page 2-36 and the restrictions on work in an SCA when surface water is present, which he believes would preclude all work except emergency repairs. Substantive Issue 22 refers to revegetation in Program **BIO-4.i** on page 2-38, which he believes would require replacement of all riparian vegetation at an infeasible ratio.

Recommendation

No revision to the text related to passive recreation in Policy **BIO-4.1** and **Bio-4.15** are recommended by staff and Counsel given the importance of setting consistent standards for assessment and similar concerns. Revisions to Policies **BIO-4.1** and Program **BIO-4.i** would be useful in clarifying their intent. These revisions are as follows.

BIO-4.1...

- 2) Development on ~~any portion of~~ the parcel *wholly* outside the SCA is either infeasible or would have greater impacts on water quality, wildlife habitat, other sensitive biological resources, or other environmental constraints.

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 groundcovers 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.

ISSUE 9 (Prior Issue 19; SCA/WCA): Tree removal inside SCA

Discussion

The Planning Commission directed that this issue be brought back at the March 19th hearing.

Policy **BIO-4.7**, *Protect Riparian Vegetation*, provides for the retention of riparian vegetation in an SCA and specifically acknowledges the importance of diverse species of trees, shrubs, grasses and forbs. Several other broader policies and programs related to tree and woodland resources would also serve to provide protection of trees within and outside an SCA, including Policy **BIO-1.3**, *Protect Woodlands, Forests and Tree Resources* and Program **BIO-1.d**, *Reevaluate County Tree Ordinance*. Refer to the detailed discussion and recommended policy revisions under Issue 9

Recommendation

Staff does not support further revisions at this time. Policies and programs in the CWP Update would provide adequate protection for tree resources within and outside an SCA, when combined with the recommended revisions under Issue 11.

ISSUE 10 (Prior Issue 22; SCA/WCA): Should there be any distinction between the City-Centered and other Corridors for SCA/WCA setback regulations.

Discussion

The Planning Commission directed that this issue be brought back at the March 19th hearing. Members of the Planning Commission questioned why setback standards vary between the City-Centered and the other Environmental Corridors for SCA and WCA policies. Policies **BIO-3.1** and **BIO-4.1** both adjust the minimum development setback according to the Environmental Corridor and parcel size. This distinction was based on a continuation of the current CWP policy and was consistent with direction given previously by the Planning Commission. The intent was based on the general understanding that greater siting options would be available to the landowner on larger parcels in comparison to smaller parcels, and to allow for more intensive development opportunities in the City-Centered Corridor, while still providing adequate protection and mitigation of potential impacts on sensitive resources. Biologically, the larger the setback distance, the more effective the buffer becomes in serving to avoid and minimize potential direct and indirect impacts on the wetland feature or stream.

While it is true that the intent of the City-Centered Corridor is to continue to protect resources while focusing development within existing communities and along the transportation routes, there is a much greater prevalence of smaller lots in the City-Centered Corridor and more often insufficient lot area to apply greater setbacks. For example, it is not unusual for historic parcel sizes in the City-Centered Corridor to be approximately 5,000-7500 square feet (50-60 ft x 100-125 ft), so applying the 100 foot setback to small lots in this Corridor would be difficult. Alternatively, reduced setbacks could be applied to small parcels in the Coastal, Inland Rural, and Baylands Corridors; however, there are more federally and state listed species in the streams in these areas. For that reason, it was not recommended to reduce SCA/WCA setbacks in these Corridors.

Recommendation

Staff recommends continuing to apply the SCA and WCA setbacks differently for the City-Centered Corridor than for the other three environmental corridors as proposed in the Draft 2005 CWP. However, as previously noted, staff also supports applying a 20 foot minimum setback for parcels less than .5 acres in the City-Centered Corridor.

ISSUE 11 (Prior Issue 23; SCA/WCA): Should additional language supporting Community Forests be considered?

Discussion

The proposed draft 2005 CWP includes policies and programs concerning tree preservation and urban forestry respectively in the Natural Systems Element - Biological Resources and Atmosphere and Climate sections as well as the Built Environment Element – Design and Planning Areas sections and the Socioeconomic Element - Historic and Archeological Resources section. Specifically, the CWP includes a number of proposed policies and programs that address protection of woodlands, forests and tree resources in the Biological Resources section as follows:

BIO-1.3 Protect Woodlands, Forests and Tree Resources. Protect large native trees, trees with historical importance, oak woodlands, and forest habitats, and 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.

BIO-1.d Reevaluate County Tree Ordinance. Reevaluate Native Tree Preservation and Protection Ordinance #3291, and consider expanding existing provisions along with establishing a complementary education and outreach program to ensure woodland conservation and management, not simply protection of individual trees. Factors to address in the reevaluation include preserving stands or groups of trees, identifying and promoting representative species and a diversity of age classes, minimizing fragmentation and providing linkages and corridors, protecting and enhancing other components of forests and woodlands such as understory species and associated wildlife, and providing for sustainable regeneration through natural processes.

Other policies and programs, including **BIO-1.4 Support Vegetation and Wildlife Disease Management Programs**, **BIO-4.5 Restore and Stabilize Stream Channels**, and **BIO-1.a Map Natural Communities** and **BIO-1.e Protect Against Vegetation and Wildlife Diseases** should also be noted.

In addition, a program in the Atmosphere and Climate also refers to tree planting as follows:

AIR-4.j Encourage Planting of Trees. Adopt urban forestry practices that encourage re-forestation as a means of storing carbon dioxide.

Policies in the Design section include:

DES-1.3 Encourage Sustainable Urban Forestry. Promote the use of sustainable urban forestry practices addressing long-term forest management, public education, and outreach.

DES-3.c Encourage Small-scale Green Spaces;

DES-4-1 Preserve Visual Quality. Protect scenic quality and views of the natural environment – including ridgelines, trees....;

DES-4.c Regulate Mass and Scale. Ensure that the mass and scale of new structures respects environmental site constraints and character of the surrounding neighborhood... avoid tree-cutting and grading whenever possible.

DES-5.b Refine Parking Area Standards. Review and amend the Development Code as necessary to require that a minimum of 50% of a parking lot be shaded by trees within 10- years of being built or substantially remodeled

SV-1.7 Preserve Trees. Protect major native oak groves and specimen oak trees. Preserve the native oak woodlands on Pacheco Ridge. Preserve healthy and safe eucalyptus groves and maintain them in a healthy condition.

Beyond Oak protection grants, staff is not aware of other grants that require general plan language to qualify for funding. The current language in the Plan is adequate to show support for community-based education and programs in this area.

Recommendation

Staff is very supportive of the ideas on community forestry provided by Marin ReLeaf and as previously noted, their key concepts are generally addressed in the Atmosphere and Climate as well as Design sections of the Natural Systems and Built Environment Elements draft CWP. Toward this end, a new program **BIO-1.h** is recommended:

New BIO-1.h Encourage Community Forestry Programs. Work with volunteer organizations and Marin cities and towns to encourage the creation of a comprehensive, long term, community forestry program(s) in recognition of the multiple benefits provided by trees to our health, our communities and the environment.

March 5 Planning Commission Issues

ISSUE 12 (Prior Issue 2; Baylands): What should be included in the Baylands Corridor?

Discussion

The Planning Commission directed that this issue be brought back at the March 19th hearing. Staff reviewed the existing Bayfront Conservation Zone maps as requested by the Commission to determine whether the communities of Bel Marin Keys, Black Point, and Santa Venetia are included in the existing Bayfront Conservation Zone (BFC).

The Marin Countywide Plan, adopted in January 1994, includes a Community Development Element which contains a number of Land Use Policy Maps (numbered Map 1.0 through 7.13.) These maps show land use designations and densities, as well as overlays such as the Bayfront Conservation Zone and Ridge and Upland Greenbelt, for all unincorporated lands in the county. The following maps include the approximate location of the Bayfront Conservation Zone Area for the three subject areas:

- Map 1.1 Bel Marin Keys Area Land Use Policy Map
- Map 1.2 Black Point Land Use Policy Map
- Map 2.5 Santa Venetia Land Use Policy Map

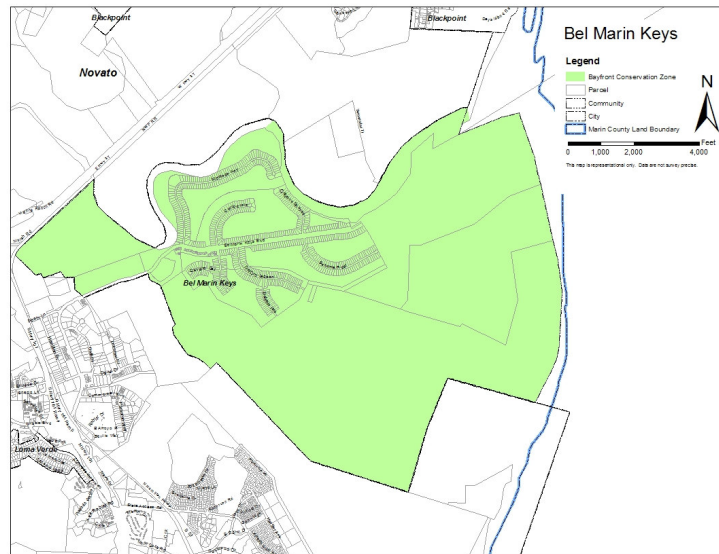
All three maps display all or portions of areas within the boundary of the Bayfront Conservation Zone. Specifically, Map 1.1 includes a note that says “all areas within the Bel Marin Keys area boundary are in the Bayfront Conservation Zone.” Map 1.2 shows parcels along the Petaluma River and the Day Island Sanctuary to be within the Bayfront Conservation Zone Area, while Map 2.5 shows portion of wetland areas adjacent to San Pablo Bay within the BFC.

All the Land Use Policy maps were updated in 1999 and replaced the existing maps in the Community Development Element. These updated maps also show the same areas above within the Bayfront Conservation Zone.

