(12)



# BEL MARIN KEYS UNIT 5 FINAL

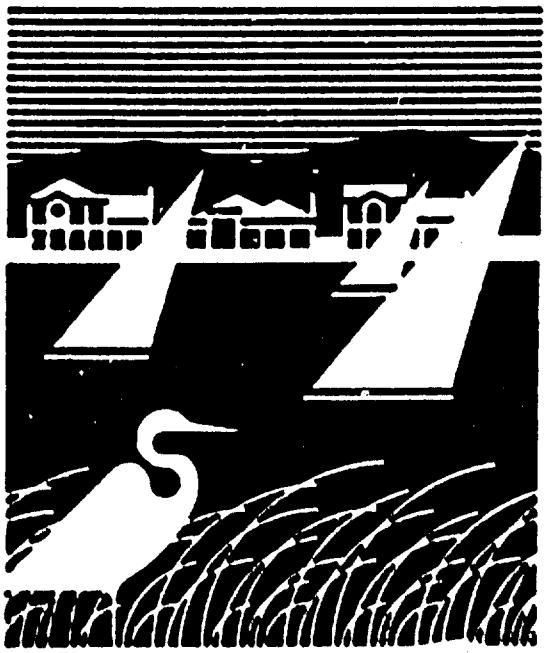
## *Environmental Impact Report/ Environmental Impact Statement*

*Corps Public Notice No. 15813N33A*
*State Clearinghouse No. 89072519*

## VOLUME TWO
## RESPONSE TO COMMENTS

*August 1993*





ESA

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## RESPONSE TO COMMENTS

*August 1993*

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**Federal Cooperating Agencies:**
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**BEL MARIN KEYS UNIT 5**
**VOLUME 2**
**COMMENTS RECEIVED AND RESPONSES**

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# 1. INTRODUCTION TO FEIR / EIS VOLUMES

The Guidelines implementing the California Environmental Quality Act (CEQA) require that written responses be prepared for all written and oral comments received on a draft Environmental Impact Report (EIR) during the public review period. CEQA Guidelines Section 15132 specifically states:

"The Final EIR shall consist of:

a) The Draft EIR or a revision of that draft.
b) Comments and recommendations received on the Draft EIR either verbatim or in a summary.
c) A list of persons, organizations, and public agencies commenting on the Draft EIR.
d) The response of the Lead Agency to significant environmental points raised in the review and consultation process.
e) Any other information added by the Lead Agency."

Similarly, the Council on Environmental Quality Regulations Implementing the National Environmental Policy Act (NEPA) require that a Final EIS be prepared responding to all comments received on the draft and also discussing any opposing views on issues raised. Specifically, 40 CFR 1503.4 states:

"An agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses are to:

1) Modify alternatives including the proposed action.
2) Develop and evaluate alternatives not previously given serious consideration by the agency.
3) Supplement, improve, or modify its analyses.
4) Make factual corrections.
5) Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response."

This Final EIR/EIS has been prepared in compliance with these Guidelines and Regulations, as well as with applicable procedures of Marin County, the U.S. Army Corps of Engineers. The Final EIR/EIS is also intended to comply with relevant, recent judicial actions pertinent to CEQA and NEPA.

As described in the DEIR/EIS (pp. 1.5-1.6), supplemental CEQA and NEPA environmental review documents may be required to address components of the proposed Master Plan not developed in sufficient detail at this time. At a minimum, these components include: 1) the proposed access roads to SR 37 and Hamilton Field; 2) the proposed shorebird habitat/managed mudflat; 3) the proposed seasonal marsh/ farmland area; 4) the proposed shuttle bus; 5) the proposed ferry; and 6) the proposed light rail station.

In addition to supplemental NEPA documents (e.g., Environmental Assessments, Supplemental EISs), a detailed mitigation/monitoring plan may be required to provide site-specific information regarding the impacts for all proposals discussed in the EIS at a Tier 1 (Programmatic) level so that the magnitude of impacts can be evaluated by the Crops prior to any decision on the 10/404 permit application. The detailed mitigation/monitoring plan for the Section 10/404 permit, which will be reviewed by the resource agencies, will be required before the District Engineer issuance or denial.

The Draft EIR/EIS was circulated for public review in early August, 1992 for an initial period of 45 days. Two public hearings were held on September 14, 1993 to receive comments on the draft document. In the afternoon of that day, a public hearing was conducted by the Marin County Planning Commission at the Civic Center in San Rafael. In the evening a separate public hearing in the Bel Marin Keys community was conducted by the Corps of Engineers. At the County Planning Commission hearing, the Commission agreed to grant a 45 day extension of the comment period and to hold a second hearing on November 2. This second hearing was held as scheduled on November 2, 1992 and additional comments were received. This Final EIR/EIS responds to all written and oral comments received on the Draft EIR/EIS during the 90 day review period.

During the EIR/EIS review process, the U.S. Coast Guard circulated Public Notice No. 11-92 with respect to the retractable bridge that would be installed with the Project Sponsor's proposed new navigational lock. The Coast Guard is the permitting agency for the retractable bridge. In addition, any highway alignment, bridge removal and replacement, or new bridge construction related to the BMK 5 Project would be subject to Coast Guard permit authority if constructed over a navigable waterway. Written comments received on this Public Notice, many of which were duplicative with comments made on the EIR/EIS, are responded to in this environmental document.

This Final EIR/EIS is prepared in four volumes. Volume One is a revised Draft EIR/EIS, with additions, corrections, and deletions made evident through the use of "strike-outs," indicating deletion to the EIR/EIS text, and underlining indicates additions to the EIR/EIS text. In general, the revisions to the Draft EIR/EIS are developed in response to comments received during the review process. However, the EIR/EIS authors also made minor corrections and revisions to improve writing clarity and organization. In particular, and in response to general comments concerning the draft document's readability, the impact and mitigation section throughout Chapter 5 has been reformatted so that each impact statement is immediately followed by the pertinent mitigation measure.

Volume Two is this Responses to Comments document. Following this introduction, section 2 lists key corrections to the Draft EIR/EIS suggested by commenters, and indicates where these corrections have been made or whether the corrections suggested are inappropriate and why. Section 3 presents a summary of all comments and provides responses to them. To improve readability and minimize redundancy in response, the comments are organized by issue category (e.g. all comments concerning hydrology [flood control, lagoon management, water quality, etc.] are addressed in one subsection). A comment coding system is used which keys the comment summary (e.g. B-3) to the response and to the specific comment letters (see attached Coding Key). For the most part, the code letter for topics follows the sequence in the EIR/EIS, Chapter 5. As evident in the key, a "comment noted" (CN) coding is used to indicate where comments are either not relevant to the BMK 5 Project at hand, relate more to the merits of the project rather than a specific environmental issue, or represent points of information or general concern.

In providing the responses, the reader is also referred to the EIR/EIS text (including revisions) or to technical appendices as appropriate. To assist readers in locating responses to their specific comments Section 4 of Volume Two includes an index of all written comments received and the code number where they are addressed.

Volume Three of the Final EIR/EIS contains all written comments received on the Draft EIR/EIS as well as both the transcript from the September 14, 1992, Corps of Engineer's public hearing and the minutes from the September 14 and November 2 County Planning Commission hearings. Comment coding as described above is indicated in the right-hand margin of these letters, minutes, and transcript. Volume Three also includes a comprehensive index that enables a reader to determine where responses to specific comments can be located in Volumes One and Two of the FEIR/EIS.

Volume Four of the Final EIR/EIS contains the technical appendices, including both previously prepared appendices (Volume Two of the Draft EIR/EIS) and new appendices generated during preparation of the FEIR/EIS. The table of contents for Volume Four indicates which appendices are new through the use of underlining.

COMMENT CODING KEY

| | |
|---|---|
| CN | Comment Noted |
| COR | Corrections |
| GEN | General Comments |
| PD | Project Description |
| ALT | Alternatives |
| A | Land Use/Plans and Policies |
| B | Biological Resources |
| C | Transportation and Circulation |
| D | Geology, Soils and Seismicity |
| E | Hydrology, Drainage and Water Quality |
| F | Air Quality |
| G | Noise |
| H | Aesthetics |
| I | Energy |
| J | Public Safety |
| K | Public Services |
| L | Cultural Resources |
| M | Agricultural Land Use Policies and Economics |
| N | Fiscal Economics |
| O | Population, Housing and Employment |
| P | Growth Inducement |
| CUM | Cumulative Impacts |
| MIT | Mitigation Measures |

## 2. CORRECTIONS/CLARIFICATIONS

The following corrections and/or clarifications have been suggested by various commenters in their review of the Draft EIR/EIS. The correction/clarification suggestions are organized by Chapter or Section in Volumes One and Two of the Draft.

### VOLUME ONE - DRAFT EIR/EIS

SUMMARY

*Page S.10. The second bullet under cumulative project effects must include loss of endangered species habitat.*

**Response**

The EIR/EIS text has been revised to note that a lesser but still potentially significant regional reduction in endangered species habitat (i.e. salt marsh harvest mouse) would occur.

*Page S.11. The FEIR should clarify that any reduction in the LOS at the Alameda del Prado/southbound Highway 101 ramps would primarily be caused by a Hamilton project. See evidence on Page S.16.*

**Response**

The commenter is correct in that a Hamilton project of a size proposed in the Hamilton FEIR would have the largest impact on this intersection. No correction to the EIR/EIS is necessary.

*Page S.14. Bullet 8 is conversion of agricultural land which is considered farmland of local importance. This significant effect (loss of agricultural land) should also appear in D. Irreversible and Irretrievable Commitment of Resources.*

**Response**

The EIR/EIS text has been revised to note the irreversible loss of farmland of local importance.

*Page S.66. Impact K.5 - In the event of Bel Marin Keys Blvd. road closure a single site access to the BMK5 community would adversely affect the ability of the Novato Fire Protection District (NFPD) and others to provide emergency services. This impact is Class 1 if Hamilton Air Force Base (HAFB) is in operation.*

**Response**

It is not clear the potential impact could not be mitigated even if the Hamilton Field Air Base were in operation. For example, flight operations could be altered to minimize any potential significant impact. No correction to the EIR/EIS is necessary.

INTRODUCTION

*Page 1.7, description of Chapter 4. The text of this section is not as described. There is no tabular format for easy evaluation and no cross referencing of inconsistencies, only mitigations.*

**Response**

The change has been made in Final EIR/EIS.

PROJECT DESCRIPTION

*My own short road is not on the site map. (Bermuda Harbor) I cannot tell the orientation of the new road in relation to my home.*

**Response**

The mapping scale used in the EIR/EIS is typical for a project of this type and is not intended to be used for specific building site orientation. No correction to the EIR/EIS is necessary.

*Page 2.15, Figure 2.A-8. The 200' Buffer Zone is not shown for the existing property. The actual water-ski area is much smaller than shown. The Secondary Skiing Zone will not be completed before Phase 3.*

**Response**

The buffer zone for the existing BMK development where it abuts the proposed project is currently 125-feet and also includes some skiing prohibition areas. Comment noted regarding completion of secondary skiing zone. Please refer to revised project description (page ___) in FEIR/FEIS, Volume One.

ALTERNATIVES ANALYSIS

*Page 3.11. There appears to be a computational error in the analysis of the Alternative Residential Development alternative. The estimated revenue should be $1,997,622 (vs. $697,061), and the fiscal impact is a net revenue gain of $307,440 versus a loss of $1,009,032.*

**Response**

The Final EIR/EIS has been corrected to make this change.

*Page 3.12. There seems to be some inconsistencies/confusion on trade offs between internal and external trips.*

**Response**

The description of trip-generating potential of the Alternative Mix/Type of Uses (AMTU) alternative on pages 3.12 to 3.14 of the Draft EIR/EIS shows a substantial reduction in total vehicle trips generated by this alternative compared to the project, on the basis of trip generation rates for each land use type. There would be no commercial uses with this alternative, and therefore no commercial-based trips. The difference in trips passing through study intersections (i.e., trips external to the project site) between the AMTU alternative and the project, however, would not be substantial. The project's commercial-generated trips were reduced 75 percent on the basis of the expectation that most of these trips would occur internal to the site. It is the residential component that accounts for the majority of trips generated for the project and all alternatives, and because the project and AMTU alternative residential components are identical, there would not be a substantial reduction in vehicle trips traveling through the study intersections under the AMTU alternative.

*Page 3.39. Table 3.D-1 should have the same identifying numbers on the Impacts as the text and the Summary. The Policy numbers should also appear. In addition, for Impacts A-5, A-7 and D-1 the Class I portion is not in the table.*

**Response**

This table is intended to provide a broad overview comparison among the various alternatives considered. It was not intended to correspond precisely with the listing of impacts identified for the proposed project. The narrative discussion of alternatives has been revised to address general plan and land use policy consistency.

*Page 3.48. The text states the net fiscal impact is a gain, but the summary, Table 3.D-1, shows a loss. Correct the table.*

**Response**

The Final EIR/EIS has been corrected to make this change.

BIOLOGY

*Pg. 5.11. OG-9 - The statement (para. three, p. 5.11), that the antennae field north of Novato Creek is not owned by the USFWS is in error. It is owned by the State of California. Ownership is correctly shown on Figure 5.A-1, p. 5.2 and Figure 5.B-1, p. 5.12.*

**Response**

This change has been made in the Final EIR/EIS.

*There is a grove of eucalyptus trees on the Jack West Property which serves as a roosting place for thirty Great White Herons. The current site map does not show if this grove is to be saved.*

**Response**

Comment noted. A new figure (Figure 5.B-2a) has been created for the Final EIR/EIS that shows the approximate location of the heron roost. The trees comprising the roost area would not be displaced by the proposed project.

TRAFFIC

*Figs: The new northbound on-ramp from Nave Drive is shown on all the figures located south of the existing northbound off-ramp which is not consistent with the PSR.*

**Response**

This change has been made in the Final EIR/EIS.

*Figure on page 5.110 shows McInnis Parkway going through Pacheco Pond. This, of course, is totally unacceptable.*

**Response**

The alignment of McInnis Parkway on Figure 5.C-16, page 5.110, of the Draft EIR intended to illustrate a conceptual connection only for the purpose of analyzing traffic flow impacts, and was based on information available at the time of the preparation of the Draft EIR. Please see Figure 2-8 in Chapter 2, "Eastside Arterial Analysis", of the *Bel Marin Keys Unit 5 - Transportation Addendum* (Appendix L, Volume Four of the Final EIR/EIS) for an updated and more detailed series of potential roadway alignments. Any future alignment would certainly have to avoid traversing the Pond. No correction in the EIR/EIS is required.

*Page 5.54. For location #6, under Existing Traffic Flows, southbound should be changed to northbound.*

**Response**

This change has been made in the Final EIR/EIS.

*Page 5.61. "Ignacio Blvd. and Northbound 101 Off-ramp" should be On-ramp.*

**Response**

This change has been made in the Final EIR/EIS.

*Page 5.75. In Table 5.C-5 there appears to be a significant discrepancy in the trip generation rates between the retail space in Project #9, Vintage Oaks, and the proposed Bel Marin Keys retail space. This discrepancy in generation rate comparison needs to be investigated further.*

**Response**

The difference between trip generation rates for retail space within the Vintage Oaks Shopping Center and Bel Marin Keys Unit 5 is reflected in the different types of retail uses expected for each project. The rate used for Vintage Oaks was based on Land Use Code 820 (Shopping Center) in the Institute of Transportation Engineers (ITE) Fifth Edition of Trip Generation, while the rate used for the project was based on ITE Land Use Code 814 (Specialty Retail Center). The characteristics of a Specialty Retail Center is closer in scale to the Project's proposed retail use as a neighborhood-serving commercial retail center than would be a standard shopping center use such as Vintage Oaks. The use of the ITE Specialty Retail rates for 85,000 square feet of proposed project space was based on the fact that there is no Neighborhood Retail rate available in the ITE Trip Generation, and the published ITE rates for general and shopping center retail land uses did not match the project in either scale or composition.

The San Diego Traffic Generators Manual has a rate for Neighborhood Shopping Centers, but it applies to retail uses (including super market/drug store use) of less than 10,000 square feet. The project proposes a retail area of 150,000 square feet and for this reason the San Diego Traffic Generators Neighborhood Shopping Center rate was not applicable. It was assumed by the consultant that the combination of the ITE Specialty Retail Center rate (85,000 sq. ft.) an the San Diego Supermarket/Drug Store rate (65,000 sq. ft.) would provide the best estimate of traffic generation for the proposed project retail land uses. No correction to the FEIR/EIS is necessary.

*Page 5.77. Wilbur and Smith Associates is listed as the source for the trip distribution assumptions in Table 5.C-6. This contradicts an earlier reference to the "research" that sources the Transportation Research Board Highway Capacity Manual, Special Report 209, 1985, Chapter 10. Which is the correct source?*

**Response**

The source for Table 5.C-6 has been changed to include EIP Associates, a consultant whose survey work in the area had been used by Wilbur Smith Associates in the development of trip distribution assumptions. The earlier reference /5/, on page 5.73, referred to by the commenter, has been corrected in the Final EIR.

*Page 5.93. The assumptions for calculations of the Level of Service (LOS) are not compatible with the proposed lane configurations. For Impact number C.3, page 5.93, (Ignacio Blvd / Northbound 101 ramps) Caltrans used the traffic volumes shown in Figure 5.C-14 and the mitigations proposed in Figure 5.C-19. We recalculated the LOS for location number 3. We found that under cumulative conditions, the LOS will be between E and F, not C or D (AM and PM, respectively).*

**Response**

The lane configuration for Intersection 3 (Ignacio Boulevard / Northbound 101 Ramps) shown in Figures 5.C-19 and 5.C-20 in the Draft EIR/EIS were incorrect. These figures have been revised in the Final EIR/EIS. The commenter's reference to using traffic volumes shown in Figure 5.C-14 and mitigations shown in Figure 5.C-19 was not correct. The correct volumes to use with Figure 5.C-19 are shown in Figure 5.C-12 of the DEIR/EIS. Traffic volumes shown in Figures 5.C-14 are associated with Mitigation C.11 and Figure 5.C-10.

Text changes have also been made to mitigations C.3 and C.11 in the Final EIR/EIS.

*Page 5.99. The following projects have received initial land use approval and should be moved from Table 5.C-13 to Table 5.C-5 (page 5.75): 4, 5, 7, 8, 9, 11, 12, 14 and 17.*

**Response**

The list of planned and unapproved projects used in the EIR/EIS was developed from the most current and detailed information available at the time of the analysis. The list of projects was taken from the August 1991 inventory of proposed development in Marin County. The list of projects was reviewed and approved by the County. Although the list has undoubtedly changed over the past year-and-a-half, it is unlikely that the magnitude of change would be sufficient to alter the report findings. No correction to the EIR/EIS is required.

*Page 5.54 (et. al.). The traffic studies and nomenclature are very confusing with respect to intersections. The ramp for northbound traffic at BMK Blvd. and 101 is not an Ignacio Blvd./101 ramp, it is a BMK Blvd./101 ramp. I assume that Ignacio Blvd. ends at the center of the freeway if not before. I also assume that the traffic referred to is not Eastbound Ignacio Blvd. traffic turning north at the BMK Blvd./NB 101 ramp. Please make the necessary corrections for clarity.*

**Response**

Comment noted that people may make different assumptions as to where Ignacio Boulevard ends and Bel Marin Keys Boulevard begins. The EIR/EIS authors, in an effort to simplify nomenclature as much as possible, have made the assumption that Bel Marin Keys Boulevard does not begin until one is east of the entire freeway interchange. No correction to the EIR/EIS is required.

*The following minor corrections are provided with regard to the description of GGT service: Route 1 operates beyond Indian Valley Colleges to downtown Novato; Route 48 operates southbound only during the morning commute period and does not service the Ignacio or Alameda del Prado bus pads.*

**Response**

These changes have been made in the Final EIR/EIS.

*The cumulative conditions on the existing network result in the greatest impact to the study intersections with four of the five intersections exhibiting LOS F in the PM peak hour. Only Nave Drive and the U.S. 101 northbound off-ramp exhibit a LOS better than F at C. When the analysis moves to the ultimate street system, the trips are redistributed with 35 percent of the total southbound trips using McInnis Parkway rather than U.S. 101 to and from San Rafael and southern Marin County. At this point the text becomes unclear in that it states, "In addition, an estimated 12 percent of southbound, and 20 percent of northbound commercial trips were assigned to McInnis Parkway." As the text previously stated that 35 percent of the total southbound trips were redistributed to McInnis, I do not understand what is meant by an additional 12 percent of commercial trips were reassigned to McInnis Parkway. Does this indicate a total of 47 percent of southbound trips or does it mean 35 percent of the total plus an additional 12 percent of commercial trips only? A clarification should be requested on this item as it affects the number of trips on the network and at the study intersections, possibly altering the levels of service.*

**Response**

The text in the Final EIR/EIS (Volume One), has been changed to clarify the distribution assumptions, i.e. the reference to "35 percent of the total southbound . . . trips" should have been "35 percent to the total residential southbound . . . trips."

CHAPTER 5.E, HYDROLOGY, DRAINAGE AND WATER QUALITY

*Page 5.149. The last sentence of the second full paragraph, "There is no treated sewage discharged to Novato Creek", is in error. There is an overflow from the Novato Sanitary District pumps into Novato Creek. We observed discharge into the Creek on numerous occasions during our surveys of the site.*

**Response**

This change has been made in the Final EIR/EIS.

*Page 5.153. Bottom of page - the statement regarding approval of the "ultimate channel" is incorrect. The ultimate channel is approved by Policy. (PB-27)*

**Response**

The Final EIR/EIS has been revised to indicate that the ultimate channel improvements could be permitted, recognizing that any approval would also have to be based on policy considerations.

*Page 5.155. What is the proper reference number for creek widening? The number 10 is incorrect.*

**Response**

The Final EIR/EIS text has been revised to clarify the reference context.

*Page 5.156. P3: Statement regarding FCD fiscal responsibility should be added to Mitigation and Fiscal Analysis.*

**Response**

The fiscal section of the Final EIR/EIS has been revised to be consistent with the noted statement in the hydrology section.

*Page 5.157. P2: Penultimate sentence: What does "require waste discharge requirements" mean?*

**Response**

Waste discharge requirements refers to the Regional Water Quality Control Board's establishment of conditions under which a discharge into state waters can occur. Such conditions usually include sampling and analysis of the discharge at regular intervals as well as reporting requirements.

CHAPTER 5.N, FISCAL ECONOMICS

*Page 5.284. In the summary of fiscal impacts on page 5.284, annual expenditures include an estimated $744,412 attributable to the Novato Fire Protection District. However, in the summary of annual revenues, the estimated $882,082 in newly generated property taxes that would accrue to the Fire District are omitted. The $1.3 million in property taxes included in the table are those that would accrue to the County's General Fund and are exclusive of property taxes distributed to other servicing districts.*

**Response**

The commenter is correct; the fiscal impact summary has two errors that result in a significant understatement of annual project revenues to the County of Marin. The text on p. 5.284 of the DEIR/DEIS, and Table 5.N-7 on that same page, have been revised to show that net annual revenues to the County of Marin are estimated to be $1,051,942. Also, the discussion of "Other Revenues" (p. 5.280 of the DEIR/DEIS) has been revised to show that these revenues are estimated to be $266,693 annually.

## VOLUME TWO - TECHNICAL APPENDICES

APPENDIX B, MITIGATION MONITORING AND REPORTING PROGRAM

*There should be a table listing all the Impacts, by number only, and whether they are Class I, II, or III, and the Mitigation Measure Designation if there is any. This will provide a cross check for omissions.*

**Response**

The mitigation measures listed are specifically keyed to the number impacts listed in the summary table (Table S-1) of the EIR/EIS to enable such a cross-check.

*Page 30. Mitigation (M) K.5: Which access road is the emergency access road? The access road that provides a second emergency entrance to BMK will be the road through Hamilton. The Highway 37 connector is necessary for access from the highways, but the road through Hamilton provides the BMK community access. Change mitigation to specify second access through Hamilton also. Impact is Class II for highway 37 but Class I for Hamilton road. Timing: specify prior to construction for the Hamilton road since construction equipment could wipe out the bridge on BMK Blvd. at Pacheco Pond.*

**Response**

Either road could function as an emergency access road depending on the nature and location of any emergency that might occur. The text has been revised to clarify that second access routes refers to both the Hamilton Field connector and Hamilton Field extension.

*Page B-16, K.6. Add second bridge over existing lock to mitigation.*

**Response**

Constructing a second bridge over the existing lock does not appear warranted, provided the existing retractable bridge's operational reliability is upgraded as suggested in the current mitigation. Any structural modifications altering the vertical or horizontal clearances, or altering appearances of the lock bridge from that described in Coast Guard Public Notice 11-92 dated September 8, 1992 would require reevaluation of the bridge permit application and might require issuance of a new public notice.

APPENDIX E

*Sheets containing signalized intersection capacity analysis in Volume 2/Appendix F should be numbered for easier comparison to tables and figures in Volume 1. It is noted that there are inconsistencies in comparing data for intersection 3. The volumes and traffic configurations are not consistent, therefore they are not reliable.*

**Response**

The level of service calculation sheets in Appendix E have been numbered to match intersection numbering in the EIR/EIS. In some instances, the wrong level of service calculation sheets were included in Appendix E; the Final EIR/EIS (Volume Four) contains the correct calculation sheets.

*Volume 2, page C.18, Table C.1-4. The LOS of signalized intersections 2, 3, and 4 are not correct. The table must be corrected.*

**Response**

This change has been made in the Final EIR/EIS.

## 3. COMMENTS RECEIVED AND RESPONSES

The following section provides responses to all comments received on the Bel Marin Keys Unit 5 Draft EIR/EIS. Comments and responses are grouped by subject matter and are arranged by topics corresponding in part to the Table of Contents in the Draft EIR/EIS. Each group of comments is coded (e.g. ALT-1) followed by its set of responses; the order of the responses under each topic follows the order of the comments. As the subject matter of one topic may overlap that of other topics, the reader must occasionally refer to more than one group of comments and responses to review all information on a given subject. In addition, the responses may occasionally have triggered revisions to the Draft EIR/EIS text and/or additions to the technical appendices. Where this occurs, cross references are provided.

A number of comments raised by reviewers are simply declarative statements expressing a particular viewpoint or providing a point of information. These are regarded in the EIR/EIS as "comments noted", indicated as such by the coding, CN.

### GEN. GENERAL COMMENTS

**Comment GEN-1: EIR/EIS Clarity.** *A number of commenters provided general statements on style of presentation and suggestions for improving clarity. The key suggestions made include:*

- *A summary of the EIR/EIS and a system of wide distribution is needed to allow citizens throughout the County to become better informed. The existing EIR takes too long to read for the average citizen.*

- *With respect to information dispersal: A brief (10 page?) summary of the important items of the EIR should be made available to affected parties. This should contain many one-liners with a yes or no with respect to the questions that have been raised.*

- *Section 4 (Consistency with Applicable Plans and Policies) was very difficult to read, primarily due to the organization of the information. In future EIRs, the preparer should review the Lucasfilm EIR for a more readable and understandable format for this type of information. A table-style summary would be immensely useful.*

- *Section 5 could benefit from reorganization as well. Put mitigations next to the relevant discussion of the impact, not a page or two later. This section was very difficult to read in a practical sense. Its organization forced the reader to flip back and forth through pages, which causes frustration and is time consuming. The summary was easier to read to get this information.*

**Response**

These comments are acknowledged. The controversial history of the site and past planning efforts to develop it have generated an extensive database of environmental and other information. In addition, the BMK Unit 5 project as currently proposed and as presented in

the applications to the County and Corps is complex, involving both on-site (e.g. managed habitats) and off-site project elements (e.g. second access roadways, Novato Creek bypass, Port Sonoma-Marin ferry) that require active participation and/or approval of multiple jurisdictions and which are only addressed in this EIR/EIS at a programmatic level (see Section 1.E of the DEIR/EIS). This has represented a significant challenge to the EIR/EIS authors and resulted in a lengthy document. An immediate solution to the problem of digesting all of the information presented in the Draft EIR/EIS was made by the County Planning Commission when it doubled the public review period, thereby providing more time for the public to react to the document.

Nevertheless, many of the comments and suggestions made regarding the readability of the Draft EIR/EIS are valid. Consequently, a number of improvements in the organization and presentation style have been made in the revised draft (Volume One of the Final EIR/EIS). These improvements include:

- making grammatical correction and writing style improvements where most warranted.

- substantially expanding the project description to provide additional written clarifications, six new graphics and a more legible illustration of the BMK5 Conceptual Plan (Figure 2.A-1).

- employing tab or other dividers throughout the various volumes of the Final EIR/EIS to assist the reader in finding information of interest. For example, in Volume One (revised draft), a tab divider is provided for each key EIR/EIS section, including one for each environmental topic addressed in Section 5.

- adding a master index of all comments received to assist the reader in locating responses to particular comments. This master index is presented in Volume Three of the Final EIR/EIS.

- in Section 4, Alternatives Analysis, revising the header so that the reader can more easily figure out what alternative is being discussed on a given page.

- in Section 5.C, Transportation, revising the header in the impact and mitigation analysis section so that the reader can easily determine what traffic scenario is being discussed on a given page.

- reformatting the impact and mitigation sections in Section 5 of the EIR/EIS so that the stated impact is immediately followed by the pertinent mitigation measure.

Wider distribution of the EIR/EIS summary was certainly an option and will be considered in the future. For the Draft EIR/EIS, it was considered most efficient to put the entire document rather than just the summary in the hands of those expressing interest in the proposed project.

The comment regarding the plans and policies consistency section is noted and considerable effort was employed attempting to develop a table presentation in lieu of the text approach finally used. However, almost 100 policies are potentially affected by the proposed project,

many of them with multiple parts, and there was a need to examine and explain each potential conflict in some detail. The table would have been nearly as long and probably more difficult to understand.

**Comment GEN-2: Adequacy of the EIR Process.** *One commenter asked if this project had been adequately reviewed by all appropriate agencies. The oral comments made by the BMK CSD Board at the NOP hearing are not evident in the DEIR/EIS.*

**Response**

The Draft EIR/EIS was submitted to over 50 local, state, and federal agencies for review. Of these agencies 14 local, 12 state, and 6 federal agencies submitted written comments (see Final EIR/EIS, Volume Three). In addition to the EIR/EIS review process, many of the agencies that would need to issue approvals for this project (e.g. Corps of Engineers, Coast Guard, Regional Water Quality Control Board, Bay Conservation and Development Commission) have separate review processes that can, and frequently do, include public review and comment.

With respect to the BMKCSD's oral comments made at the Notice of Preparation (NOP) hearing, these comments were considered by the County when it developed its request for environmental services. The Draft EIR/EIS work scope was designed to respond to all of the NOP comments received.

**Comment GEN-3: General Project Approval/Opposition.** *Many commentors voiced general support of or opposition to either the project as a whole or to certain project components. In some instances these statements contained general references to environmental concerns (e.g., "too much traffic"). Some representative examples follow:*

- *We are renting our home in Bel Marin Keys for the time being, but have every intention of coming back when we retire. We especially love to golf, and this would be a dream come true, to be able retire in our own home with a golf course nearby. We also want a marina where our friends can enjoy the social activities inherent in a water community.*

- *We do not see the need for such a project, especially given the environmental impacts that the project will generate. Although the idea of affordable housing is attractive, the affordable units will be supported by a large number of expensive homes plus several commercial projects (i.e. marina, shopping center, yacht club, golf course, etc.). Marin County is not lacking in either expensive homes or commercial centers. Open space, wetlands, and agricultural land would be better uses of the land.*

- *As for the golf course, shuttle service, swimming pool, tennis courts, marina, yacht club, R.V. storage, elementary school, shorebird habitat, and commercial area, I vote 'yes'! I see nothing in this package that isn't a major plus for Bel Marin Keys! These are enhancements to our community, and will add value to our homes.*

- *The proposed development of 1,200 homes, golf course and commercial center with a lack of access roads and recreational waterways can only have a detrimental impact on our community.*

- *We understand the Marin Planning Commission is being thorough in looking at all angles, but do hope for a yes vote on the go ahead for the project. The project will increase open space and water habitat. The extended lagoon system will create more recreational opportunities and also be aesthetically pleasing.*

- *We are counting on you to vote this project down in its entirety. If you let the people of Bel Marin Keys vote, the project would be defeated by a large margin.*

**Response**

These comments are acknowledged. The comments are directed to the merits of the project and do no raise specific physical environmental concerns requiring discussion pertinent to CEQA and NEPA. Subsequent to completion of the EIR/EIS the County will hold hearings before the Planning Commission and Board of Supervisors to consider the merits of the proposed project.

**Comment GEN-4: Off-site Setting.** *Provide descriptions , figures for off-site setting (context): e.g., topography, resource values.*

**Response**

The regional context of the proposed project site was described under virtually every environmental topic discussed in Section 5 of the EIR/EIS. Consequently, off-site setting was described, and in many cases, depicted on maps. For example, in Section 5.A regional land use is described and a map (Figure 5.A-1) prepared showing the general land uses surrounding the site. In Section 5.B, regional resources were described and a map (Figure 5.B-1) provided indicating the location of wildlife preserves and other biologically sensitive areas surrounding the project site. With respect to off-site resource values, the reader is referred to the responses to comments on Biological Resources in this document.

## PD. PROJECT OBJECTIVES/DESCRIPTION

**Comment PD-1: Project Description Clarifications.** *Expand Project Description - text and illustrations - for the following:*

- *locations for community center, fire station, boat storage, swimming pool, school park;*
- *institutional uses for 7-acre parcel north of BMK Blvd.;*
- *perimeter road, in re function as primary levee;*
- *relationship of (existing) outer levee to project actions;*
- *elevations of peninsulas, golf course, lagoon water level;*
- *Port Sonoma Ferry (see also Transportation and Circulation);*
- *second access roadways (see also Transportation and Circulation);*
- *flood control channel (see also Hydrology and Water Quality);*
- *mudflat/dredge disposal habitat and seasonal managed marsh/agricultural site:*
- *design, operation, and maintenance; long-term responsibilities (See also Biology and Wetlands)*
- *distribution of public vs. private open space recreation facilities;*
- *description of below-market-rate and affordable housing (See also Population, Housing and Employment, below); and*
- *source(s) of fill and quantities by Phase; mode of transport.*

**Comment PD-2: Project Phasing.** *Provide description of specific and detailed milestones for and key activities w/in each phase.*

**Responses 1 and 2**

The revised DEIR/EIS, i.e. Final EIR/EIS (FEIR/EIS), contains an extensively revised Project Description that covers the information requested above, to the extent that it is available at the Master Plan stage of project planning. The following technical sections in the FEIR/EIS Responses to Comments, Volume Two, also contain further project description information: Transportation and Circulation; Biological Resources, Hydrology, Drainage, and Water Quality, and Population, Housing, and Employment.

The revised Project Description includes a summary and illustration showing the overall phases for site preparation and milestones for construction of housing products and other project components, and a preliminary schedule of required earth grading by phase. It is premature at the Master Plan stage to provide more detailed information on specific activities in each phase. Engineering designs for specific activities for each phase have not yet been developed by the Project Sponsor. Further information will be required at the precise development plan stage for each phase of the project. Additional environmental review pursuant to CEQA may be required at that time, depending on the detailed information provided. See also Response to Comment PD-3, below.

**Comment PD-3: Program/Project Analysis.** *Provide further discussion: project vs. program-level analysis.*

**Response**

The DEIR/EIS, on page 1.5 and 6, explains, that "because not all components of the Master Plan have been developed in equal detail, the EIR/EIS functions on two analytical levels, serving as a program document for certain project components and a project-specific environmental document for other components." It is particularly important to note in the DEIR/EIS that "...subsequent activities which would result in effects not examined in sufficient detail in the program environmental document may require additional environmental documentation prior to their implementation...," or prior to subsequent approvals in the project review process.

The DEIR/EIS identified several components of the project as "programmatic" in their level of available detail. These include:

- Second access roadways connecting the Bel Marin Keys community to Hamilton Field, and to State Route 37 to the north;
- Flood control improvements to create the Novato Creek bypass, or floodway;
- Port Sonoma ferry terminal;
- Habitat enchancement projects to create seasonal wetlands or managed mudflats;
- Construction and operation of a light rail station in the project vicinity; and
- Construction of a fire station on the project site.

The DEIR/EIS analyses, augmented by responses to public and agency comments, provide sufficient information to demonstrate that all of these "program" elements are technically feasible; that is, all are capable of being carried out with mitigation, if responsible agencies were to approve those components that lie outside Marin County jurisdiction. Additional analyses for the FEIR/EIS also demonstrate that the second access roadways, Port Sonoma Marin ferry terminal and operation, light rail station, and fire station would probably have relatively minor environmental impacts that could be mitigated, subject to further specific environmental review. Therefore, these particular "program" elements appear to be environmentally feasible, pending further CEQA evaluation. In contrast, the environmental feasibility of two of the program components - viz. the Novato Creek bypass flood control improvements and the habitat enhancement projects to create seasonal wetlands, managed mudflats (or, alternatively, tidal saltmarsh restoration) cannot be demonstrated in this FEIR/EIS since both will require substantial additional planning and design based on input from permitting and/or responsible agencies. In summary, all of these project components will require further consultation with affected or responsible agencies on specifics of location, size, funding, design, and permit requirements, as well as environmental review.

**Comment PD-4: Project Objectives.** *Provide further discussion of project objectives.*

**Response**

The project objectives were provided by the Project Sponsor. With several modifiers removed, they could be restated to express the Sponsor's goals and objectives, as follow:

> The primary goal of the Project Sponsor is to develop a water and recreation oriented residential community that completes the Bel Marin Keys community that was begun in 1960. In the spirit of mitigation, the Master Plan application states that the Sponsor offers to make contributions (fulfill objectives) in each of three categories:
>
> - Take more traffic off the Freeway (during peak hours) than the Project puts on;
>
> - Provide better and more wildlife habitat than currently exists at the site; and
>
> - Build needed market-rate and affordable housing; and create a major, privately funded program for future affordable housing. (Note that the number of affordable units proposed exceeds projected need for unincorporated lands in the Marin Countywide Plan Housing Element.)
>
> Additional project objectives are listed in the Sponsor's application and in the DEIR/EIS; they simply add a little detail to the ones above. The EIR/EIS authors acknowledge that reviewers will not all agree with these objectives. One purpose of the EIR/EIS is to provide the analytic basis that will allow the County to determine, first, whether these objectives for the site are consistent with County objectives (as expressed through planning policies and zoning for the site), and, second, whether agreed-upon objectives can be met by the project or any of its alternatives.

## ALT. ALTERNATIVES

**Comment ALT-1**: **On-site Alternative Diagrams**. *Present schematic layout and summary site analysis for the six on-site development alternatives and variants. These should include, minimally, 1) locations of all major project components, 2) primary local circulation pattern, 3) location of developed areas in relation to jurisdictional wetlands, and 4) location of buffers.*

**Response**

The EIR/EIS has been revised (see Section 3 in Volume One of FEIR/EIS) to include schematic layouts for the following on-site alternatives:

- Status Quo (current zoning) Alternative
- Reduced Size Alternative
- Alternative Residential Development Alternative
- Alternative Mix/Type of Uses Alternative
- Mitigated Project Design Alternative
- Higher Density Alternative

The schematic layouts for the Status Quo, Reduced Size, Alternative Mix, and Mitigated Project Alternatives were developed by the EIR/EIS consultant team. The schematics indicate both the location and approximate acreage of the major development components provided under each alternative. The schematics presented for the Alternative Residential Development and Higher Density Alternatives were prepared by the Project Sponsor and peer-reviewed by the EIR/EIS consultant team for general site planning and development feasibility.

**Comment ALT-2**: **Relationship to 404(b)(1) Alternatives Analysis**. *Describe the relationship between 404(b)(1) alternatives and the alternatives considered in the EIR/EIS. Summarize the alternative sites analyzed and conclusions of the draft 404(b)(1) alternatives analysis submitted by the Project Sponsor to the Corps of Engineers. Why are the off-site alternatives examined in the Project Sponsor's 404(b)(1) analysis different than those considered in the EIR/EIS? Define "water dependency" and "least environmentally damaging practicable alternative" as they relate to the Clean Water Act Section 404 process. Because this is an EIS, it must meet Section 404 requirements. The criteria established in the EIR/EIS to identify and screen alternative sites are unduly restrictive or inappropriate.*

**Response**

The Section 404(b)(1) alternatives analysis procedure is part of the Corps' separate 404 permit process and is not directly relevant to NEPA EIS requirements as they relate to alternatives analysis. The Project Sponsor has submitted an application to the Corps to fill wetlands and other waters of the U.S. in order to accommodate the proposed project. As part of that permit process the Project Sponsor is required to rebut the presumption contained in the 404(b)(1) Guidelines (40 CFR 230.10) that less environmentally damaging and practical alternate sites are not available if the project is not water dependent.

Under the 404(b)(1) Guidelines promulgated by the Environmental Protection Agency in 1980, the Corps should not approve the fill if there is a "practicable alternative" to the proposed fill. An alternative is "practicable if it is available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purpose". Alternatives can be both on- and off-site. It's important to note that at least one on-site build alternative (Alternative Residential Development) has been developed as a no-fill approach and another on-site alternative (Reduced Size) would result in less than one acre of on-site fill.

EPA's regulations presume that less adverse alternatives, which do nor require placing fill materials into waters of the U.S., are available for non-water-dependent activities which result in a discharge into a special aquatic site (such as a wetland). A non-water-dependent project is defined as one that does not need to be located in or adjacent to water to fulfill its basic purpose. Residential housing, shopping centers or office buildings are examples of projects that are considered non-water-dependent while a marina would be an example of a water-dependent use (with the exception of any related on shore facility such as parking or boat shops). A non-water-dependent project must overcome the presumption that alternate sites are available to satisfy the basic project purpose.

To fulfill the Section 404(b)(1) requirement, the Sponsor has submitted a draft alternatives analysis to the Corps. This draft report was prepared by the Sponsor in mid 1991 and has not been finalized to date. This draft report identified and evaluated 15 potential sites along the Highway 101 corridor in central/northern Marin and southern Sonoma counties. These sites included some that were also considered in the Bel Marin Keys Unit 5 DEIR/EIS and a number that were not. Because the 404 (b)(1) alternatives analysis is distinct from the EIS process, it is not necessary that the off-site alternatives analysis be identical to that provided in the EIR/EIS.

Since all Section 404 Permit applications are subject to NEPA review, they provide analysis of the BMK5 project, including the 404 Permit application. The EIS is intended to support to the extent possible the Section 404 process. It does this primarily by providing environmental impact information (e.g. acres of wetlands to be filled on-site proposed mitigation) required by the regulatory agencies involved in the process. However, as discussed in Section 1.E of the EIR/EIS (page 1.6) supplemental environmental information will likely be necessary for "programmatic" components of the project, including the second access roadways, flood control improvements along Novato Creek, and on-site habitat enhancement.

In contrast to the 404(b)(1) Alternatives Analysis, the criteria used to identify and screen potential off-site alternatives under either CEQA or NEPA are based on reasonable environmental, planning, regulatory, and institutional considerations. Legal and procedural guidelines governing CEQA and NEPA generally support an approach where the alternatives need only relate to the project as a whole. Consequently, an agency is not required to break a project down into its various parts in order to construct alternatives for analysis. Nevertheless, this EIR/EIS, in determining and analyzing a reasonable range of on-site alternatives did consider various major project components (e.g. neighborhood commercial, golf course). The conclusions of the on-site alternatives analysis in regard to these components can be generally applied to the alternate sites considered.

**Comment ALT-3: Additional Impacts of Alternatives**. *Supplement impact analyses as necessary to insure that all alternatives are analyzed and compared at an equal level of detail, including:*

- *quantities and impacts of excavation and fill for all development alternatives*
- *methods for and impacts of flood control*
- *wetland impacts and ability to buffer sensitive habitats*
- *wildlife impacts as determined through HEP analysis*
- *fiscal impacts*
- *water skiing safety*
- *effects on community character*
- *construction phasing and schedule*
- *mitigation measures for all potentially significant impacts*

**Response**

Please refer to Section 3 of the FEIR/EIS, which has been revised to provide additional analysis of all on-site alternatives. Specifically, additional information/analysis of excavation/fill quantities, flood control methods, wetland impacts, water skiing safety, and effects on community character is provided. Fiscal impacts of these alternatives were quantified in the DEIR/EIS Section 3 (please refer to pages 3.6, 3.11, 3.17, 3.22, 3.25, 3.29, 3.34, and 3.38).

Construction phasing and scheduling have not been specifically determined for any of the on-site alternatives considered. However, the phasing schedule presented for the proposed Project can be extrapolated to the alternatives. Phasing for the Alternative Residential Development, Alternative Mix/Type of Use, and Higher Density Development alternatives would be similar to that of the proposed Project (i.e. three phases over an approximate 9-year period). Phasing for the Mitigated Project Design and the Status Quo alternatives would likely entail two development phases extending over 6 or 7 years. It is likely that the Reduced Size Alternative would be constructed in a single phase extending over a 2- or 3-year period.

Mitigation measures for potentially significant impacts of on-site alternatives would be similar to those identified for the proposed Project. Where development intensity is sharply reduced compared to the proposed Project, but potentially significant impacts are still identified, the required mitigation measure would be comparable to that described for the proposed Project but of a lesser magnitude and with more flexibility to implement. For example, mitigating the potentially significant impact of losing seasonally important waterfowl feeding areas under the Reduced Size Alternative would require less compensatory habitat acreage that would be more easily sited than under the proposed Project. Beyond this, the formulation of the alternatives themselves in the EIR/EIS is driven in large part by the need to mitigate various potentially significant environmental impacts. Thus, the analysis and comparison of alternatives to the proposed Project intrinsically addresses mitigation requirements.

**Comment ALT-4**: **Additional/Modified Alternatives**. *Other on- and off-site alternatives should be considered in the EIR/EIS to provide for a reasonable range of possibilities. Also, modifications to some of the alternatives presented in the DEIR/EIS should be considered and evaluated. The additional alternatives or modifications to current alternatives include:*

- *On-site:*
  - *"EA Alternative" (i.e. one that restricts development to the Headquarters Hill area)*
  - *Mitigated Project Design Alternative with more mitigation*
  - *"Balanced Alternative" (essentially the Mitigated Project Design Alternative with between 160 and 805 units).*
  - *Alternate Reduced Size Alternative (i.e. approx. 80 units in Headquarters Hill area with no new lagoon)*
  - *Modified Project to Address BMK Community water skiing and public safety concerns.*
  - *Status Quo Alternative with Golf Course*
  - *No Golf Course in any alternative*
- *Off-site:*
  - *Hamilton Field or Renaissance Estates properties as off-site alternative*
  - *Alternative with Commercial Retail in existing BMK Industrial Park*
  - *Alternative using basic F-2 Zoning*

**Response**

Comments noted that other alternatives for development of the site are possible. Refer to Section 3.A of the FEIR/EIS, which has been revised to respond to these comments. CEQA and NEPA environmental review guidelines require that EIRs and EISs provide sufficient information to enable a reasonable choice of alternatives from an environmental standpoint. In particular, a "reasonable range" of alternatives must be considered that could feasibly attain the project's basic objectives. The discussion of alternatives does not need to be exhaustible but rather should focus on providing information that supports informed decision-making.

The alternatives suggested for consideration by the reviewers of the DEIR/EIS are either substantially similar to those alternatives that were considered or fall within the range of the alternatives that were considered and their potential for environmental impacts can be reasonably interpolated from the information provided in Section 3. For example, the impacts of an "EA Alternative" would generally fall within the confines between the Reduced Size Alternative, which "clusters" development in the northwest portion of the

project site, and the No Project Alternative, which continues the site in agricultural use while maintaining the Headquarters Hill area in residential use. The impacts of an Alternate Reduced Size Alternative (i.e. 80 units in Headquarters Hill area) can be similarly interpolated. If the EA interpretation were taken literally, the "EA Alternative" would virtually be the "No Project" Alternative, since it would add only two units to the 20 acre area that (at 0.5 dwelling units/acre) already contains eight residences.

The "Balanced Alternative" represents essentially a merger of the two on-site alternatives identified in the EIR/EIS as environmentally superior to the proposed Project, Mitigated Project Design and Reduced Size Alternative. The potential impacts of such an alternative can be generally interpolated by examining the impacts of those two alternatives. Depending on the range of residential units considered (e.g. 300-400 or 500-600) and what other components might be included (i.e. with/without neighborhood commercial, golf course), the potential impacts on flood control and management, regional traffic, need for secondary access, schools, and fire protection services would vary.

While it is true that the current zoning of the project site includes a golf course as an allowable (but conditional) use and could have been a component of the Status Quo Alternative, the Bayfront Conservation Zone designation for the site was presumed to preclude this use for the purposes of this EIR/EIS analysis. In any event, the impacts of a golf course are amply examined in connection with both the proposed Project and under other on-site alternatives (e.g. Mitigated Project Design, Alternative Residential Development). Conversely, in response to other comments made, the absence of a golf course under several on-site alternatives (e.g. Alternative Mix/Type, Status Quo) provides an adequate means for evaluating "no golf course" and does not need to be carried through all alternatives.

With regard to off-site alternatives, comments are noted that some view Hamilton Field and Renaissance Estates properties as suitable alternate sites, even though they are noted in the EIR/EIS as outside of County control. The recent Supreme Court decision on the Goleta case upheld the ability of a lead agency to reject as infeasible alternatives that are out of that agency's jurisdiction. In considering the various development proposals pending in the north Marin area, both the City of Novato and Marin County decision-makers will take into account cumulative environmental impacts in evaluating the merits of a given development proposal.

**Comment ALT-5: Project Size.** *The project as proposed is too big and out-of-scale with the existing BMK community. The size of the project itself results in unacceptable impacts on the environment, including traffic, wildlife, and public safety.*

**Response**

Comment noted. The alternatives to the project, including the Reduced Size, Status Quo, and Mitigated Project Design alternatives were constructed and evaluated to address the issue of development intensity and provide a means for evaluating trade-offs between various environmental concerns.

**Comment ALT-6: On-site Alternatives Impact Analysis**. *Some impacts of the on-site alternatives as described in the DEIR/EIS are either missing or inaccurate. These include:*

- *the school and fire station are not needed for the Reduced Size Alternative; therefore, the fiscal impact would be positive, not negative.*

- *no dredge disposal site would be provided under any alternatives except for the Mitigated Project Design and Higher Density Alternatives.*

**Response**

Comment noted. Please refer to Section 3 of the FEIR/EIS (Volume One), which has been revised to note that a new school and fire station would likely not be required under the Reduced Size Alternative, making the fiscal impact positive, not negative. Although not explicitly stated, it is assumed that a dredge disposal site could be provided in the same manner as proposed under the proposed Project (i.e. as part of a managed mudflat/shorebird habitat) under any of the on-site alternatives considered.

**Comment ALT-7: Favor/Oppose Alternatives**. *A number of commentors indicated either their support for or opposition to a certain alternative described in the DEIR/EIS. A number of commentors expressed support for the Reduced Size Alternative, others supported the Open Space/Agriculture Alternative, and a few supported the Mitigated Project Design Alternative. Other commentors expressed disfavor of any alternative that does not include a lagoon.*

**Response**

Comments noted.

## A. LAND USE/PLANS AND POLICIES COMMENTS

**Comment A-1: Relationship of EIR/EIS to Environmental Assessment.** *The Bel Marin Keys Unit 5 property was evaluated in an Environmental Assessment (EA) in 1990. The EIR/EIS does not make reference to the EA nor appear to conform with its findings.*

- *The FEIR/EIS should describe the relationship between the EA and the EIR/EIS, summarize the findings of the EA and identify where the EIR/EIS agrees and disagrees, and indicate to what extent the proposed project addresses the concerns and issues identified in the EA. Specific points are as follows:*

  - *The EA concluded that the property was unsuitable for development and that development should be limited to the Headquarters Hill area of about 20 acres. The EIR/EIS should explain why its conclusions are different.*

  - *The EIR/EIS should explain how the density formula was derived. The proposed 1190 dwelling units (DUs) on 174 acres yields a density of 6.8 DUs/acre. The Final EA states that the maximum total DUs permitted by current zoning would be 655 (Page ii of Executive Summary and page 54 of Final EA). The FEIR/EIS should change the maximum number of new DUs to 640 to account for correct site area and seven existing residences on Headquarters Hill, as specified in the Addendum to Final EA, August 24, 1990.*

  - *The developer claims that gross density of Unit 5 would be .74 (acres per DU), compared with density in Units 1-4 of .43. This is a misleading comparison; the commentor states that density should be compared in terms of developed parts of Unit 5, i.e., in terms of net, not gross, density.*

  - *The Final EA Addendum (page C-1) states that only 284 (housing) units outside of San Rafael's sphere of influence are needed in the unincorporated County area. This is not discussed in the DEIR/EIS.*

  - *The Final EA (page viii) states that the bayfront stretch is one of 28 areas in the City-Centered Corridor that the Marin Countywide Plan recommends for preservation for open space. This should be included in the FEIR/EIS.*

  - *Applicant should have waited for findings of the EA before filing a Master Plan. In so doing, the Applicant might have recognized that the objective of "fulfilling the hopes and expectations of original Bel Marin Keys residents" would no longer be feasible in light of changes in County policies since 1965.*

**Response**

Role of EA and EA conclusions: The EA was prepared as a preliminary assessment of site conditions and planning and policy considerations that would affect development suitability. The Executive Summary and the section entitled "Composite Capabilities Constraints Analysis" from the Final Environmental Assessment, July 1990, are reproduced in Appendix J, Volume Four, of the Final EIR/EIS.

The EA, which is required for proposed development on Bayfront Conservation Zone sites, was intended to serve as a guide to the County and project Applicant for future site planning and project plan review. The Applicant was an active participant in funding preparation of the EA, through the County, and in commenting on the conclusions of the EA. However, the BMK5 Master Plan was submitted before the Final EA was actually approved by the County.

The EA made clear that further analysis of a plan for development would be required in an EIR, addressing in detail subjects raised in the EA. Although the DEIR/EIS does not explain how the EA was used in its preparation, the DEIR/EIS preparers did review the EA as background information and even engaged authors of the EA to prepare or assist in certain sections of the DEIR/EIS. However, the DEIR/EIS went beyond the EA in analyzing each environmental topic with specific regard to the impacts of the submitted BMK Unit 5 Master Plan. The DEIR/EIS examined a range of development alternatives determined by the County to provide sufficient bases for comparison of impacts; and it analyzed the feasibility and potential effectiveness of mitigation measures proposed by both Project Sponsor and by the EIR/EIS consultants.

Certain conclusions of the DEIR/EIS are very similar to those of the EA and certain conclusions differ, on the basis of either new or expanded information relevant to the proposed project, or on the basis of reinterpretation of policy. The DEIR/EIS found that a number of unavoidable significant adverse impacts would result from the project as proposed, particularly in the areas of biological and wetland resources, conversion of agricultural lands, inconsistency with plans and policies concerning Bayfront Conservation Zone/ diked historic baylands and urbanization of fringe lands, air quality, and potential future noise if Hamilton Field were reactivated. These findings are in general agreement with constraints identified in the EA.

The DEIR/EIS also found that some potentially significant adverse impacts of the Project, identified as site constraints in the EA, could be mitigated, either through restorative work, engineering designs, or institutional arrangements proposed by the applicant or through implementing mitigation recommendations made by the consultant. These conclusions were in the topic areas listed above, as well as in the areas of traffic and transportation, geology and soils, flood control, water quality, public services and utilities. However, some mitigations were clearly qualified by the DEIR/EIS authors as being potentially problematic in implementation and/or requiring further design and environmental review prior to the Precise Development Plan stage of review by the County. These conclusions were presented in the DEIR/EIS, and can be found in succinct form in the DEIR/EIS Summary.

The principal area of difference between the DEIR/EIS conclusions and the EA can be found by referring to the synthesis of composite constraints (FEIR/EIS Volume Four, Appendix J: Final Environmental Assessment, July 1990, page 97) in which the EA authors provided their interpretation of overall development suitability of the site relative to existing laws and policies. By compositing a number of constraints, they mapped virtually the entire site, with the exception of 20 acres, for preservation, that is, as unsuitable for development (Figure 12, Final Environmental Assessment). In so doing, the EA stated that

> "...in most cases, this interpretation is a strict one...This does not mean that value judgments regarding development in some areas marked for preservation cannot be

made or, for that matter, are inappropriate. Also, in some cases, stated policies may appear to be somewhat conflicting (emphasis added by BMK5 EIR/EIS authors). Therefore, the Figure 12 map should be viewed by readers of this EA as a planning guide based on ecological sensitivity and strict interpretation of policies"(emphasis by EA authors).

The EIR/EIS authors found sufficient ambiguity in County policies and zoning relating to the site to warrant a review of the EA's interpretation of policies and a reexamination of "development suitability". The DEIR/EIS presented an independent, objective analysis of the proposed BMK5 Project in relation to a broad spectrum of environmental factors as well as in relation to environmental constraints identified in the EA. A "strict implementation of policies," as found in the EA, would essentially limit any proposed BMK5 Project (and impact investigation) to the "No Project" alternative. To examine only the "No Project" alternative in the EIR/EIS would imply that no mitigation measures were feasible.

Density. In response to a specific comment citing the "Addendum to the Final EA, August 24, 1990" basis for calculation of residential density, the commentor is referred to the opinion of Marin County Counsel, dated October 9, 1991, in the FEIR/EIS Volume Four, Appendix J. It was the conclusion of County Counsel that the 300 acre ponding easement on the Project site should be included in the total area for calculation of maximum density for Bel Marin Keys Unit 5. At current zoning of 0.5 acres per dwelling unit, and assuming total acreage at 1,610, the maximum density would be 805 DUs. The DEIR/EIS explains on page 1.2 and 4.7 and 8 that there are differing interpretations of the total acreage of combined parcels - that the property could be 1,602 acres according to County Assessor maps rather than the 1,610 acres shown on the 1985 and 1991 Master Plan submissions. Or it could even be 1,595 acres if the Headquarters Hill parcel (6.91 acres) were not included. The commentor also suggests removing from the calculation the seven existing residences on Headquarters Hill.

Therefore, assuming an acreage figure of 1,602, under current zoning and removing the seven existing residences, the density calculation would thus be "corrected" to yield 794 units. The rezoning density requested by the Project Sponsor is 0.75 DUs/acre. 1,602 acres would yield 1,201.5 DUs. Removing from the calculation the seven existing residences would yield 1,194.5 DUs, or slightly more than the proposed 1,190 DUs. It should be emphasized that this would be the maximum allowable, and not necessarily the approved, number of residences under rezoning.

Comparing residential densities between the proposed BMK Unit 5 and Units 1-4 raises questions of comparability and what is included in net and gross density calculations. For purposes of rough comparison, the following estimates are provided:

| BMK Unit 5 | BMK Units 1-4 |
|---|---|
| 1. Gross density: (all lands)<br>1,190 DUs/1,610 acres = 0.74 DUs/acre | Gross density (including lagoons)<br>733 DUs/590 acres = 1.24 DUs/acre |

| BMK Unit 5 (Continued) | BMK Units 1-4 (Continued) |
|---|---|
| 2. "Net" density (including commercial, golf course, lagoons, and miscellaneous): 1,190 DUs/940 acres = 1.27 DUs/acre | Gross density (including lagoons) 733 DUs/590 acres = 1.24 DUs/acre |
| 3. Net density (including commercial and residential lands and infrastructure): 1,190 DUs/342 acres = 3.48 DUs/acre | Net density excluding lagoons; infrastructure unknown: 733 DUs/320 acres = 2.29 DUs/acre |
| 4. Net density (including only commercial and residential lands: 1,190 DUs/200 acres = 5.95 DUs/acre | no exact comparison |
| 5. Net density (residential lands only); 1,190 DUs/174 acres = 6.8 DUs/acre | no exact comparison |

Other EA Comments. The Final EA (see FEIR/EIS Volume Four, Appendix J) states that the bayfront stretch is one of 28 areas in the City-Centered Corridor that the Marin Countywide Plan recommends for preservation for open space. This statement can also be found in the DEIR/EIS on page 4.14.

Several commentors note that, had the Project Sponsor waited for findings of the EA before filing the BMK Unit 5 Master Plan, he might have reconsidered the feasibility of Project objectives relative to "...fulfilling the hopes and expectations of original Bel Marin Keys residents..." in light of changes in County policies since 1965. County policies affecting the Bel Marin Keys area have changed dramatically since 1965. It is also important to acknowledge that the Bel Marin Keys overall Master Plan submitted in 1961 did identify long-term expectations of the community that are generally consistent with at least one of the stated objectives of the Unit 5 Master Plan, notwithstanding changes in County policies since 1961. The EA left room for interpretation of these policy changes by both Applicant in preparation of the Master Plan and by County in their review of the Master Plan. The Unit 5 Master Plan application, with its goals and objectives, therefore deserves full environmental analysis and objective County review.

It is speculative but interesting to ask whether, if an application for the existing Bel Marin Keys Units 1-4 were filed today with the "hindsight" of 10 - 25 years of occupancy, it would be approved as it now exists. Would the engineering techniques that were used to construct and operate lagoons and locks and create land forms for residences and roads in "diked historic bayland" at current densities be accepted? How would it be modified (mitigated) to reflect current policies, or would it be approved at all? Had the EA assessed the suitability of Units 1-4 lands for development at this time, on the same bases used to map composite constraints for Unit 5 lands, it would have mapped the entire area as unsuitable for development.

**Comment A-2: Consistency with the Countywide Plan.** *With regard to a comment that DEIR/EIS did not accurately address housing needs in the unincorporated County, the reader is referred to the response to Comment O-2 in this document. The consistencies and/or inconsistencies of the proposed project with certain policies contained in the Countywide Plan, especially the Bayfront Conservation Zone (BFC), should be reexamined in the FEIR/EIS. Comments on the DEIR/EIS raise the following points and questions:*

- *The text of Chapter 4 (Consistency with Applicable Plans and Policies) is not organized as described in the Introduction (Chapter 1). Table-style would be more readable.*

- *The FEIR/EIS should evaluate further the subdivision history of the property. What would be the effect on the Project of withdrawing the West Family property. Could the project be built as planned?*

- *The DEIR/EIS makes narrow or biased interpretations of Countywide Plan policies.*

- *The legislative record for adoption of the BFC, included in the FEIR on the adoption of the BFC, established that the intent of that zone was not to decrease or down-zone residential property. Nor does the Zone clearly establish "preferred land uses" as implied in the DEIR/EIS. Preferred land uses listed in Policy C-1.4 (see below) should all be considered in interpreting consistency.*

- *The EIR/EIS authors, in their reporting of impacts and analyzing must define a balance among competing County priorities. The Countywide Plan forces a complex weighing of environmental and social choices, but do not give explicit guidance as to how various acceptable uses should be balanced.*

- *The DEIR/EIS does not acknowledge that certain Countywide Plan policies conflict with agricultural use on the property, such as creation of maximum habitat values in agricultural areas; use of the property for flood control, which would kill existing crops and damage soil; water quality problems in the agricultural drainage ditches; and air quality problems arising from dust and control burns.*

- *The FEIR/EIS should discuss how many homes were assumed on the BMK Unit 5 property by the State-accepted Housing Element (of the Countywide Plan). (See also Response to Comment O-2 in this document.)*

- *Mitigation A-7 ("The cumulative impact of the proposed Project and other proposed projects currently under consideration in the County would result in further urbanization of eastern portions of the City-Centered Corridor and further loss of agricultural and other natural resources associated with the Bayfront Conservation Zone.") states that the Developer's proposed mitigation would not mitigate this impact to an insignificant level. There is no consultant-proposed alternative mitigation. Why not? What other mitigation could be proposed?*

- *It should be noted in the FEIR/EIS that the developer purchased the property two years <u>after</u> it was rezoned to Bayfront Conservation Zone, a zoning designation which the commentor views as a "major deterrent to development."*

- *The Bayfront Conservation Zone states that significant agriculture should be maintained and that wetland and habitat areas should not be greatly modified; yet 12,900,000 cubic yards of earth would be disturbed. This appears to be inconsistent with the intent of BFC policies.*

- *Consistency with specific policies of the Marin Countywide Plan should be given additional analysis because it appears that the project is inconsistent with "...many County policies for the BFC zone..." concerning agricultural protection, flood control, and habitat, as follows:*

  *Environmental Quality Element (including Bayfront Conservation Zone)*

  - *Policy A-1: The policy analysis discounts habitat value of the lagoon, although the Habitat Evaluation Procedure (HEP) found that the lagoons have relatively high habitat values for certain bird and waterfowl groups;*

  - *Policy A-2: Lands identified as "natural" open space would require active management for purposes other than habitat and thus should be considered as Class I impacts;*

  - *Policy A-4: The FEIR/EIS should also consider noise pollution from increased motorized boat traffic;*

  - *Policy A-6: The FEIR/EIS should provide further evidence that oat hay must have 500 acres to be an economically viable operation;*

  - *Policy A-8: Tidal wetlands along Novato Creek would be excavated and covered with riprap to construct the lock; this should be a Class I impact; no adequate mitigation is proposed;*

  - *Policy A-10: The FEIR/EIS should not overlook that the project would significantly increase marine life. The document should also state that water quality would be degraded by increased boat use, impacting creek values by destroying wildlife diversity and abundance;*

  - *Policy A-13: The FEIR/EIS should address safety effects from increased boat traffic;*

  - *Policy B-5.2: This policy evaluation should be reassessed, since there is no provision for (developed) public access to the Bayfront lands;*

  - *Policy B-7.4 states that flood control measures should retain natural features and conditions as much as possible. Consistency with this policy should be discussed.*

  - *Policy B-7.5 prohibits use of county-owned floodplain to permit development of private property; this would exclude the parallel channel flood control alternative (Novato Creek channel bypass). The DEIR/EIS sidesteps the main issue by addressing the flood hazard but not the use of County lands. Therefore, the impact should be Class I.*

- *Policy C-1.1: This policy calls for enhancement of diversity of wildlife. The project would result in such diversity, but Impact B.2 and Mitigation B.5 seem to discourage diversity. This is inconsistent with Policy C-1.1. The DEIR/EIS contradicts the applicant's claim that habitat values would be enhanced, and therefore the Class II assessment should be revised to Class I.*

- *Policy C-1.4 is the "heart of the BFC zone." The project proposes intense land uses that would severely impact habitat values of remaining areas - Class I assessment is warranted. The DEIR/EIS addresses housing in this policy but does not address the remainder of policy. If land requires diking, filling, or dredging, the public benefit must exceed environmental costs and liabilities. Although low and moderate income housing is a public benefit, the lagoons are not a public benefit, since they do not encourage public access or public recreational opportunities. (Commentor notes that this policy would not apply to existing BMK 1-4 units, which were permitted before adoption of the Bayfront Conservation Zone.)*

- *Policy C-3.1: The policy states that agricultural lands in the Bayfront Conservation Zone play an integral role in other dairy operations. Furthermore, "such agricultural lands could consist primarily of grazing operations". Why is this a "Class I inconsistency" when the lands are not highly integrated with dairy operations nor are they grazing lands?*

- *The EIR/EIS should address the impact of overturning, or reducing the effectiveness of BFC policies on the future protection of other BFC lands.*

*Community Development*

- *Policy C-3: The DEIR/EIS does not discuss compliance of clustered (segregated) "low-cost housing";*

- *Policy D-7: Would negative response from Sonoma County concerning Port Sonoma Ferry change finding of consistency of BMK 5 Project with this policy?*

*Marin Countywide Plan, Draft 1991*

- *Since the project would be approved/rejected under policies of the revised Countywide Plan, it should be assessed in relationship to proposed revisions to the CW Plan. Consistency with Plant and Wildlife Preservation policies are particularly important.*

- *Policy CD-9.1: This policy, would rezone the undeveloped portions of Bel Marin Keys to Agriculture and Conservation, AG3. The commentor endorses the concept and objectives of this policy, but is concerned that it would permit a density of .50 (acres per DU), which would allow 800 units. Commentor believes this density is too high and should be set at the proposed lower limit of .10, for a total of 160 homes on 1,600 acres.*

**Response**

Format of Section on Plans and Policies (DEIR/EIS, Chapter 4). Presenting the Consistency With Applicable Plans and Policies in table form was initially attempted; the authors found that the amount of text required to analyze consistency of almost 100 policies and discuss mitigation was unwieldy in table format and that to summarize either policies or the analysis for purposes of adapting them to table format tended to oversimplify the discussion, especially of multi-part policies. The authors regret the difficulty in reading a very complex section of the EIR/EIS.