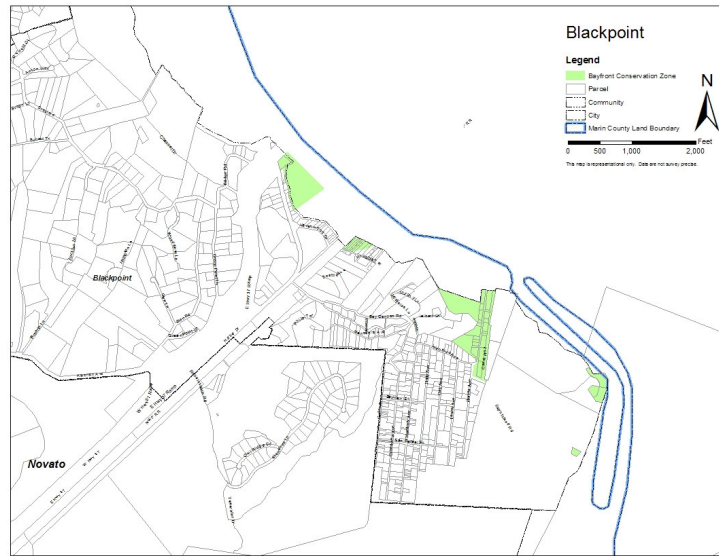
The land use maps were again updated for minor technical corrections and adjustments to reflect enhanced Geographic Information System mapping capabilities for the Draft 2005 Update. As part of the Draft 2005 CWP proposal, the BFC Zone was replaced with the Baylands Corridor on these maps. The Bel Marin Keys map (renumbered to Map 1.6) now excludes small, developed parcels from the Baylands Corridor although they are still zoned with the BFC prefix. On the Black Point map (renumbered Map 1.5) the BFC has been removed from the Day Island Sanctuary and some areas around Heavenwood Drive. Santa Venetia (renumbered Map 2.5.2) remains unchanged in terms of the location of the Bayfront Conservation Zone/Baylands Corridor.

The Bayfront Conservation Zone is a combining district that is applied to property in addition to a primary zoning district to highlight special regulations that apply to properties within that district. The Bayfront Conservation Combining District consists of the Tidelands Subzone, Diked Bay Marshland and Agricultural Subzone, and the Shoreline Subzone. The following figures show the location of the BFC (shaded area) in Bel Marin Keys, Black Point, and Santa Venetia, based on current zoning:

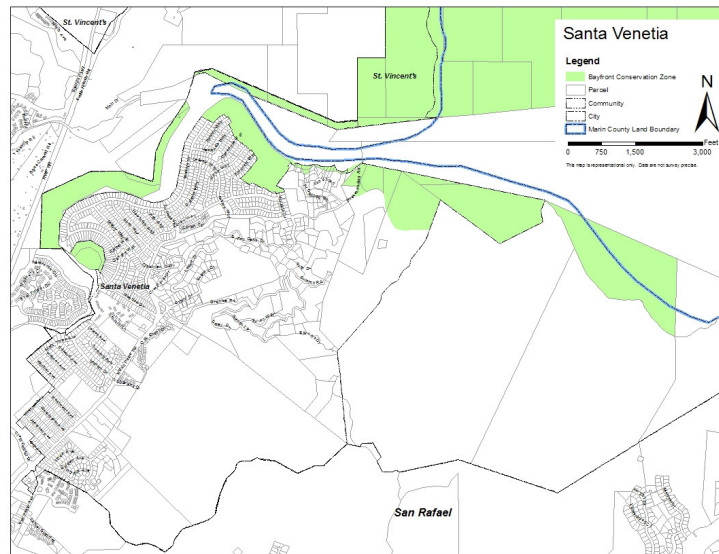
Bel Marin Keys



Black Point



Santa Venetia



This may have implications on language in Policy **BIO-5.1**, *Protect the Baylands Corridor*, and Program **BIO-5b**, *Provide landowner Education*.

Recommendation

Continue to propose the Baylands Corridor as a fourth corridor to ensure that baylands and large, adjacent essential uplands are protected. The Commission may consider the following 2 choices for finalizing the boundary of the Corridor:

Two choices:

1. Subject to further reviewing Bayfront Conservation (BFC) Zone maps, adopt a Baylands Corridor for large properties north of Point San Pedro, and maintain the existing BFC Zone with a BFC Area Countywide Plan designation for small properties currently in the BFC Zone south of Point San Pedro.
2. Regardless of location in the County, adopt a Baylands Corridor (Option 2) for portions of large undeveloped parcels (2 acres or more in size), generally consisting of the historic bay marshlands based on maps prepared by the San Francisco Estuary Institute and additional adjoining lands consistent with the selected Baylands Corridor option. Properties 2 acres or less in size would be excluded from the Corridor; however, the existing Bayfront Conservation (BFC) Zone would be maintained where it is currently located. The General Plan level Bayfront Conservation Zone would be renamed as the Bayfront Conservation Area to correspond with similar CWP terminology.

Staff recommends accepting Choice 2 above.

ISSUE 13 (Prior Issue 7; Baylands): Should the Baylands Corridor also include baylands with agricultural zoning that are currently in the Inland Rural Corridor to avoid using two different boundaries, i.e., Highway 101 and SFEI Line?

Discussion

The Planning Commission directed that this issue be brought back at the March 19th hearing. The Countywide Plan may use two different boundaries for the Baylands Corridor, i.e., Highway 101 and the SFEI Line plus an appropriate buffer area. Counsel has determined that courts apply a deferential standard in reviewing zoning boundary lines (e.g., Miller v. Board of Public Works, 195 Cal. 477, 495 (1925)), and it is believed that the same standard would apply in drawing general plan boundary lines. So long as a rational basis can be stated for using two different boundaries, the legal standard would be met.

To the extent Hwy 101 is already being used for the boundary, existing resource information provides a basis for extending the boundary to 101. Where SFEI Line is used instead, additional resource information should be obtained before deciding whether to go beyond the SFEI Line boundary to Highway 101.

Recommendation

Staff recommends developing a program to study and consider, depending upon resource information, the inclusion or exclusion the area north of Gness Field.

NEW Program **BIO-5i**: Undertake detailed resource mapping to determine the relationship of the uplands to the baylands on large properties north of Gness Field. Based on the mapping, re-evaluate whether additional large properties should be included in the Baylands Corridor.

ISSUE 14 (Prior Issue 8; Baylands): Should consideration be given to “in the future adjusting the limits of the Baylands Corridor and associated setbacks from the historic bay marshlands on large parcels mapped by SFEI in Maps 2-5a from the CWP Update”

Discussion

A question has been raised regarding whether the Baylands Corridor boundary should be adjusted to reflect future sea level rise. This should include consideration of possible implications of future sea level rise on existing habitat and need for sufficient upland to accommodate changes in Baylands boundaries while still maintaining a functional upland habitat area. The Planning Commission directed staff to provide additional language for Program **BIO-5a** for consideration at the March 19th hearing

Draft revisions were presented to the Planning Commission during the hearing on March 5, 2007, which were generally acceptable providing additional consideration during the Zoning Ordinance update process regarding sea level rise and scientific data for establishing criteria for upland setbacks in the Baylands Corridor.

Recommendation

Staff recommends revising Program **BIO-5.a** as indicated below in underlining.

BIO-5.a *Establish Criteria for Upland Setbacks in the Baylands Corridor.* During the Zoning Ordinance update, ~~E~~establish criteria to be used in the review of individual development applications for determining an adequate setback distance in adjacent uplands to serve as a buffer zone between development and remaining or historic tidelands and wetlands. Setbacks should provide for at least the minimum distances necessary to avoid adverse effects of increased human activity and potential disturbance to sensitive biological resources, and to provide essential linkages between important features such as seasonal wetlands, freshwater marsh, and roosting and nesting areas. This should include consideration of possible implications of future sea level rise on existing habitat. Use focus species, locational distribution of sensitive resources and other ecological tools to establish criteria for determining essential habitat connectivity in site specific planning that serves to preserve and enhance existing wildlife habitat values.

ISSUE 15 (New Issue; Baylands): Should language be reinstated to support funding to maintain and repair levees?

Discussion

As the result of public input and concerns raised specifically regarding levee reconstruction in Santa Venetia, the following program was deleted from the 2005 Draft Plan. Program **EH-3.1, Seek Levee Assistance**. Pursue federal funding for levee reconstruction in the Santa Venetia area. As a result of the recently published sea level rise maps produced by BCDC for planning purposes, the issue of levee reconstruction has resurfaced from residents in the Santa Venetia area as well as other areas shown to be threatened by the potential rise in sea level.

Recommendation

Staff recommends reconsidering previously deleted Program **EH-3.1, Seek Levee Assistance**, in light of the projected sea level rise threat. Staff recommends the revised program as noted below be added to the Environmental Hazards section of the Countywide Plan

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

ISSUE 16 (New Issue; Baylands): Is an advisory committee needed to address natural resource issues and evaluate the adequacy of stream, wetland, and Baylands protections?

Discussion

As new biological information becomes available and the conditions of sensitive resources change, it may be necessary to adapt SCA, WCA, and Baylands regulations. An ad-hoc technical advisory committee could serve to address this issue.

Recommendation

Staff recommends including a new program to ensure the biological resources in streams, wetlands, and baylands continue to be protected through current policies and programs

NEW PROGRAM: **NEW BIO-5i**. Consider establishing a technical working group on an as-needed basis to provide scientific expertise in evaluating natural resource issues regarding adequate protections when considering revisions for SCA's, WCA's and Baylands regulations.

ISSUE 17 (Prior Issue 10; Baylands): Should development be restricted to the low end of the density range on those properties shown as subject to sea level inundation?

Discussion

The topic of climate change and sea-level rise has been included both in the draft Countywide Plan and in the DEIR. This topic is new to the general plan context in California, and currently, Marin's draft Countywide Plan has addressed the topic more thoroughly than any other county general plan known in the State. Sea level rise will have multiple effects, not only on buildings and infrastructure, but also on local ecosystems. For example, there will be increased flooding of buildings, roads and other infrastructure, while wetlands will need room to migrate inland to continue providing ecosystem and flood protection functions.