Subdivision History. The DEIR/EIS, on pages 4.7 and 8, reviews the subdivision history of the property. The actual acreage of the project site has variously been set at 1,610 (Master Plan acreage), 1,602 (County Assessor's maps), and 1,595 acres (excluding the Headquarters Hill property of 6.91 acres). Withdrawal of this property from the project site might reduce density calculations slightly, but the proposed number of units (1,190) actually represents less than the "permissable" maximum (see also Respone to Comment A-1). It would also require either obtaining an easement across the property or relocating the access point for the Perimeter Roadway from Bel Marin Keys Boulevard.

Interpretation of Policies. The DEIR/EIS authors have attempted to interpret Countywide Plan (CWP) policies objectively and, where policies are open to more than one interpretation, to provide both interpretations - that is, to interpret them broadly rather than narrowly, identifying policy conflicts where they are found to occur. This does not preclude other interpretations.

"Preferred Land Uses" in BFC. The EIR/EIS authors agree that the intent of the Bayfront Conservation Zone, as expressed in the FEIR on adoption of the BFC zone, was not to decrease or down-zone residential property or reduce the supply of housing. This was a fundamental policy discussion that took place during adoption of the BFC Zone and is documented in the FEIR on that adoption. However, as the authors of the BMK Unit 5 EIR/EIS interpret the policies of the BFC Zone, although all of the "preferred land uses" listed in CWP Policy C-1.4 are to be considered in interpreting consistency, clear priorities are set forth in that policy that (first) encourage land uses which provide or protect wetland or wildlife habitat, and/or which do not require diking, filling, or dredging (specifically, restoration of the land to tidal status, agricultural use, flood basin, wastewater reclamation area). Other land uses which do not require diking, filling, or dredging and/or are less protective of habitat value may be permitted when it can be proven that the resulting public benefit exceeds environmental costs and liabilities (Emphasis added). The DEIR/EIS, on page 4.29, (and the discussion on page 36, following, under Policy A-2) provides two possible interpretations of this policy and does give consideration to several "preferred" land uses within the Zone as providing public benefits. These include, but are not limited to, housing, as proposed by the BMK Unit 5 Master Plan.

Balancing Competing County Priorities. The EIR/EIS authors agree that clearly implied in Policy C-1.4 is the need to define a balance among competing County priorities for this site. The Countywide Plan forces a complex weighing of social choices, but does not give explicit guidance on how various uses should be weighted or balanced. Furthermore the choices involve unlike quantities and qualities. Therefore, the EIR/EIS authors disagree that the final determination of balance is the responsibility of the EIR/EIS, since the choices are

both social and political in nature. Rather it is the responsibility of the EIR/EIS authors to interpret policies in a professional, objective, and comprehensive manner, disclose differences of interpretation, and identify trade-offs, and for County decision makers - the makers and interpreters of policy - to finally determine whether the "public benefits (offered by the BMK Unit 5 Master Plan) exceed environmental costs and liabilities."

Agricultural Land use Compatibility. The policies of the approved Countywide Plan (not the Draft 1991 Plan) do not directly address possible incompatibilities between agriculture and other land uses except to note in Policy B-1.5 that lands in agricultural use (among others) should not be included in an urban service area unless they lie within a city's limit. Otherwise County policies are silent on this issue. The EIR/EIS authors recognize that it is often taken as a "truism" that agricultural uses are always compatible with wildlife habitat when, in fact, these uses can also be incompatible. Agriculture generally creates a monoculture ecosystem, lacking in complex or diverse habitat niches for plants and wildlife. On the other hand, agriculture (oat hay cultivation) and wildlife habitat on diked historic bayland sites such as the BMK Unit 5 site are compatible in several respects, discussed in the DEIR/EIS on pages 5.13 (habitat value of saturated agricultural fields), page 5.17 (brackish drainage ditches are dispersed throughout the agricultural fields and serve as wildlife cover and forage habitat within the agricultural context), and page 5.18 (seasonal wetland due to variable ponding of agricultural lands). On page 5.44, the DEIR/EIS states that "...although agriculture as it is currently practiced on the site...does not favor optimum habitat for all wildlife groups, the continuation of agriculture on the site would keep future habitat options open for a variety of species." The maintenance of future habitat options is central to the common assertion that agriculture and habitat are "compatible" in diked historic baylands.

Although they are assumed to be compatible, agricultural practices and operations can also be incompatible with flood control and maintenance of water quality (see also Comment M-5 and its response). The commentor is correct in observing that sporadic flooding of agricultural lands by brackish water would destroy crops, at least in the short term. More frequent flooding could do lasting damage to soils, although the BMK 5 site has traditionally required active draining and pumping to remove water from rain, high groundwater, and seepage through levees (of brackish water), as well as lime application to lower soil salinities. Other examples of incompatibility are water quality in the drainage ditches, which is of poor quality (DEIR/EIS, page 5.154) due to typical agricultural pollutants (nutrients from fertilizers, organic chemicals from pesticides and herbicides, biodegradable wastes from vegetative matter, etc.). Agriculture can also be incompatible with adjacent residential uses in generating dust (particulate), smoke, and other air-born pollutants from regularly cultivated areas.

Number of Homes Assumed for Property. The Countywide Plan Housing Element (Adopted 1991) assumed current zoning - 800 units - for the BMK Unit 5 property in projecting residential development potential in unincorporated lands. The total potential for above moderate (market rate) units in unincorporated land is 7,403; the regional need (1990-1995) is 296 units. (See also Response to Comment O-2.)

Mitigation A-7. A mitigation for this Class I impact (viz. cumulative impact of urbanization of eastern portions of City-Centered Corridor and further loss of agricultural and other natural resources) is not proposed because the Project as proposed is inconsistent with the

Countywide Plan in this respect. To "mitigate" this policy inconsistency would require turning to lesser project alternatives, as discussed in Section 3 of the FEIR/EIS: Alternatives Analysis.

BFC Zone As "Deterrent to Development." The comment that the developer purchased the property after it was rezoned to Bayfront Conservation Zone, a designation that might "deter development," is noted. As stated above, the BFC Zone policies are subject to more than one interpretation.

Consistency of Earth Moving With BFC Zone. The DEIS/EIR agrees that moving 13,500,000 cubic yards of earth is inconsistent with the intent of Bayfront Conservation Zone policies relating to maintenance of agriculture and minimum modification of wetland and habitat areas.. However, it should also be stated that, from an engineering standpoint, it is technically feasible to reconfigure the land as proposed using methods similar to those that were used to create the existing BMK Units 1-4 community, but with improved techniques and equipment based on experienced knowledge of construction in bay mud.

The following responses concern specific policies noted by commentors:

- Policy A-1: The authors agree that the DEIR/EIS discussion of the lagoons as habitat tends to downplay their value as habitat (See also Comment and Response B-5). However, because the expanded lagoon would be designed and managed for multiple purposes, including shoreline protection, sediment management, Novato Creek Flushing, recreation by large numbers of people, pest control, and potential flood control, it must be regarded as "developed open space" rather than as single purpose wildlife habitat. The existing lagoons have developed considerable habitat value over the years, but they also have been used by relatively few people. The addition of 1,190 households and related recreationists, in combination with other management requirements, could compromise potential habitat value.

- Policy A-2: This policy, which establishes criteria for priority selection of open space, does not use the criterion "natural" but rather "ecological importance". The proposed habitat restorations would qualify as "ecologically important," although active management would be required. There are numerous examples of ecologically important wetland habitats, both restored and "natural," around the San Francisco Bay that are under active management. However, there remains some uncertainty with regard to the long-term success of some of these restorations. The DEIR/EIS provides two interpretations of this policy. The first interpretation gives credit for the Project's intended restoration of 669 acres of wetland habitat. The second interpretation, however, acknowledges that only 40% of the site would be restored and, therefore, the project would not be consistent with the policy.

- Policy A-4: The DEIR/EIS, on page 4.15 identifies primary sources of noise pollution, notably from local traffic, from aircraft operations on a potentially reactivated Hamilton Field, and from boats on the lagoon. Noise pollution from increased boat use is not discussed in the DEIR/EIS, Section 5.G. The revised FEIR/EIS (Volume One) contains additional discussion of this issue in Section 5.G and identifies it as a Class II (significant but mitigable) impact. See also Comment and Response G-3, in this document.

- Policy A-6: The DEIR/EIS, on page 5.269, identifies the current tenant farmer as the source for estimating that the minimum acres necessary for economically viable oat hay production is 500 acres if the farmer also has other lands and agricultural operations. In the absence of other agricultural lands or operations, the minimum acreage would be 800 acres. Thus, 500 acres is a very conservative estimate for the Bel Marin site. The Project Sponsor proposes less than half that acreage in conjunction with a managed seasonal marsh.

- Policy A-8: The installation of the navigation lock will require excavation of the Novato Creek levee (stream bank) for a length of approximately 125 linear feet, dredging of approximately 5,000 square feet (~0.12 acre) to connect with Novato Creek channel, and placing erosion control (riprap) on new banks created to contain the lock and navigation channel into the lagoon. This is the only portion of the Project that impinges on the more than three-mile-long outer levee that fronts Novato Creek and San Pablo Bay. The remainder of this levee (99%) will remain in its existing condition, without developed public access or other improvements. Mitigations for the lock installation are identified in response to Comment B-6 in this document. The Novato Creek Bypass flood control facility will not require any dredging on or around existing levees and tidal marshes, although it will involve removing (lowering) upper portions of the existing levee and may involve excavating (deepening) some existing seasonal wetlands (see FEIR/EIS, Volume One, Figures 2.A-6b and 6c).

  (See also Comment and response B-6)

- Policy A-10: The policy is intended to maintain the (overall) diversity and abundance of wildlife and marine life...and preserve vegetation and animal habitats wherever possible. The DEIR/EIS, on page 4.17 and 18 states that the project is both consistent and inconsistent with this policy. With specific regard to aquatic resources, it is the opinion of the DEIR/EIS authors that increased boat use would contribute to existing disturbance in Novato Creek and minor disruptions to the overall movement patterns of fish in the Creek, but would not in itself destroy tidal wetlands nor significantly reduce the diversity and abundance of marine life and wildlife in Novato Creek. Dredging, which is already a permitted use in Novato Creek, would be more likely to adversely affect tidal wetlands on a periodic basis. Water quality in Novato Creek receives many inputs from upstream sources, including the existing Bel Marin Keys community. The DEIR/EIS notes on page 5.49 that several mitigation measures should be applied, such as speed limits for boats in Novato Creek, monitoring of water quality in the lagoons, and controls on urban runoff pollution sources within the community, including both Unit 5 and the existing Units 1-4.

- Policy A-13: This policy addresses manmade environments in terms of health, safety, quiet, good functional design, and aesthetics. These are briefly discussed in the DEIR/EIS on page 4.19, and discussed in more detail under individual topics. Safety effects from increased boat traffic are discussed in the DEIR/EIS, Section 5.J, pages 5.228, 229, and 232. The DEIR/EIS identifies safety effects of increased water-related recreational use of the lagoons in Impact J.6. Further discussion can be found in the FEIR/EIS, Volume Two, under Comment and Response J-1 and J-2.

- Policy B-5.2: The Project is generally consistent with this policy. The commentor is correct that the Project does not propose any developed access to the outer levee. At the same time, there is no provision to restrict the public from walking on foot on the outer levee. The Project does propose a bike lane and pedestrian walkway and trail along the perimeter road on the lagoon side. From this vantage, the public would have visual access to broad expanses of restored habitat and/or farmed areas, with the Bay beyond. Placing the walkway and trail on the outer (bay) side of the road would diminish the effectiveness of the 75 foot buffer between roadway and habitat areas. From the standpoint of wildlife, especially endangered species, it is preferable that developed public access and protection of habitats be carefully balanced.

- Policy B-7.4: The consistency of the Project with this policy is discussed in the DEIR/EIS on page 4.27. The Project was found to be partially consistent in that, under the lagoon "flow-through" alternative, flood control would be accomplished with compatible and/or "natural" features (agriculture, wildlife habitat, recreation [lagoon], per policy). Those portions of the Project intended to serve in flood control would be the lagoons (fluctuating water level), the shorebird/mudflat habitat area, and the seasonal marsh/agricultural area. Because this latter area poses conflicts with a sewer outfall force main, the project's flood management system is not fully consistent with the policy. The Novato Creek bypass flood control alternative would use a quasi-natural approach, comparable to the Yolo Bypass for example, in which a new levee would define an expanded flood channel without directly altering the existing Novato Creek channel or banks. Either strategy would be more consistent with the policy than the "ultimate channel," designed (but not built) to provide optimum flood control for Novato Creek, or other traditional engineered flood control facilities.

- Policy B-7.5: On its surface, the policy suggests that the Project would be inconsistent. However, as the DEIR/EIS points out, the full consistency or inconsistency with this policy would be determined once a specific flood control proposal has been accepted and approved by the County Flood Control District. The intent of the policy is to retain land use control and not sacrifice necessary capacity of flood retention lands. A flood control plan involving a Novato Creek bypass would both retain capacity and move flood waters more efficiently than under present conditions and thus fulfill this intent (see also Response to Comment E-2).

- Policy C-1.1. Several interpretations of "diversity of wildlife and aquatic habitats", and therefore interpretations of consistency with Policy C-1.1, are possible and are discussed in the DEIR/EIS in Section 5.B. The Project Sponsor bases his argument of consistency on the fact that the Project will increase diversity of wildlife on the site by creating habitat components that have been calculated by the Habitat Evaluation Procedure (HEP) to provide more diverse habitats for certain bird groups than currently exist on the largely agricultural site. According to one interpretation of "diversity" this is a valid assertion: the Project will reintroduce two large areas of mudflat/vegetated wetland that, if successful, would be used by a greater abundance of certain bird and waterfowl groups than currently use or are expected to use an agricultural site. Under this limited interpretation, the project is consistent.

However, this approach does not achieve full consistency with the policy in three respects: (1) It is based on use by birds and waterfowl alone; it does not account for other forms of wildlife (e.g. mammals) that will be either precluded from using the site or cut-off from access to some surrounding undeveloped, protected lands (Impact B-8 and 9); (2) Even considering birds and waterfowl alone, the HEP does not give full credit to observed, as opposed to calculated, existing habitat use of the site; the low-diversity typical of agricultural monocultures is not characteristic of this site, due to factors discussed thoroughly in Section 5.B (e.g. a dispersed mosaic of cover types on a relatively undisturbed large tract of land; wildlife use of saturated, ponded fields; proximity to Bay ecosystem); and (3) The interpretation only partially addresses the central theme in policies concerning diked historic baylands, which is the preservation of future habitat restoration options. According to these interpretations, the BMK5 proposal is not fully consistent with the policy.

Impact B-2 is intended to acknowledge that a major part of the site - 900 acres - would be committed to developed use (note also Policy A-1 response, above, concerning the value of lagoons) and thereby result in overall regional reduction of associated habitats. Mitigation B-7 focuses only on specific mitigation for 116 acres of jurisdictional wetland, not on appropriate overall mitigation for loss of nonjurisdictional but seasonally "wet" habitats on the site.

- Policy C-1.4: The DEIR/EIS (page 4.29) does identify several public benefits mentioned in the policy that would be provided by the project: public access, recreation, scientific opportunities, affordable housing, community amenities, and protection from flood hazards. The commentor is correct, however, in noting that the public benefit of the expanded lagoon would be largely limited to residents, as would the golf course, which would offer limited public use. No developed public access is proposed for the shoreline, although levees would be accessible for both residents and nonresidents on foot. No parking is indicated for the general public except at the neighborhood commercial center and (presumed) visitor parking for residential clusters. The DEIR/EIS applies both Class I and Class II impacts in interpreting consistency of the project with the policy.

- Policy C-3.1: The commentor selects only two out of several factors contained in this policy to question why the Project is inconsistent and the impact is thus Class I. Other values in the policy that would apply to agricultural use of the site besides playing an "integral role in other agricultural and dairy operations" include visual and scenic resources, productive economic resource, and compatibility with water-related wildlife. "Such agricultural lands could (emphasis added) consist of grazing operations harmonious with adjoining marshes, wetlands, grasslands, or other sensitive lands." "Could consist" does not appear to preclude oat hay from being covered by this policy if it is "harmonious with" the other adjoining marshes, wetlands, et cetera.

- BFC Zone Policies (general): The DEIR/EIS in Section 4 concludes that, although the proposed Project would be partially consistent under some interpretations, it is largely inconsistent with several central policies of the BFC Zone, notably C-1.2, 1.4, 1.6, and 3.1. These policies address some major intentions of the BFC, such as not encroaching into sensitive wildlife habitats; prioritizing uses that enhance habitat and open/space-related uses and that do not require diking or filling; retaining large tracts of land as possible land banks for protection of wetland habitats; minimizing the

impact of earth disturbance; and protecting existing agriculture. Approving the Project as proposed would appear, as the commentor suggests, to "overturn the effectiveness of these BFC Zone policies on the future protection of other BFC lands." However, the Project also proposes components that are intended to be consistent with some BFC Zone policies, such as proposing the largest habitat restoration thus far attempted in diked historic baylands in the San Francisco Bay Area. The Master Plan proposals to create the shorebird mudflat and seasonal marsh/farm could be modified to restore tidal action, under controlled circumstances, a proposal that would be consistent with BFC Zone policies. Thus, the project should not be viewed simply as "overturning the effectiveness of BFC policies." This interpretation fails to acknowledge the complexities of the BFC concept and need for "balancing" that is expressed in both Policy C-1.4 and in the FEIR on the adoption of the BFC Zone. The policies of the BFC Zone provide guidance but not absolute standards or limits to development.

- Policy C-3 (Community Development): The commentor notes that the DEIR/EIS does not discuss compliance of clustered (segregated) "low-cost housing." The discussion of consistency in the FEIR/EIS is revised to state that the Below Market and Affordable Housing programs are not consistent with part of this policy in that they will be clustered rather than dispersed (Class II).

- Policy D-7 (Transportation): In the absence of approval by Sonoma County, there could be other ways to be consistent with this policy besides developing a new Port Sonoma Ferry Service, since the policy itself is not specific as to which "ferry system" in the Bay Area should be aggressively marketed. One such means would be to provide a bus shuttle service from Bel Marin Keys to existing ferry terminals.

- The revised 1991 Draft Countywide Plan has not been adopted. Several relevant policies of the Draft Plan are referenced in the DEIR/EIS. Until it is adopted, the BMK Unit 5 Master Plan must be analyzed in relation to the adopted Countywide Plan.

- Policy CD-9.1 (Marin Countywide Plan, Draft, 1991): See the response above. In addition, refer to other discussions of proposed density above. The comment expressing a preference for density of 10 acres per housing unit (.10) is noted. The Reduced Size Project Alternative addresses the impacts of a development at this density.

**Comment A-3: Relationship of BMK5 to Sonoma County and Novato General Plans.** *The relationship between the Project and (consistency with), provisions of the Sonoma County General Plan and the Novato General Plan should be discussed and clarified. What other permits would be required for the Port Sonoma Marin Ferry?*

**Response**

Sonoma County General Plan. The project is related to the Sonoma County General Plan in only one respect, i.e., the proposed Port Sonoma Marin Ferry. The Project site is not within the jurisdiction of Sonoma County. However, the proposed Port Sonoma Marin Ferry would

be in Sonoma County and would need to be found consistent with the Sonoma County General Plan. As stated by Sonoma County Department of Planning in their letter to the County of Marin, August 12, 1992 (See Volume Three of this FEIR/EIS), the proposed ferry service at Port Sonoma is not consistent with the Sonoma County General Plan; Sonoma County requests that this mitigation measure be deleted. "By implication in the Draft EIR (sic), the ferry users would...come from the north..., e.g. from Sonoma County....the provision of ferry service from Port Sonoma could...have growth-inducing effects upon Sonoma County. Given this likelihood, the County is unlikely to approve a General Plan Amendment and use permit for such ferry service from Port Sonoma."

Since this letter was written in the absence of any specific request by the Project Sponsor to the County for a General Plan amendment or similar policy consideration to permit the ferry, it must be regarded as an interim opinion of staff, reflecting the current policy of the Sonoma County General Plan.

Development of the Port Sonoma Marin Ferry service would not require dredging, unless a ferryboat were to be stored overnight. Depending on the extent of construction within navigable waters, the Port Sonoma Ferry would probably require permits, at a minimum, from the County of Sonoma, Corps of Engineers, and BCDC. These permit actions would require further environmental review under CEQA (Sonoma County; BCDC) and NEPA (Corps of Engineers).

City of Novato General Plan. As discussed in the Draft EIR/EIS on pages 4.11 and 4.12, the Project site is not within the corporate boundaries, the urban services area, or the sphere of influence of the City of Novato. It is within the "planning area" covered by the Novato General Plan. The Novato planning area also includes special districts that would serve the Project. Although the Novato General Plan does not have the force of law over planning areas outside its corporate limits, the City's adopted policies provide guidance on appropriate land use. The Draft EIR/EIS on pages 4.46 - 48 finds that the Project is not consistent with certain of these policies. A letter from the City of Novato (see FEIR/EIS Volume Three) expresses opposition to the project on the basis of these policy conflicts. Novato's policies concerning the site will be given consideration by the County of Marin in reviewing and acting on the BMK 5 Project application.

The possibility of annexation to Novato of BMK Unit 5 is discussed thoroughly in the DEIR/EIS on pages 4.45 and 46, in connection with the "Dual Annexation Policy" of the Marin County Local Agency Formation Commission. Residents of BMK Units 1-4 have been traditionally opposed to annexation to the City of Novato.

**Comment A-4: Consistency with Federal and State Laws and Regulations.** *The proposed project must be consistent with applicable federal and state statutes, plans, and regulations. The EIR/EIS should include a complete listing of responsible and interested agencies and summarize their authority relevant to the project. Several comments request further clarification of the following agency concerns and requirements:*

- *U.S. Coast Guard permit approval process as it applies to the bridge over the proposed lock;*

- *Relationship of project components to the bay and shoreline jurisdiction of San Francisco Bay Conservation and Development Commission (BCDC);*

- *Authority of the California Harbors and Navigation Code, administered by California Department of Boating and Waterways;*

- *Applicability of Fish and Game Code sections 1601-03 (Streambed Alteration Agreements);*

- *Jurisdiction of State Lands Commission;*

- *Specific issues and concerns of the U.S. Army Corps of Engineers (COE), and which of the alternatives substantially meet, partially meet, or poorly meet their concerns; under COE regulations, if the lagoon becomes "waters of the United States," should it be open to the public? (Commentor views public access to "waters of the U.S." and recreation areas as important.)*

- *Consistency with Farmland Protection Policy Act*

**Response**

U.S.. Coast Guard has jurisdiction over the retractable bridge that would be placed over the new lock. The Coast Guard is a Cooperating Agency of the Corps of Engineers in review of the DEIR/EIS. Coast Guard authorities are described in the DEIR/EIS on page 4.54.

BCDC jurisdiction over the Project site and applicable policies are described in the DEIR/EIS on pages 4.48 - 52. As discussed on page 4.51, jurisdiction would extend over the bay and tidelands in San Pablo Bay and over levees within the 100-foot shoreland band. Jurisdiction does not include tidelands or levees of Novato Creek beyond the transmission line towers. The Project does not propose any activities in tidelands or improvements to levees for public access, although BCDC's Public Access Supplement Map identifies the Project site as an exceptional shoreline site for public access. BCDC policies concerning Diked Historic Baylands, with which the Project is inconsistent, are advisory.

The California Department of Boating and Waterways (Letter #SA-2, FEIR/EIS Volume Three) states that primary and secondary skiing areas developed as part of the proposed project are considered "special use areas for vessels" and such areas must be adopted by local ordinance through the auspices and requirements of Sections 651 (aa), 660, and 662 of the California Harbors and Navigation Code.

California Fish and Game Code §§1601-1603 are administered by the Department of Fish and Game. These sections of the Code apply to any public or private entity that proposes to divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake designated by the department. It is unlawful to commence any activity affected by this section until the department (of Fish and Game) has found it will not substantially adversely affect an existing fish or wildlife resource . Section 1603 is applicable to private projects, as stated in the DEIR/EIS on page 4.55. Compliance with

Code typically involves the Project Sponsor entering into a Stream Alteration Agreement, which details measures to mitigate adverse impacts, with the department. The construction of the new lock and related activities (dredging an approach to the lock) in Novato Creek will require an Agreement. (See Letter #SA-11, FEIR/EIS Volume Three.)

The California State Lands Commission's (SLC) jurisdictional applicability to the Project site is briefly stated in the DEIR/EIS on page 4.1. Although the SLC would not have jurisdiction over the site itself, the effect of the development may affect Public Trust interests of the State adjacent to the project. The SLC has a duty and responsibility to comment on activities which affect the sovereign and public trust interests. The staff of the SLC, in reviewing U.S. Coast Guard public Notice No. 11-92 has found that the project involves State land for which no lease or permit has been issued (see Letters #SA-5 and SA-7, FEIR/EIS Volume Three). Therefore the Project Sponsor will have to secure a dredging permit from SLC for the dredging of the entrance channel (to the new lock and lagoon) on State-owned land in Novato Creek. The permit process is subject to review under CEQA, which this EIR/EIS is intended to fulfill.

United States Army Corps of Engineers. The COE has expressed concern that habitat mitigation proposals are "highly questionable" (see also Response to Comment B-4). The COE has not specified whether the Project as proposed, or any of the alternatives analyzed, "substantially, partially, or poorly meet" their concerns. On completion of the EIR/EIS process, the COE will review all information in the 404 Permit Application and the EIR/EIS and form an opinion.

The expanded lagoon would become "waters of the U.S." Public access is not relevant to this designation; some waters of the U.S. are privately owned, and some are publicly owned. The COE has regulatory jurisdiction over certain actions in these waters regardless of ownership.

The Farmlands Protection Policy Act is not applicable to this project. The rule implementing the statute makes it clear that activities of the Federal Government to issue permits or licenses on private or nonfederal lands or approve public utilities are not "federal programs" within the definition provided in the Act and thus neither the Act nor the rule will apply to these activities of federal agencies (FR 5 JUL 84 27716-17, see also p. 27724, under Port 658.2(c) of the Act).

**Comment A-5: Impact of Community Center on Residential Community.** *The need for and impacts of the commercial center should be analyzed.*

**Response**

See Comment and Response N-4.

## B. BIOLOGICAL RESOURCES COMMENTS

**Comment B-1: Extent of Jurisdictional and Nonjurisdictional Wetlands on the Property.** *Commentors noted the following points and requested clarification and amplification:*

- *The amount of wetlands (116 acres) determined by the U.S. Army Corps of Engineers (COE) to be within their jurisdiction under Section 404 (Clean Water Act) appears to understate the real extent of seasonal wetlands on the site.*

- *The differences in interpretation of wetland jurisdiction, i.e. between U.S. Army Corps of Engineers' (COE) 1985 determination, and that of Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and (California) State Water Resources Control Board (SWRCB) should be explained.*

- *The extent of COE's Section 10 (Rivers and Harbors Act, 1899) jurisdiction should be shown on a map.*

- *Farmed areas are subject to seasonal ponding ("part-time swamp," according to one commentor) following significant rainfall. Although not subject to Section 404 jurisdiction, they provide important habitat for shorebirds and waterfowl and other seasonal wetland habitat that enhances the overall habitat value of the cultivated lands.*

- *Mitigation should be recalculated to include Section 10 losses in addition to Section 404, to account for historic as well as existing wetland losses.*

**Response**

The DEIR/EIS, on pages 5.23, 5.24, and 5.30, summarizes the history of the COE jurisdictional determination and discloses differences of interpretation of the extent of wetlands on the site, expressed by Environmental Protection Administration (EPA), U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Game (CDFG). It is not the purpose of the EIR/EIS to contest the authority of the 1985 jurisdictional determination of the COE, which found that 116 acres of wetlands on the site met the COE definition of "wetlands" that would be filled by the project. The COE has used this acreage as the basis for reviewing the Project Sponsor's Section 404(b)(1) Alternatives Analysis and will use this number in evaluating the Sponsor's Section 404 permit application to fill or otherwise alter 116 acres and in judging whether the Project Sponsor has proposed adequate mitigation for wetland fill. According to calculations by the Project Sponsor, the actual fill would be only 15.81 acres of Section 404 wetland. However, the remaining jurisdictional acreage would be substantially altered from its present condition.

The DEIR/EIS also points out on page 5.30 that the COE has taken jurisdiction over 969 acres of the site pursuant to Section 10 of the Rivers and Harbors Act of 1899, on the basis of elevation only (those portions of the site that are at or below the elevation of Mean High Water). A new figure is provided (FEIR/EIS Volume One Figure 5.B-2a) showing the location and extent of Section 10 jurisdiction. Lands and waters under Section 10 jurisdiction are not subject to compliance with the 404 (b)(1) Guidelines. However, the

COE has indicated that they may also require mitigation for habitat losses due to work or activities that fall under Section 10 jurisdiction.

In describing the extent of seasonal wetlands on the site, the DEIR/EIS on pages 5.13 and 5.14 points out that cultivated fields are subject to seasonal ponding and localized saturation following lesser flood events. Page 5.18 states that "seasonal ponding and wet soils persist on portions of the site for periods up to several months following significant rainfall," and goes on to say that "if USFWS or CDFG methodologies for delineating wetlands were applied to the site, a substantially larger portion of the site would be delineated as wetlands than is currently delineated." For purposes of calculating Habitat Suitability Indices (HSIs) and Habitat Units (HUs) for existing and proposed cover (habitat) types, the Project Sponsor made the conservative estimate that 675 acres of the farmed land are subject to ponding in an extreme (100-year) flood DEIR/EIS page 5.13, even though in drier years considerably fewer acres are subject to ponding.

Thus, from an ecological perspective, as distinct from a purely jurisdictional one, the site exhibits seasonal wetland areas mixed with upland agricultural habitat. This has been documented in a number of counts of water birds, discussed in the DEIR/EIS on pages 5.13, 14, 16, 18, and 20. The number of water birds using agricultural fields as habitat varies greatly with seasonal and annual rainfall and also with the way the fields are managed for oat hay production. Even minor variations in management can produce local and seasonal variations in water ponding and, hence, in wildlife use. This is characteristic throughout diked historic baylands that are under agricultural cultivation around San Pablo Bay in Marin, Sonoma, Napa, and western Solano Counties. During winter, use by migratory and wintering waterfowl and shorebirds is high when fields may also be fallow and partially ponded. Wet years produce more ponding, which increases wildlife use in those years.

The frequent cultivation and considerable annual and seasonal variability in acreage of ponded areas within these agricultural fields makes it difficult to calculate the aggregate acreage of "wet areas" on a consistent basis. For this and other technical reasons, a large number of areas on the site that pond sporadically do not meet the COE's definition of jurisdictional wetland. However, because diked historic baylands generally contain a *mosaic* of both wetland and upland habitat types that promotes wildlife use and diversity, agencies such as the COE, USFWS, CDFG, EPA, and San Francisco Bay Conservation and Development Commission (BCDC) regard such lands as having *existing* high ecological value as a whole, as well as high *potential* ecological value that could be achieved through tidal or other forms of restoration" (DEIR/EIS, page 5.30).

The COE and EPA have established a specific sequence for mitigation of proposed filling of Section 404 jurisdictional wetlands, as follows: (1) avoidance of fill; (2) minimization of fill where avoidance is not practicable; and (3) compensation in the form of creation or restoration of wetlands, where neither of the prior means is practicable. The COE has not established an explicit standard for the acreage ratio of compensatory mitigation, but the general guide is that mitigation should be "in-kind," "on-site," and that it should result in "no net loss" of (jurisdictional) wetlands. "Jurisdiction" in the context of the BMK5 site will include consideration of both Section 404 and Section 10 habitat values.

The mitigation proposed by the Project Sponsor is premised specifically on the potential fill and/or alteration 116 acres of Section 404 jurisdictional wetland (see also discussion under

Mitigation B.5, FEIR/EIS Volume One). It does not specifically address possible mitigation for losses of habitat values in Section 10 areas of the site. The Project also involves avoidance of fill in tidal areas (except for the navigation lock) and in a seasonally flooded area in the northwestern corner of the site. The primary compensatory mitigations proposed involve recreating seasonal wetland and mudflat habitats on 669 acres. Of these acres, 247 acres would fit the COE's strict definition of vegetated wetland after implementation, a replacement ratio of about 2:1. The EIR/EIS recommends a higher ratio of replacement for jurisdictional wetlands (3:1) in addition to mitigation for other wetland losses. Based on the 116 acres of Section 404 wetland only, the overall program would represent a mitigation ratio of almost 6:1 of habitat that would support several groups of water birds. The mitigation programs proposed by the Project Sponsor are discussed in greater detail below, under Comment 4, and alternatives that would both decrease the area of wetlands filled or altered and increase the restoration (mitigation) areas are discussed in the FEIR/EIS, Volume One, under Alternatives.

**Comment B-2: Regional Reduction of Seasonally Important Wildlife Habitat, and Precedent-setting Nature of Project in North San Pablo Baylands.** *Commentors request additional analysis of the following points:*

- *How does the site function as part of seasonal wetland habitats of the North Bay region?*
- *What are cumulative and/or precedent-setting impacts of the proposed Project on migratory waterfowl and shorebird species using the Pacific Flyway, on endangered species, and on seasonally important wildlife habitats of North Bay? Impacts should be assessed in relation to adjacent sites.*
- *Mitigation B-2 ("The SPONSOR PROPOSED enhancement of 247 acres of seasonally flooded agricultural fields and 377 acres for 'managed shorebird habitat', plus anticipated use of lagoon areas by diving and dabbling ducks, does not constitute adequate mitigation for the long term regional reduction of habitat.") states that Developer's proposed mitigation cannot adequately mitigate this impact. What is an alternative mitigation that would be more successful? If there is such a mitigation it should be stated.*
- *The finding that conversion of baylands (by the Project) would result in a regional reduction of seasonally important habitat for migratory waterfowl, shorebirds, and raptors is contradicted by statements elsewhere in the DEIR/EIS. This contradiction should be explained.*

**Response**

North Bay Regional Context. The importance of the San Francisco-San Pablo Baylands and Pacific Flyway contexts of the Project site is discussed in the DEIR/EIS on pages 5.11 and 5.36. This regional context embraces the entire North Bay, where an extensive system of tidal marshes and mudflats once formed a wide band, from approximately Richardson Bay in Southern Marin County to Carquinez Strait, with several intervening peninsulas. The majority of these wetlands were diked off from tidal action for farming and/or salt production during the late 1800s. Substantial areas were also filled and developed. The areas that remained in agricultural use, such as the undeveloped portion of Bel Marin Keys,

continue to serve an important habitat role for migratory birds and waterfowl by providing large blocks of relatively undisturbed land which is seasonally wet as well as adjacent to the Bay ecosystem. Page 5.36 of the DEIR/EIS states that this "...is one of the most important coastal wintering and migrational areas within the Pacific Flyway..."

Precedent-Setting Impacts. Diked agricultural baylands have also been particularly susceptible to development proposals. Over the past two-and-a-half decades, in addition to the filling of areas of wetlands for development in Richardson Bay, Corte Madera-Larkspur, San Rafael, Novato, Petaluma, Vallejo, and other locales, major developments have been proposed for larger blocks of diked historic baylands in Marin, Sonoma, Napa, and western Solano Counties. Regulatory restrictions supported by conservationist constituencies and the promulgation of new local policies have been largely responsible for the defeat of proposals such as Cullinan Ranch in Napa County and for the reconsideration of Sonoma baylands as sites for dredge material disposal coupled with wetland restoration, and similar reconsideration of land use for diked historic baylands. In addition, significant areas of diked historic baylands have been committed to permanent open space through public acquisition or easement for flood conservation, irrigated agriculture using treated wastewater, other compatible uses, and habitat. For example, the Project site is almost surrounded, with the exception of BMK Units 1-4, by lands and waters protected for these purposes.

However, in addition to the BMK 5 site, at least three prominent sites with comparable areas of diked historic baylands, some in agriculture, remain subject to development in Marin County: Bahia, Rennaissance Estates, and St. Vincent's/Silviera Ranch. The nature of development of BMK 5 could set a precedent for development of any of these and other similar sites within the Bayfront Conservation Zone. For example, portions of St. Vincent's School and Silviera Ranch that lie primarily east of the Northwestern Pacific Railroad tracks are all diked historic baylands in oat-hay production. The combined 1,200 acres of these two properties are under consideration for some form of urban development.

Mitigation B.2. The DEIR/EIS, on Page 5.36, states in Impact B.2 that the conversion of over 900 acres of diked baylands to urban uses and developed open space would result in an overall regional reduction of seasonally important habitat for migratory waterfowl, raptors, salt marsh passerines, and shorebirds, etc. The Project Sponsor argues that this impact appears to conflict with other statements (particularly with results of the Habitat Evaluation Procedure [HEP]) in the DEIR/EIS that suggest that, with successful restoration of mudflat and wetland habitats (shorebird mudflat; seasonal/farmed marsh) and expansion of lagoons, there would be a regional increase in habitat values, particularly for shorebirds and waterfowl.

The analysis and conclusions in Impact B.2 focus, first, on the 900 acres of site that would be developed, including the lagoon expansion (see also Comment B-5, below), and then on the area proposed for habitat creation. The Habitat Suitability Indices calculated for existing and proposed habitats suggest that four bird groups would experience a net increase with the recreated habitats. This would be at the expense of three other bird groups that currently use the site, however. Second, the proposed restorations involve technological design and management (see also Comment 4, below) that cannot be guaranteed to perform as intended without further analysis, design and possible "pilot" operation and monitoring. Third, an important wildlife value of this site and other large undeveloped bayfront lands is their

relative remoteness from disturbance. Even though managed for agriculture rather than for habitat (note that optimum management for agriculture does not simultaneously promote optimum conditions for wildlife), the mosaic of undisturbed habitats and continuity with similar bay habitats emparts an overall habitat value that is greater than the sum of the individual parts or the sum of Habitat Units.

Adequate mitigation for Impact B-2 (Class I), as noted in the DEIR/EIS, is not possible under the Project as currently proposed. An alternative that maintains and/or restores a larger area of agriculture/habitat would provide the only mitigation for this particular impact.

**Comment B-3. Off-site Project Components.** *Several off-site components of the project require more information on location and design for adequate analysis of impacts and mitigations. These include:*

- *Port Sonoma-Marin Ferry;*
- *"Second access" routes: to Hamilton Field, and Hamilton Drive extension to State Route 37;*
- *Shuttle bus and light-rail stations; and*
- *The Novato Creek Bypass flood control alternative.*

**Response**

These off-site components were included in the Master Plan application by the Project Sponsor primarily as mitigation of traffic and/or flood hazard impacts. They are "programmatic" to the extent that other entities would also be involved in their approvals, funding, design, and/or implementation, and, therefore, precise details cannot be known at this time nor impacts identified. Prior to final design and construction, each would be subject to possible state and/or federal permit applications as well as subsequent environmental review under CEQA and/or NEPA. However, the following additional information will assist in evaluating the potential biological impacts and environmental feasibility of these components.

- Port Sonoma Marin-Ferry. The loading area for the proposed ferry, including parking lot, ticket facility, and loading ramp, would occupy an approximate 7.5 acre site that is already filled. No additional fill is anticipated, and no new dredging would be required, since the ferry would use the same channel that is currently used for the boats currently docked at Port Sonoma-Marin. Limited dock construction would probably be required within the Corps of Engineers, Section 10 (Navigable waters) jurisdiction.

  It is possible that one currently unused area would be dredged for overnight ferry storage. That dredging would be minor relative to the permitted annual maintenance dredging for Port Sonoma-Marin, which amounts to about 50,000 cubic yards that are discharged into adjacent on-land storage ponds with capacity of 200,000 to

300,000 cubic yards. Dredge material is dried in these ponds and excavated and hauled periodically to Redwood Sanitary Landfill for use as a cap or levee construction.

In view of the limited new physical requirements for this facility and relative infrequency of ferry trips (maximum two-per-day, each way), the impact on biological resources would appear to be not significant. However, it would be necessary to examine in detail both the specific design and the proposed ferry operation to determine potential impacts such as wave effects, levee and shoreline erosion, noise, and effects on local shorebirds and waterfowl.

- Second access routes. The Project Sponsor would be responsible for providing two second access routes, one to Hamilton Field, that is, with the proposed Hamilton project, and one to Highway 37. The former would be a two-lane "stub" road connecting to the boundary of Hamilton Field near the northwestern end of the existing runway. Detailed engineering and grading plans have not been prepared for this road, but it is likely that fill would be needed to cross a small drainage ditch (less than 0.10 acre) between the Bel Marin Keys Perimeter Road and the current Hamilton runway perimeter road. No wetland other than the drainage ditch would need to be filled. The fill would come from sources on the BMK5 property.

  For the latter, *viz.* the connection to Highway 37, two routes have been proposed, as described in the DEIR/EIS. The Hamilton Drive extension ("Route A") would be a two-lane local street, forming a connection to the interchange of Marsh Drive and Hanna Ranch Road with State Route 37. It would connect to Bel Marin Keys Boulevard via Frosty Lane. "Route B" is not under serious consideration. Although the proposed Route A generally follows an already disturbed alignment, it is anticipated that some fill would be required in two areas that may contain jurisdictional wetlands: drainage ditches and swales that contain isolated patches of wetland along the southerly portion of the alignment that lies between a P.G. and E. substation and Highway 101, and in the northerly portion of the alignment that would traverse a field that may contain jurisdictional wetlands, to reach Marsh Drive . A total of two-to-four acres within the filled areas would probably qualify as jurisdictional wetlands, subject to precise delineation. Placing fill in these areas would require a Section 404 permit and would require compensatory mitigation, minimally at a 1:1 ratio, preferably onsite and inkind. Mitigation would also have to account for possible indirect operational impacts from traffic encroachment into lands that are currently open and infrequently disturbed.

- Shuttle Bus and Light Rail Station. Neither the feasibility nor the location of these facilities has been determined, so biological impacts cannot be ascertained. However, the shuttle bus route would probably follow the BMK5 Perimeter Road, with stations placed along the route, so additional biological impacts beyond those associated with construction and automobile use of the road itself, would not be significant. The light rail station would be part of a transportation system whose future in Marin County has not been determined.

- Novato Creek Bypass Flood Control. The Novato Creek Bypass flood control facility would entail construction of a new levee north of the existing Novato Creek levee (see Comment E-2 and Response and FEIR/EIS Volume One: Project Description and Figures 2.A-6b and 6c) to provide a flood control bypass channel. It would consist of placing a new perimeter levee on the north side of Novato Creek, using material excavated to create the bypass channel between the new and existing levees. The existing easterly Novato Creek levee would be lowered to create one large channel with uneven bottom depths. This lowering of the existing levee would be accomplished from the adjacent farmland owned by the Marin County Flood District. Construction of the new levee would not involve disruption of tidal salt marsh on aquatic habitats in Novato Creek.

  The by-pass channel would occupy grasslands that are currently used for storm water detention. The land used for the bypass may now contain seasonal wetlands. The bypass channel would initially alter the topography of these grasslands, but eventually the "channel" lands would function generally as upland ruderal habitat, as they do now, except for sporadic passage of flood waters. This is not likely to have a significant adverse effect on this habitat, which already is subject to flooding during wet years. However, installation of this flood control alternative would require environmental review by a number of agencies, including the COE and CDFG at a minimum.

**Comment B-4: On-site Habitat Components, Habitat Creation/Restoration.** *Several habitat components, including habitat creation/restoration, are proposed as mitigation for filling jurisdictional wetlands. According to commentors, information on these components in the DEIR/EIS is insufficient to permit adequate analysis of impacts to biological resources and wetlands. These components include:*

- *Shorebird mudflat habitat;*
- *Seasonal freshwater marsh with farming use; and*
- *(Alternative) tidal restoration.*

*Comments raise the following issues and request further examination and analysis:*

- *Mitigation proposals do not represent "in-kind" mitigation (i.e., proposed recreated habitats are different from existing wetlands on the site); loss of habitat for some species would not be mitigated.*
- *Their design is somewhat experimental, raising a number of questions: e.g., Why is it necessary to excavate down to -7 feet to create the shorebird mudflat habitat? That is too deep relative to the Perimeter levee road. Would shallow water over the mudflat reach too high temperatures during the summer for marine life intended as a food source? Would the shallow area function as a salt evaporation pan? Would there be periodic algal blooms and die-off? What would be the impact of potential mosquito hazard and odors from seasonal marshland and managed wetland habitats? The dual function of seasonal habitat and agricultural uses does not appear feasible. A firm source of water must be identified.*

- *Design calls for intensive management and continual maintenance (for example, they would be subject to operational problems; equipment failures could be costly and damaging to wildlife); cost of operation and financial arrangements for maintenance and monitoring are not provided; a specific operational plan and responsibilities for management must be identified to make this an acceptable mitigation for wetland losses.*

- *Long-term protection (e.g. measures to prevent or minimize potential conflicts between public access areas and sensitive wildlife areas) should be discussed; the managing agency should be identified and qualifications addressed.*

- *Do wetland creations/restorations as proposed adequately mitigate for loss of other areas of seasonal ponding as well as jurisdictional wetlands. One commentor objects to the concept of "enhancing" wetlands as an acceptable mitigation for filling wetlands, in that enhancement (frequently) results in a net loss of wetlands.*

- *The present wetland habitat is not pristine; the majority of existing wetlands were created by human devices (ditches and borrow pits). Another commentor states that the fact that wetlands on the site may have been artificially created has no bearing on jurisdictional determination or habitat value and, in fact, "...all but about 7 acres ...was at one time tidal wetlands, so most of the site should be viewed as historic and seasonal wetlands."*

- *The desired habitat values of the created mudflat area, envisioned as a means of mitigating for loss of seasonally ponded areas, would be potentially compromised by use over a period of 85 years in dredge disposal; further excavation (to -7 feet Mean Sea Level) should not be permitted; this habitat would also be subject to occasional flooding.*

- *No measures proposed in the DEIR/EIS appear to address the loss of restorable historic (tidal) wetland habitat. Restoration of tidal marsh habitat should be discussed as possible mitigation and the temporal and/or permanent impacts of such a proposal identified; would this not necessitate preparation and circulation of a new or supplemental draft EIR/EIS?*

- *The Habitat Plan, dated March 5, 1990, should be included as an appendix in the final document.*

**Response**

Habitat components of the Project are described in the FEIR/EIS Volume One: Project Description and in the Master Plan, and are evaluated in the DEIR/EIS on pages 5.45 and 5.46. According to the Master Plan and the DEIR/EIS, the proposals for creation of shorebird mudflat and seasonal marsh/farmed use (referred to as "Managed Marsh With Farm" Alternative in the Master Plan) are still conceptual. Seven habitat proposals were developed at a conceptual level and evaluated (DEIR/EIS page 2.20), including the Managed Marsh With Farm, for purposes of comparing land use alternatives. The Managed Marsh With Farm was selected as the preferred alternative because it would yield relatively high Habitat Units and still permit limited farming. In fact, the highest Habitat Units would be yielded by restoration of tidal marsh, discussed below. The next highest would be Managed Marsh Without Farming, similar to the "preferred" alternative discussed in the DEIR/EIS, but without any dry season farming.

Shorebird Mudflat/Seasonal Freshwater Marsh with Farming Use (Managed Marsh With Farm)

This alternative would not replace existing wetland cover types. The only way to achieve "in-kind" mitigation would be to recreate conditions similar to those that now exist on the site. The land has been cultivated for many decades. Existing brackish seasonal wetlands on the site are the result of both human and natural factors: human manipulation (diking off tidal action; constructing ditches for farm drainage; excavating soil for levee and land construction for BMK Units 1-4); and variable, natural factors, due to proximity to the bay, such as recurring ground saturation, ponding, locally high salt concentrations, low elevation, high groundwater, subtle variations in microtopography due to differential settlement, seepage from the bay, and relatively poorly drained clay soils.

"Restoration" of portions of the site could take any one of several directions, as the HEP analysis suggests. "In-kind" mitigation may not even be an appropriate or ideal objective for this site, given its history of manipulation, although "in-kind" replacement is one of the stated mitigation goals of the COE and other resource agencies. The appropriate objectives for restoration should also answer the questions: "What form(s) of restoration take best advantage of the site's location and 'natural' conditions? What form(s) best promote habitat diversity? What form(s) will be most reliable for management over the long-term.

The Project Sponsor proposes two restoration schemes: Shorebird Mudflat and Managed Seasonal Marsh and Farm. On the positive side, these schemes, when implemented, would be expected to result in net increases in Habitat Units for migratory shorebirds, dabbling ducks, herons/egrets, and diving birds, over the existing Habitat Units for these groups. A permanent water source is assured for the shorebird mudflat habitat (brackish water from lagoons and/or Novato Creek) but not for the seasonal marsh/farmed habitat (see below). The seasonal marsh could be managed as many "duck clubs" around the bay have been managed, for waterfowl habitat during the migratory season and silage crop during the dry season.

In response to concerns raised by numerous commentors on the DEIR/EIS, including the COE, both of the proposed schemes must be regarded as experimental, technological, and management-intensive with a high potential risk of failure associated, in particular, with the seasonal marsh/farmed land mitigation proposal. They take only partial advantage of the natural conditions of the site. In addition, the shorebird mudflat would also receive dredge material disposal, raising concerns that, as shorebird habitat, it would be periodically disturbed and would require careful reconfiguration to function as designed. Sporadic flooding would temporarily disrupt the habitat. A reliable source of "fresh" water for the seasonal marsh from the treated effluent disposal pipeline (a 54" forcemain that traverses the restoration site) has not been assured by Novato Sanitary District (see also Comment K-4). If this effluent were used, its discharge to San Pablo Bay through the marsh would probably require a NPDES permit. NSD has also indicated that design of the marsh would have to avoid the full length of the forcemain and also provide access to it for inspections.

To design and manage for potential problems, such as elevated temperatures or the development of salt panne in the shorebird mudflat, the development of algal blooms, odors, or botulism in both habitats, and/or the breeding of mosquitos, both areas should be designed with reliable hydraulics and water control structures for both circulation and depth

control, including, when necessary for vegetation or other biological management, capability for manipulation of water depths, including complete drawdown. Potential problems would be better managed if the mudflat and marsh habitats were developed as several "cells" capable of being hydraulically isolated, rather than as large undivided areas. Both areas would require active and continuing management and monitoring of water quality, with the high possibility of failure due to human carelessness or equipment failure.

The proposed design of the seasonal fresh water marsh for waterfowl is supported by a long history of duck club and wildlife refuge operational experience and, therefore, could achieve its habitat objectives, if water supply were guaranteed. The shorebird mudflat design has no exact precedent or prior operational history and therefore could not be assured of performing as conceived without a pilot study first. In both, there is no assurance that an agency assuming management responsibility for the mitigation areas in perpetuity would have the ability to pay for continued management.

Salt marsh tidal restoration

The Project Sponsor examined the feasibility of restoring a portion of the site to tidal salt marsh as one of the seven habitat alternatives examined in the Master Plan. This alternative is discussed in the Master Plan and in the DEIR/EIS on pages 2.20 and 5.30. This restoration alternative was rejected earlier by the Project Sponsor for two reasons. First, it was recognized that reintroducing tidal action to areas behind the levees that have subsided to an elevation several feet below Mean Sea Level would result initially in creation of a tidal "lagoon," not a tidal marsh. Eventually, with natural sedimentation, the lagoon would begin to fill in, but it would take many years to develop into a mature tidal salt marsh in this manner. This process could be accelerated, however, if the internal elevations were raised over time using dredge materials, in the manner described below. Second, because raising elevations and introducing tide waters would reduce the volume capacity of those undeveloped portions of the BMK5 Master Plan that are intended to accommodate 100-year flood waters, tidal restoration would only be possible if the Novato Creek bypass or equivalent off-site flood control alternative were selected and implemented.

To respond to critical comments on the DEIR/EIS concerning the loss of restorable historic wetlands on the site and the interested mitigation proposal, the FEIR/EIS expands on the tidal restoration mitigation strategy, previously mentioned briefly in the DEIR/EIS. To carry out this mitigation alternative, the Project would have to shift the restoration design for both areas from the proposed mudflat and seasonal marsh to tidal restoration. If the Project restored roughly one square mile - 640 acres - to tidal action (exclusive of the existing brackish wetland in the southwest portion of the property), this restoration would encompass and replace the two proposed wetland creations/restorations: *viz.* the shorebird mudflat and seasonal marsh/farmland.

The necessary elevations and topography could be accomplished by creating a series of cells, each initially enclosed by temporary levees, and sequentially placing dredged material from Novato Creek in the cells. As each cell was brought up to approximate sea level, or 1.0 above sea level (an elevation that would allow revegetation), it could be opened to tidal action through a tide gate. Over time the cells would become hydraulically connected. The project design could also include "islands" for loafing, resting, and feeding and peripheral

upland areas adjacent to the outer levee to serve as refugia for special status species that inhabit the outer tidal salt marshes of Novato Creek and San Pablo Bay.

The restoration would proceed in several self-contained phases as dredge material became available. In the interim, the land would be managed much as it is today, probably farmed in oat-hay. This concept is also described in the FEIR/EIS, Section 5.B. The goal of this restoration would be to increase habitat area for various migratory and resident water birds as well as to augment and restore salt marsh habitat for several endangered species that currently inhabit Novato Creek and San Pablo Bay salt marshes.

No detailed mitigation or monitoring plans have been developed for any of the three restoration alternatives, nor have cost estimates have been developed. The COE will require preparation of a formal, detailed Mitigation/Monitoring Plan for the Section 10/404 permit. This plan, which will be reviewed by the resource agencies, is required before the District Engineer issues or denies the permit application. The cost of the restoration would be paid by the project. Because such restoration projects take time, the Project Sponsor would provide necessary bonds or other forms of financial security to guarantee that the work is completed. The habitat would be placed into permanent protection through a conservation easement, transferring title to a non-profit entity or deeding it over to the public trust with a state or federal agency. No recipient or management agency has been identified by the Project Sponsor.

The Project Sponsor has offered to grant an easement to BMK CSD initially covering 90 acres for purposes of land disposal of dredge materials. This is described in the revised Project Description in FEIR/EIS, Section 2, and in the Response above concerning the mudflat shorebird mitigation proposal.

At this conceptual stage of plans for habitat restoration, tidal restoration appears to offer the best long-term solution and comes closest to exploiting natural conditions for restoration of wetland functions with minimum operation and maintenance cost or opportunity for failure. Approval of any habitat restoration alternatives, even in concept, will require further design and environmental review.

**Comment B-5: General Wetland, Aquatic, and Other Habitat Values on the Site.** *A wide variety of questions, based on differing opinions, were raised by commentors concerning impacts of the project on general wetland, wildlife and aquatic habitat values on the site, with request for further discussion and analysis.*

- *Lagoon as habitat. The DEIR/EIS does not adequately consider the value of the lagoons as habitat. Differing opinions are presented by commentors. Some feel that these are "poor" habitats, subject to frequent disturbance; others feel that the DEIR/EIS undervalues the lagoon habitat , especially as compared to existing dry farming on the site.*

- *Use by Common Wildlife. The site is used by many common wildlife species, such as upland mammals (deer, gray fox, others) and passerines (the largest group of birds) and raptors. A commentor notes that the character and quantity of wildlife "have increased and changed drastically just within the last year. Previously conducted surveys of protected wildlife are*

*hopelessly out of date." Impacts to these animals should be evaluated and the EIR/EIS should demonstrate how the proposed mitigations would compensate for habitat values lost.*

- *Relationship Between Agricultural Lands and Wildlife Habitat. The relationship between agricultural use and wildlife habitat should be discussed in the EIR/EIS in greater detail, for example the combined values of seasonal wetlands and agricultural use, the habitat value of agricultural lands per se, and the relative compatibility (or incompatibility) of agricultural use and wildlife habitat.*

- *Fishery Resource in Novato Creek. The extent of the fishery resource in the Novato Creek should be discussed in more detail and fishery resources documented. Is there any evidence that significant water quality deterioration or reduction in biological values in Novato Creek has occurred as a result of existing boating? Would increased boating activity have an adverse effect on aquatic habitat?*

- *Bird Species Guilds. A HEP analysis was conducted on the site to determine existing habitat suitability indices for a variety of bird species groups, or "guilds." One commentor requests that the analysis include a detailed description of target year scenarios for each alternative, including indices for each target year and discussion as to how these indices change over time.*

**Response**

Lagoon as Habitat. The DEIR/EIS is conservative in placing value on lagoon habitat, in part because the existing setting of the BMK5 Project area includes only 2.1 acres of lagoon and, therefore, lagoons were a negligible part of both the Environmental Assessment (1990) and the Setting Section of the DEIR/EIS. The Master Plan document describes the habitat conditions of the lagoons as follows: "The water level is kept constant year around via a system of locks along Novato Creek. The lagoon is up to 20 feet deep and opens into the Bay via Novato Creek. Human disturbance on the lagoon occurs due to the homes adjacent to the shoreline and water-oriented activities. Numerous species of waterfowl use the lagoons as resting areas. Very little emergent or aquatic vegetation is associated with this cover type. Habitat Suitability Index values (HSI values are discussed in the DEIR/EIS on page 5.20) are high for diving water birds, moderate for wintering dabbling ducks and herons and egrets, and low for the other species." These statements generally concur with observations of the EIR/EIS biological consultants. It should be noted that bird and waterfowl use varies with season; during prime migratory periods (fall, winter, and early spring) there is also less boating activity; lagoons are used as resting areas throughout this period when there is less human activity.

Residents of BMK Units 1-4 have a number of anecdotal observations to add. One resident notes that wetland vegetation (Pacific cordgrass, *Spartina foliosa)* has become established in some parts of the older lagoon, and that clumps of cordgrass have been transplanted along about 1,000 feet of shoreline, along with pickleweed (*Salicornia virginica).* The new Unit 5 lagoon would become part of the lagoon "ecosystem." Vegetation could be planted on the lagoon side along the lengthy perimeter road. However, management of the lagoon for mosquito control would discourage both vegetation establishment and creating the shallow water depths that promote establishment of vegetation.

One resident has observed that the quality of marine life in the waterway known as "Sunset Lagoon" has deteriorated as a result of Unit 4 housing and landscaping; diversity of marine life was "much greater" four years ago. Therefore, "...an additional 1190 homes would undoubtedly destroy most marine life/waterfowl in these lagoons." In contrast, other residents have observed (and caught) numerous fish species in the new (Unit 4) lagoon: striped bass, leopard sharks, steelhead, stingray, and have observed crabs and mussels. "There has been an astonishing increase in shorebirds, white pelicans, and waterfowl. ...more lagoons and shorebird habitat will increase the quality of our wildlife."

In the absence of systematic surveys and monitoring of fish and wildlife use in the lagoons, it is evident from informal observations that the lagoons support a variety of species. However, for purposes of evaluation of habitats that would be lost, altered, or restored with the BMK 5 Project, the EIR/EIS continues to take a conservative position, recognizing that the expanded lagoon would be designed and managed for multiple purposes, including shoreline protection, sediment management, recreation by residents, pest control, and potential flood control. Therefore, the lagoon has been defined as "developed open space," in spite of the fact that it also affords habitat.

Use by Common Wildlife. The DEIR/EIS on pages 5.13, 14, 16, 17, 18, and 20 provides discussion of wildlife use of the entire site, including extensive use by several bird groups (e.g. 140 raptors distributed among 12 species observed in the vicinity of the site in a two-day period). Raptor foraging habitat would be reduced from the existing approximately 1,610, acres to 247 acres. Mitigation proposals presented as part of the project favor some of these animal groups and not others. The HSI values for cover types and species guilds proposed for the Project are summarized in Table 5.B-6 in the DEIR/EIS. In response to the Commentor who requests a HEP analysis for all alternatives, the EIR/EIS authors do not believe that such an analysis is necessary to compare adequately the alternatives with respect to biological resource impacts, since the HEP is at best an imprecise guide.

An alternative proposal to restore a portion of the site to tidal action is discussed under Comment 4, above.

Relationship Between Agricultural Lands and Wildlife Habitat. The BMK5 site under its current agricultural regime functions in three basic ways, depending on the year and the season, and to some extent on the rigor of agricultural practices. This is characteristic of extensive diked historic baylands in the North San Francisco Bay area that are in agricultural production, as described briefly above, Comment B.1 Response 1. The three functions are as follows. The property is currently cultivated for oat-hay production. Management practices are designed to promote this use at the expense of other uses. The site also supports several kinds of wildlife habitat, which have been documented. The wildlife use fluctuates widely from year-to-year and season-to-season, as explained in Response 1, above. Although agricultural and habitat uses coexist and, in a long-term sense, are compatible (in that agriculture does not permanently convert the land from open space to developed use and preserves the option for future restoration), neither can be optimized except at the expense of the other. County policy for dual habitat/agricultural use specifically promotes each resource without optimizing either. Finally, the site can also function incidentally as an area of flood storage in extreme flood events. This is not a desirable conjunctive use from the standpoint of agriculture, since brackish water from the Bay and Novato Creek would damage or destroy the value of soils for further agriculture.

Agriculture and habitat are not always compatible for other reasons. For example, the continuous plowing of the property, addition of lime to counteract the high salt content in the soil, and use of chemical fertilizers constitute "proper soil management" for purposes of agriculture, but these activities are incompatible with creation of high value habitat on the same site. Further discussion of inherent incompatibilities of agriculture with habitat and other land uses is provided under Comment A-2.

Fishery Resources in Novato Creek. Aquatic resources in Novato Creek are discussed in the DEIR/EIS, page 5.30, 31, and 32. No systematic surveys or monitoring have been conducted to document changes to fisheries in Novato Creek due to water quality degradation or existing boating. The National Marine Fisheries Service, which is responsible for preserving and enhancing marine, estuarine, and anadromous fish resources and their habitats, was consulted concerning the proposed Project and expressed the opinion that the proposed project would not negatively impact these resources (see FEIR/EIS Volume Three, Comment #FA-3).

**Comment B-6: Impacts To Endangered and Threatened Species.** *Activities that could affect threatened and endangered species would include the following:*

- *construction, maintenance, and operation of the navigation lock in Novato Creek and impacts on associated aquatic and salt marsh habitats;*
- *maintenance dredging in Novato Creek;*
- *boating activity; and*
- *public access on levees and roads.*

*The FEIR/EIS should provide more detailed analysis and quantification of impacts of activities on endangered species (notably California clapper rail and salt marsh harvest mouse) inhabiting Novato Creek salt marshes and (probably) sites of salt marsh vegetation interior to the levee.*

- *The DEIR/EIS does not address these impacts adequately or propose sufficient mitigation measures (ratio of mitigation, location of mitigation), or consider possible failures and need for guarantees, such as bonds.*
- *What restrictions should be placed on these activities, what provisions for spatial buffers, and what recommendations from USFWS for mitigation?*
- *How should contractors be educated about presence of endangered species during construction? Cessation of construction should be considered as mitigation.*
- *The analysis should meet standards for preparation of a biological assessment, pursuant to section 7, Endangered Species Act. Evidence should be provided in the final EIR/EIS that the COE has initiated consultation under section 7 and that potential impacts to listed species and/or their habitats from project implementation have been adequately evaluated.*

- *Areas of pickleweed within the site that may serve as habitat for salt marsh harvest mouse should be re-trapped and specific mitigation identified, if a population if it is found to be present. If no trapping is done, potential impacts of loss of this habitat for the salt marsh harvest mouse should be identified as an adverse impact and mitigation proposed.*

- *Transition (buffer) zone habitat (up to 300 feet) for salt marsh harvest mouse should be addressed; 100 foot buffer is insufficient.*

**Response**

Navigation Lock. The installation of the navigation lock will require excavation of the levee (stream bank) for a length of approximately 125 linear feet, dredging of approximately 5,000 square feet (0.12+ acre) to connect with the Novato Creek channel, and erosion control measures (riprap) along the new internal banks of the lock entrance. This is the only portion of the Project that impinges on the more than three-mile-long outer levee that fronts Novato Creek and San Pablo Bay and forms the upland boundary for tidal marsh habitat of endangered species. The remainder of this levee will remain in its existing condition, accessible to the public but without any developed public access or other improvements.

The lock installation is considered a Class II impact because the extent of disturbance to tidal marsh habitat, and hence to habitat of endangered species, would be limited in extent and would not likely jeopardize the population of either salt marsh harvest mouse or California clapper rail inhabiting the marsh. So as to disturb a minimum amount of tidal marsh habitat, the entry to the lock would be located at a point on Novato Creek where the marsh occurs primarily along the opposite (northern) shore and bank. Along this reach, the curve of the Creek tends to "hug" the southern shore, leaving a relatively narrow band of salt marsh bordering the southern levee. A wider band occupies the inner curve on the northern bank.