Policy **CD-1.3**, *Reduce Potential Impacts*, currently proposes to calculate residential densities and commercial Floor Area Ratio at the low end of the applicable range on sensitive sites within the Ridge and Upland Greenbelt, the Baylands Corridor, or properties lacking public water or sewer systems. The implications of restricting development also on properties threatened by sea level rise are unknown since the coastal areas have not been mapped and it is still difficult to determine the precise location of the threat. Although the Bay Conservation and Development Commission has released illustrations of the areas potentially threatened by a 1 meter rise in sea level, the Commission was careful to note that the illustrations are "not intended to be used for planning purposes." As more information becomes available, it may be necessary to revisit policies in the Draft 2005 CWP that restrict development in constrained areas. Furthermore, while restricting densities to the low end of the range would be prudent for green field properties that may have room to accommodate some future bay expansion, it may not be appropriate to use the low end of the density range in areas that are already largely developed.

Recommendation

Staff recommends including a new program, **CD-1.h** as follows:

NEW Program CD-1.h. Consider future threat of sea level rise. Consider revising Policy **CD-1.3** to include properties threatened by sea level rise as more information about the sea level rise threat becomes available.

While staff does not support the following revision to **CD-1.3** at this time, we have provided the text as requested by the Planning Commission.

CD-1.3 Reduce Potential Impacts. Calculate potential residential density and commercial Floor Area Ratio (FAR) at the low end of the applicable range on sites with sensitive habitat or within the Ridge and Upland Greenbelt, the Baylands Corridor, or properties lacking public water or sewer systems and threatened by sea level rise.

ISSUE 18 (New Issue; Baylands): Should the unincorporated portion of the San Rafael airport property be excluded from the Baylands Corridor since the airport is developed?

Discussion

The San Rafael airport is bordered by highly sensitive coastal salt marsh and brackish water marsh along Gallinas Creek. These resources should be carefully identified and considered as part of any future modifications to existing uses at the airport. Including the unincorporated portion of the property in the Baylands Corridor would not preclude future development but would assist in the protection of essential habitat areas.

Recommendation

Continue to include the unincorporated portions of the San Rafael airfield in the Baylands Corridor, and no revisions to existing mapping are recommended.

Issues from March 12 Planning Commission: AGRICULTURE AND TRAILS

ISSUE 19 (Prior Issue 1; Ag): Should home sizes be limited on agricultural lands?

Discussion

The majority of Planning Commission members supported **Option 1** of Program **AG- 1.a** to limit home sizes on agricultural lands. This option does not exempt primary residence, includes exclusion details, and sets the size threshold at 3,000 sq ft for triggering additional mitigations. The Commission also recommended that staff draft a new program to ensure continued monitoring and updating of the agriculture economic analysis report to be brought back on March 19. In light of testimony at the March 12 Planning Commission hearing, Staff would recommend the following addition to Option 1 as shown in underlining below:

Option 1

- i. The total floor area of all dwelling units and non-agricultural accessory structures on a parcel shall not exceed an aggregate of 6,000 square feet; and
- ii. The total floor area for any single dwelling unit on a parcel shall not exceed 3,000 square feet;

- iii. Agricultural worker housing, up to 540 square feet of garage space for each dwelling unit, agricultural accessory structures, and up to a total of 500 square feet of office space used as a home occupation in connection with the agricultural operation on the property shall be excluded from the above residential floor area limits.
- iv. Residential development shall not be allowed to diminish current or future agricultural use of the property or convert it to primarily residential use.
- vi. Single dwelling units in excess of 3,000 square feet of floor area, but not more than 6,000 square feet of floor area, may be allowed if there is evidence of a bona fide commercial agricultural production operation on the property. In making this determination, the County may require an Agricultural Production and Stewardship Plan demonstrating that: (1) the long term agricultural use of the property will be preserved; (2) agricultural infrastructure, such as fencing, processing facilities, marketing mechanisms, agricultural worker housing or agricultural land leasing opportunities have been established or will be enhanced; agricultural uses proposed in connection with the residence are appropriate to the site and; (3) sound land stewardship, such as Marin Organic Certification, riparian habitat restoration, water recharge projects, and erosion control measures, have been implemented or will be enacted. Dedication or sale of perpetual agricultural conservation easements may be voluntarily offered to ensure continued agricultural production.

Preparation of an Agricultural Production and Stewardship Plan (APSP) is not intended for applicants with a long history of production agriculture.

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.

Recommendation

Staff recommends Option 1 as approved by the Commission with the addition noted above, along with a new program, **AG-1.s**, *Maintain up to date Agricultural Statistics*.

NEW AG-1.s, *Maintain up to date agricultural statistics*. Monitor and maintain up to date statistics on agricultural production values, land costs, expenses and other data affecting the agricultural economy.

Furthermore, in response to testimony received at the March 12, 2007 CWP hearing, staff recommends that the Planning Commission consider additional revisions pertaining to agriculture.

1. Clarification regarding Agricultural House Size. Revise **AG-1.a**, *Limit Residential Building Size*, to include:

Up to 2,500 square feet may be considered where justified for agriculture family members where agricultural residences totaling 4,000 square feet or more were constructed on the site prior to January 1, 2007.

2. Clarification regarding the waiver of Agriculture Production and Stewardship Plans. Revise **AG-1.b**, *Require Production and Stewardship Plans*, as follow:

Preparation of an Agricultural Production and Stewardship Plan (APSP) is not intended for applicants with a long history of production agriculture.

ISSUE 20 (Prior Issue 4; Ag): Should ag processing, retail sales, and visitor-serving uses be permitted in ag land-use designations?

Discussion

It is a goal of the CWP to enhance the viability of farms, ranches and agricultural industries in Marin County. The development of agricultural processing (e.g. cheese making) retail sales, and visitor-serving uses (e.g. tasting rooms) would be of substantial benefit in keeping agricultural operations economically viable as well as prevent the loss of these lands to expanded residential development or other land uses permitted by the CWP other than agriculture. The Commission raised some concern over the impacts of these uses related to noise and traffic. It was requested that Mitigation Measure **4.1-4(a)** be modified to address this concern. The Mitigation measure would be as follows:

Mitigation Measure 4.1-4(a)

~~AG-2c Review existing Development Code Criteria and Standards. Prepare criteria and standards to identify compatible agricultural activities and applicable development code requirements.~~ Review and amend the Development Code as appropriate to include new and/or modified criteria and standards that encourage agricultural processing and sales while limiting uses that are not compatible with sustainable agriculture. Consideration should be given to development code revisions that ensure agricultural processing and sales-related uses will not result in any significant impacts, such as those related to traffic and noise. Continue to support the efforts of the UC Cooperative Extension, Marin Resource Conservation District, the Marin County Farm Bureau, Marin Agricultural Land Trust, Marin Organic, Marin County Agriculture Commissioner, and the Marin County Farmer’s Market to plan for agriculture in Marin and ensure that the new criteria and standards are consistent with the County’s goals of improved agricultural viability and preservation and restoration of the natural environment.

Mitigation Measure 4.1-4(b)

The County shall obtain funding for Program **AG-2.c**.

Recommendation

Staff recommends accepting Mitigations Measures 4.1-4(a) and 4.1-4(b) as modified above to reduce impacts from such uses to less-than-significant level. No additional regulations are required.

ISSUE 21 (Prior Issue 5; Ag): Should clustering requirements be applied to ag structures (in addition to existing requirements for clustering of residential structures on ag lands)?

Discussion

A question was raised about the appropriateness of the term “clustering” in Program AG-1.6. The Commission recommended removing the term “clustering” from the policy while maintaining the recommendations within the policy. Policy **AG-1.6** and Program **AG-1.g** would be modified as follows:

AG-1.6 Limit Non-Agricultural Development. Limit non-agricultural development in the Agricultural Production Zone to allowed residential and accessory uses ancillary to and compatible with agricultural production. Require dwellings and other non-agricultural

development to be limited in size ~~and clustered or~~ and grouped together in building envelopes covering up to ~~than~~ five percent of the property or as determined through a site specific analysis of agricultural and environmental constraints and resources, with the remainder preserved for agricultural production. ~~Clustering of~~ Residential development on very large parcels may be limited to less than five percent of the land area.

AG-1.g *Revise Agricultural Zoning Districts.* Modify existing agricultural zoning districts to create a more uniform approach to preservation of agricultural lands, ~~mandatory clustering~~, development standards, allowance of ancillary and compatible non-agricultural uses, and to limit incompatible non-agricultural commercial uses. The principal use of agriculturally zoned land shall be agricultural production, with non-agricultural uses limited to necessary residential uses and compatible ancillary uses that enhance farm income.

Recommendation

Staff recommends accepting Policy **AG-1.6** and Program **AG-1.g** as revised above.

ISSUE 21 (Prior Issue 9; Ag): Should the impacts of ag uses, including dairying, on baylands and streams be further delineated? Sub-Issue: Should there be a setback to limit removal of native vegetation?

Discussion

The Commission directed staff to develop potential language for vegetation (non-native) removal within standard stream and wetland setbacks. Additional concern was raised about the impacts of row-cropping within SCA's. Since Policy AG-2.6 promotes small scale crop production, it may be relevant to address how this type of use relates to SCA impacts.

Several policies and programs in the CWP Update address extensive and intensive agricultural use and need to protect sensitive biological resources. These include Policy **BIO-4.1** *Restrict Land Use in Stream Conservation Areas*, Program **BIO-4j**, *Continue Funding Fencing of Sensitive Stream Areas*, Policy **BIO-5.9**, *Allow Limited Agricultural Use*, and Program **BIO-5e**, *Enforce Diked Bay Marshlands Requirements*.

Allowable uses within a SCA specified on page 2-32, Policy **BIO-4.1** include "Agricultural uses that do not require removal of woody riparian vegetation, **result in installation of fencing within the SCA which prevents wildlife access to the riparian habitat within the SCA** and do not involve animal confinement within the SCA." This would preclude any intensive agricultural use such as row-cropping within areas of established woody riparian vegetation and prevent construction of fencing that would block wildlife movement along streams, which is typically an important function of riparian corridors.

Policy **BIO-5.9** would "Encourage only those agricultural uses that are compatible with protection of wetlands and other sensitive resources **to remain** in baylands.

Conversion of non-agricultural lands to agriculture should occur only if wetlands or other sensitive biological resources would not be lost or adversely affected.." This policy address protection of sensitive resources in baylands.

Recommendation

Staff Recommends no change to SCA and WCA (and other) policies in Draft CWP. Current language would ensure that woody riparian vegetation is not removed as part intensive agricultural use, and would prohibit installation of fencing that would obstruct riparian corridors. Agricultural activities are generally a non-discretionary use in agriculturally zoned lands. Staff recommends that the County not institute discretionary review and approval for appropriate agricultural uses, which would be the only method to further regulate agricultural activities in or near an SCA, WCA, or Baylands.

ISSUE 22 (Prior Issue 13; Ag): Should policy AG-2.5 be revised to specifically address agriculture-related products?

Discussion

The Commission directed staff to revise Policy **AG-2.5, Market Local Products**, to specify the focus of the policy on agriculture-related products.

Policy **AG-2.5, Market Local Products**, would be revised as noted in underlining as follows:

AG-2.5 Market Local Products. Support the efforts of local farmers and ranchers to develop more diverse and profitable markets related to agriculture, including a permanent public market, for Marin County agricultural products, including direct markets to local and regional restaurants.

Recommendation

Staff recommends accepting Policy **AG-2.5, Market Local Products**, as revised above.

ISSUE 23 (Prior Issue 13; Ag): How will non Ag uses (other than residential) be considered, specifically how will scale for institutional uses in Ag zones be addressed?

Discussion

The commission directed staff to revise Program **AG-2.c, Prepare Criteria and Standards**, to include language addressing the issue of appropriate scale of compatible Agricultural uses.

The Program would be revised as noted in underlining as follows:

AG-2.c Prepare Criteria and Standards. Prepare criteria and standards to identify compatible agricultural activities and applicable development code requirements, including appropriate scale for compatible uses.

Recommendation

Staff recommends accepting Program **AG-2.c, Prepare Criteria and Standards**, as revised above.

Other Issues Related to Natural Systems and Agriculture Element

NEW ISSUE 24: Are more effective controls on installation of impermeable surfaces needed in the SCA and WCA?

Discussion

Commissioner Holland raised the issue that the installation of impermeable surfaces, asphalt and paving in particular, in SCAs where there is already development needs to be better regulated. Consequently, the Commission directed staff to develop a policy to address this issue for consideration at the March 19th hearing. Policy **BIO-4.14**, *Reduce Road Impacts in SCAs*, somewhat addresses this concern; however, it goes back to an enforcement concern, and how best to address the ministerial issue. Language could be introduced in the Biological Resources section to address this. See below.

Policy NEW BIO-4.17, 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.

Program: NEW BIO-4.m, Develop standards for promoting the use of permeable materials in the SCA and WCA. A checklist of Best Management Practices would be made available to applicants of ministerial permits. These standards would also provide guidance for staff during a discretionary review.

Recommendation

Accept Policy **NEW BIO-4.17**, *Promote permeable surfaces wherever feasible within the SCA*, and New Program **BIO-4.m**, *Promote routine training between DPW and CDA*, as proposed above.

ISSUE 25: Should trail maintenance include the Removal of Invasive Exotic Plants?

Discussion:

The removal of invasive exotic plants is addressed in **BIO-1.6** *Control Spread of Invasive Exotic Plants*. This policy prohibits the use of invasive species in landscaping as part of the discretionary review process, and says to work with landowners, such as MCOSED, to remove and prevent the spread of highly invasive and noxious weeds including Scotch broom.

The removal of exotic species should also be encouraged where feasible during trail maintenance. Additional language for Program **TRL-2.m**, *Maintain Trails in a Sustainable Manner*, to address this issue is shown in underlining below

TRL-2.m *Maintain Trails in a Sustainable Manner. Consider and enact as appropriate:*

- Using natural materials;
- Using longer lasting materials
- Using recycled materials
- Reducing or avoiding use of chemicals;

- Scheduling maintenance activities to avoid disturbing the nesting and breeding seasons of sensitive species
- Exploring alternatives to fossil fuels for maintenance vehicles and equipment
- Rebuilding and/or realigning trails with chronic maintenance problems.
- Seasonal trail closures
- Removal of invasive exotic plants.

Recommendation:

Staff recommends modifying Program **TRL-2.m** as shown above.

NEW ISSUE 27: Buffer zones for Potential Source of Odors/Toxics

Discussion

This issue is only related to impacts identified in the DEIR. The *Draft 2005 CWP Update* defines four environmental corridors and focuses new housing in the City-Centered Corridor. This could put new sensitive receptors closer to sources of toxic air contaminants, primarily Diesel Particulate Matter (DPM) from traffic.

According to the *BAAQMD CEQA Guidelines*, for a general plan to have a less-than-significant impact with respect to odors and/or toxic air contaminants buffer zones must be established around existing and proposed land uses that would emit these air pollutants. Buffer zones to avoid odors and toxics impacts must be reflected in local plan policies, land use maps, and implementing ordinances.

The *Draft 2005 CWP Update* includes policies and programs to reduce exposure of existing and future sensitive receptors from existing and future sources of odors and air toxic contaminants. Policy **AIR-2.1, Buffer Emission Sources and Sensitive Land Uses**, would consider potential air pollution and odor impacts from land uses that may emit pollution and / or odors when locating (a) air pollution point sources, and (b) residential and other pollution-sensitive land uses in the vicinity of air pollution point sources. Program **AIR-2.a,** , would require a separation between air pollution point sources and other land uses consistent with BAAQMD guidelines.

Policy **AIR-2.1, Buffer Emission Sources and Sensitive Land Uses**, and Program **AIR-2.a, Require Separation Between Point Sources and Other Land Uses**, would only address point sources of air pollution and would not protect sensitive land uses such as residences from mobile source emissions. Trucks, buses and some smaller vehicles using freeways emit DPM, which is a known toxic air contaminant. The only two roadways in Marin County that would have the potential to cause a significant health risk for sensitive land uses are U.S. 101 and Interstate 580. Other roadways in Marin County do not have high enough truck volumes to cause a significant health risk for residents of new housing. New freeways are not proposed in Marin, but new housing or other sensitive land uses may be located close enough to existing freeways to result in unhealthy exposures to DPM.

EIR Considerations

According to the DEIR, the exposure of new sensitive receptors to unhealthy levels of DPM would be a significant project impact and the project would make a cumulatively significant contribution to a cumulative impact. The following mitigation would be required to reduce project related and cumulative impacts

Mitigation Measure 4.3-3(a) Revise Policy **AIR 2-1** of the Natural Systems & Agriculture Element as follows:

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 ~~point~~ sources, and (b) residential and other pollution-sensitive land users in the vicinity of air pollution ~~point~~ 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) Revise Program **AIR-2.a** of the Natural Systems & Agriculture Element as follows:

AIR-2.a *Require Separation Between Air Pollution Point Sources and Other Land Uses.* Only allow (a) emission ~~point~~ sources or (b) other uses in the vicinity of air pollution or odor ~~point~~-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) Add a new program to the Natural Systems & Agriculture Element as follows:

AIR-2.(new) *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 to reduce these risks to acceptable levels.

Recommendation

Staff recommends acceptance and implementation of Mitigation Measures **4.3-3(a)**, **4.3-3(b)** and **4.3-3(c)** would ensure appropriate buffers between sources of air pollution or odors and sensitive receptors are maintained. The project impact would be reduced to a less-than-significant and the project's contribution to cumulative impacts would be less than cumulatively considerable. Staff recommends adoption of Mitigation Measures **4.3-3(a)**, **4.3-3(b)** and **4.3-3(c)**.

NEW ISSUE 28: Increase in Greenhouse Gas Emissions

Discussion

This issue is only related to impacts identified in the DEIR. Land uses and development consistent with the Draft 2005 CWP Update would result in an increase in greenhouse gas emissions over existing levels.

EIR Consideration

Because of uncertainties pertaining to the timely and effective implementation of the proposed Countywide greenhouse gas reduction measures beyond the control of Marin County government this would be a significant project impact and the project would make a cumulatively significant contribution to a cumulative greenhouse gas emissions impact.

Mitigation Measure 4.3-6 In order to reduce project related and cumulative impacts the following mitigation would be required:

Mitigation Measure 4.3-6(a) Revise Program **AIR-4.f** of the Natural Systems & Agriculture Element as follows:

AIR-4.f *Establish a Climate Change Planning Process. Approve and begin implementation of the Marin County Greenhouse Gas Reduction Plan. Integrate Marin County Greenhouse Gas Reduction Plan climate change planning and program implementation 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) Implement 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.

Implementation of the County's *Greenhouse Gas Reduction Plan*, the goals, policies, and programs of the *Draft 2005 CWP Update* and Mitigation Measures **4.3-6(a)** and **4.3-3(b)** and **4.3-3(c)** should reduce the rate of increase in greenhouse gas emissions. It is uncertain whether greenhouse gas emissions would be reduced countywide to below existing levels within the timeframe of the Countywide Plan. This, therefore, would be a significant unavoidable project and cumulative impact.

Recommendation

Staff recommends adoption of Mitigation Measures **4.3-6**, **4.3-6(a)** and **(b)**¹ but notes that implementation of the Marin County Greenhouse Gas Reduction Plan has already been initiated.

NEW ISSUE 28: Water Quality Standards

Discussion

This issue is only related to impacts identified in the DEIR. Implementation of the *Draft 2005 CWP Update* may result in violations of water quality standards as defined by the San Francisco Regional Water Quality Control Board (RWQCB) in the *1995 Basin Plan*.

The *Draft 2005 CWP Update* contains several policies and implementation programs that, if adopted and implemented, would reduce adverse effects to water quality from nonpoint source pollution (i.e., polluted stormwater) and improperly maintained septic systems. The policies would reduce the use of pesticides and fertilizers, minimize erosion and downstream sedimentation, and provide public education and outreach to reduce residential nonpoint source pollution

EIR Consideration

The Environmental Impact Report (EIR) of the Draft 2005 CWP Update includes mitigation measures to reduce significant impacts of the Plan. The EIR recommends three mitigation measures to address the water quality impacts. The proposed mitigation measures are as follows:

Mitigation Measure 4.5-1 In order to reduce impacts to water quality from septic system operation to a less-than-significant level, the County would amend Program **WR-2.i** to reduce adverse effects to water quality to the maximum extent practical for new development and redevelopment projects and to continue to implement existing ordinances.