Impacts would be of three kinds: (1) the primary impact would be during construction, during which "incidental take" (as defined by the federal Endangered Species Act) of individuals could occur; (2) the loss of approximately 0.12 acre of mudflat with some associated tidal salt marsh would also occur; and, (3) the area between the existing lock and the new lock - approximately 500 linear feet of a narrow band of salt marsh- could be viewed as an "island" of creek bank and tidal salt marsh habitat, somewhat isolated between the two exposures represented by the openings to the locks.

The COE has determined that the BMK5 Project "may affect" an endangered species, including its habitat. The specific conditions of design and mitigation would be developed in a Biological Assessment for U.S. Fish and Wildlife Service Office of Endangered Species, pursuant to Section 7 of the Endangered Species Act. Formal consultation has not been initiated by the COE. A Section 404/10 permit from the Corps of Engineers and a permit from the U.S. Coast Guard for the retractable bridge are also required.

Mitigations in connection with installation and operation of the lock would take several forms, as listed in the DEIR/EIS under Mitigation B.7, page 5.46. Controls on construction can be identified in specifications and bid documents and become part of the construction contract. These would include, but not be limited to, limiting the construction zone to the minimum area necessary for access of equipment and clearly defining this zone with flags;

prohibiting construction workers from nonwork-related activities outside this zone; instructing the construction supervisor as to the sensitivity of the habitat (the efficacy of this measure is supported by experience); ceasing construction if monitoring reveals violation of restrictions; and permanently restricting access beyond (Creek-side of) the lock to boats only.

Additional mitigation would be required to off-set the loss and/or isolation of approximately one-half acre tidal marsh habitat for endangered species and for loss of salt marsh harvest mouse habitat within the site (approximately 32 acres). A location for this mitigation has not been selected, but, to avoid temporal loss of use of habitat, this should be initiated early in the first phase, in advance of the actual placement of the lock, which will occur after lagoon areas have been excavated.

Maintenance Dredging on Novato Creek. Maintenance dredging is discussed in detail in the DEIR/EIS in Section 5.E and under Comment E-3.

Boating Activity. It is the conclusion of the EIR/EIS that if mitigations are implemented, increased boating activity in Novato Creek, due to the addition of BMK5, in itself, will not have a significant adverse effect on the fishery resource or aquatic habitat of the Creek. Continued periodic dredging, permitted to maintain the channel for recreational boating from the existing BMK community, already periodically disturbs the substrate of the Creek. Boat use of the lock would indirectly contribute to build-up of sediment within the lagoon, increased need for flushing of the lagoon, and erosion of the shore adjacent to the lock. As discussed under Impact E.8, increased boat use would also contribute discharges of pollutants within the lagoon, with indirect effect on water quality and, indirectly, habitats of endangered species in salt marshes. Various specific mitigation measures proposed for a marina would also address this water quality impact under Mitigation E.8, DEIR/EIS page 5.167 and 168.

Public Access on Levees and Roads. Approximately three miles of levee border the eastern and northern site. This levee is not intended to be developed for public access, although no provisions have been proposed that would restrict pedestrians from using the levee trail. Because the tidal salt marsh is immediately adjacent to the levee, there is no room for a spatial buffer between the levee and the outboard intertidal habitat. The inboard side of the levee would border the shorebird/mudflat habitat proposed for the northeastern portions of the site, or alternatively, restored tidal habitat. Thus the levee would lie between two sensitive habitats. In the absence of strict "No Trespassing" onto the levee, it would undoubtedly continue to be used casually as are many levees around the Bay.

Various means are proposed under Mitigation B.7 to minimize intrusion into habitats such as these as well as to restrict access to adjacent sensitive lands. Access onto the adjacent State-owned lands near the southeastern corner of the site could be restricted by means of a fence bet een the golf course and seasonal marsh and the State land. Encroachment into habitats from the levee would require more subtle "people and dog control" by means listed in Mitigation B.3, DEIR/EIS page 5.44. The most restrictive means would be No Trespassing signs. Less restrictive, but at a minimum, vehicles should be restricted by a low, locked gate. Less restrictive for pedestrians, and still practicable, would be community education brochures, installation of interpretive signs, enforcement of leash law (difficult to enforce at such a distance without frequent patrolling), and installation on the inboard side

of a wide "moat" to discourage encroachment into the shorebird/mudflat area. (This area is designed to be unattractive to foot traffic, however.) These techniques have been variously tested along both developed and undeveloped shorelines. The inevitable trade-off is that any installations along the levee, coupled with community education, will tend to increase interest in and use of the levee, whereas a passive approach tends to limit both interest and use.

Novato Creek Flood Bypass. The Novato Creek flood control facility will not require excavation near existing Novato Creek levees and tidal marshes and, therefore, is not likely to have an adverse impact on endangered species. However, additional environmental review will be required if this flood control facility is considered for further study

Navigation Lock. The lock installation is considered a Class II impact because it would be located at a point on Novato Creek where the tidal marsh occurs primarily along the opposite shore and bank, so that it would disturb a minimum amount of marsh habitat. The primary impact would be during construction. The conditions of design would be worked out to meet the standards and requirements of both Department of Fish and Game (1601 Stream Alteration Agreement) and U.S. Fish and Wildlife Service Office of Endangered Species in conjunction with obtaining a Section 7 permit, a Section 404/10 permit from the Corps of Engineers, and a permit from the U.S. Coast Guard for the retractable bridge.

**Comment B-7: Other Special Status Species.** *Other special status species may receive indirect impacts from the Project. Commentors note the following:*

- *Green sturgeon, long-fin smelt, winter run chinook salmon, golden eagle, saltmarsh yellowthroat, and tricolored blackbird.*

- *Appropriately-timed surveys should be conducted by qualified biologists to determine whether the proposal would adversely affect these species. The results of surveys should be included in the final document.*

- *Results of surveys of sensitive plants should be included in the FEIR/EIS.*

**Response**

The DEIR/EIS contains a list of special status species that may receive indirect impacts in Table 5.B-4, and mentions other species of concern in other locations in Section 5.B, Impact B.8. Included are several of the species mentioned by commentors, as follows:

- Golden eagle: Golden eagle, a species of special concern, was observed on, or in the immediate vicinity of the site in 1981. It is likely that golden eagle was among the 12 raptor species sighted in the area in 1988. Golden eagle probably makes occasional use of the site for foraging; however, there are no appropriate nesting sites on the property.

- Tricolored blackbird: Tricolored blackbird is listed in Table 5.B-4 and was observed on-site in 1981 but not during surveys in 1988 and 1991. Appropriate habitat exists on the property for this bird, but its use has not been recently documented.

- Salt marsh yellowthroat: Seven pairs were reported one mile from the site on Novato Creek, as noted in Table 5.B-4. Potential habitat in the form of both drainage ditches with alkali bulrush and tidal salt marsh occurs on site. The tidal salt marsh habitat would not be altered by the project except in the immediate vicinity of the navigation lock.

  Long-fin smelt and green sturgeon have not been reported in Novato Creek or in the vicinity of the project area. Therefore, this EIR/EIS concludes that these species would not receive direct or indirect impacts from the project. Chinook salmon (*Onchorhynchus tshawytscha)* has been reported feeding in the shallows in Novato Creek during migration through this area, and occasionally smolts or adults may be drawn or attracted into the lagoon (DEIR/EIS, page 5.34). The project would not have a significant impact on this species, which is an incidental local visitor at most.

No further surveys are proposed for these species. Mitigations are discussed under Mitigation B.8 for these species. As discussed in the DEIR/EIS on pages 5.22 and 5.24 (Table 5.B-3), several plant species have been the object of surveys on three occasions. None of the species has been identified on the site. They are all associated with salt marsh habitat. The project does not propose direct impacts to this habitat except in the immediate vicinity of the navigation lock (See Comment 6, above).

**Comment B-8: Impacts To Trees On Property.** *The location of trees on the property should be mapped, their condition evaluated, and potential losses assessed.*

- *The County should hire an arborist to evaluate condition of trees (oaks) before removing any.*

- *The grove of eucalyptus trees on the Jack West property provides roosting for 30 great white herons, which are being monitored as an Audubon project. Will this grove be saved?*

**Response**

The DEIR/EIS, on page 5.15 (FEIR/EIS Figure 5.B-2a) shows that trees occur in five general locations on the property: Valley oak grow scattered on the north side of Bel Marin Keys Boulevard and on Headquarters Hill, and blue gum eucalyptus occur in three small groves near the corners of agricultural fields as well as on Headquarters Hill. According to the Project Sponsor, the oaks and several stands of eucalyptus would be retained. Therefore, Impact B.8 (DEIR/EIS page 5.40) and Mitigation B.8 (page 5.46) have been revised in the FEIR/EIS to reflect this. Mitigation measures under B.8 that address the protection of oak trees in and around construction sites are retained.

Although eucalyptus has no protected status, and in fact receives a mixed response on its habitat value from conservationists, the three eucalyptus groves on the site, along with several plantings of acacia, provide arboreal cover in an otherwise open environment, and nesting and resting substrate for several resident and migratory bird species. Two of these groves in the outer fields would likely be removed by the project and replaced by diverse native and naturalized trees as part of the landscape program. Impact B.6 is augmented to

reflect this, and Mitigation B.6 includes the stipulation that comparable trees be included in terrestrial "islands" within or adjacent to habitat restoration areas.

**Comment B-9: Temporal Impacts During Project Phasing.**

- *During the projected nine year construction period, will temporal losses of habitat occur prior to the time that mitigation programs are implemented? Does mitigation take these into account these temporal losses, and what means would be employed to minimize such losses?*

- *Mitigation areas should be created in advance of, or at least concurrently with, development construction activities, to maintain wildlife habitat values in the project area.*

**Response**

Phasing of construction is described in the revised Project Description, FEIR/EIS Volume One. In Phase 1, the shorebird/mudflat (or alternative tidal restoration) would be initiated in the northeastern corner of the site, currently used for disposal of dredge materials. All other areas designated for habitat development would remain under oat-hay cultivation much as they are used today. In addition, the peninsula areas designated for Neighborhoods 5, 6, 7, 10, and 11 would continue to be cultivated. The shorebird/mudflat would continue to be developed and possibly completed in Phase 2. Land designated for the seasonal marsh/farm habitat would continue under cultivation until Phase 3, at which time that habitat would be developed. Under the proposed phasing program, undeveloped areas would either remain under agricultural cultivation or be allowed to be fallow. In either case, they would provide interim habitat very similar to that which is present today.

**Comment B-10:** Mitigation Measure Contingency. *Implications of potential loss of funding by the Project Sponsor prior to implementation of mitigation programs.*

**Response**

See Comment and Response N-5 and MIT-1

**Comment B-11: Other Wetland Impacts**. *Absent other proposals, current Novato City law will grant jursdiction over the airfield portion of Hamilton Airfield to the USFWS...with the apparent intention to create twice-daily-flooded wetlands. Would this proposal impact the (BMK5) project, and would the project impact this proposal?*

**Response**

The impacts of the two project proposals on each other would be negligible for two reasons. First, they would be hydrologically discrete, designed as independent systems behind separating levee(s). Second, the proposed Hamilton Wetland would be adjacent, in part, to state-owned open space lands, and, in part, to lands on BMK5 proposed for some form of restoration. There would be no urban development at the BMK5 site directly adjoining the Hamilton wetlands.

**Comment B-12: Dredge Disposal Alternative.** *What alternative site or sites might be considered, or what management alternatives, to avoid using shorebird habitat for dredge material disposal.*

**Response**

See Comment and Response E-3

**Comment B-13: Novato Creek/San Pablo Bay Impacts.** *Potential effects on salt marsh habitat in Novato Creek from urban runoff into creek and wetlands should be more fully described. Cumulative impacts of the project on Novato Creek and San Pablo Bay water quality and biota, due to increased flushing and dredging, should be discussed. The DEIR/EIS is speculative in stating that there would be a significant decrease in biological resource values within the Creek as a result of the Project.*

**Response**

See Comment B-5 and 6; E-1 and 4

**Comment B-14: Mitigation Monitoring and Reporting.** *The Mitigation Monitoring and Reporting Program should provide more explicit assurrances that mitigations will be implemented and how they will be implemented. Specific success criteria for hydrology, vegetation, invertebrate community development, wildlife use, etc., should be clearly defined and a contingency plan developed that discusses possible remedial measures to be undertaken during monitoring period to ensure achievement of criteria.*

**Response**

See Comment and Response MIT-1

## C. TRANSPORTATION COMMENTS

**Comment C-1: Ferry.** *The description, feasibility and impacts of the proposed ferry service should be discussed in greater detail.*

- *Would the service be feasible with only one trip per day in each direction?*
- *Where and when would the ferry terminal be constructed, how long would construction take, and when would its operation begin?*
- *What would be the route of the ferry and the geographic area it would serve?*
- *How many prospective ferry users would come from the current pool of single-occupancy motorists and how many would already be transit users?*
- *What traffic impacts on Highway 37 at the ferry terminal entrance would occur?*
- *Would a stoplight be required at that entrance?*
- *What would be the number, size, and speed of the proposed ferry boats?*
- *Would there be any dredging requirements for the ferry?*
- *What would be the impacts of ferry operation on adjacent wetlands and migratory waterfowl?*
- *What land use planning and policy conformance issues are raised by the proposed ferry and would it be growth-inducing?*
- *What permits would be required?*

**Response**

Further assessment of the Project sponsor-proposed ferry service between the Port Sonoma Marina and the ferry terminal in San Francisco was undertaken, based in large part on the Metropolitan Transportation Commission (MTC) report *Regional Ferry Plan - San Francisco Bay Area*, September, 1992. See a revised (summarized) discussion of the proposed ferry service in Volume One of the Final EIR/EIS; a full and detailed discussion of the proposed ferry service is provided in Chapter 1, "Port Sonoma Ferry Feasibility Study", of the *Bel Marin Keys Unit 5 - Transportation Addendum*, prepared by the EIR/EIS consultant team (Appendix L, Volume Four of the Final EIR/EIS).

The target market for the proposed ferry service are the residents of Novato, Petaluma, Santa Rosa and Bel Marin Keys who work in downtown San Francisco. The numbers of residents from these areas who work in the San Francisco Central Business District (CBD), based on 1980 journey-to-work data and extrapolated on the basis of partial 1990 census available data, are as follows: six percent (or about 3,100) of Novato area residents; two percent (or about 2,900) of Petaluma area residents; and 0.5 percent (or about 1,000) of Santa Rosa area

residents. The primary existing commute modes for residents of southern Sonoma and Northern Marin County to downtown San Francisco are (1) Drive Alone; (2) Carpool; (3) Golden Gate Transit Bus; and (4) Larkspur Ferry. Based on relative travel time and out-of-pocket costs, it appears that the Port Sonoma ferry would be an attractive alternative to a drive-alone commuter. For bus commuters, the travel time would be the same or up to 25 minutes faster, but the out-of-pocket cost is 80 percent higher. Still, it is likely that the Port Sonoma ferry would attract some commuters who would otherwise take the bus.

The proposed terminal for the Port Sonoma Ferry service would be located at the Port Sonoma Marina (purchased by the Venture Corporation in 1990, and therefore available for ferry service) on the Marin - Sonoma County line. Access to the terminal would be via Highway 37, just east of the Petaluma River bridge. Ferry operation could begin after the purchase of the vessel(s) and after site improvements are made. Construction of on-site physical improvements would cost approximately $1.5 million and would take three months, according to the Venture Corporation. Based on purchasing schedules for other ferry operators, revenue service could be initiated 16 months after developing the specifications for the vessels and 12 months after awarding a contract for the construction and purchase of a vessel. The Unit 5 project proponents propose to initiate ferry service at the completion of Phase I, i.e., after about 366 units are constructed. They expect to begin with one vessel and have one peak-hour run in the AM peak and one peak-hour run in the PM peak. The service would expand to two vessels and three runs per peak period later in the development stage depending on demand.

The ferry would exit the terminal and pass through a swing railroad bridge into the channel. (The bridge remains open to boat traffic virtually 24 hours a day.) At this point, the ferry could reach and maintain full speed for the full length of the five-mile-long channel. Once in San Pablo Bay, the ferry would join the Vallejo-San Francisco route through San Pablo Strait and under the Richmond-San Rafael Bridge into San Francisco Bay. The entire route is 22 nautical miles long.

The MTC report evaluated numerous vessels that operate at a variety of speeds. It concluded that a route of 22 nautical miles would best be served by a vessel that could travel at 35 or 40 knots. This would make the travel time 45 or 39 minutes, respectively, and would put the ferry service on a competitive basis with Golden Gate Express buses. The project proponents have indicated that the primary choice of vessel is a catamaran which has a passenger capacity of 250 persons, a travel speed of 35-40 knots, and a cost of $4.0 million.

The MTC report presented an analysis of the Port Sonoma ferry service assuming one vessel and two vessels. With one vessel, even with two scheduled departures, only one trip per direction could be expected to capture the height of the peak demand. Given a 45-minute travel time, one vessel would be able to achieve two AM departures, but they would be at least 1 hour and 40 minutes apart. While the earlier departure would get workers to their jobs by about 8:00 AM, the later departures would result in an arrival time after 9:15 AM, which would not be acceptable to the majority of financial district workers. Thus, as discussed below, two departures would not double the projected patronage. With two vessels, two departures could be made within the peak hour and a third could be made slightly off-peak.

Ridership estimates with variable fare assumptions were developed for the MTC report, using the MTC travel forecasting model, which also included other existing forms of transit. (These estimates are based on existing conditions and do not include the proposed Bel Marin Keys development, land use changes to the Hamilton field site, or any other future housing.) A single-vessel - one-trip service is estimated to attract 282 - 232 AM passengers based on round trip pass fares of $5.00 to $8.00. A single-vessel - two-trip service would attract 385 - 316 AM passengers, and two-vessel - three-trip service would attract 440 - 361 AM passengers, with the above fare range. In sum, according to the MTC Report, the second trip increases patronage by 36% over that of one trip, while three trips increases patronage 56% over that of one trip. These estimates were based on a dock-to-dock travel time of 45 minutes. Reducing travel time to about 40 minutes would increase these projections by 11 to 12 percent.

As discussed above, about six percent of Novato area residents commute to the San Francisco CBD. The projected population of Bel Marin Keys Unit 5 is 3,300 residents. Therefore, approximately 190 project residents would be expected to commute to downtown San Francisco. Based on a survey of existing residents of Bel Marin Keys and Bahia, and ridership assumptions made for the Bel Marin Keys Unit 5 development in the MTC report, it is estimated that 36 to 56 ferry commuters would be generated from Bel Marin Keys Unit 5.

An estimate was made of the existing modes of potential ferry riders, and the resulting impact that the Port Sonoma ferry service would have on Highway 101 traffic volumes. It is estimated that five percent (or 156) of the commuters from the Novato superdistrict would take the Port Sonoma ferry. Since Novato residents have the largest number of existing options, only one-third (or 52) were assumed to be diverted from single-occupant vehicles; a good portion were assumed to be diverted from the Larkspur ferry, and the rest would divert from Golden Gate Transit. For Petaluma residents, seven percent (or about 200 commuters) are estimated to take the Port Sonoma ferry. The ferry would save travel time and cost for a single-occupant driver, but only travel time for a bus patron. To be conservative, it is estimated that fifty percent (or about 100) would divert from drive alone and fifty percent would divert from the bus. The same assumptions were used for Santa Rosa residents as for Petaluma residents, except that an additional two percent (or nine percent of the San Francisco CBD commuters) were assumed to take the ferry because of the increased travel time savings compared to driving alone. This would result in 90 ferry commuters (or 45 single-occupant vehicles) diverting to the ferry. Thus, about 200 vehicles during the AM peak hour would divert from drive alone on Highway 101, if a ferry service were provided from Port Sonoma to the San Francisco Ferry Building.

The AM peak-period ferry-generated traffic would not be expected to have an adverse effect on State Route 37 (SR 37) traffic flow. The majority of ferry-bound traffic in the morning would travel eastbound from Highway 101, which is counter to the peak westbound commute flow direction on SR 37. In addition, ferry-bound traffic headed east would access the Port Sonoma facility by turning right from SR 37.

Vehicles departing the ferry facility bound for Highway 101 in the afternoon commute period would be expected to adversely affect operations on SR 37. The majority of exiting vehicles would be turning left onto SR 37 toward Highway 101. These vehicles would be in conflict with the peak eastbound through traffic flow. SR 37 is a four-lane highway (two

lanes in each direction), in the vicinity of Port Sonoma, with a posted speed limit of 55 miles per hour. The key operational concerns would involve safety requirements and vehicle delay rather than capacity constraints. Traffic departing from the ferry facility would require sufficient gaps in the through traffic streams to allow for crossing the eastbound lanes, turning left into gaps in the westbound stream, and accelerating to match the speed of the westbound traffic flow. Gaps in traffic flows are often created by traffic signals, but there are no signals on SR 37 between Highway 101 and Port Sonoma. The absence of consistent gaps in SR 37 peak-hour traffic streams would increase delays for ferry-departing vehicles.

It is possible that a traffic signal would be warranted at the Port Sonoma Marina / SR 37 intersection under "worst-case" conditions (two vessels -- three trips) based on Traffic Signal Warrants in the Caltrans *Traffic Manual*, and on consideration of other data and analysis beyond the scope of this study. Recommendations other than signalization that could improve operations at this intersection would include installation of intersection warning signs, a reduced speed zone on SR 37 in the Port Sonoma area, and addition of an acceleration lane on SR 37 for left-turning vehicles from Port Sonoma.

No additional dredging would be required for the ferry, since the ferry would use the same channel that is currently used for the rest of Port Sonoma Marin. It is possible that a currently unused area would be dredged for overnight storage. That dredging would be minor relative to the permitted annual maintenance dredging for Port Sonoma Marin, which amounts to about 50,000 cubic yards.

The impacts of ferry operation on wetlands and waterfowl are discussed in the responses to comments on Biological Resources in this document.

The Sonoma County Planning Department has submitted a letter of comment on the Draft EIR/EIS addressing growth-inducement and land use planning and policy concerns (see Letter LA-1). The senior planner submitting the letter indicates that the proposed ferry is not consistent with the Sonoma County General Plan and would likely be growth-inducing. This position has been reinforced in a subsequent discussion with the Sonoma County Planning Director.

In addition to approval by Sonoma County, the ferry would likely require permits and approvals from a number of other regulatory agencies including, but not limited to, the Corps of Engineers, Bay Conservation and Development Commission, and Regional Water Quality Board.

**Comment C-2: Second Access Roadways.** *The description, feasibility, and impacts of the proposed second access roadways should be discussed in greater detail.*

- *How does the proposed McInnis Parkway relate to the proposed Hamilton Connector and the proposed Hamilton Drive extension?*

- *How do these roads relate to the EIR/EIS process, since they are proposed as mitigation measures, and how do they relate to the Caltrans/City of Novato PSR?*

- *Verify the feasibility of connecting the proposed Hamilton Drive extension to the Highway 101/State Route 37 interchange. Both second access roadways (i.e. one to Hamilton Field, one to State Route 37) should be in place prior to Phase 1 development of Unit 5. The discussion of second access roadways and the need for them should be given more visibility in the Transportation Section of the EIR/EIS. What is the institutional and financial feasibility of building either second access roadway?*

- *When would an assessment district be formed and who would be expected to participate in it?*

- *What width and carrying capacity of roadway is envisioned?*

- *Would any fill be required to construct either road?*

- *What would be the impacts on Pacheco Pond, Novato Creek, and other wetland areas?*

- *What would be the impact on commuter traffic flows and at the new intersections to be created by either the McInnis Parkway or Hamilton Drive extension?*

**Response**

See Chapter 2, "Eastside Arterial Analysis", of the *Bel Marin Keys Unit 5 - Transportation Addendum*, prepared by the EIR/EIS consultant team, (Appendix L, Volume Four of the Final EIR/EIS) for a clarification of, and more detailed analysis of, proposed eastside arterial alternatives. This analysis examines three alternative proposals (i.e.,(1) Hamilton Drive Extension to Hanna Ranch Road, with a second access between the project site and the Hamilton Field area; (2) Novato Intra-City Connection between the Hamilton Field and Bel Marin Keys areas and a tie into the South Novato Boulevard interchange; and (3) Novato / San Rafael Inter-City Connection: McInnis Parkway from Civic Center Drive (in San Rafael) to South Novato Boulevard) and the existing street network, in terms of local impacts; discussion of how local cumulative mitigation with the alternatives would differ from cumulative mitigation without each alternative; and a discussion of the extent to which each alternative would benefit Highway 101 traffic flows.

The results of the expanded analysis of the proposed eastside arterial alternatives have been summarized in the EIR/EIS, revising the description of the Project Sponsor's Proposed Street Network on pages 5.69 to 5.72 of the Draft EIR/EIS.

Local Implications - The Hamilton Drive Extension and Inter-City Connection alternatives would provide the greatest relief to projected Ignacio Boulevard traffic. Cumulative plus project improvements to the Ignacio Boulevard interchange could be accommodated within the existing overpass width with either of these alternatives. With the Existing Street Network or Intra-City Connection alternatives, improvements to the Ignacio Boulevard Interchange would necessitate widening the overpass.

The Intra-City and Inter-City Connections provide the greatest relief to Nave Drive traffic. The cumulative plus project mitigation on Nave Drive would be reduced to local intersection improvements with either of these alternatives instead of the major widening which would be necessary with the Existing Street Network and Hamilton Drive Extension alternatives.

Regional Implications - Table 2-6 of the *Transportation Addendum* is inserted on the following page to help provide a simple comparison of regional benefits. A clear case can be made for the Novato/San Rafael Inter-City Connection alternative from the standpoint of benefits afforded to Highway 101 under year 2010 with project conditions. It would afford the greatest benefit to the largest area. The Novato Intra-City Connection would rank second in terms of Highway 101 benefits, providing its greatest relief in the critical segment between South Novato Boulevard and Ignacio Boulevard. The Hamilton Drive Extension would also provide benefit to Highway 101, but the extent of that benefit would be smaller than for any other alternative except the Existing Street Network alternative.

Overall Assessment - From solely a transportation perspective, the Novato/San Rafael Inter-City Connection would appear to be the best of the eastside arterial alternatives, but it would also carry the highest price tag and would be the most controversial. It is difficult to rank the Hamilton Drive Extension and Intra-City Connection alternatives because the Hamilton Drive Extension alternative provides the greater relief to the Ignacio Boulevard Interchange, but the Intra-City Connection provides greater relief to Nave Drive and Highway 101. From a cost and feasibility perspective, the Hamilton Drive Extension alternative would be better than the Novato/San Rafael Inter-City or Novato Intra-City Connections.

The Existing Street Network would rank last from a transportation perspective because it would result in the most significant local and regional impacts. From a cost and feasibility perspective, however, this alternative could be better than all of the others since it does not include construction of any new roads. It should be noted that although new no roads would be constructed as part of this alternative, it would be necessary to widen the Ignacio Boulevard Overpass which would carry a very high price tag.

An assessment district or other similar funding mechanism would need to be in place prior to the construction of the second access roadways (Hamilton Drive Extension, Intra-City Connector). Typically, when an assessment district is formed a zone of benefit is established. The zone of benefit would include lands in the vicinity of the proposed project which could reasonably be expected to significantly benefit from the improvement. The participants in forming such a district is unclear, but could include the County, City of Novato, and Caltrans. For additional information on the likely dimensions of the roadways, please refer to Section 2.A, Project Description, of the Final EIR/EIS.

Some limited wetland fill would be required to build either second access road. However, neither road would involve crossing Pacheco Pond or Novato Creek. Further discussion of wetland and other related biological issues is provided in the responses to comments for Biological Resources in this document.

**Comment C-3: Light Rail Station.** *There should be further description, discussion, and evaluation of the proposed light rail station.*

- *Where would a light rail station be located?*
- *Who would build and operate the station?*

Table 2-6
Estimated Vehicle Trips Removed From Highway 101 by Each Alternative Roadway Scenario
Bel Marin Keys Unit 5 – Transportation Addendum

| | Cumulative Conditions with Project Existing Street Metwork | | Cumulative Conditions with Project Hamilton Drive Extension | | Cumulative Conditions with Project Intra-City Connection | | Cumulative Conditions with Project Inter-City Connection | |
|---|---|---|---|---|---|---|---|---|
| | AM Peak Hour | PM Peak Hour | AM Peak Hour | PM Peak Hour | AM Peak Hour | PM Peak Hour | AM Peak Hour | PM Peak Hour |
| Freeway Segment | Southbound | Northbound | Southbound | Northbound | Southbound | Northbound | Southbound | Northbound |
| Rowland Boulevard to South Novato Boulevard | 0 | 0 | 0 | 0 | 100 | 165 | 190 | 255 |
| South Novato Boulevard to Ignacio Boulevard | 0 | 0 | 295 | 345 | 725 | 930 | 1,445 | 1,035 |
| Ignacio Boulevard to Alameda del Prado | 0 | 0 | 320 | 420 | 370 | 475 | 1,430 | 960 |
| Alameda del Prado to Marinwood | 0 | 0 | 0 | 0 | 0 | 0 | 1,210 | 1,215 |
| Marinwood to Lucas Valley/Smith Ranch Road /1/ | 0 | 0 | 0 | 0 | 0 | 0 | 1,000 | 1,000 |
| Lucas Valley/Smith Ranch Road to Freitas Parkway /1/ | 0 | 0 | 0 | 0 | 0 | 0 | 1,000 | 1,000 |

NOTES:
/1/ Vehicle estimates at these locations are not based on analysis performed, but on judgement.

SOURCE: Wilbur Smith Associates, March 30, 1993.

- *What would the station look like and how would it function in relation to surrounding land use and station access modes?*

- *What geographic area would the station serve?*

*The project should be evaluated as if the light rail station were not going to be built.*

**Response**

Acquisition of land for the future construction of a light rail station is proposed in the Unit 5 Master Plan application. The intent of this proposal by the Project Sponsor is to make a contribution toward future development of a transit system within the Northwestern Pacific Railroad (NWPRR) right-of-way. The Bel Marin Keys Development Associates do not anticipate being directly involved in the planning, engineering, site acquisition, or construction of the site.

See Chapter 3, "Light Rail Station", of the *Bel Marin Keys Unit 5 - Transportation Addendum*, prepared by the EIR/EIS consultant team, for a discussion of the history of proposed transit uses in the NWPRR right-of-way, and recent developments in this regard. The *Transportation Addendum* discussion includes a general description of station location, design and function.

The project analyses in the EIR/EIS was conducted without consideration of a light rail station. As stated above, the intent of the proposal by the Project Sponsor (to acquire land for the construction of a light rail station) is to make a contribution toward future development of a transit system within the NWPRR right-of-way. The station was not considered feasible as a mitigation measure in the EIR/EIS because of the absence of any currently active prospect for transit in the NWPRR corridor; there was no consideration of project trip reduction assuming implementation of a light rail station.

The description of the Project Sponsor's proposal regarding a light rail station in the Draft EIR/EIS has been revised.

**Comment C-4: Shuttle Bus.** *There should be further description, discussion, and evaluation of the proposed shuttle service.*

- *How many shuttle buses would be provided?*

- *What would be the characteristics, capacity of each bus?*

- *What route would the shuttle buses follow?*

- *Would the shuttle serve the proposed ferry?*

- *What curbside facilities would be provided and where would the buses be stored when not in use?*

- *Who would fund, operate and maintain the shuttle buses?*

- *When would the shuttle bus operation begin?*
- *What is the likelihood that BMK residents will use the shuttle?*
- *What is the BMK CSD's position on operating the shuttle?*

**Response**

See Chapter 4, "Shuttle Bus Service", of the *Bel Marin Keys Unit 5 - Transportation Addendum*, prepared by the EIR/EIS consultant team, (Appendix L, Volume Four, of the Final EIR/EIS) for a detailed discussion of the Project Sponsor's proposed project traffic mitigation to provide on-site shuttle bus service. The shuttle service would connect project residents to existing Golden Gate Transit bus locations and to a Port Sonoma / Marin - San Francisco ferry service proposed as another project traffic mitigation by the Project Sponsor (see Chapter 1, "Port Sonoma Ferry Feasibility Study", of the *Transportation Addendum*).

The results of the detailed assessment of the proposed shuttle bus service have been incorporated into the EIR/EIS, replacing text on page 5.131 of the Draft EIR/EIS.

**Comment C-5: Traffic Analysis Methodology.** *The traffic analysis in the EIR/EIS does not use the best and latest methodology (Transportation Research Board Special Report 209-1985) in analyzing the capacity of signalized intersections. In addition, the trip generation and distribution methodology used in the EIR/EIS needs to be explained and justified.*

- *For example, why is senior housing assigned the same generation factor as multi-family residential?*
- *How was internal traffic (including the golf course), the ferry, the light rail station and the proposed shuttle accounted for in the traffic impact analysis?*
- *Traffic generation estimates for the Unit 5 project may have been overstated. What occupancy level occurred in the Bel Marin Keys industrial park at the time traffic counts were taken?*
- *The EIR/EIS traffic analysis does not evaluate the volume/capacity or level of service on area roadways and intersections under the ultimate condition with any mitigations in place.*

**Response**

The EIR/EIS analysis of traffic conditions at signalized intersections used the intersection analysis computer program (CAPPY) developed by Wilbur Smith Associates (preparers of the Transportation and Circulation section). This program combines the Transportation Research Board's (TRB) *Circular 212* and *Highway Capacity Manual* (TRB Special Report 209) methodologies. The results yield an overall intersection volume-to-capacity (V/C) ratio, using the intersection's sum of critical volumes, which determines the intersection level of service. See Chapter 5 "Traffic Analysis Methodology", of the

*Bel Marin Keys Unit 5 - Transportation Addendum*, prepared by the EIR/EIS consultant team, (Appendix L, Volume Four, of the Final EIR/EIS) for a description of this analysis methodology.