Mitigation Measure 4.5-1(a) Revise Program **WR-2.i** of the *Draft 2005 CWP Update* as follows:

¹ Please note where revisions to policy and program language are proposed, some additional editing for clarity, consistency, and the ability to effectively administer may be appropriate prior to the Commission's final recommendation. This is particularly applicable to several mitigations proposed in the Draft Environmental Impact Report (DEIR).

WR-2.i; ~~Consider Establishing~~ *Establishing a Septic Inspection, Monitoring, and Maintenance District.* Establish a countywide Septic Management and Monitoring District that would include all 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 and cost effective way. Establishment requires a petition or election to put the district in place.

Mitigation Measure 4.5-1(b) 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.

Recommendation

Staff recommends acceptance of the revised program described in Mitigation Measure **4.5-1**, along with continued enforcement of the referenced ordinances would minimize the impact of future land uses and development to the extent practicable.. Adoption and implementation of Mitigation Measure **4.5-1** would reduce this impact to a less-than-significant level and the project’s contribution to cumulative impacts would be less than cumulatively considerable. Staff recommends adoption of Mitigation Measures **4.5-1, 4.5-1(a)** and **(b).**¹

NEW ISSUE 29: Drainage – On-Site and Downstream Erosion and Sedimentation

Discussion

This issue is only related to recommendations in the DEIR. Land uses and development consistent with the Draft 2005 CWP Update could result in an alteration of local drainage patterns and / or the modes of stormwater conveyance that would increase watershed peak flow rates. Increased peak flow rates may exacerbate hillside or channel / floodplain erosion and downstream sedimentation.

EIR Consideration

While policies and programs in the Draft 2005 CWP would reduce some of the adverse affects of erosion and downstream sedimentation to Marin County streams, implementation of programs **BIO-4.f**, *Identify Potential Impacts to Riparian Systems*,, **BIO-4.g**, *Require Site Assessment*, **BIO-4.h**, *Comply with SCA Criteria and standards*, **BIO-4.i**, *Replace Vegetation in SCAs*, and **EH-3.f**, *Require Hydrologic Studies*, would be required to reduce this impact substantially. Implementation of these programs would help identify impacts to riparian systems, require site assessment for projects affecting SCAs and riparian areas, ensure compliance with SCA regulations, replace vegetation in SCAs removed by projects, and require hydrologic studies for new development. Based on criteria described in **Section 4.0**

¹ Please note where revisions to policy and program language are proposed, some additional editing for clarity, consistency, and the ability to effectively administer may be appropriate prior to the Commission’s final recommendation. This is particularly applicable to several mitigations proposed in the Draft Environmental Impact Report (DEIR).

Environmental Setting, Impacts, and Mitigation Measures, all five of these programs would be implemented within five years.³

However, adverse effects from erosion and sedimentation caused by increased peak flow rates would still occur because policies of the *Draft 2005 CWP Update* would not address the need to assess the erosion potential of local drainageways that would serve as the receiving waters for a proposed development. Therefore, this would be a significant project impact and the project would make a cumulative significant contribution to a cumulative impact. The following mitigation would be required.

Mitigation Measure 4.5-4 In order to reduce impacts from erosion and downstream sedimentation in Marin County drainageways to a less-than-significant level, the County would add an additional policy to minimize the adverse affects of increased peak flow rates and storm drain discharges from development.

Mitigation Measure 4.5-4(a) Add a new policy to the Natural Systems & Agricultural Element

BIO-4 (new) Project applicants for new development / redevelopment projects shall, where evidence that significant current or impending channel instability is present, i.e. 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, is presented to the County demonstrating the need for an assessment, be required to prepare a hydraulic and / or geomorphic assessment of on-site and downstream drainageways that are affected by project area runoff. 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 and access. In the event that project development would result in or further exacerbate existing channel instabilities, the applicant could either propose their own channel stabilization program, or defer to the mitigations generated during any environmental review required by the County for the project, which could include maintenance of peak flows at pre-project levels [Holland clarification]. Any proposed stabilization measures shall anticipate any project-related changes to the drainageway flow regime.

Mitigation Measure 4.5-4(b) 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) Implement Mitigation Measure **4.5-1(b)** of *Impact 4.5-1 Water Quality Standards* and **4.5-3(b)** of *Impact 4.5-3 Groundwater Recharge* relating to infiltration and peak flow rate control upon adoption of the *Draft 2005 CWP Update*.

Recommendation

Staff recommends acceptance of the relevant *Draft 2005 CWP Update* policies discussed above along with Mitigation Measure 4.5-4 would ensure that discretionary projects are designed and constructed in accordance with accepted engineering practices to minimize local hillslope and channel instability, soil loss, impacts to riparian vegetation, increased peak flows, and adverse affects to downstream storm drainage facilities. These measures would also ensure that applicable regulatory statutes would be

³ As described in *Section 4.0 Environmental Setting, Impacts, and Mitigation Measures*, this Draft EIR assumes that if there is an identified funding source; if it is a medium or high priority; and will be implemented in the immediate-, short-, or medium-term, or is ongoing, that the program would be implemented and could be relied upon to reduce significant impacts to a less-than-significant level. If there is no identified funding source, is a low priority, and only would be implemented in the long-term, then this Draft EIR does not assume that the program will be implemented. In instances where such program would be required to mitigate significant impacts, this Draft EIR recommends, as a mitigation measure, that the program be funded, receive a higher priority, and be implemented in the medium-term or sooner.

followed. Therefore, project impacts related to drainages, erosion and downstream sedimentation would be reduced to a less-than-significant level and the project's contribution to cumulative impacts would be less than cumulatively considerable. Staff recommends adoption of Mitigation Measures **4.5-4(a)**, **(b)**, and **(c)** as modified above.

NEW ISSUE 30: Stormwater Drainage System Capacities

Discussion

This issue is only related to impacts identified in the DEIR. Implementation of the *Draft 2005 CWP Update* would increase peak flow rates, erosion, and downstream sedimentation in and around new development. Such increases would reduce the capacity of drainageways and could result in flood flows that exceed existing downstream channel or stormwater system capacities.

EIR Considerations

According to the DEIR, these policies and programs would reduce some impacts to the capacity of Marin County's stormwater drainage facilities. However, implementation of the *Draft 2005 CWP Update* would still result in increases in peak flow rates that would increase flooding. Policies of the Draft 2005 CWP Update would not address maintaining predevelopment peak flow rates so that existing stormwater drainage system capacities would not be reduced or exceeded. In addition, the policies would not require a complete hydraulic and geomorphic assessment of on-site and downstream drainageways. Such assessments would be necessary to ensure that the stability of drainageways would not be compromised or that their capacity be reduced. Therefore, this would be a significant project impact and the project would make a cumulatively significant contribution to a cumulative impact. The following mitigation would be required.

Mitigation Measure **4.5-5** To minimize the potential impact of flooding from undersized stormwater drainage system capacity, Mitigation Measures **4.5-1(b)** of Impact 4.5-1 Water Quality Standards, **4.5-3(b)** of Impact 4.5-3 Groundwater Recharge, and **4.5-4(b)** of Impact 4.5-4 Drainage – On-Site and Downstream Erosion and Sedimentation should be implemented upon adoption of the Draft 2005 CWP Update.

Recommendation

Staff recommends acceptance of the relevant *Draft 2005 CWP Update* policies discussed above along with Mitigation Measures **4.5-5** would ensure that discretionary projects are designed and constructed in accordance with accepted engineering practices. Such practices would minimize local hillslope and channel instability, soil loss, impacts to riparian vegetation, increased peak flows, and adverse effects to downstream storm drainage facilities. Therefore, this would be reduced to a less-than-significant impact and the project's contribution to cumulative impacts would be less than cumulatively considerable. Staff recommends adoption of Mitigation Measures **4.5-5**, **4.5-1(b)**, **4.5-3(b)**, and **4.5-5(b)**¹.

NEW ISSUE 31: Stormwater Drainage System Expansions

Discussion

This issue is only related to recommendations in the DEIR. Development consistent with the *Draft 2005 CWP Update* would require the expansion of existing stormwater drainage systems. Depending on the

¹ Please note where revisions to policy and program language are proposed, some additional editing for clarity, consistency, and the ability to effectively administer may be appropriate prior to the Commission's final recommendation. This is particularly applicable to several mitigations proposed in the Draft Environmental Impact Report (DEIR).

routes selected for the storm drain alignments and other right-of-way and environmental factors, such construction could result in secondary impacts to hydrology and water quality

EIR Considerations

According to the DEIR, policies and programs in the Draft 2005 CWP would reduce some impacts to water quality from the expansion of storm drain systems, peak flow rates would still increase because specific measures to reduce such flows are not included in the *Draft 2005 CWP Update*. Detailed hydraulic studies of receiving drainage systems would also not be required. Such studies would assess the capacity and stability of downstream drainage systems for discretionary projects. Therefore, this would be a significant project impact and the project would make a cumulatively significant contribution to a cumulative impact. The following mitigation would be required.

Mitigation Measure 4.5-6 Implement Mitigation Measures **4.5-1(b)** of *Impact 4.5-1 Water Quality Standards*, **4.5-3(b)** of *Impact 4.5-3 Groundwater Recharge*, and **4.5-(b)** of *Impact 4.5-4 Drainage – On-Site and Downstream Erosion and Sedimentation* upon adoption of the *Draft 2005 CWP Update*.

Recommendation

Adoption of the relevant *Draft 2005 CWP Update* policies discussed above, along with Mitigation Measure **4.5-6** would combine to minimize erosion impacts from future construction of storm drain system expansions. Furthermore, they have the ability to maintain peak flows at predevelopment levels, which would be necessary to preserve the existing capacity of storm drain systems and minimize downstream erosion. Therefore, this would be reduced to a less-than-significant impact and the project's contribution to cumulative impacts would be less than cumulatively considerable. Staff recommends adoption of Mitigation Measures **4.5-1(b)**, **4.5-3**, and **4.5-(b)**¹.

NEW ISSUE 32: Exposure of People or Structures to Flood Hazards

Discussion

This issue is only related to impacts identified in the DEIR. This issue is only related to recommendations in the DEIR. Implementation of the *Draft 2005 CWP Update* could result in the development of residential or commercial structures in floodplains, and expose occupants and / or structures to flood hazards. Similar development could occur in shoreline areas and would be subject to flooding due to extreme high tides or coincident high tides and watershed flooding. Sea level rise associated with the warming of the earth's atmosphere would exacerbate these risks.