Given the nature of the analysis (i.e., forecasts of development potential and roadway network scenarios), it was judged that using a planning applications analysis methodology was appropriate for this EIR/EIS. The *Highway Capacity Manual* Planning Applications methodology does not yield intersection levels of service (it only defines intersection operations as "below", "at," or "above" capacity), so the *Circular 212* approach to level-of-service characterization, related to V/C ratios, was chosen.

Trip generation rates developed for the Bel Marin Keys Unit 5 land uses, with the exception of the supermarket/drug store land use, were based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 5th Edition*, January 1991.

The trip generation rates developed for the "senior housing" land use category were formulated on the basis of available ITE data, and judgments as to the likely characteristics of senior housing trip generation at Bel Marin Keys. The ITE-surveyed sites include on-site special services such as medical and dining facilities; the Bel Marin Keys project does not propose special services for senior citizens. It was assumed that most senior home residents would be attracted to the golf and boating opportunities the development would offer, and as such would tend to be active on a daily basis. In order to capture the anticipated trip generation characteristics of the senior housing land use within the project, the daily trip rate associated with multi-family residential use was used. The multi-family daily trip rate (5.9 trips per unit) is mid-range between the high single-family use and the low senior categories mentioned above. The majority of senior housing residents would likely be retired, thus making fewer trips during peak commute periods. The developed senior peak-hour trip rate accounts for the lack of peak-period activity by using the peak-hour rates associated with a "retirement" community land use category. These peak-hour trip rates are the highest of the three elderly housing categories published. A comparison of the expected a.m. peak-hour trip generation for 110 senior-housing units is 19 trips versus 48 trips for 110 multi-family units.

The trip generation rates used for the proposed supermarket/drugstore land use were based on trip generation research developed by Caltrans for the San Diego Association of Governments, published in *San Diego Traffic Generators*, January 1990. This work offered a trip generation rate specifically for a supermarket/drugstore land use combination.

Internal traffic (including the golf course) was accounted for in the distribution phase of the impact analysis for all project and alternatives scenarios. Project-generated residential traffic was reduced by 14 percent and commercial-generated traffic (including golf course traffic) by 75 percent to account for estimated internal trips associated with these types of uses.

The Port Sonoma ferry service and the on-site shuttle service were not considered in the project impact analysis. The ferry and shuttle service are proposed mitigations by the Project Sponsor which would be expected to reduce the traffic trips, if in place. The

possible effects of these services are considered in Chapter 9 ("Mitigation Measures") of the *Bel Marin Keys Unit 5 - Transportation Addendum.*

The Ultimate Street System was not analyzed with the estimated trip reduction associated with the Project Sponsor's proposed mitigation measures for the following reasons. The EIR/EIS impact analysis indicates that the study intersections would operate at an acceptable LOS D or better under cumulative plus project conditions with the Ultimate Street System in place, with the exception of the Alameda Del Prado / Highway 101 southbound ramps. The project's contribution to cumulative traffic at the intersection of Alameda Del Prado / Highway 101 southbound ramps would be minor. The majority of the mitigated trips would be southbound in the morning and would use the McInnis Parkway arterial in lieu of a shuttle bus and ferry service. The mitigated trips therefore would have no effect on the study intersections on the Ultimate Street System.

Text in the Draft EIR/EIS regarding intersection analysis methodology (page 5.56), and project trip generation (pages 5.83 to 5.86) has been revised.

Occupancy levels at the BMK Industrial Park have remained fairly steady at about 75% over the past three years, according to a local realtor. Consequently, traffic counts taken in fall of 1990 and spring of 1991 would not have been significantly distorted by unusual economic circumstances.

**Comment C-6: Highway 101 Mainline.** *Impacts and mitigation for project effects on mainline Highway 101 traffic require further discussion and clarification. The cumulative impacts of increased traffic on mainline Highway 101 traffic must be considered significant. Providing improvements (e.g. additional ramp lanes, signalization) to the Highway 101 interchanges in the project area does not mitigate mainline traffic impacts.*

- *What specific Highway 101 interchange and mainline traffic mitigation measures are proposed by the Project Sponsor and by the EIR/EIS consultant?*

**Response**

See Chapter 6, "Regional Impacts and Mitigation", of the *Bel Marin Keys Unit 5 - Transportation Addendum*, prepared by the EIR/EIS consultant team, (Appendix L, Volume Four, of the Final EIR/EIS) for a detailed discussion of project and cumulative impacts on mainline Highway 101 in the project area. Using the Countywide Traffic Model for Marin County in conjunction with the Highway 101 / State Route 37 Project Study Report, drivers on most segments of Highway 101 will experience extremely long delays by the year 2010 if no improvements are constructed, and based on the amount that demand would exceed capacity during the peak hours, delays would be expected to persist throughout the day.

The project would contribute to Highway 101's poor operating conditions, but would have its most significant impacts on Highway 101 segments south of the project site. The project's contribution would be expected to be about 10 to 15 percent on the Highway 101 segments immediately south of the project site. The Highway 101 segments north of the project, and especially the segment in which Highway 101 narrows from three to two lanes in each direction (at the Marin/Sonoma County line) are the most critical freeway segments

in the area. In these segments, the project's impact would be relatively small (about one percent), but this additional traffic would be added to volumes already exceeding highway capacity.

Planned and potential improvements to the Highway 101 corridor, with their current status, are described in the *Addendum*. If these improvements were implemented, Highway 101 operations would be improved to LOS E or better in all segments. Because many of the improvements to Highway 101, and the eastside arterial and transitway are not funded, however, it would be speculative to identify these as mitigation. Therefore, the impacts to Highway 101 can only be described as unmitigatable.

Congestion Management Programs (CMP) are designed to address existing and future transportation problems in urban areas of the State of California. A number of facilities in the area of the project are CMP Designated Facilities, including Highway 101, State Route 37 (between Highway 101 and the Sonoma County Line), Bel Marin Keys Boulevard (between Highway 101 to Hamilton Drive), and South Novato Boulevard (between Highway 101 and Diablo Avenue).

The overall goal of the CMP is to maintain level of service standards on the Designated Roadway System. One of the adopted strategies to achieve this goal is to reduce peak-hour usage of single-occupant vehicles. The Transportation System/Demand Management measures proposed in the Marin County CMP fall into four broad categories: (1) Physical or Operational Improvements; (2) Transit Improvements; (3) Traffic Mitigation Measures (reducing the amount of traffic generated by a development or planning area); and (4) Land Use Planning and Regulation.

A Capital Improvement Program for the Designated Roadway System is also part of the CMP. With the exception of Highway 101, the mitigation measures identified in the EIR/EIS would provide levels of service complying with the CMP standards. Under cumulative conditions without the project, operations on Highway 101 would be below the CMP standards. The addition of project trips to Highway 101 would result in being further outside CMP standards. The County of Marin could be found to be in non-conformance with CMP requirements by the Congestion Management Agency (CMA) if the deteriorated operations on Highway 101 are not acknowledged and steps taken to improve those conditions. Such a finding could result in the State Controller withholding subventions from the additional gas tax made available from Proposition 111.

To avoid this penalty, the County of Marin, in cooperation with the City of Novato, will need to prepare a Deficiency Plan for Highway 101, which the CMA would need to approve. The Deficiency Plan must show intent to improve operations by the means of TDM/TSM measures and capital improvements. A source of funding for capital improvements must also be provided.

The County will need to show intent to make capital improvements to Highway 101. Improvements would include the provision of HOV lanes from State Route 37 to the Sonoma County line, provision of a transitway on the NWPRR, and construction of an eastside arterial. Although getting approval of some of these projects may also be a large hurdle, the most difficult hurdle in satisfying the requirements of a Deficiency Plan would be the identification of a funding source.

One possible source of revenues being explored is the institution of a Countywide Impact Fee. This is a fee which would be extracted from developers and would be used for the improvement of regional transportation facilities. This type of fee is usually tied to the size of a proposed development or the number of trips, either daily or during peak hours, expected to be generated by such development. Based on the progress now being made toward the implementation of a Countywide Impact Fee, it is likely that such a fee will be in place prior to any final approvals of the Bel Marin Keys Unit 5 project. If this were the case, the Project Sponsor would be required to contribute fees toward the construction of regional improvements. No estimation of the fee to be contributed can be made at this time. It should be noted that a Deficiency Plan will have to be prepared with or without the construction of the Bel Marin Keys Unit 5 development.

**Comment C-7: Highway 101 Interchanges.** *The potential impacts to Highway 101 interchanges south of the Alameda del Prado Interchange of constructing the McInnis Parkway need to be assessed.*

**Response**

See Chapter 7, "Highway 101 Interchanges with an Eastside Arterial", of the *Bel Marin Keys Unit 5 - Transportation Addendum*, prepared by the EIR/EIS consultant team, (Appendix L, Volume Four, of the Final EIR/EIS) for a detailed discussion of the impacts of an eastside arterial on Highway 101 interchanges south of the project area. An eastside arterial would be expected to divert a number of short-distance trips (e.g., between the County Civic Center in San Rafael to State Route 37) currently made on Highway 101. Such a road also could attract some drivers who would exit Highway 101 at either end of the arterial, and then get back onto the freeway at the opposite end, potentially affecting ramp operations at the interchanges at either end of the arterial. The southernmost interchanges, Manuel T. Freitas Parkway and North San Pedro Road, could experience some additional traffic, but this likely would be offset by reductions in interchange traffic related to short-distance trips diverted off Highway 101.

The results of the detailed assessment of traffic operations at Highway 101 interchanges south of the project area have been incorporated into the EIR/EIS. (FEIR/EIS, Volume One).

**Comment C-8: Cumulative Impacts.** *The cumulative traffic analysis requires further discussion and clarification, particularly when considering the ultimate street system.*

- *Does the fact that the list of planned but unapproved projects cited in the EIR/EIS is over a year old affect the conclusions of the cumulative analysis?*
- *Why does the level of service at the Ignacio Boulevard/Highway 101 southbound ramps deteriorate when considering the ultimate street system under cumulative conditions?*

**Response**

See Chapter 2 ("Eastside Arterial Alternatives"), Chapter 6 ("Regional Impacts and Mitigation"), Chapter 7 ("Highway 101 Interchanges with an Eastside Arterial"), and

Chapter 9 ("Mitigation Measures"), of the *Bel Marin Keys Unit 5 - Transportation Addendum* (Appendix L, Volume Four, of the Final EIR/EIS) for discussions and clarification of cumulative impacts.

The list of planned and unapproved projects used in the EIR/EIS was developed from the most current and detailed information available at the time of the analysis. The list of projects was taken from the August 1991 inventory of proposed development in Marin County. The list of projects was reviewed and approved by the County. Although the list has undoubtedly changed over the past year-and-a-half, the magnitude of change is not sufficient to alter the report findings.

The level of service at the Ignacio Boulevard/Highway 101 southbound ramps with the ultimate street system under cumulative conditions deteriorates only slightly compared with existing conditions. In other words, the ultimate street system assumed in the EIR/EIS will be able to accommodate cumulative development as it is envisioned at this time without significant deterioration from existing conditions. Any further traffic generation would result in a reduced level of service and/or the need to provide other transit options.

**Comment C-9: Mitigation Measures.** *Mitigation measures for project traffic impacts as opposed to mitigations for cumulative project impacts need to be more clearly distinguished in the EIR/EIS. Measures aimed at reducing peak period vehicle trips should be quantitatively analyzed. In addition, the financial responsibility for all mitigation measures needs to be clearly defined. In particular, costs for and funding of the "ultimate street system" needs to be quantified and the proportional share of the Project Sponsor determined.*

- *What measures would ensure that the needed improvements are built if projects proposed by others are not constructed?*
- *What would be the growth-inducing effects of constructing these improvements?*

**Response**

See Chapter 9, "Mitigation Measures", of the *Bel Marin Keys Unit 5 - Transportation Addendum*, prepared by the EIR/EIS consultant team, (Appendix L, Volume Four, of the Final EIR/EIS) for a detailed discussion of: the project's contribution to the need for intersection mitigation under cumulative conditions; the Project Sponsor's responsibility in paying for cumulative mitigation measures; the growth-inducing impacts of constructing cumulative mitigation measures; and the effects of the Project Sponsor's proposed mitigation measures (i.e., on-site shuttle bus service and Port Sonoma ferry service) at study area intersections.

The results of the further assessment of mitigation measures have been incorporated into the Project Mitigation Measures subsection in the EIR/EIS, starting on page 5.122 of the Draft EIR/EIS.

**Comment C-10: Local Intersections.** *The increased traffic levels that would occur near the entrance of the existing BMK development should be analyzed as part of the local intersection discussion.*

- *What is the capacity of Bel Marin Keys Boulevard and how would Unit 5 development under the various alternative scenarios considered impact this capacity?*
- *Study the traffic on Bel Marin Keys Boulevard from Digital Drive to the Unit 5 entrance.*
- *Exactly where will the Perimeter Road intersect with Bel Marin Keys Boulevard?*

**Response**

See Chapter 10, "Bel Marin Keys Boulevard", of the *Bel Marin Keys Unit 5 - Transportation Addendum*, prepared by the EIR/EIS consultant team, (Appendix L, Volume Four, of the Final EIR/EIS) for a description of the capacity and traffic conditions (current and future) of Bel Marin Keys Boulevard, from Frosty Lane eastward to the entrance of the existing Bel Marin Keys community. The analysis of this segment of Bel Marin Keys Boulevard considers worst-case conditions and considers traffic generated from the existing community as well as from the Project under buildout conditions. The conclusion is that while the roadway segment has sufficient carrying capacity for Unit 5 generated traffic during the morning and evening peak hour, level of service would degrade two full levels from LOS B to LOS D. The increase in traffic on this segment would result in increased vehicle delay and reduced travel speeds. Because all proposed Project Alternatives would generate less traffic than the Project, the existing Bel Marin Keys Boulevard would provide sufficient carrying capacity under Project Alternatives as well. The Draft EIR/EIS analyzed the signalized intersections on Bel Marin Keys Boulevard at Commercial Boulevard and Digital Drive, west of Frosty Lane; traffic operating conditions at signalized intersections generally control operating conditions on the roadway segments adjacent to these intersections.

The Community Collector Road ("Perimeter Road") would intersect Bel Marin Keys Boulevard at the existing community entry. The community entry is located approximately 1,800 feet west of the Montego Key / Bel Marin Keys Boulevard intersection.

Text in the EIR/EIS regarding traffic conditions on Bel Marin Keys Boulevard and the Perimeter Road has been revised. (See Volume One of the FEIR/EIS).

**Comment C-11: Bike Path System.** *More detail on the proposed bike path system within the Unit 5 area is necessary.*

- *What vehicle trip reduction would be expected due to the presence of the bike system?*
- *How will pedestrian traffic be encouraged and provided for within the Unit 5 site?*
- *What is meant by the statement on page 5.67, "A Class II Bikeway provides a striped lane for one-way bike travel on a street or Highway 101".*

**Response**

A four-foot wide bicycle lane is proposed for the Unit 5 community collector road. This lane would extend the length of the community collector (4.5 miles) and would connect to existing bicycle lanes on Bel Marin Keys Boulevard. The Project Sponsor would fund construction of the bicycle lane.

Vehicle trip reduction during morning and evening peak periods due to the presence of bicycle lanes could be expected to be minor, based on historical travel-to-work data. According to 1980 Census Journey-to-Work data, less than one percent of all Novato commuter trips were made with bicycles. The Metropolitan Transportation Commission's *Bay Area Travel and Mobility Characteristics, 1990 Census, Working Paper #2*, states that for the Bay Area:

> "Commuting by bicycle showed slow growth in the 1980's, increasing from 31,200 daily bicycle commuters in 1980 (1.3 percent of commuters) to 32,500 daily bicycle commuters in 1990 (1.1 percent of commuters)."

Based on Unit 5 residential morning peak hour estimates (565 outbound trips), it is anticipated that perhaps five to six of these trips would be made by bicycle.

The second sentence in the last paragraph on page 5.67 of the Draft EIR/EIS incorrectly stated that Class II Bikeways are provided on State highways. See the corrected text in the revised EIR/EIS.

The Project Sponsor's preliminary circulation plans indicate that the community collector road would provide a five-foot-wide pedestrian walk/jogging trail. The pedestrian trail would travel the length of the collector road and would be shielded from the roadway by a five-foot-wide landscaped buffer. Community neighborhood sidewalks would be linked to the collector pedestrian trail.

Text in the EIR/EIS regarding bike path systems, and pedestrian traffic has been revised. (See Volume One of the FEIR/EIS).

**Comment C-12: Perimeter Road Maintenance.** *Describe the maintenance frequency of the proposed perimeter levee road. What kind of maintenance would be required and how would it be done?*

**Response**

Marin County roads similar to the proposed community collector require major maintenance on an average of 15 years following construction, according of the Marin County Department of Public Works (Road Maintenance and Repair Division). Major maintenance refers to pavement removal and resurfacing of the roadway. The community collector road would require treatment with a sealant (Reclamite) in order to ensure a 15-year life span. Average maintenance cost for County roads is estimated between $10,000 and $12,000 per mile, for a 24-foot-wide (two-lane) roadway.

**Comment C-13: Emergency and Construction Access, Safety and Parking.**

- *What would be the likelihood of opening the emergency road/retractable bridge for daily use?*
- *What benefits and detriments would result from such daily use?*
- *As the Perimeter Road will not be completed until Phase 3, how will emergency access be provided for to Unit 5 from Bel Marin Keys Boulevard?*
- *More discussion is needed on safety aspects of the Perimeter Road design, including consideration of incorporating a wide median strip.*
- *Construction access via Hamilton Field should be considered.*
- *A parking analysis of the proposed Unit 5 development is needed. Also, how will parking be affected in the Bel Marin Keys Industrial Park by any additional lanes provided on Bel Marin Keys Boulevard to accommodate the Unit 5 project?*

**Response**

As part of the project's internal circulation system, a navigation lock with retractable bridge would be installed. The lock's primary purpose would be to provide additional access to Novato Creek recreational boats, relieving congestion from increased vessel use anticipated from the project, as well as to permit periodic lagoon flushing. The retractable bridge would be similar to that provided at the existing lock at the end of Bel Marin Keys Boulevard, and would provide emergency vehicular access between the Perimeter Road and Bel Marin Keys Boulevard. The retractable bridges (existing and proposed) would not be usable for non-emergency uses because of the high potential for conflicts and resulting delays experienced by water-borne vessels (wishing to use the lock(s)), and land vehicles (wishing to use the bridges). In addition, the single-lane retractable bridge would not be suitable for use as a regular roadway.

The Project Sponsor has proposed construction of a stub road off the main community collector road (Perimeter Road), approximately 3,500 feet from the intersection of Bel Marin Keys Boulevard and the collector road, across to the north end of the Hamilton Field runway. Access to the stub road could be controlled with a gate to ensure that it is used as an emergency access road only. This road should be in place prior to completion of Phase One so as to provide adequate emergency access and, possibly, access for construction of subsequent development phases.

Design specifications for the Perimeter Road will be reviewed by Marin County prior to consideration of project approval, and safety features in the final design, including a possible wide median strip, will be an integral part of the County's review.

The proposed number of parking spaces for the residential, social center (i.e., golf, tennis, marina, etc.) and commercial land uses of Unit 5 would be adequate and would meet the requirements set forth in the Marin County Code, Title 24.

Parking at the Bel Marin Keys Industrial Park most likely would not be affected by the widening of the Ignacio Boulevard overpass. Currently there is no parking allowed between the overpass and the entrance to the Industrial Park (at Commercial Boulevard) on Bel Marin Keys Boulevard, and therefore, no on-street parking would be lost. If the overpass and a segment of Bel Marin Keys Boulevard were to be widened, there is a possibility that the existing entrance at Commercial Boulevard would be cut back from the existing location. This scenario could result in the loss of curbside parking along Commercial Boulevard; however, the number of spaces lost would be expected to be few.

Text in the EIR/EIS regarding emergency access and traffic safety has been revised. Text regarding parking impacts associated with the project has also been added to the EIR/EIS. (See Volume One of the FEIR/EIS).

## D. GEOLOGY, SOILS AND SEISMICITY

**Comment D-1: Fill Placement/Settlement.** *Provide additional impact analysis of required quantities and engineering of fill and predicted settlement as follows:*

- *historic settlement of existing BMK Units 1-4 and application to projected settlement for BMK5. Address the uncertainty associated with the effectiveness of the proposed mitigation measures for static settlement. Who would be responsible for repairs of homes and infrastructure if settlement were to cause structural damage?;*
- *comparative information on differential settlement from project sites with similar characteristics: e.g. Vintage Oaks;*
- *more information on engineering of fill placement and state-of-the-art techniques to minimize settlement;*
- *requirement for additional fill to allow for more settlement;*
- *settlement of perimeter road: elevation, required fill, maintenance, source of maintenance funds;*
- *potential for imported fill to contain hazardous substances (pesticides, fertilizers). Also provide details of the proposed imported fill, including the soil type, origin, quality, and compatibility with bay mud for use as fill.;*
- *secondary impacts of importing fill-trucks, noise, safety, air quality - and mitigation. How would these impacts compare to the impacts of using fill from the project site?*
- *proposed elevations of homes on Novato Creek and on Unit 2 and 3 lagoons. Are all homes located above 7' NGVD which FEMA has defined as the safe elevation?*
- *in Mitigation D-1, pg. S-49, quantify or explain what level of reduction in earthwork would be necessary to comply with Countywide Plan policies.*
- *evaluate the impacts of raising the perimeter levee by four feet. The discussion should include:*
  - *the effect of the additional fill on rate of settlement;*
  - *the ability to balance cut-and-fill;*
  - *secondary impacts on roads and traffic*
  - *conformance with BCDC standards;*
  - *the structural integrity and long-term stability of the levee/perimeter road;*
  - *effect on and responsibility for future levee roadway improvements.*
- *clarify the analysis performed in Tables 5.D-1 and 5.D-2. Are the numbers used for ultimate settlement and assumed elevations required minimum site elevations?*

- *the theoretical nature of some of the analysis presented in Tables 5.D-1 and 5.D-2, and the limitations of the data regarding bay mud material, should be recognized, as should the uncertainty associated with the effectiveness of the proposed mitigation measures.*

- *the potential for settlement of existing BMK homes during construction when the existing lagoon is temporarily emptied needs to be addressed.*

**Response**

Fill requirements necessary to provide long-term flood protection while accounting for settlement at the project site have been studied by several geotechnical engineering firms in recent years. As part of the Master Plan submission by the Project Sponsor (Master Plan Addendum 2, Attachment A), Harding Lawson Associates (HLA) concluded that a minimum initial fill of at least +10 feet NGVD would be necessary to maintain an elevation of +7 feet (the FEMA 100 year flood elevation) in 50 years. It should be noted that these elevations refer to street elevations. Building pads for houses and other structures would be built higher (finished floor elevations of +12 feet) and HLA concluded that floor elevations would not drop below the flood elevation ever. The HLA report also noted that the perimeter road and levee could be raised in the future if necessary to maintain adequate flood protection for the Unit 5 development.

Conclusions Drawn from Other Settlement Data. As requested by several commentors, further investigation of settlement history for other nearby project sites was conducted by the EIR/EIS consultant team. The sites investigated included Bel Marin Keys Unit 4, Vintage Oaks Shopping Center, Golden Gate Business Park, and Hamilton Field. Other relevant published data was also examined. The results of this investigation are presented as Appendix M of Volume Four of the Final EIR/EIS.

The two key Bay Mud characteristics or parameters that influence settlement behavior are compressibility and rate of consolidation. The compressibility of Bay Mud provides an indication of how much settlement will occur ultimately while the consolidation rate indicates how rapidly such settlement will occur.

A review of the available data indicate that the parameters vary widely. When comparing these settlement parameters as estimated in the EIR/EIS with settlement data from other sites, the EIR/EIS values fall within the reported range. However, some differences were observed.

For example, the EIR/EIS parameters, if applied to the Unit 4 site, would substantially underestimate the actual measured settlement there. For 13 feet of fill overlying 40 feet of Bay Mud the EIR/EIS parameters would have predicted a settlement of about 1.1 feet after the first 8.5 years at Unit 4. The actual measured settlements at BMK Unit 4 were in the range of 2.1 to 3.6 feet.

Similarly, the EIR/EIS parameters would have also underestimated the measured settlements at the Golden Gate Business Park. The Golden Gate Business Park results indicated that 4 feet of fill placed over about 20 feet of Bay Mud resulted in 0.51 to 0.63 feet of settlement in about 1-1/2 years. The EIR/EIS parameters would have predicted about 0.3 feet of settlement at 1-1/2 years with 10 feet of fill placed on 20 feet of Bay Mud.

Conversely, when comparing EIR/EIS settlement parameters estimates to those developed by the California Division of Mines and Geology, the EIR/EIS estimates are more conservative. In other words, the EIR/EIS parameters overestimate ultimate settlements compared to that which would be estimated using CDMG data.

Comparing the settlement parameters with those obtained from Hamilton Field, both would predict ultimate settlement of a similar magnitude. However, these settlements would be predicted to take longer to occur on the BMK 5 site than those calculated using Hamilton Field data.

In summary, the EIR/EIS settlement estimates should be considered only a reasonable preliminary indication of the impact that site filling may have on future settlement. During detailed design of the project, further sampling and testing will be necessary to model the settlement behavior of the Bay Mud at the BMK Unit 5 site. Specific fill levels would then be established and accounted for in the Precise Development Plan review process. This mitigation, provided as Mitigation Measure D.2 in the Draft EIR/EIS, is acceptable to the County Department of Public Works, which will require that sufficient fill be placed to keep any development on the BMK 5 site above flood levels (see Comment letter LA-13).

State-of-the-Art Settlement Methods. Settlement on Bay Mud can be "managed" through the placement of surcharge fill (i.e. fill to elevations substantially higher than needed initially) and the use of prefabricated drainage wicks. The drainage wicks increase the rate at which settlement occurs by shortening the drainage path that water must travel for consolidation to occur. Settlements that would normally take up to 30 years to achieve can occur in one year by using drainage wicks and surcharge fill. These methods were used at the nearby Vintage Oaks site and could be applied at the BMK 5 site.

Assessment Settlement for BMK 5 Site. For the EIR/EIS, all previous geotechnical and settlement information was reviewed and updated by Herzog Associates. Specifically, a geotechnical report was prepared and included in Draft EIR/EIS Volume Two as Appendix F. This geotechnical report was based on further subsurface exploratory work within the project site largely focused on assessing the characteristics of the underlying Bay Mud. In 1991 Herzog conducted 8 test borings and 20 cone penetration tests to determine the thickness of Bay Mud deposits and evaluate their compressibility.

The results of this analysis as it specifically relates to the Unit 5 site are discussed on pages 5.140 and 5.141 of the Draft EIR/EIS and presented on Table 5.D-1. The EIR/EIS concluded on the basis of this analysis that up to four feet of additional fill (beyond the 10 feet indicated in the Project Sponsor's conceptual grading plan) would have to be placed to meet anticipated County requirements. (These requirements have been affirmed by County Public Works Department staff in their comments submitted on the Draft EIR/EIS, see letter LA-13).

The Project Sponsor maintains that sufficient material would be available from excavating the Managed Mudflat area to offset any need to import material. A conservative estimate of the additional amount of fill needed to bring the building pads up to initial elevations above that shown in the Project Sponsor's Master Plan would be about one million cubic yards. The Project Sponsor estimates that excavation at the Managed Mudflat would generate approximately 1.8 million cubic yards.

Should importation of additional (i.e. approximately one million cubic yards) fill be required, the following impacts could result. Assuming a truck capacity of 18 cubic yards, approximately 56,000 truck round trips would be necessary to bring the material to the site. Assuming a truck haul rate of approximately 30 truck loads delivered per hour and an eight hour work day, approximately 116 work days would be required to complete the importation process. This additional truck traffic would significantly impact local traffic patterns and generate noise, air quality and safety impacts if not properly controlled. Traffic controls could include prohibition of truck traffic during weekday, peak hour commute periods, covering using tarps of all loaded trucks, twice daily watering of all exposed sediments, and regular inspection and sweeping of local haul roads. Compared with on-site impacts of grading and excavation these impacts would generally be greater, in part because the entire BMK community (and the industrial park) would be affected.

Raising the perimeter road and levee by an additional four feet would require additional fill, with all the attendant impacts described, should importation of the material be necessary. The additional weight of this additional fill would be expected to increase settlement rates in the early years but would not substantively alter ultimate settlement. The stability of the perimeter levee along its boundary with the proposed shorebird habitat could pose a stability concern due to the large differential in elevation (i.e. perimeter levee at +14 feet, shorebird habitat at -7 feet). Providing proper slope stability could require either more fill to broaden the levee base or incorporation of structural features (e.g. retaining walls). Suitable measures would be determined during detailed geotechnical design. Bay Conservation and Development Commission (BCDC) policies with respect to levees generally require appropriately engineered slopes and do not specify particular techniques to be used.

The source of any required imported fill is not known. During the Precise Development Plan review process, the County would require identification of potential borrow sites and assess their suitability with respect to structural characteristics and quality. Testing would be required if there were any reason to suspect the possible presence of hazardous substances.

Existing BMK Home Elevations. With respect to the elevations of existing homes in the BMK community, available information indicates that most are at least at an elevation of +8 feet NGVD presently and therefore are still above the FEMA flood elevation. However, a detailed analysis of the existing homes with regard to their elevations is not within the purview of this EIR/EIS.

County Grading Policies. With respect to grading and excavation activities as they relate to County plans and policies that express a desire to "minimize" such activities, there is no specific threshold below which such activities can be judged to be acceptable. However, it seems evident that the magnitude of all grading and excavation as proposed is inconsistent with these policies. Alternatives to the proposed project are available that would both involve a lesser area of disturbance and would be more in balance (from a cut and fill standpoint). Please refer to Section 3 of the Revised Draft EIR/EIS (Volume One of the Final EIR/EIS) for further discussion of grading requirements for the build alternatives.

Purpose of Tables 5.D-1 and 5.D-2. Tables 5.D-1 and 5.D-2 in the Draft EIR/EIS present expected settlement of the site given certain amounts of fill over various depths of Bay Mud. Table 5.D-1 is based on the conceptual grading plan submitted by the Project Sponsor which would create initial fill elevations of +10 feet NGVD for the perimeter levee and building pads. Table 5.D-2 is based on a scenario of maintaining a minimum elevation of +8 NGVD after 100 years of settlement.

The purpose of these tables is to present the information necessary to evaluate the amount of fill which will be required to maintain certain minimum elevations at the site to protect it from flooding. Neither of these tables constitutes a plan for filling the site which has been approved by the County Public Works Department or the Corps of Engineers. Prior to approval of the Master Plan, County Public Works will determine minimum site elevations to be incorporated as conditions of Master Plan approval.

**Comment D-2: Site Seismicity.** *Provide additional analysis concerning site seismicity: e.g., description of seismic event of highest magnitude and longest duration; damage due specifically to duration of event (More than reference to Uniform Building Code is needed in EIR). Detailed information should be provided on:*

- *the effects of bay mud on structures during a seismic event and the potential dangers associated with building on bay mud;*
- *what construction techniques would be used to minimize the seismic dangers of building on bay mud;*
- *the longest duration event which could be reasonably expected to occur;*
- *the nature of damage which could reasonably be expected to occur as a result of earthquakes of specific magnitude and duration.*
- *the sliding emergency bridges over the locks must be built to withstand earthquakes. The existing lock will need to be rebuilt to the same standards.*

**Response**

Seismicity and seismic-related impacts are discussed in the DEIR/EIS on pages 5.136-5.139 and 5.143-5.145. Groundshaking intensity at a particular location is strongly affected by the underlying geologic materials. Thick, poorly consolidated soils tend to amplify and prolong the shaking. In Marin County, one of the soils most susceptible to shaking is Bay Mud. Consequently, structures placed in the study area would be subject to significant damage during a major earthquake event unless they are properly engineered. In other words, developing on Bay Mud is feasible but only if certain precautions are taken and design standards followed.

To minimize the risk of damage to development from strong groundshaking, a registered engineering geologist and structural engineer would need to evaluate the specific soil characteristics at each building site, including the proposed sliding emergency bridges over the new lock. This is addressed in Mitigation Measure D-4 in the DEIR/EIS. From this

investigation specific design features can be recommended. Typical design features could include installing flexible joints on underground pipes; providing earth-quake-actuated, automatic shut-off valves with manual override on all gas and water lines; and use of post-tensioned concrete slab foundations or other foundation designs determined appropriate for the specific building site in question. At a minimum, meeting the 1988 UBC standards would be necessary to conform with County (and state) requirements. Existing structures in the BMK area, including the existing navigational locks, are not required to be rebuilt to meet new standards.

The longest duration earthquake event that could reasonably occur at the project site would be on the order of one minute. For comparison, the 1989 Loma Prieta earthquake lasted approximately 15 seconds. The nature of damage resulting from earthquakes of various magnitudes and durations would depend on many factors such as where the epicenter was, the distance from the epicenter, the specific site characteristics within the Unit 5 site, and building materials and design used. This cannot be accurately predicted.

**Comment D-3: Grading/Erosion Control.** *Make the detailed geotechnical investigation cited in Mitigation Measure D-2 of the DEIR/EIS available; describe grading and erosion control plans and analyze in Final EIR/EIS. The public should be allowed the opportunity to review and comment on the geotechnical investigation, particularly because the project would be built in a flood plain. Grading and erosion control plans should be prepared and submitted for public review.*

**Response**

The Project Sponsor has developed a conceptual grading plan as part of the Master Plan indicating that the initial fill elevations of the perimeter levee and development peninsulas would be +10 feet NGVD. A detailed grading plan would be developed in conjunction with Precise Development Plan (PDP) review, following consideration of the Master Plan. The public will be afforded the opportunity for review and comment during the PDP review process. The level of geotechnical information provided in the DEIR/EIS is considered appropriate for assessing the environmental consequences of the proposed project.

**Comment D-4: Sea-Level Rise.** *Provide information on sea-level rise and impacts of the flood control design for the proposed development. The EIR/EIS does not adequately state how the engineering design would accomplish this goal.*

**Response**

Sea-level rise is discussed in the Hydrology Section of the DEIR/EIS (Section 5.E, pages 5.147-5.148). As noted in this section, predictions of future sea rise vary widely and range from as little as four inches to more than six feet over the next 85 years. This increase is not explicitly factored into the fill requirements discussed above. As an additional mitigation measure, proposed fill elevations should be increased to account for reasonable future sea rise.

## E. HYDROLOGY, DRAINAGE, AND WATER QUALITY

**Comment E-1: Lagoon Management.** *The description, feasibility and impacts of the proposed expanded lagoon and its management needs to be discussed in more detail. How will existing problems with circulation, sedimentation, and water quality in the lagoons be remedied by the proposed management? Will increased flushing of the expanded lagoons into Novato Creek be feasible, given tidal characteristics and capacity of the creek? What effect would the increased flushing have on siltation in the creek and the need for dredging?*

**Response**

Lagoon management for the proposed project has been studied extensively. In January 1990 a study prepared by Dr. Ray Krone & Associates and entitled "Circulation, Water Quality, and Sedimentation in the Lagoons of Bel Marin Keys Unit 5" was submitted to the County by the Project Sponsor as part of the Master Plan. This report was peer-reviewed by Dr. Barry Hecht of Balance Hydrologics Inc. as part of the DEIR/EIS preparation. The results of Dr. Hecht's investigation were included as Appendix G.1 in Volume Two of the DEIR/EIS. Pertinent information is summarized and discussed in the DEIR/EIS Section 5.E (see pages 5.154-155, pages 5.159-5.160, and page 5.165). Further detail describing the features of the proposed lagoon and its hydrologic management has been provided in Section 2.A, in a new subsection entitled Lagoon Network, and further analyzed in Appendix N of the Final EIR/EIS, Volume Four.

Prior to the 1980's, the lagoons of Units 1-3 experienced water quality problems. The problems were primarily the result of excessive sedimentation and algal blooms. Algal blooms have been successfully controlled in the existing lagoon through the implementation of a water quality circulation plan (see Section 5.B, Biological Resources). Similarly, the Unit 5 lagoon would be maintained to ensure acceptable water quality by regular flushing, by protecting lagoon banks against erosion, by avoiding vegetated shallows in the lagoon, by monitoring water quality, and by regularly maintaining culverts, locks, gates and other water control facilities. The proposed flushing operation and schedule is described in DEIR/EIS Section 5.E, Impact E.6.

The lagoon flushing, in addition to maintaining water quality, will also tend to scour accumulated sediment from Novato Creek. While this scouring helps minimize the need for dredging in the vicinity of the lock channel's confluence with Novato Creek, periodic dredging is also necessary. Dredging is likely every 3 to 5 years, with or without the proposed project, with up to 150,000 cubic yards of material removed from the Creek and lagoon entrances at each dredging. Sedimentation and dredging are thoroughly discussed in DEIR/EIS Section 5.E, Hydrology, Drainage, and Water Quality, and in FEIR/EIS Volume Four Appendix N, Additional Hydrological Issues.

With respect to the capacity of Novato Creek to accommodate water flushed from the expanded lagoons, such flushing would likely have to occur over several tidal cycles. This is evidently the case already for the existing lagoons, where flushing takes place over two low tide cycles. While the capacity of the Creek is technically adequate to accommodate the increased volume of flushed water, each flushing will have to take place over several (perhaps four or five) low tide periods. During the July through September period of the

initial year of expanded lagoon opreation, when four flushings per month are recommended by Krone & Associates, a nearly continual flushing sequence would be required. Although feasible, such a system would not only require considerably more intensive management than already occurs, but could also potentially disrupt boating and other water-oriented recreational activities for a number of days during the peak summer months of the initial year.

**Comment E-2: Flood Control.** *The flood control options should be described in more detail and illustrated in the EIR/EIS. In particular, the third flood control option described on page 5.155 of the DEIR/EIS should be further characterized. The impact analysis for these flood control options should also be expanded. Show the location and design of each option, including a widened Novato Creek flood control channel and areas of ponding on-site, and indicate how the expanded lagoon and proposed managed mudflat would be used for flood control. The elevation of the lowest homes on Novato Creek and along the Units 2 and 3 lagoons should be provided and its relationship with Federal Emergency Management Agency requirements described. Explain how the Novato Creek widening alternative can be included in the EIR/EIS since it was not included in the Master Plan Application or other documents available to the public at the time of Notice of Preparation issuance.*

*For all flood control options;*

- *Conduct operational analysis and analyze impacts of operations and long-term maintenance.*
- *Identify impacts and potential flood damage, both on- and off-site, including change to flood water velocity in Novato Creek and effect of reduced scouring on dredging frequency.*
- *Ability to handle 100 year flows under normal Creek flow conditions.*
- *Provide more specific and detailed mitigation measures for all impacts.*
- *Show areas subject to flooding, including worst case.*
- *Discuss in more detail the relationship with County F-2 Secondary Floodway District restrictions.*
- *Identify the role of the outer, bayside levee for flood control, how it would be maintained, and who would be responsible for this maintenance.*
- *Describe fiscal impact of any flood damage claims on U.S. taxpayers.*
- *Calculate cost/benefit ratios for development and maintenance, including responsibilities, costs, sources of funding, and bonding requirements to provide for dredging, dredged material disposal, sediment and grease traps, and other flood control facilities.*
- *identify maintenance and funding responsibility.*

- *discuss timing of implementing in relation to Precise Development Plan approval process.*

- *delineate roles and responsibilities between the County Flood Control District and the Bel Marin Keys Community Services District.*

*For the Novato Creek widening (Bypass) option;*

- *identify land ownership affected and approvals required.*

- *address revegetation requirements for any widening.*

- *describe use of public lands for constructing channel and impacts on Novato Sanitary District's wastewater reclamation project.*

- *resolve 1,800 cfs discrepancy in 100-year peak flow estimate.*

*For Through-Lagoon option;*

- *What impacts would using the expanded lagoon for flood control have on existing BMK residences?*

- *Is the flow-through system feasible? What if the pumps failed?*

- *How would flow control be accomplished in phases 1 and 2 of the proposed development since the managed mudflat will not be completed until phase 3?*

**Response**

The method of flood control proposed as part of the project (flow-through) would be to utilize the BMK Unit 5 lagoon and managed mudflat for floodwater storage and conveyance. Excess flood water from Novato Creek would be diverted from the Creek into the lagoon through a new gated box culvert, as shown in Figure 2.A-6a of the Final EIR/EIS (Volume One). Floodwater would then be diverted into the managed mudflat habitat area when lagoon elevations reached +2.5 to 3.0 feet NGVD. Together, the lagoon and the mudflat area would provide flood storage capacity for the "worst case" (100 year) flood event. As discussed in Section 5.E of the Final EIR/EIS and Appendix N, Additional Hydrologic Issues Addendum, further examination of the flow-through lagoon flood control concept leads to a conclusion that, while technically feasible, is highly problematic in above-normal rainfall years, would adversely affect operation of the managed mudflat and golf course.

A second flood control alternative, the bypass channel, is illustrated in Figures 2.A-6a and 2.A-6b (Volume One, FEIR/EIS). The bypass channel is an updated approach to expanding the capacity of Novato Creek. This flood control alternative is related to the BMK 5 project but is not an explicit part of the application or project description. An earlier "ultimate channel" concept developed in 1971 which would have deepened the existing Creek channel is considered infeasible. The bypass channel concept consists of creating a wider but not substantially deeper channel through construction of a protective levee along the northern edge of Novato Creek. The channel would add flood water conveyance capacity to the existing capacity of the creek. This flood control alternative, if pursued, would be designed

under the direction of the Marin County Flood Control District and constructed by the Project Sponsor if permitted by the District. If constructed, the bypass channel would be maintained by the Flood Control District.

A third approach to providing flood control would be to combine elements of the two previously mentioned alternatives into a multi-step alternative. Since this alternative is not included in the initial application, it is not part of the project description that was approved by the County, and therefore will not be analyzed further during this environmental review. The Marin County Flood Control District supports this analytical approach (see Comment letter LA-3).

The three flood control alternatives are discussed in the Final EIR/EIS in Chapter 2, Project Description, under the subsection entitled Flood Control, and in Section 5.E, Hydrology, Drainage and Water Quality, in the subsections entitled Flooding and Flood Control Alternatives. Examples of active management flood control systems are discussed in Appendix N, Additional Hydrological Issues. With respect to the flow-through lagoon alternative active management will be required. Equipment such as culverts, pumps, and gates would need to be maintained, and personnel would need to be properly trained and prepared to respond to potential flooding. For this reason, the Bypass Channel alternative appears to be the most feasible option.

Three scenarios were identified in the EIR/EIS (Section 5.E, Impacts E.1-3) which could lead to flooding. Potentially significant flooding of the project area could occur during a 100-year storm due to human error or mechanical failure. Under the Bypass Channel alternative, if significant erosion of the Novato Creek levees was allowed to occur, flooding of adjacent properties could take place. Furthermore, sea level rise and/or land settlement could lead to future flooding of the project site. These potential flood related impacts were evaluated in the EIR and found to be either insignificant or insignificant after the implementation of mitigation measures. Mitigation measures are described in Section 5.E, Mitigation Measures E.1-E.3 of the Draft EIR/EIS.

Responses to specific comments related to flood control are as follows:

For all flood control options:

- Impacts of operations and maintenance
  The impact of the operational and maintenance activities were discussed in Section 5.E (see pages 5.155-5.164), and Appendix G of the Draft EIR. Further discussion of the flood control alternatives is provided in Appendix N of the FEIR/EIS, Volume Four.

- Impacts and potential flood damage
  If flooding in excess of that predicted for the 100 year storm at high tide were to occur in the project area, significant damage could result. However, forecasting any specific damage that could occur is highly speculative. The implementation of mitigation measures described in Section 5.E of the EIR/EIS reduces flood impacts to a level of insignificance.

- Ability to handle 100-year flows
  The bypass channel flood control alternative has been analyzed using a hydrologic model and found to be adequate for 100-year floods. While flood control systems similar to the flow-through lagoon alternative proposed for the Unit 5 project have performed successfully elsewhere, this system is judged to be less desirable than the bypass channel alternative.

- Role of outer, bayside levee
  Overtopping of the outer levees has caused flooding of the project site in the past. Currently, a farmer leasing a portion of the project site pumps stormwater over the levee into San Pablo Bay. There are no plans to modify the outer levee as part of the proposed project.

- Fiscal impact of flood damage claims on U.S. taxpayers
  The fiscal damage to U.S. taxpayers resulting from any flood damage claims due to the proposed project is not known but is likely to be insignificant from a regional, state or national perspective.

- Maintenance and funding responsibility
  Ownership of the lagoon and hence, flow-through flood control facilities would be by the BMK CSD. The CSD would be responsible for carrying out and funding maintenance activities. Maintenance responsibility for the Bypass channel and associated levees would be the responsibility of the County Flood Control District.

For the Novato Creek widening (Bypass) option:

- Land ownership affected and approvals required
  The County Flood Control District owns most of the lands north of Novato Creek that would be affected by construction of the bypass channel. Prior to construction of a bypass channel, approvals would be required from a number of state and federal agencies, including, but not limited to, the Corps of Engineers, State Lands Commission, Bay Conservation and Development Commission, and California Department of Fish and Game. The State of California (Lands Commission) also owns some of the lands potentially affected.

- Revegetation requirements
  Revegetation of the newly created northerly levee along Novato Creek would be required.

For through-lagoon option:

- Flow-through system operation prior to completion of the managed mudflat
  During Phase I development the northwesterly portion of the mudflat would be made "operational" with respect to its ability to accommodate excess stormwater flows from Novato Creek.

**Comment E-3: Dredge Disposal and Management.** *Identify alternative dredge disposal sites and alternative management and uses of dredge material. What is the capacity of the proposed on-site dredge disposal site/managed mudflat to accommodate dredge spoils? Could dredge spoil from other locations be placed at this site? The water quality impacts of dredge disposal decant water on the bay need to be described in more detail. How would the use of this site for dredge spoil disposal be affected under a tidal marsh alternative? What would be the impact on the existing Bel Marin Keys community of not having an on-site dredge disposal facility available? How was dredge frequency determined?*

**Response**

The expanded lagoon would require little or no dredging for many years because of its deep initial depth (approximately 34 feet). Some dredging may be necessary in the vicinity of the proposed new lock due to shoaling. However, with or without the proposed project, regular dredging in Novato Creek is required. The most recent Creek dredging took place in 1985-86, when approximately 300,000 cubic yards of sediments were removed and disposed at an upland site located within the northeast portion of the Unit 5 project site. Prior to that about 44,000 cubic yards of sediment were dredged in the Creek as part of a larger Corps of Engineers' dredging effort on the lower Petaluma River. In 1974 dredging of about 235,000 cubic yards of material were removed, mostly from the Creek but also some from the lagoons.

The BMKCSD (Anne Crowder, personal communication) has indicated that Creek dredging has been proposed for mid- to late 1993, contingent upon receipt of the necessary permits and approvals. About 300,000 cubic yards are expected to be removed, divided equally between the Creek and the north (Unit 1) lagoon. The proposed disposal area is undetermined but may be at the upland site within the Unit 5 property. The BMKCSD estimates that dredging of about 150,000 cubic yards every three to five years will be required for the existing BMK community.

During the last few years, concern over the potential impacts of dredged sediment disposal in San Francisco Bay has increased substantially. In response, regulatory requirements have become more stringent and the availability of disposal sites more limited. Traditionally, most dredge material disposal has taken place at one of three unconfined aquatic sites, primarily the Alcatraz disposal site. Concerns regarding this practice have centered around potential alterations to benthic and shoreline habitats as well as the bioavailability and toxicity of contaminants contained in the sediments when resuspended into the water column. While there is an unconfined aquatic disposal site in San Pablo Bay, its rated capacity is limited and allocated primarily to certain Corps maintenance dredging projects. For the past twelve years the Corps and EPA have been attempting to establish a permanent ocean dredge disposal site for San Francisco Bay. While establishment of such a site may relieve some of the Bay Area's larger dredge disposal requirements (e.g. Port of Oakland), it would not directly benefit small discharges such as BMKCSD because of the long haul distance required.

The use of upland sites has generally been encouraged by the regulatory agencies but these sites are also limited and typically constrained by the presence of wetlands. In addition, even upland sites have come under greater regulatory scrutiny in recent years. For example, the City of San Leandro, which operates a 114 acre upland site for disposal of sediments

dredged from the entrance channel to its marina basin, has recently been required to implement a management plan that will operate the site as shorebird habitat when it is not needed for active dredge disposal. In addition, the City is required to remove all deposited dredge materials as soon as they are dry enough to off-haul. The City is currently completing a project to remove approximately 230,000 cubic yards of dried dredge material and haul it to a nearby landfill to be used beneficially as landfill cover.

Several projects have been proposed and/or are currently under study which would combine dredge material disposal with wetland creation. The Sonoma Bay Wetlands project, proposed for a diked baylands site immediately east of Port Sonoma-Marin, would accomplish this dual objective if approved by the Corps, EPA, Regional Water Quality Control Board. Another similar, but larger magnitude project is proposed near Montezuma Slough in Solano County. Both projects envision the possibility of accepting dredge spoils from various projects. The successful implementation of these projects, although encouraging, remains uncertain.

As part of the Unit 5 development proposal, the Project Sponsor proposes to provide an upland disposal site for dredged material. The 377 acre mudflat area, to be created adjacent to San Pablo Bay within the Unit 5 site, would serve as shorebird habitat when not actively being used for spreading dredged material. The presence of this disposal area would substantially benefit the existing BMK community by providing a nearby and predictable disposal location for materials dredged from the Creek and lagoons.

The proposed mudflat would hold approximately 4.2 million cubic yards of dredged material. Deposited at a projected rate of 150,000 cubic yards per dredging (assuming a 3 year dredging cycle), the site would reach capacity after approximately 84 years. It is not anticipated that dredge spoil from non-project locations would be disposed of at the proposed mudflat site and Mitigation Measure E.1 has been revised to address this issue (see Volume One of FEIR/EIS). Further discussion of dredge material disposal is contained in Chapter 2 under the subsection entitled Managed Shorebird/Mudflat Habitat, in Section 5.E, Hydrology, Drainage, and Water Quality, and in FEIR/EIS Appendix N, Additional Hydrological Issues.

The water quality impacts of dredge disposal decant water have been analyzed in detail and no significant impacts have been identified (see impacts E.10 and E13). Decant water would generally be of similar quality to what exists in San Pablo Bay, because the dredged sediments are derived predominantly from the bay. Therefore, no long term degradation of bay water would occur from decant water. In the short term, some turbidity would result from the decant water being discharged into the bay. This impact would be temporary.

The 377 acre mudflat area may alternatively be used to create a tidal salt marsh in accordance with habitat concepts outlined in the master Plan. If this alternative is chosen, the disposal of lagoon and Novato Creek dredging spoil would still occur on the site; however, the material would be used to fill independently constructed "cells" surrounded by interim levees. The cells would be filled sequentially to approximately mean sea level. The cells would then be restored to tidal action once the desired elevation is attained. To accelerate the tidal salt marsh restoration process, dredged material from other projects

could be sought and utilized for cell construction. Additional information regarding this alternative can be found in the new subsection entitled Tidal Salt Marsh in Chapter 2 of the FEIR/EIS, Volume One.

**Comment E-4. Golf Course Water Quality.** *Provide more analysis of water quality impacts on lagoon and Novato Creek (and Bay) from golf course maintenance: identify responsibility for compliance, enforcement, monitoring; identify mitigation measures for use of fertilizers resulting in possible discharge of nitrates into surface- and groundwater. How would runoff from the golf course be controlled and managed? How will water in the water traps be managed with respect to chemical and salt inputs.? Provide more detail on "natural links" concept for golf course design. What alternatives to pesticide and fertilizer use on the golf course are available?*

**Response**

The effect of golf course maintenance activities on the water quality of the proposed lagoon, Novato Creek and San Pablo Bay has been identified as Impact E.7 in Chapter 5 of the EIR. New text has been added in Chapter 5.E and additional discussion is provided in Appendix M, Additional Hydrological Issues, regarding golf course water quality issues. The golf course is described in detail in Chapter 2, Project Description. After mitigations are implemented, it has been determined that negative impacts on water quality from golf course operations would be reduced to a level of insignificance.

If not properly designed and maintained, percolation, runoff, and chemical use on the proposed golf course could impact water quality. To prevent this from occurring, features would be incorporated into the golf course design to prevent runoff and infiltration, and a golf course chemical management plan (CHAMP) would be developed and implemented.

The CHAMP would first assess the resources that may require protection. Vulnerabilities of these resources to chemicals that may be used on the golf course would then be evaluated. Pathways by which pollutants may be delivered into surface and groundwater would also be evaluated. With this information, pesticide, herbicide, and fertilizer use would be planned such that environmental impacts are reduced to a level of insignificance.

Under the proposed Project, the golf course would be designed for internal drainage; i.e., runoff is not expected to leave the course boundaries. For reasons described below, however, a full runoff retention program may not be feasible or desirable and, therefore, it is likely that on occasion, water will leave the golf course, with discharge either to San Pablo Bay (via pumps) or to the lagoon. The former option would be preferrable in order to avoid adverse effects on the flow-through flood control system proposed as part of the project.

Full retention of runoff for the golf course would need to consider storage for nearly all of a wet year's rainfall over the 135 irrigated acres of the course, plus a reasonable contingency volume. Rainfall in Marin County in a wet year can reach twice the mean annual precipitation of 25 inches. Under such circumstance irrigation needs are minimal during the winter months, and other losses (to soil storage or to seepage) would be small. If full runoff retention is to be maintained, total water storage capacity would likely be slightly in excess of 500 acre feet, which might be supported in 50 to 100 acres of ponds 5 to 10 feet deep. (Note: Such a required water surface area would substantially reduce the regular golf play

area and necessitate that a substantially larger total golf course acreage be provided.) Water features of this scale would create their own hydrologic and habitat effects. By comparison, retention of rainfall during a "normal" rainfall year (but not for wetter years) would entail volumes and areas perhaps one-third as large, and would be more easily integrated into the existing proposed golf course acreage.

In assessing the feasibility of full runoff retention, one would also need to consider the possibility that local ground water would be intercepted, reducing pond capacity. Ponds near the lagoon may also receive saline percolate seeping out of the lagoons, creating numerous habitat-management challenges as well as a question of suitable disposal for the brackish or salty water before the next winter's rains begin. For these reasons, while it might be useful to endorse drainage retention as a suitable mitigation approach, it must be recognized that full retention may not be feasible and some surface water discharge from the golf course would occur.

**Comment E-5: Marina and Boating Water Quality.** *Provide more analysis of water quality impacts of and within the marina; water quality management programs for both lagoon and marina should be available for further public review and be analyzed in more detail in the EIR/EIS. The impacts on water quality of existing boating should be described and compared with impacts resulting from increased boating due to the Unit 5 project.*

**Response**

Water quality in the existing lagoon is discussed in Section 5.E, Hydrology, Drainage and Water Quality. Pollutants enter the BMK Units 1-4 lagoon through storm drains. The pollutants may include oil, heavy metals, landscaping chemicals, and bacteria. No water quality analyses are available to indicate whether or not these pollutants are having an adverse affect on the lagoon environment. There is no obvious visible evidence of water quality problems in the lagoon.

The potential degradation of water quality in the proposed Unit 5 lagoon was identified in Chapter 5 of the EIR as a Class II impact (see Impact E.6), meaning that after mitigation measures are implemented, the impact will be insignificant. Estimated concentrations of pollutants in typical urban stormwater runoff are provided in the discussion of Impact E.6. To minimize the accumulation of pollutants in the lagoon, flushing would be performed on a regular basis. The lagoon would be flushed at an initial rate of 24 times per year. This would provide a higher level of water replacement than is experienced by the Unit 1 and 2 lagoon.

To prevent pollutants from entering the lagoon, Mitigation Measure 6.E (see EIR Section 5.E) recommends that the Project Sponsor implement a detailed storm water quality control plan. This plan would set water quality objectives for the lagoon, and specify preventative measures which would lead to those objectives being met. Similarly, Appendix N, Additional Hydrological Issues, recommends the formulation and implementation of a marina operating plan in order to prevent water quality degradation from boating activities. The plan should require, among other things, that the marina be equipped with adequate sewage pumpout facilities and oily water separators for not only the 152 vessels mooring there but also all boats expected to use or moor in the lagoon. The

elements of this plan would also include coordination with regulatory agencies, development of water quality objectives, an assessment of aquatic resources, and an education program for boaters.

**Comment E-6: Novato Creek Hydrology.** *Analyze impacts of maintaining navigable channel on scouring of tidal marshes at the mouth of Novato Creek. What dredging requirements in the channel would be attributable to the Unit 5 project? How have BMK Units 1-4 contributed to sedimentation in Novato Creek in the past? Has Creek flushing deposited more silt than it has removed? What increased erosion would result along the creek due to increased boat traffic?*

**Response**

In order to maintain a navigable channel near the mouth of Novato Creek, a program of regular releases from the Unit 5 lagoon would be implemented. The released water would have the effect of scouring the creek bottom, thereby maintaining the required depth for boat clearance. In addition to scouring, dredging would be required perhaps as often as once every three years. Sedimentation is discussed in Section 5.E of the EIR in the subsections entitled Lagoon Features and Operation, and Sedimentation and Dredging. Sedimentation of Novato Creek was identified in Section 5.E as Impact E.9, and found to be insignificant.

Sedimentation in the past has been a problem in Novato Creek. Sediments originate from areas upstream of the BMK site, from the outflow of the BMK Units 1-4 lagoon, and from San Pablo Bay water carried upstream by tidal action. Continuous sedimentation occurs in the navigable channel, similar to other mud accumulation elsewhere along San Pablo Bay. Regular flushing of Novato Creek and occasional dredging have been used in the past to maintain a navigable channel.

Creek flushing and sedimentation scouring would be accomplished by closing the gates of the lagoon at the peak of a high tide, and then opening the gates to the creek once the tide has receded. The high water in the lagoon would pass through the gates at a high velocity and carry sediments with it to the bay. This practice would serve to increase circulation in the lagoon thereby increasing water quality, and also maintain the navigable channel in Novato Creek. Creek flushing would generally remove more sediment from the channel than it deposits. (See also response to Comment E-1, above.)

Some increased erosion along the Novato Creek channel banks could occur due to additional boat traffic generated by the project. This is not expected to be significant, provided that boat speed limits established for the channel are enforced.

**Comment E-7: Non-point Source Pollution.** *Indicate how project urban stormwater discharge would comply with County NPDES permit and with the adopted 1989 State Non-point Source Management Program.. More specific control and enforcement standards are needed. Discuss the applicability of EPA guidance specifying management measures for sources of non-point pollution in coastal waters. Describe the mitigation of educating residents with respect to water pollutant control in more detail.*

**Response**

Water quality in surface water bodies in California falls under the auspices of the National Pollution Discharge Elimination System (NPDES) program, which is administered by the Regional Water Quality Control Board (RWQCB). Water quality regulations are discussed in detail in the subsection of EIR Section 5.E titled Regulatory Framework.

In September of 1992 the Environmental Protection Agency (EPA) began issuing general permits for industrial sites and construction sites that require measures to prevent storm water pollution. Storm water permitting in California has now begun by the RWQCB under the authority of the EPA. The RWQCB will generally require a stormwater pollution prevention plan for industrial sites, municipal storm drain systems, and construction sites greater than 5 acres. A stormwater pollution prevention plan for the BMK Unit 5 construction would include requirements to minimize erosion and airborne dust, prevent and cleanup leaks and spills, keep pollutants off of exposed surfaces, and a training program for employees and subcontractors.

In January 1993, EPA published "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters." In preparing the stormwater and marina pollution prevention plans as recommended in the EIR/EIS, the Project Sponsor should incorporate this guidance as it will be considered by the RWQCB in its determination of plan adequacy.

Additionally, the EIR (Section 5 E, Mitigation Measure E.6) recommends that a storm water plan include public education on non-point source pollution, and it is recommended (see Appendix N, Additional Hydrological issues) that a marina management plan be developed that includes an outreach program for boaters focused on pollution prevention. These plans have not yet been developed, and therefore specifics regarding their contents are not available at this time.

**Comment E-8: Hamilton Groundwater Contamination.** *Describe the potential for contaminated groundwater at the Hamilton Field landfill site to migrate toward and into the expanded lagoon at Bel Marin Keys.*

**Response**

The potential for contaminated groundwater to migrate toward and into the expanded lagoon on the project site is considered essentially nil. As described in Section 5.J (page 5.231) of the Draft EIR/EIS, remediation of Landfill No. 26 is being implemented. When completed the landfill will be effectively sealed to prevent future infiltration and contaminant migration beyond the landfill footprint. Consequently, no significant impacts to the BMK Unit 5 site are expected. (Refer also to response to Comment J-5 in this document.)

## F. AIR QUALITY

**Comment F-1: Regulatory Compliance.** *Reclassify impact significance in view of non-attainment, especially cumulative.*

- *The proposed project does not seem to meet the statutory requirements for conformity as outlined in §176(c) of the Clean Air Act (CAA). Should that be the case, the CAA states that "no department, agency or instrumentality of the Federal government shall engage in, support in any way or provide financial assistance for, license, permit, or approve any activity which does not conform to an implementation plan after it has been approved or promulgated under §110".*

  *The FEIS should provide additional information sufficient to clarify whether the 1991 Clean Air Plan (CAP) has been federally approved or whether the 1982 implementation plan would be applicable in terms of meeting §176(c) conformity provisions. In addition, DEIS Section (4), Consistency with Applicable Plans and Policies" should identify the BAAQMD as an agency which has been delegated regulatory authority in terms of the CAA and should discuss the project's applicability to §176(c) of the CAA.*

- *Inconsistency of the project with the Clean Air Plan should be avoided. The DEIS/EIR recognizes that the proposed project is inconsistent with the Clean Air Plan since the population proposed for the project will exceed ABAG estimates and the increased air emissions will delay attainment of the ambient air quality standards. The DEIS/EIR classifies these impacts as a Class III level of significance; adverse but insignificant. These impacts are improperly classified since the attainment of necessary permits from regulatory agencies may be jeopardized according to the Clean Air Act of 1990.*

- *However, the interpretation of consistency between the Clean Air Plan and ABAG estimates is called into question (pg. S.14). The DEIS assumes that the proposed project does not conform with the Clean Air Plan because population levels are increased beyond projected ABAG estimates. According to BAAQMD, this comparison of zoning versus ABAG projections is inappropriate except on a regional level. If population estimates are used in a conformity analysis, the analyst must take regional population trends into account to assess whether the region as a whole is in fact increasing in population density. Additionally, the BAAQMD also will not accept as valid any air quality analysis that does not rely on the most recent population projections, i.e. the 1992 projections instead of the 1991 projections used in the DEIR. Based on the above, the consultant is requested to clarify and redraft the conformity component of the air quality analysis.*

**Response**

The 1991 Clean Air Plan was prepared to comply with State, not federal, regulatory requirements. The applicable federal planning document for the region is the 1982 Air Quality Plan. Given that the federal ozone standards have not been violated in the past three years, the BAAQMD will be submitting a "maintenance plan" to the EPA.

Generally, conformity is determined by evaluating whether the project is a part of or included in a regional Transportation Improvement Plans (TIPs), and whether the project would cause reductions in roadside CO concentrations. Additionally, EPA has not

finalized their requirements for conformity yet; a draft version was published in the Federal Register, and a final version is expected shortly. In the Bay Area, MTC Resolution 2270 seeks to determine conformity for transportation-related projects. Conformity analyses are normally required for transportation projects, and not for residential projects (David Marshall, Bay Area Air Quality Management District, personal communication).

BAAQMD is the local agency responsible for implementing the provisions of the Clean Air Plan. The DEIS/EIR Section 5.F, Air Quality, on page 5.178 recognizes that the proposed project is inconsistent with the CAP, however, the impact is considered Class I (unavoidable), not Class III.

A comparison between existing land use designations and the proposed population increases resulting from the proposed zoning amendment was done to determine the Project's consistency with BAAQMD guidelines. Such comparisons are normally appropriate for larger scale developments where a regional level of analysis is adopted. Since the project would add about 1,200 homes and approximately 3,000 people in an area that is essentially vacant, a population projection comparison was made to assess the Project's effects. The proposed number of housing units were compared to the existing land use designated number of housing units to assess the implication of increased housing at the local level. While the methodology is more suitable for analysis at a regional scale, growth at any scale, whether regional or local, in excess of planned land use designation densities would alter the assumptions BAAQMD made during the development of future attainment dates. The 1991 CAP estimated air pollutant attainment projections on the basis of data available at that time. The 1990 ABAG projections were, thus, used in BAAQMD's analysis, and it is these figures that are appropriate for comparison purposes, and not the 1992 figures that were released subsequent to the '91 CAP. Using estimates for more recent years would not be expected to substantively alter the conclusions of the EIR/EIS with regard to air quality.

For the purpose of providing a worst-case analysis, as required by CEQA and NEPA, development in excess of current zoning was considered to have an adverse effect on air quality and be inconsistent with the BAAQMD's planning efforts.

**Comment F-2: Cumulative Projects.** *The DEIS refers the reader to Appendix I for a list of "proposed development projects" which were considered in assessing cumulative impacts. However, Appendix I was not included as part of this DEIS. The FEIR/EIS should identify all projects which were considered in this assessment.*

**Response**

Appendix I was not included in Volume 2 (Appendices) of the Draft EIR/EIS. Appendix I was available at the front counter of the Marin County Planning Department during the public review and comment period on the Draft EIR/EIS. Appendix I contains a list of projects Under Review and a list of Approved/Under Construction projects and is taken from data supplied by the Marin County Planning Department. For a project to be placed on the list of projects entitled "Under Review" an application must have been accepted by the Marin County Planning Department prior to the data publication date.