EIR Considerations

According to the DEIR, while policies and programs in the *Draft 2005 CWP Update* would substantially reduce the exposure of people or structures to flood hazards, additional policies would be needed such as that proposed in Mitigation Measure **4.5-4(a)** to address channel stability. In addition, it would be necessary to implement Programs **EH-3.k**, *Anticipate Sea Level Rise*, and **AIR-5.c**, *Prepare Response Strategies*, to reduce adverse effects of sea level rise. Based on criteria described in Section 4.0 Environmental Setting, Impacts, and Mitigation Measures, program **EH-3.k**, *Anticipate Sea Level Rise*, would be implemented within five years. However, given that program **AIR-5.c**, *Prepare Response*

¹ Please note where revisions to policy and program language are proposed, some additional editing for clarity, consistency, and the ability to effectively administer may be appropriate prior to the Commission's final recommendation. This is particularly applicable to several mitigations proposed in the Draft Environmental Impact Report (DEIR).

Strategies, would require additional funding it cannot be certain that this program would be implemented in a timely manner.

Therefore, this would be a significant project impact and the project would make a cumulatively significant contribution to a cumulative impact. The following mitigation would be required.

Mitigation Measure 4.5-7 In order to reduce the exposure of people or structures to flood hazards to a less-than-significant level, the County would need to address issues related to channel stability, and sea level rise.

Mitigation Measure 4.5-7(a) Implement Mitigation Measures **4.5-3(b)** of Impact 4.5-3 Groundwater Recharge and **4.5-4(a)** and **4.5-4(b)** of Impact 4.5-4 Drainage – On-Site and Downstream Erosion and Sedimentation upon adoption of the Draft 2005 CWP Update.

Mitigation Measure 4.5-3(b) 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) Add a new policy to the Natural Systems & Agricultural Element *BIO-4* (new) Project applicants for new development / redevelopment projects shall, where evidence *that significant current or impending channel instability is present, i.e. 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, is* presented to the County demonstrating the need for an assessment, be required to prepare a hydraulic and / or geomorphic assessment of on-site and downstream drainageways that are affected by project area runoff. 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 and access. In the event that project development would result in or further exacerbate existing channel instabilities, the applicant could either propose their own channel stabilization program, or defer to the mitigations generated during any environmental review required by the County for the project, which could include *maintenance of peak flows at pre-project levels* [Holland clarification]. Any proposed stabilization measures shall anticipate any project-related changes to the drainageway flow regime.

Mitigation Measure 4.5-4(b) 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 4.5-7(b) Obtain additional funding necessary to implement Program **AIR-5.c**. In addition, County staff would amend the Marin County Development Code to include construction standards for areas threatened by future sea level rise.

Mitigation Measure 4.5-7(c) 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.

Recommendation

Staff recommends acceptance of the relevant *Draft 2005 CWP Update* policies discussed above along with Mitigation Measures **4.5-7(a)**, **4.5-7(b)** and **4.5-7(c)** would ensure that people and structures are protected against the 100-year flooding event. Addressing rising sea level elevations would protect future development in low-lying areas affected by extreme high tide events. Addressing development densities and regulating SCAs would ensure that the conveyance capacity of stormwater drainage systems would be preserved. These measures would reduce the exposure of people and structures to flooding to a less-than-significant impact and the project's contribution to cumulative impacts would be less than cumulatively considerable. Staff recommends adoption of Mitigation Measures **4.5-7**, **4.5-7(a)**, **(b)**, and **(c)**.¹

NEW ISSUE 33: Special-Status Species

Discussion

This issue is only related to impacts identified in the DEIR. Land uses and development consistent with the Draft 2005 CWP Update could result in the loss of populations or essential habitat for special-status species.

EIR Considerations

While adoption and implementation of the policies and programs in the Draft 2005 CWP Update would substantially reduce adverse effects to special-status species in unincorporated Marin County, continued participation in the FishNet4C program and implementation of four programs in the Draft 2005 CWP Update would be required to reduce this impact to a less-than-significant level. Specifically, implementation of Programs **BIO-1.c**, *Maintain a Natural Resource Information Program*, **BIO-2.a**, *Require Site Assessments*, **BIO-2.c**, *Facilitate Agency Review*, and **BIO-2.d**, *Promote Early Agency Consultation*, would be necessary to maintain up-to-date informational resources, require site assessments, and coordinate environmental review with jurisdictional agencies and the project applicant. Based on criteria described in Section 4.0 Environmental Setting, Impacts, and Mitigation Measures, programs **BIO-1.c**, **BIO-2.a**, **BIO-2.c**, and **BIO-2.d** would be implemented within five years and therefore could be relied upon to reduce this impact. However, as the Draft 2005 CWP Update does not call for continued participation in the FishNet4C program or the implementation of the program's recommendations, impacts to anadromous fish and other aquatic species could still occur. Therefore, this would be a significant project impact and the project would make a cumulatively significant contribution to a cumulative biological resources impact. The following mitigation would be required.

Mitigation Measure 4.6-1 Add a new policy to the Biological Resources section as follows:

BIO-2.(new) 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.

¹ Please note where revisions to policy and program language are proposed, some additional editing for clarity, consistency, and the ability to effectively administer may be appropriate prior to the Commission's final recommendation. This is particularly applicable to several mitigations proposed in the Draft Environmental Impact Report (DEIR).

Recommendation

Adoption of Mitigation Measure 4.6-1, together with effective implementation of relevant programs, and oversight by regulatory agencies entrusted with enforcement of State and federal regulations that address protection and management of special-status species, would substantially reduce adverse effects to special-status species resulting from land uses and development consistent with the *Draft 2005 CWP Update*. Therefore, this would be a less-than-significant project impact and the project's contribution to cumulative impacts would be less than cumulatively considerable. Staff recommends adoption of Mitigation Measures **4.6-1**.

NEW ISSUE 34: Geology, Surface Fault Rupture

Discussion

This issue is only related to impacts identified in the DEIR. Land uses and development consistent with the Draft 2005 CWP Update would expose people and new structures to the risk of loss, injury, or death involving ground surface rupture of a known active fault. This would be a significant impact.

EIR Considerations

According to the DEIR, while implementation of the Draft 2005 CWP Update policies and programs would reduce the adverse affects of surface fault rupture as well as other geologic hazards, surface fault rupture could still affect structures that meet only the minimum requirements of the Alquist-Priolo Earthquake Fault Zone Act. Additional planning would also be required to reduce damage to structures that cross an active fault trace.

Therefore, this would be a significant impact and the project would make a cumulatively significant contribution to a cumulative surface fault rupture impact. The following mitigation measure would be required.

Mitigation Measure 4.7-1 In order to reduce this impact to a less-than-significant level, it would be necessary to revise Policy **EH-2.2** (*Comply with the Alquist-Priolo Act*) and Program **EH-2.d** (*Limit Building Sites in Alquist-Priolo Zones*) to require that any development and redevelopment within the San Andreas Earthquake Fault Zones be properly evaluated and sited. In addition, a new program would be implemented to develop strategies to reduce the impact of surface fault rupture on critical public lifelines and access (i.e., evacuation) routes.

Mitigation Measure 4.7-1(a) Revise Policy **EH-2.2** (*Comply with the Alquist-Priolo Act*) and Program **EH-2.d** (*Limit Building Sites in Alquist-Priolo Zones*) of the *Draft 2005 CWP Update* as follows:

Policy EH-2.2; Comply with the Alquist-Priolo Act. Continue to implement and enforce the Alquist-Priolo Earthquake Fault Zoning Act. ~~prohibit specified types of any structures for human occupancy in State-designated active fault areas.~~

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 certified engineering professional geologist establishes that the and sufficient and suitable land area for development pursuant to will comply with all applicable State and County earthquake standards and regulations.

Mitigation Measure 4.7-1(b) Add a new program to the *Draft 2005 CWP Update* in order to reduce adverse effects of surface fault rupture to critical public lifelines and access (i.e., evacuation) routes that cross an active fault trace.

Program EH-2.(new) 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) 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 the presence of surface fault rupture.

Recommendation

Mitigation Measure 4.7-1, combined with the hazard awareness and emergency preparedness policies and programs of the *Draft 2005 CWP Update* described above, which would minimize the exposure of people and development to the adverse effects of surface fault rupture within an Alquist-Priolo Earthquake Fault Zone. These policies and programs would reduce the number of new structures built on an active fault trace, and prepare the County for damage to lifelines and roads crossing an active fault. In addition, these programs, if implemented, would provide multi-hazard pre-disaster mitigation and community preparedness.

However, while these measures would reduce the exposure of people and structures to the adverse effects of surface fault rupture for minor to moderate events to a less-than significant-level, they would not do so for severe events. Structures exempted in the Alquist-Priolo Fault Zone Act, and any lifelines or access (evacuation) routes that cross the San Andreas Fault Zone would still be exposed to this impact. Therefore, this would remain a significant unavoidable project and cumulative impact. Staff recommends acceptance of Mitigation Measures **4.7-1(a), (b), and (c)**

NEW ISSUE 35: Seismic Ground Shaking

Discussion

This issue is only related to impacts identified in the DEIR. Land uses and development consistent with the Draft 2005 CWP Update would expose people, new development and redevelopment to substantial adverse seismic effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

EIR Considerations

Mitigation Measure 4.7-2 In order to reduce seismic ground shaking impacts substantially, the County would revise the following policy and programs related to seismic safety, retrofit, and the location of emergency service facilities and create a new program to systematically assess damaged and collapsed buildings after a damaging earthquake. In addition, the County would obtain funding and revise the timeframe of implementation of Program **EH-2.e** (*Retrofit County Buildings*), to the medium-term or sooner.

Mitigation Measure 4.7-2(a) Revise Policy **EH-2.3** (*Ensure Safety of New Structures*) and Programs **EH-2.e** (*Retrofit County Buildings*), **PS-3.f** (*Promote Structural Safety*), and **PS-3.g** (*Locate Emergency Services Facilities Appropriately*) to ensure seismic safety of all new structures, to address the proper

location and retrofit of County buildings and essential critical facilities, and to promote structural and nonstructural safety (e.g., proper securing of nonstructural items within buildings).

Policy EH-2.3; Ensure Seismic Safety of New Structures. Require that structures to be occupied by large groups, such as offices, restaurants, hotels, senior housing and multi family housing are designed to be as safe as technically feasible in locations subject to ground shaking or other geologic hazards. 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 by 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 installation of automatic natural gas shut-off valves in buildings. Encourage retrofit of older buildings and securing nonstructural elements of a building to prevent the falling or throwing of objects. Encourage retrofitting seismically vulnerable buildings.

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) Add a new program to the *Draft 2005 CWP Update* that would create a process for systematic assessment of damaged and collapsed buildings immediately following a significant earthquake in order to determine recovery needs. This should begin with evaluation of essential service buildings and facilities and then continue with other structures.

Program EH-2.(new); 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 plan in response to a damaging earthquake.

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

Mitigation Measure 4.7-2(d) Continue to implement County ordinances to ensure new construction utilize 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.

Recommendation

Mitigation Measure 4.7-2(a) would minimize adverse effects of seismic ground shaking on future development, redevelopment, County buildings, and critical facilities and ensure the eventual retrofit of seismically vulnerable County buildings. Implementation of the revised policy, programs, and the new program would greatly reduce the exposure of people and structures to injury and damage associated with building collapse from seismic ground shaking. However, due to the various ages and types of construction and the minimum requirements in current building codes, some buildings would still be damaged, especially during severe seismic ground shaking.

Mitigation Measure 4.7-2(b) would allow a quick assessment of infrastructure and critical facility damage following a damaging earthquake and help direct resources to appropriate locations. Such measures could identify hazardous conditions and prevent or substantially reduce the potential for additional damage, injury or death from earthquake aftershocks that are common after a large earthquake.

Mitigation Measure 4.7-2 would ensure a reduced level of risk compared to existing conditions and reduce adverse effects of mild to moderate seismic ground shaking to a less-than-significant level. Nevertheless, for severe seismic ground shaking this would remain a significant unavoidable project and cumulative impact. Staff recommends acceptance of Mitigation Measures **4.7-2,(a), (b), (c), and (d)**

NEW ISSUE 36: Seismic-Related Ground Failure

Discussion

This issue is only related to impacts identified in the DEIR. Land uses and development consistent with the Draft 2005 CWP Update would expose people and structures to substantial adverse seismic effects, including the risk of loss, injury, or death from seismic-related ground failures.

EIR Considerations

Implementation of the *Draft 2005 CWP Update* would result in damage to or destruction of new development and redevelopment by one or more of the various types of seismic-related ground failure: liquefaction-related ground failure, dynamic compaction, dynamic displacement, or tectonic deformation. During a moderate to severe seismic event, Marin County could locally experience some or all of the seismic-related ground failures listed above.

This would be a significant project impact and the project would make a cumulatively significant contribution to a cumulative seismic-related ground failure impact. The following mitigation would be required.

Mitigation Measure 4.7-3 In order to reduce the exposure of people and structures to seismic-related ground failure to a less-than-significant level, the County would revise Programs **EH-2.a** (*Require Geotechnical Reports*) and **EH-2.b** (*Require Construction Certification*) and add a new program upon adoption of the *Draft 2005 CWP Update*.

Mitigation Measure 4.7-3(a) Revise Programs **EH-2.a** (*Require Geotechnical Reports*) and **EH-2.b** (*Require Construction Certification*) of the *Draft 2005 CWP Update* 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 (unless waived), in conformance with the State Seismic Hazards Mapping Act (PRC Div. 2, Chapter 7.8), that~~ 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; and
- ~~Addresses on-site structural engineering,~~ the impact of the project on adjacent lands, and potential impacts of off-site conditions.

~~When available, post and disseminate information from Seismic Hazard Zone maps in conformance with the Act.~~

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 ~~to~~ be supervised and certified by a geotechnical engineer and / or, ~~when necessary,~~ an engineering geologist, as deemed necessary.

Mitigation Measure 4.7-3(b) Add a new program to the *Draft 2005 CWP Update* that would continue to create Geologic Hazard Area maps based on the most up to date geologic and geotechnical information as it becomes available. This would be incorporated into County GIS data so that updates can be implemented as new information is obtained.

Program EH-2.(new); *Geologic Hazard Areas.* Continue to create Geologic Hazard Area maps that utilize updated information as it becomes available. These maps should be used to determine the need for geologic and geotechnical reports for a proposed development or redevelopment.

Mitigation Measure 4.7-3(c) 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 seismic-related ground failure.

Recommendation

Mitigation Measure 4.7-3 would minimize the exposure of persons or structures to adverse effects of seismic-related ground failure for minor and moderate events to a less-than-significant level. However, implementation of these policies and programs would not eliminate all structural damage, injuries, or death from seismic-related ground failures, especially for severe seismic events. Therefore, this would remain a significant unavoidable project and cumulative impact. Staff recommends acceptance of Mitigation Measures **4.7-3,(a), (b), and (c).**¹

NEW ISSUE 37: Landsliding

Discussion

This issue is only related to impacts identified in the DEIR. Land uses and development consistent with the Draft 2005 CWP Update would expose people and structures to adverse effects of landsliding, including the risk of loss, injury, or death from slow or rapid gravity driven earth movement. This hazard is prevalent in the hillsides of Marin County.

EIR Considerations

Historically, periods of intense rainfall have caused debris flows throughout the county. In many cases, they begin in areas that are far away from the communities they damage. As these conditions would continue in Marin County, this would be a significant project impact and the project would make a cumulatively significant contribution to a cumulative landsliding impact. The following mitigation would be required.

¹ Please note where revisions to policy and program language are proposed, some additional editing for clarity, consistency, and the ability to effectively administer may be appropriate prior to the Commission's final recommendation. This is particularly applicable to several mitigations proposed in the Draft Environmental Impact Report (DEIR).

Mitigation Measure 4.7-4(a) In order to reduce 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.(new)** [*Geologic Hazard Areas*]) in Mitigation Measure 4.7-3 of *Impact 4.7-3 Seismic-Related Ground Failure*.

Mitigation Measure 4.7-4(b) Continue to implement 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.

Recommendation

Mitigation Measure **4.7-4** and Program **EH-2.f** would combine to minimize adverse effects to people and structures exposed to landsliding. If effectively implemented and enforced, these programs could reduce the impact to a less-than-significant level. However, implementation of these policies and programs would not eliminate source areas of debris flows and landslides in Marin County, especially during prolonged or intense rainfall events. Therefore, this would remain a significant unavoidable project and cumulative impact. Staff recommends acceptance of Mitigation Measures **4.7-4(a)** and **(b)**.

NEW ISSUE 38: Subsidence and Settlement

Discussion

This issue is only related to impacts identified in the DEIR. Land uses and development consistent with the Draft 2005 CWP Update would expose structures to ground subsidence and settlement. Damage to structures and improvements could be substantial as deposits prone to subsidence and settlement are present throughout the Marin County, especially in the flatland areas adjacent to the bay.

EIR Considerations

According to the DEIR, without implementation of Program **EH-2g** and the revised policy, programs, and the new program in Mitigation Measure 4.7-3 of *Impact 4.7-3 Seismic-Related Ground Failure*, exposure of people and structures to the adverse effects of subsidence and settlement would not be reduced to a less-than- significant level. Therefore, this would be a significant project impact. However, because impacts associated with subsidence and settlement are typically limited to the proximity of development there would not be a significant cumulative subsidence and settlement impact. The following mitigation measure would be required.

Mitigation Measure 4.7-5(a) In order to reduce 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.(new)** [*Geologic Hazard Areas*]) in Mitigation Measure 4.7-3 of *Impact 4.7-3 Seismic-Related Ground Failure*.

Mitigation Measure 4.7-5(b) Revise the timeframe of implementation of Program **EH-2.g** to the medium-term or sooner.

Mitigation Measure 4.7-5(c) Continue to implement 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.

Recommendation

Mitigation Measure **4.7-5** would combine to reduce adverse effects to people and structures exposed to subsidence and settlement to a less-than-significant level. Staff recommends acceptance of Mitigation Measures **4.7-5**

NEW ISSUE 39: Expansive Soils

Discussion

This issue is only related to impacts identified in the DEIR. Land use and development consistent with the Draft 2005 CWP Update would expose structures to substantial adverse effects of expansive soils, including the risk of damage and possible loss of structures and property improvements. This hazard is prevalent in Marin County, especially in the flatland areas adjacent to the bay.

EIR Considerations

According to the DEIR, expansive soils are widely distributed throughout Marin County and implementation of the *Draft 2005 CWP Update* would likely expose development and redevelopment to adverse effects of expansive soils. These soils contain clay minerals that will swell and increase in volume when they become wet and shrink when they dry out. In addition, expansive soils are responsible for surficial creep on steep slopes and shallow slope failures in hillside areas. If not designed properly, light structures, roads and pavements could be damaged by the seasonal shrinking and swelling of expansive soils and result in substantial cracks and differential movement.

Although the *Draft 2005 CWP Update* contains no policies or programs specific to this hazard, adverse effects of expansive soils would be addressed by proper geotechnical investigation and report as required by Mitigation Measure **4.7-3** of *Impact 4.7-3 Seismic-Related Ground Failure*. Absent this mitigation measure, this would be a significant project impact. However, because impacts associated with expansive soils are site-specific and typically limited to the proximity of development there would not be a significant cumulative expansive soils impact. Therefore, the following mitigation would be required.

Mitigation Measure 4.7-6(a) In order to reduce adverse effects from the exposure of structures to expansive soils 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.(new)** [*Geologic Hazard Areas*]) in Mitigation Measure 4.7-3 of *Impact 4.7-3 Seismic-Related Ground Failure*.

Mitigation Measure 4.7-6(b) Continue to implement 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.

Recommendation

Mitigation Measure **4.7-6** would reduce adverse effects to structures exposed to expansive soils to a less-than-significant level. Staff recommends acceptance of Mitigation Measures **4.7-6(a) and (b)**

NEW ISSUE 40: Septic Suitability of Soils

Discussion

This issue is only related to impacts identified in the DEIR. As described in the environmental setting section, a significant number of existing properties utilize on-site septic systems in Marin County. Implementation of the *Draft 2005 CWP Update* would result in additional development and redevelopment that would utilize septic systems in areas where soils are not suitable for wastewater treatment. The suitability of a property for on-site disposal would depend on many variables other than soil type: topography, type and thickness of appropriate soils, percolation rate, depth to bedrock, and other limiting factors.

EIR Considerations

According to the DEIR, without implementation of program **WR-2.e**, adverse effects due to the use of septic systems in unsuitable soils would not be reduced to a less-than-significant level as no-cost inspections of septic systems in high-priority areas would not be provided. This would be a significant project impact. However, because impacts associated with septic suitability of soils would be limited to where septic systems are used, primarily in the unincorporated area (i.e., West Marin Planning Area); there would not be a significant cumulative impact. The following mitigation would be required

Mitigation Measure 4.7-7 In order to reduce adverse effects from septic system use in unsuitable soils to a less-than-significant level, the County would obtain 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.

Recommendation

Mitigation Measure **4.7-7**, in addition to other programs discussed in the impact analysis above, would reduce adverse effects from septic system use in unsuitable soils by providing a countywide management plan. Therefore, this would be reduced to a less-than-significant impact. Staff recommends acceptance of Mitigation Measures **4.7-7**.

NEW ISSUE 41: Tsunamis and Seiches

Discussion

This issue is only related to impacts identified in the DEIR. Tsunamis are a threat to all coastal communities along the west coast of the United States. Implementation of the *Draft 2005 CWP Update* could result in new land uses and development in close proximity to the Pacific Ocean and San Francisco Bay and therefore would expose people and structures to the risk of tsunamis and seiches generated primarily by high-magnitude earthquakes

EIR Consideration

According to the DEIR, land use and development consistent with the Draft 2005 CWP Update would expose people and structures in some low-lying areas of Marin County to substantial adverse effects of tsunamis and seiches, including the risk of loss, injury, or death from this hazard. Seiches could occur within enclosed bodies of water and would cause damage to property. Tsunamis along the coastal corridor would cause significant damage, injury and death. This would be a significant impact.

While the policies and programs in the Environmental Hazards Section of the Draft 2005 CWP would reduce the exposure of people and structures to the adverse effects of tsunamis and seiches, additional

measures would be required to avoid development in areas of inundation and provide public education and community preparedness, especially in the Coastal Corridor. Therefore, this would be a significant project impact and the project would make a cumulatively significant contribution to a cumulative tsunami and seiches impact. The following mitigation would be required.

Mitigation Measure 4.7-8 In order to reduce impacts associated with tsunamis and seiches to a less-than-significant level, the County would revise Policy **EH-2.4**, *Protect Coastal Areas from Tsunamis*, to address tsunami wave runup and inundation impacts when reviewing proposed development along coastal areas of Marin County when inundation maps become available. In addition the County would revise Programs **EH-3.a**, *Regulate Development in Flood and Inundation Areas*, and **EH-3.g**, *Locate Critical Facilities Safely*, to continue to require that new development / or improvements be more resistant to damage and that critical facilities be located outside of tsunami hazard areas. In addition, it would be necessary for the County to participate in the National Weather Service's *TsunamiReady* program, which promotes tsunami hazard preparation in coastal communities.

Mitigation Measure 4.7-8(a) Revise Policy **EH-2.4** (*Protect Coastal Areas from Tsunamis*) and Programs **EH-3.a** (*Regulate Development in Flood and Inundation Areas*) and **EH-3.g** (*Locate Critical Facilities Safely*) as follows.

Policy EH-2.4; *Protect Coastal Areas from Tsunamis.* ~~Consider~~ When inundation maps become available, address tsunami wave runup and inundation impacts 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 ~~withstand impacts~~ be more resistant to damage from flooding, tsunamis, seiches, and related waterborne debris, and to be located so that buildings and features such as docks, decking, floats, and vessels would be more resistant to damage. ~~do not become dislodged.~~

Program 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.

Mitigation Measure 4.7-8(b) Add a new program to the *Draft 2005 CWP Update* that would require participation by Marin County in the National Weather Service's *TsunamiReady* program to create public awareness and community preparedness in hazard areas. Certification would be accomplished by satisfying criteria including 1) establishing an emergency operations center; 2) creating multiple ways of receiving National Weather Service tsunami warnings; 3) the ability to disseminate a tsunami warning; 4) having a tsunami hazard plan; and 5) creating a community awareness program.

Program EH-2.(new); *Make Marin County TsunamiReady.* Become a National Weather Service TsunamiReady community in order to promote public awareness, community preparedness, and facilitate quick recovery in the event of a tsunami.

Recommendation

Mitigation Measure **4.7-8** would substantially reduce the exposure of people and structures to minor and moderate tsunami and seiche events in Marin County through public education, community preparedness, more damage resistant structures, and informed land use planning. However, people and development (i.e., structures, critical facilities, lifelines, and emergency access) in low-lying areas would experience substantial damage, loss, injury, or death in the event of a severe event. Therefore, this would remain a significant unavoidable project and cumulative impact. Staff recommends acceptance of Mitigation Measures **4.7-8(a) and (b)**.

NEW ISSUE 42: Groundwater Supply

Discussion

This issue is only related to impacts identified in the DEIR Land uses and development consistent with the Draft 2005 CWP Update would result in increased rural demand for groundwater supply.

Recommendation

Since this issue is not only covered by the Water Resources section of the CWP but also the Public Facilities and Services Section in the Built Environment Element, staff recommends delaying discussion on specific Groundwater Supply mitigations until the Water Supply discussion, scheduled for the April 9th Planning Commission hearing.

NEW ISSUE 43: Water Resources

Discussion

In the Alternatives Section of the DEIR, *Alternative 4* includes measures to reduce potential impacts to water demand, particularly in water districts with a buildout supply deficit. Because water conservation is almost always more cost effective than new water supply projects, both in direct water costs and in the associated environmental impacts, the new measures focus on conservation. Despite ongoing water conservation practices in Marin County, there is still potential for / additional water savings through water conservation and efficient water use.

Greatly expanding the use of reclaimed water from wastewater treatment plants, for example, could provide for additional water supply, particularly for uses in the City-Centered corridor where water supply is limited. Currently, of the 7,243 million gallons per year (MGY), only 801.5 MGY or 12 percent are reused. Central Marin Sanitary District, which serves central San Rafael, Corte Madera, Larkspur, and Ross Valley, and the Sausalito and Tiburon sanitary districts, do not reclaim any of their wastewater. Novato Sanitary District reclaims 30 percent of its wastewater while Las Gallinas Sanitary District reclaims 55 percent of its wastewater. Incentives could be created to encourage use of reclaimed water in the City-Centered corridor.

In addition, some measures are proposed below that would supplement water supply. Specific measures can be summarized with these general themes:

- Promote and expand the use of existing water conserving technologies including low-flow faucets and showerheads; low-flow or waterless restroom facilities; efficient residential and commercial washing machines and dishwashers; drip and precision irrigation sprinklers; and commercial and industrial recycling systems;
- Work with water districts to institute tiered pricing;
- Add “appliance standards” to the green points checklist for permit applicants;
- Require site-appropriate, low-water use landscaping;
- Promote on-site water catchments for irrigation using rebates or other incentives;

- Promote reclaimed and recycled water as a supply source;
- Encourage and consider requiring pervious material for residential, commercial and municipal paving projects; and

Recommendation

The following revisions to goals, policies, and programs related to water supply, which staff recommends accepting as a part of *Alternative 4* in the DEIR, are included:

GOAL WR-1

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

GOAL WR-2

Policies

WR-2.2: "...and nutrient management in urban and rural watersheds."

WR-2.4: "...buildings, landscaped areas, roads, bridges, drainages, and other facilities to minimize the volume of toxics, nutrients, sediment and other pollutants in storm water flows."

Programs

WR-2.k *Establish Educational Partnerships to Protect Water Quality.*

GOAL WR-2

Programs

WR-2.b *Integrate Bay Area Stormwater Management Agencies Association (BASMAA) stormwater quality protection guidelines into permitting requirements for all development and construction activities. All projects should integrate stormwater pollution prevention design features such as those included in the BASMAA Start-at-the-Source manual for stormwater quality protection and their *Tools Handbook*. In addition, the relevant development code sections should be modified accordingly.*

WR-2.(new): *Non-Toxic Building Materials Standards Consider adoption of standards for non-toxic exterior building materials criteria to reduce the potential of toxics entering stormwater.*

WR-2.d *Continue Alternative Septic / Waste System Monitoring. Establish a Septic / Waste Alternatives Maintenance and Inspection Program to ensure the proper installation, maintenance and use of alternatives to septic systems. Work with manufacturers, suppliers and installers to provide guidelines for approvable alternative septic/waste systems.*

WR-2.(new) *Implement Least Toxic Methods for Maintenance and Pest Control. Utilize Integrated Pest Management (IPM) practices for County facilities. Develop a maintenance program for all County facilities that specifies least toxic methods. Minimize the need for toxic materials by*

designing and constructing facilities and landscaping to be durable, easily maintained and pest resistant.

GOAL EH-3

Policies

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

Programs

EH-3.(new) *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.(new) *Develop Watershed Management Plans* Develop watershed specific, wholistic watershed management 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 as well as the protection of human life and property.

Respectfully Submitted,

Alex Hinds

Kris Krasnove

Attachments:

1. Draft Marin Countywide Referenced Plan Goals, Policies and Programs for Biological Resources and Water Resources
2. Draft Marin Countywide Plan Referenced Goals, Policies, and Programs for, Atmosphere and Climate, Environmental Hazards, and Open Space
3. Bayfront Conservation Zone Map of Blackpoint
4. Bayfront Conservation Zone Map of Bel Marin Keys
5. Bayfront Conservation Zone Map of Santa Venetia
6. Technical Corrections proposed by Commissioner Holland
7. Commissioner Greenberg's proposed language related to "buffers" to sensitive habitat
8. Letter from Marin ReLeaf, dated February 25, 2007
9. Letter from Madeline Thomas, dated March 6, 2007
10. Letter from Sue Lattanzio, dated March 6, 2007
11. Letter from Dennis Gail, dated February 12, 2007