Since these two lists are several pages long they are more appropriate to be placed in an Appendix instead of within the body of the EIR/EIS text. Consequently, Appendix I is included in Volume 4, Appendices, of the Final EIR/EIS.

**Comment F-3: Mitigation of CO/Priority Pollutant Concentration Increases.** *The DEIR states that Operation of the Project would add daily and peak-hour vehicle trips, irreversibly, to local streets and intersections" increasing related emissions into the air of total organic gases, carbon monoxide, and nitrogen gases". Proposed mitigations for these air quality impacts are not adequate for two reasons:*

- *The document states that no "violations are expected after 2002" based at least partially on assumptions of future technological advances in cleaner fuels production and energy efficiency (pg. S.14). Such assumptions are not acceptable mitigation measures.*

- *The Sonoma Ferry and light rail systems, which are proposed as feasible mitigation measures, are not in place nor have they gone through the planning and permitting processes. It is not certain that these mitigation measures are feasible or that they will be implemented. The remaining mitigation measures are not complete and are not acceptable in mitigating the air quality impacts. The DEIS/EIR should provide more information on the proposed shuttles and other alternatives (to the ferry and light rail) to increase use of public transit, including but not limited to cost, sources of funding, management responsibility of the shuttles, etc.*

*Air quality impacts need to be fully mitigated. How will such mitigation be assured?*

**Response**

The quotations stated in the comment are found in the Irreversible and Irretrievable Commitment of Resources portion of the Summary, on page S.14 and in the Impact Overview on page 6.12 of the DEIR/EIS. These impact statements are in turn summaries of Air Quality impacts F.3 and F.4 presented in Section 5.F, of the EIR/EIS. Both Impact F.3 and F.4 constitute Class I, significant unavoidable impacts. These impacts will remain significant in magnitude even after the implementation of mitigation measures. In other words the impact cannot be fully mitigated. The assumptions regarding CO levels, cleaner burning fuels and more efficient motor vehicles in the year 2002 are part of the impact explanation and are not being cited as mitigation measures.

The mitigation measures for Impacts F.3 and F.4 can be found in Section 5.F of the DEIR/EIS on pages 5.181 and 5.182, respectively. Ferry and rail systems are potential air quality impact mitigating actions and included as such. They are only presented at a conceptual level in the Master Plan Application and are offered by the Project Sponsor as one way to fulfill the objective of putting fewer cars on the 101 freeway at peak commute hours than the Unit 5 project would generate. Thus, these project elements would need to be developed to a greater level of detail prior to any permits for their construction would occur. They are included in the EIR/EIS analysis because they are technically feasible and were presented in the BMK Unit 5 Master Plan Application. See responses to Comments C-1 and C-3 for further discussion on the feasibilty of these two transportation components.

See response to Comment M-1 with respect to mitigation assurance.

**Comment F-4: Ferry/Shuttle as Mitigation.** *The DEIR fails to report that the Port Sonoma-Marin ferry and community shuttle are specifically called out as a component of the 1991 Clean Air Plan (see TCM#7 and # 5, respectively).*

- *The DEIR should indicate that the proposed community shuttle would be a good example of a bus feeder system that is specifically encouraged in the Clean Air Plan (See TCM#5 - Improve Access to Rail and Ferries).*

**Response**

Please refer to Section 5.F, Air Quality, of the FEIR/EIS, which has been revised to specifically include a discussion of the relationship between the proposed Project and Transportation Control Measure (TCM) #7 - improve ferry service and its potential future role in trip reductions and TCM #5 - Improved Access to Rail and Ferries.

**Comment F-5: Stationary Sources.** *Discuss stationary sources, e.g. wood-burning stoves.*

- *The DEIR suggests that installation of wood stoves and fireplaces would be "discouraged" in an effort to minimize impacts to air quality. The FEIS/EIR should disclose the extent to which residential designs would not include fireplaces.*

- *Were any stationary sources included in assessing cumulative air quality impacts? Provide a list or discussion of the stationary sources which were included in this assessment. )*

- *Evaluate the air quality impacts of allowing agricultural uses adjacent to residential areas, i.e. dust and smoke from burning the fields.*

- *Further discussion of dust impacts is necessary. This discussion should also consider the use of dust suppressants.*

**Response**

In accordance with current regulations, any fireplace to be installed should be the EPA certified type. There are no regulatory limits on the number of fireplaces in a region. For further discussion of stationary sources please refer to the DEIR/EIS, page 5.177.

The Draft EIR/EIS Impact F.6, Air Quality, discussion of cumulative impacts has been revised in the Final EIR/EIS. The level of significance for cumulative impacts, since they would incrementally add to long-term regional air pollutant concentrations, has been changed from Class III to Class I, considered significant and unavoidable. A revised discussion of cumulative impacts is included in the Final EIR/EIS.

Burning of open fields is controlled by BAAQMD and has been regulated since 1957 under BAAQMD Regulation 5. Since 1970, the "backyard" burning of leaves, trash, grass cuttings or prunings has been prohibited in the Bay Area. There are some exemptions to Regulation 5, which allow fires on permissive burn days at certain times of the year. The

exemptions are primarily for agricultural operations. Before any exempt burning can take place, the District's burn notification form must be approved by the public officer having jurisdiction. A fire permit may also be required by the Novato Fire Protection District. The public official for the burning of stubble, as is presumably the case for the BMK 5 site, would be the local fire officials at the Novato Fire Protection District.

Air quality impacts associated with open field burning include increases in particulate matter (smoke) as well as increases in various pollutant gases such as hydrocarbons and carbon monoxide. Such pollutant emissions can potentially result in adverse health effects to residents living adjacent to such areas.

As described in the DEIR/EIS (pp. 5.176-177), construction of the project would generate substantial amounts of dust, particularly during Phase 1. The DEIR/EIS also identifies a number of mitigation measures to reduce this impact. In addition to these measures, dust suppressants such as calcium chloride could be employed. However, it is not clear that additional measures such as this would be necessary given that most of the excavated material on the project site would be Bay Mud, which has a relatively high natural water content.

**Comment F-6: Mobile Sources.** *Discuss the effects that an increased number of motor vehicles and boats will have on air quality. - or - How would increased car and boat traffic affect air quality?*

**Response**

The EIR/EIS discusses the effects that would result from increases in motor vehicles in Section 5.F, Air Quality. The proposed Project could add up to 864 boats to the BMK community. The 864 total number of boats is derived from counting the number of residences that would not have lagoon access (478) and subtracting this number from the 1,190 residences proposed; then adding back the 152 berths that would be located in the marina. An undetermined number of these boats would be primarily motor powered craft, and not all of the powered craft would be principally used in the BMK lagoons. Consequently, the increase in the number of boats would have undetermined but likely minor impacts on air quality due to increased emission of air pollutants.

The use of motorized boats would incrementally add to local and regional air pollutant emissions. Air pollutant emissions in the future, however, are expected to decrease because of cleaner burning fuels and improved engine efficiencies. However, as discussed in Impact F.3, motor-vehicle traffic, and in this case motorized boats would raise local ambient emissions. Vessel generated air emissions would not be a continuous source of emissions, and is not expected to contribute substantially to regional emission totals.

## G. NOISE

**Comment G-1: Bel Marin Keys Boulevard Noise Levels.** *Review the level of significance classification for Impact G-1, noise along Bel Marin Keys Boulevard, a major transportation route since noise levels already exceed recommended levels. Re-evaluate whether the proposed Project will adversely or significantly contribute to noise levels experienced along Bel Marin Keys Boulevard by existing residents of Bel Marin Keys.*

**Response**

The Draft EIR/EIS Section 5.G, Noise, (Impact G.2 on page 5.187) incorrectly states that "Traffic-generated noise levels along Bel Marin Keys Boulevard, 50 feet from the center of the road, already exceed noise levels recommended for residential uses". This statement was based on the data presented in Table 5.G-5, Calculated Noise Levels Along Local Roads for intersections in the industrial park and west of the BMK residential community. The calculated noise levels shown in Table 5.G-5 do not reflect noise levels along Bel Marin Keys Boulevard along the portion that is adjacent to BMK residences. As indicated in Table 5.G-2, Land Use Compatibility Chart for Community Noise for Marin County (page 5.185 of the Draft EIR/EIS), satisfactory community noise exposure ranges between 50-70 (dBA, $L_{dn}$) for offices, professional services and commercial establishments. The noise levels shown in Table 5.G-5 are listed as satisfactory levels in Table 5.G-2. (page 5.188 of the DEIR/EIS).

The assessment that the proposed Project would contribute adversely to noise levels for residences along Bel Marin Keys Boulevard is correct. Noise calculations based on "Existing" and "Future With Project" conditions for the Perimeter Road segment between the Commercial Center and its junction with Bel Marin Keys Boulevard indicate that the $L_{eq}$ hourly noise level would not exceed 55 dBA at buildout for any residences more than 800 feet from the Perimeter Road centerline.

The level of significance for Impact G.2 was not changed from Class III (less than significant) to Class II (significant but mitigatible to a less than significant level) because the projected levels of noise along Bel Marin Keys Boulevard would not exceed acceptable (recomended) levels.

Section 5.G Noise of the FEIR/EIS has been revised to provide additional analysis of calculated noise levels ($L_{eq}$) along the Perimeter Road segment. Specifically, additional analysis was performed to estimate future (with the proposed project) noise levels at the Perimeter Road and Bel Marin Keys intersection. This intersection represents the location of highest traffic volume within the existing and proposed BMK community.

**Comment G-2: Locate Sensitive Noise Receptors.** *The location of sensitive receptors (the new school, senior housing, outdoor recreation area and parks) should be identified during the EIR/EIS stage. These facilities need to be located away from high dB rating areas. The location of the facilities may require significant alternation of the design or scope of the project.*

**Response**

The commentor requests that sensitive receptors within the existing and proposed BMK community be identified and that such receptors be sited away from sources of high dB rated areas. The comment is interpreted to be a request for an illustration depicting the location of sensitive receptors and an analysis of whether such receptors would be exposed to high dB (noise) from construction or operation of the proposed project.

The location of senior townhomes, social center (that includes the tennis courts), the golf course, potential locations for the fire station and elementary school are depicted on revised Figure 2.A-1 of the Final EIR/EIS (Volume One). Except for the senior housing at the eastern end of the water sports area, none of the sensitive receptors shown in Figure 2.A-1 or discussed in the EIR/EIS text are located adjacent to noise sources that are anticipated to create significant BMK5 operational noise conditions. Please refer to the response to Comment G-3 for a discussion of boating noise.

Construction Noise, discussed in DEIR/EIS Section 5.G, Noise, on pages 5.187 and 5.189 has been determined to be a significant impact that can be reduced to a less than significant level with the implementation of the stated mitigation measures. Please refer to an additional discussion of Impact G.1, "Construction Noise" below in Comment and Response G-4.

**Comment G-3: Boating Noise.** *The DEIR/EIS did not evaluate the water-related noise associated with the use of boats etc. especially since the project proposes an additional 200 berth marina. The DEIR/EIS also needs to propose mitigation measures for this noise impact.*

**Response**

Without specific information on the type and number of boats expected to be in operation at any one time, it is not possible to reasonably estimate boat noise levels. Boat noise characteristics for the proposed project would likely be similar to that which currently exists in the BMK lagoons. Most boating and other water-recreation take place during non-noise sensitive hours (during daylight hours between 10:00 a.m. and 6:00 p.m.). However, sensitive receptors located near the lagoons could be exposed to sporadic noise events that could have an intrusive effect on the peace and leisure of persons on shore.

**Comment G-4: Construction, Project Phasing, And Noise Mitigations.** *The EIR does not adequately address the impact on residents (it might be for one year) during the nine (9)+ years of construction and resulting noise pollution. How about just plain nuisance.*

- *Noise control of individual equipment is fine but the combined level is what we hear.*
- *Request for noise monitoring at the end of each street nearest the project.*
- *Request to establish maximum permissible [noise] level and include requirement in Precise Development Plan (PDP).*

**Response**

As construction of the second and third phases of the proposed Project moves south and east, noise effects on existing BMK residents would lessen. With the implementation of the proposed mitigation measures (e.g. temporary solid noise barriers [no gaps along the wall that noise waves could travel through] are effective in attenuating noise by 5 dBA or more), and given the nature of the proposed construction (working on a portion of the proposed site at one time) the EIR/EIS construction noise impacts analysis remains essentially unchanged. Please refer to Section 5.G Noise of the FEIR/EIS, which has been revised. The mitigations proposed are intended to reduce the level of magnitude of construction noise to a less than significant level (defined as category A in Table 5.G-2, Land Use Compatibility Chart For Community) Noise For Marin County and defined as 60 dBA, $L_{dn}$. for residential uses on pages 5.184 and 5.185 of the Draft EIR/EIS.

Since temporary noise barriers and equipment muffling are anticipated to reduce the level of noise from single pieces or a combination of construction equipment to less than significant levels, additional monitoring to reduce noise levels further do not appear warranted. If the County during review of the Precise Development Plan (PDP) determines that additional controls on construction noise is warranted, such measures may be required as part of PDP approval.

**Comment G-5: Hamilton Air Field Noise.** *Several comments were received that relate to the noise impacts and mitigation measures regarding a Hamilton Air Field with continued aircraft operations following the construction of the BMK5 Project. A summary of the comments include the following recommendations and requests:*

- *Future uses of Hamilton Air Field are likely to include civilian air uses and the military retains prescriptive easements over the air space over the BMK5 site that have not been addressed in the Draft EIR/EIS. Future residents of BMK5 are most likely foreclosed from commencing any action or securing any noise abatement. Accordingly it is appropriate to notice [future residents] that this prescriptive right exists and any development and purchase of property will be subject to an easement for noise and use.*

- *The Coast Guard Pacific Strike Team (PST) has no plans to move their operations from the Hamilton Air Field. Recent changes at McClelland AFB in Sacramento make the PST access to Hamilton Air Field vital to rapid response to oil and chemical incidents throughout the Pacific Coast Region and country. Hamilton is also important to training operations and strongly oppose any infringement on the ability to use Hamilton Field for aircraft operations.*

- *The Draft EIR/EIS should discuss how the project has been designed to accommodate future operation of the air field at the increased levels that may be experienced by a general aviation reliever airport, and measures designed to avoid possible future conflicts between the air field and adjoining residences.*

- *BCDC Bay Plan designates Hamilton Air Field for airport priority use and recommends that surrounding areas be developed for uses compatible with general aviation. BMK5 Project would likely lead to future conflicts between the airfield BMK5 adjoining residences and thus is inconsistent with BCDC policy.*

- *Evaluate the need for additional mitigation measures since the Draft EIR/EIS does not address outdoor recreation with respect to aircraft noise (mitigation measures only address interior residential living area noise insulation);*

**Response**

Several commentors requested additional information regarding the effect on future air field operations or BMK5 residents should aviation activities continue or increase at Hamilton Air Field. The Draft EIR/EIS includes an analysis of the potential impact on BMK5 residents should military aviation continue or increase and if general aviation flights were to be added to the future uses of the air field. The results of that analysis are presented in the DEIR/EIS Section 5.G, Noise. The EIR/EIS found that the continued or increased use of the Hamilton Air Field would represent a significant unavoidable impact to the future residents of BMK5. To clarify this impact further, the significant unavoidable impact means that even after the implementation of the mitigation measures presented in the EIR/EIS the continued use of Hamilton Air Field in the future for aviation would still constitute a significant impact on future BMK5 residents. Specifically, such significant effects could include:

- Significant noise impacts for residential homes that would require special notification and insulation measures to reduce but not avoid the significant impacts of air field noise effects;

- Opportunities for conflict between residents of BMK5 and Hamilton Air Field operations;

- Few if any potential remediation opportunities for BMK5 residents on the military flight paths and operations of Hamilton Air Field;

- Potential inconsistency with the Bay Conservation and Development Commission's Bay Plan (BCDC) that designates the Hamilton Air Field for "Airport Priority Use". Thus, BCDC is charged to protect priority usage areas that include ports and airports for such land uses, and would discourage BMK5 as a residential use that "should be kept from interfering with aircraft operations." The Bay Plan goes on to say that the BCDC should prevent incompatible development from within its area of jurisdiction.

- Potentially significant noise impacts on some forms of outdoor recreation proposed for Bel Marin Keys including fishing, golf, tennis, and community park activities. Presumably, water ski/jet skiing and swimming would be less sensitive to aviation noise even from the potentially increased level of activity represented by general aviation uses of the air field. The degree of impact and whether this impact is significant or merely adverse but not significant would depend on the future aviation use(s) that remain or increase at the air field.

As discussed in the DEIR/EIS, the City of Novato and Marin County do not believe aviation will be a future, prescribed use of the Hamilton Field site. Considerable, controversy remains on the future land use(s) that the decommissioned Hamilton Army Air Field will be converted to. To Clarify the text of Impact G.3, please refer to Section 5.G Noise, of the FEIR/EIS (Volume One), which has been revised.

## H. AESTHETICS, LIGHT, AND GLARE

**Comment H-1: Shorebird Habitat Visibility.** *Assess visual impact of low elevation of shorebird habitat/dredge disposal site relative to perimeter levee and roadway/path (21-foot difference in finished elevation).*

**Response**

From the elevated perimeter levee and roadway/path, the proposed shorebird habitat/dredge disposal area would be visible. The visual character of the site would be changed from that of an agricultural area, but this difference by itself would not constitute a significantly adverse impact (refer to Impact H.1). The proposed shorebird habitat/dredge disposal site would not introduce visual elements that would obstruct scenic landscape features in medium-range and long-range views, preserving the sense of open space.

The shorebird/mudflat area would be subject to a future Habitat Management Plan that would presumably include maintenance of debris. Additionally, the Habitat Management Plan would be subject to future environmental review. Over time emergent vegetation would visually buffer the mudflat and dredge spoils periodically deposited in this area.

**Comment H-2: Light and Glare.** *Analyze light and glare in relation to existing BMK community and indicate "what works and what doesn't." Specifically, evaluate light and glare in relation to structural use of materials and colors. The EIR/EIS should make recommendations as to what types of materials and colors are acceptable. Provide a description of elements which work to reduce or minimize light and glare.*

*Analyze light and glare in relation to Mitigation H-3, regarding security lighting. This mitigation measure appears to be in conflict with Mitigation K-4.*

**Response**

Analysis of light and glare is not restricted to what does or does not work in the existing BMK community. The depth of analysis is appropriate for the current level of planning detail. Site-specific designs are needed in order to determine the proper type and location of lighting sources, and acceptable reflectivity level and coloration of construction materials to reduce light and glare generated by the project.

Mitigation Measure K.1, which promotes the use of high levels of illumination along streets and in commercial areas to incorporate standard safety and security measures recommended by the Sheriff's Department to be included in the Precise Development Plan, does not necessarily preclude Mitigation Measure H-3, which recommends the placement of landscaping in roadway medians and other public areas and the aiming of outdoor lighting to the ground to reduce light and glare. Negative impacts associated with light (and glare) arise when light from illumination sources is deflected away from the areas of their intended use. All night-time illumination, including that for security, would conform to a set performance standard level, and would be contained and directed to specific tasks to minimize undue spill over of light and glare.

**Comment H-3: Project Appearance.** *Additional mitigation should be provided for alterations in the appearance of the site such as:*

- *identification and protection of viewsheds and view features,*
- *specific identification of alternative building locations for reduced heights,*
- *specific recommendations for materials and color use to reduce light and glare.*

**Response**

It would not be feasible to mitigate negative impacts of a project from every possible viewpoint. CEQA emphasis is on view corridors from sensitive receptors such as existing private homes, public roadways and public open space areas (refer to 5.H Significance Criteria on page 5.204 of the Draft EIR/EIS).

- To maximize the views for all residents, the height of a building should be directly proportional to its distance from the center of the lagoon. In effect, the height of developments should decrease progressively from the perimeter of the project site to the central point (around the Social Center), creating a bowl or amphitheater shape. Multi-level houses, town homes, and commercial complexes should be located at the periphery while single-story structures and open space should be clustered about the center of the project site. This mitigation has been incorporated into the EIR/EIS (Volume One, FEIR/EIS).

- The mitigation measures provided would serve as a guide to formulating the Precise Development Plan to be submitted to the County for review an approval, provided the Master Plan is approved (see also response to Comment H-2 above).

**Comment H-4: Shoreline View Corridors.** *Discuss the conflict between the proposed shoreline view corridors and the community desire to have homes lining the shoreline for added security.*

**Response**

The alternative residential scheme to have homes lining the entire shoreline for added security would conceptually result in a more open central area in the lagoon with concomitant denser development along the shorelines. This general configuration would reduce, but will not entirely eliminate, the obstruction of distant, off-site scenic landscape features (such as the East Bay hills) by other homes in the line-of-sight across the lagoon from private residences. Scenic views of the lagoon from the enveloping public roadway would be obstructed by the roof lines of the shoreline residences.

## I. ENERGY

**Comment I-1: Review Significance Classification of Impacts.** *The significance of energy impacts should be re-evaluated and possibly raised to Class II as the project will encourage activities resulting in use of large amounts of fuel and energy. Proposed mitigation measures 5.223 through 5.224 should be included in the Table as Class II level of significance.*

**Response**

The DEIR/EIS acknowledges (page 5-222) that approximately 625 billion Btu, equivalent to about 108,000 barrels of oil will be needed annually to construct and "operate" the proposed Project over the course of the 50-year project life (estimated). However, in the absence of specific State, federal, or other authoritative source as to what constitutes a "large" amount of energy there is no basis to justify the determination that such energy consumption constitutes a significant Class II impact. The EIR/EIS significance criteria considers energy use significant if wasteful or if it requires PG&E to substantially expand its existing infrastructure. Since the project would not cause either outcome, the Class III impact significance determination is appropriate.

The comment regarding the "proposed mitigation measures 5.223 through 5.224" is interpreted to be a request to incorporate the consultant and Project Sponsor's proposed mitigation measures I-1 and I-2 in Table S-1 for Class II level of significance mitigations and to require the implementation of such mitigation measures. As discussed above the basis for increasing the level of significance for Impacts I-1 through I-3 to significant but mitigatible to a level of insignificance does not exist. Consequently, Impacts I-1 and I-2 are not appropriately added to Table S-1, since Table S-1 is intended to summarize the significant unavoidable and significant mitigatible impacts. CEQA does not require that a Project Sponsor mitigate less than significant impacts, however, the County during the design review process may require, at their discretion, some or all of the mitigation measures listed in on pages 5.223 and 5.224.

**Comment I-2: Project Utilization of Energy Conservation Techniques.** *Acknowledge that the Project Sponsor is working with PG&E to incorporate energy efficiency into the proposed Project. PG&E suggests that the EIR examine the benefits of the Developer's participation in PG&E's Customer Energy Efficiency Program.*

**Response**

The Project Sponsor has committed to exceeding The California Code of Regulations Title 24 State Building Energy Efficiency Standards by at least 20%. The Project Description and comment letters received on the DEIR/EIS provide details on some of the specific programs that the Project Sponsor is committed to incorporating into the BMK5 design. These programs include:

- Exceed Title 24 standards by at least 20%;
- Incorporate energy efficiency in the design of the entire project including commercial space;

- Model homes will meet PG&E's standards for Energywise Showcase Homes (Exceed Title 24 standards by 50%) and that they will offer showcase model homes as an option to buyers;

- Participate in all applicable PG&E energy efficiency programs in effect at the time of construction; and

- Work with PG&E to develop a method to verify that the actual building performance meets design standards.

**Response**

Comment noted. Since the EIR/EIS energy impact discussions considers energy use during the operation of the Project to be a Class III impact (adverse but less that significant), no mitigation measures are required. However, the Project Sponsor's participation in PG&E's Customer Energy Efficiency Program should be encouraged for energy conservation purposes and to further minimize the adverse energy consumption effects of the proposed Project. In addition, the implementation of such energy conservation measures, as proposed by the Project Sponsor and PG&E, would minimize the energy consumed by the proposed Project.

**Comment I-3: Energy Consumption versus Energy Budget.** *Estimate allowable energy budget relative to consumption. It is unclear on Table 5.1-1 (page 5.222) what the estimated allowable energy budget is in comparison to consumption.*

**Response**

The comment apparently requests what is the "budget" amount that would be appropriate to compare the "Total G (billion) Btu" shown in Table 5.I-1 on page 5.222 of the DEIR/EIS. As discussed on page 5.220 in Section 5.I, Energy, of the DEIR/EIS, the maximum allowable annual energy consumption budget for a single family residence would be 30,000 Btu per gross square foot. This number is comparable to the estimated annual energy consumption results calculated in Table 5.I-1 only when total gross square footage floor area is known for all the residences in the proposed project. The BMK5 project would incorporate a wide variety of floor plans many of which are only defined currently to a generic level of detail. It is the responsibility of the County during the building permit review process (specifically during the development of a Precise Development Plan) to enforce the California Code of Regulations Title 24 State Building Energy Efficiency Standards.

**Comment I-4: Energy Requirement of Managed Mudflat.** *Estimate energy required to pump water to maintain 2"-6" sheet flow for Flood Control [managed mudflat].*

**Response**

The 2"-6" of sheetflow would be intended to maintain the shorebird/mudflat proposed habitat. The habitat type as well as the Habitat Management Plan that would include the frequency, duration and amount of water needed to be pumped or potentially released into

the habitat area via tidal gates at high tides is a programmatic component to the proposed Project. Subsequent environmental review will be needed prior to the implementation of the managed mudflat component, the seasonal marsh/agriculture area and the Novato Creek flood control plan. When a specific program for flood control management on the site is determined and designed, further environmental review may be required.

The amount of water that would be required to be pumped off-site for flood control purposes would be an infrequent event occurring only after a flood event that exceeds the Novato Creek flood control channel capacity. The amount of energy that would be required for flood water pumping unknown, but could be substantial.

## J. PUBLIC HEALTH AND SAFETY

**Comment J-1. Proposed Water Ski Areas.** *The issue of boating and water safety has not been adequately addressed.*

- *No new water ski areas are proposed*
- *The proposed size of new waterways is inadequate and restrictions imposed on new waterways will significantly increase boat traffic on existing waterways. This will greatly increase the potential for boating accidents.*
- *The combined lagoon area (existing plus proposed Project) will represent a net reduction in water ski opportunities.*
- *Address the minimum size boating area needed to accommodate the new development.*

**Response**

Some confusion may exist regarding assumed water sports activities under the Mitigated Project Design and Alternative Mix/Type alternatives as compared with the proposed Project. Some of the alternatives analyzed in the EIR/EIS do place restrictions on the use of powered watercraft or reduce the lagoon size to the extent that water skiing and other motorized water craft would not be permitted. Responses to comments on the Alternatives' Analysis section of the EIR/EIS may be found in this volume. The Final EIR/EIS Section 2, Project Description, describes the two proposed water ski areas. Whereas the alternatives mentioned above limits to some degree water sport use of the lagoons, the proposed Project does not.

The proposed Project includes two proposed water ski (water sports) areas, a primary and a secondary water ski area. Within these both water skiing and jet-skiing would be permitted. These water ski areas, are discussed in Section 2, Project Description, of the Final EIR/EIS (Volume One), and depicted in Figure 2.A-8. The new water ski areas measure approximately 700' x 2,800' and 450' x 2350', when the 200' buffer areas are taken into account. The primary and secondary areas would provide 45 and 25 acres, respectively, of water ski surface. However, the secondary water ski area overlaps the primary water ski area by an estimated 40 percent. Presumably, this overlap would reduce the total number of ski users during peak periods. However, depending on the actual recreational uses occurring, up to 70 acres of new water skiing/watersports area would be provided.

Current State and local laws do not regulate the size or configuration of water ski areas. The State Harbors and Navigation Code principally requires that safe boating conditions, be maintained. Specifically, the Harbors and Navigation Code Section 655a, which makes it a violation to recklessly or negligently operate a vessel. However, specific laws that regulate speed, water ski area, and usage are left to local authorities to implement. The Bel Marin Keys Community Services District regulates the number of water skiers that may use either Sunset or Sunrise Lagoon at one time. The regulations are enforced by the Marin County Sheriff's Department. Consequently, the concern that the proposed water ski areas are

inadequate or would place restrictions on boating traffic such that new boaters would infringe on the existing lagoon may be unsubstantiated and, in any event, can be adequately mitigated through local regulation.

The older Laguna Bel Marin does not currently have any formal restrictions on the number of water skiers that may use the lagoon at one time. "Self-regulation" of water skiers is the principal means of limiting the number, speeds, routes, and types of water sports that occur in one area at one time. Please see the response to Comment J-2 below for further discussion of proposed Project's regulation of water sports.

**Comment J-2 Enforcement of Boating Laws and Safety Violations.** *Current boating safety rules are inadequately enforced and frequently violated. The project would increase the difficulty in enforcement. Encouragement of public access to lagoons would further complicate the problem. The impact on boating and water safety of additional boat traffic in the existing lagoons should be classified as level II and mitigation should be provided. Mitigation could entail obtaining a marine patrol boat to provide in-water enforcement.*

**Response**

The issues of boating and water safety are addressed in the DEIR/EIS Section 5.J, Public Health and Safety Impact J.6 on pages 5.228 through 5.229 and 5.232. The DEIR/EIS indicates that the proposed project would increase the number of water recreational users and boating related complaints to the BMKCSD and Marin County Sheriff's Department .

The impact significance level of Impact J.6 is increased in the Final EIR/EIS to Class II, significant but mitigatible to a level of less than significant. Conflicts have been reported between the current water sports users of the existing lagoons and the shore-side residents. While the EIR/EIS does not investigate these claims in great detail, the issue is discussed on pages 5-228 and 5.229 of the Draft EIR/EIS. It is likely that similar wave damage, noise and violations of existing boating laws would also occur within the lagoons of the proposed Project. (A. Crowder, BMKCSD, personal communication)

Increases in calls to the Marin County Sheriff's Department would place an additional burden on Sheriff's Department staffing resources, at a time when budget resources are already under tremendous pressure. To the extent that the Sheriff's Department has sufficient resources to respond to Bel Marin Keys lagoon complaints, the impact would remain insignificant. However, in the event that such resources were generally not available at the time needed, an increase in the number of boaters could substantially increase safety hazards to other water recreational users. Whether the Marin County Sheriff's Department will have adequate resources to respond adequately to all water-related calls several years into the future is not clear.

Consequently, the impact analysis has relied on the Sheriff's Department as a basis for assessing future water enforcement levels. The results of such inquiries to the Sheriff's Department have indicated that their ability to respond to violations within the BMK Community, as with the rest of Marin County, will depend to a large extent on their funding. Currently they do not anticipate limiting their responses to calls from either the water or

shore-side areas of the BMK community. Some versions of the proposed 1993/94 County Sheriff's budget would eliminate the marine patrol.

Furthermore, eye witness accounts by private citizens is usually the only evidence available to law enforcement officers or BMKCSD staff to pursue violators (A. Crowder, BMKSCD, and G. Perlow, Marin County Sheriff's Dept., personal communication). This approach has inherent drawbacks as a deterrent to future boating violations and if a citation is to be issued.

A reasonable case can be made that significantly increasing the number boats potentially using the proposed lagoons for water sports will increase the potential for situations that could "substantially increase safety hazards" as stated in the significance criteria in the DEIR/EIS Section 5.J, page 5.229. This case is based on existing enforcement problems regarding water related violations, the potential for significant increases in water sports recreationists, and future uncertainty for County Sheriff's Department water patrol funding.

To provide additional clarification of the issues surrounding boating and water safety Section 5.J, Public Health and Safety has been revised in Volume One of the Final EIR/EIS.

**Comment J-3: Navigational Locks.** *The existing development has two locks which serve approximately 700 homes. Address the adequacy of the single lock proposed to serve 1,190 homes.*

**Response**

Within the existing BMK community some waiting is common at peak periods (generally on some weekends and during holidays) to pass through one of the two existing locks, Even during these periods the time necessary to move through one of the locks generally does not exceed fifteen (15) minutes (A. Crowder, BMKCSD, personal communication). On average the amount of time necessary to enter and exit from the existing BMK lagoons is adequate. Currently, the Sunrise Lagoon lock provides access to Novato Creek for approximately 300 homes. This lock plus one additional lock would provide Novato Creek access to an estimated additional 864 residences. The 864 total number of boats is derived from counting the number of residences that would not have lagoon access (478) and subtracting this number from the 1,190 residences proposed; then adding back the 152 berths that would be located in the marina.

The analysis of the amount of time necessary for boats to wait prior to gaining access to the lock did not provide sufficient evidence to justify the need for more than the one additional lock currently proposed. Furthermore, since increasing the amount of wait time or cueing for existing or proposed BMK residents to enter or exist the lagoons would not result in a significant physical impact on the environment, no basis for the additional significant impacts was found. Conversely, it could be argued that increasing the number of locks from the existing two, to four (instead of the three proposed in the BMK5 Project) would result in additional adverse impacts to the environment from the construction of the locks, displacement of wetland habitat, increased difficulty to control flood flows, increased maintenance costs to the BMKCSD, and increased time for the evacuation of BMK5 residences and emergency service personnel when using the emergency access route.

Increased use of the Sunrise Lagoon lock resulting from the proposed Project could increase the frequency of scheduled and unscheduled lock maintenance for the BMKCSD.

**Comment J-4: Health Safety of Reclaimed Water.** *Evaluate the public health acceptability of using reclaimed water for golf course irrigation. Has the use of reclaimed water been approved by the necessary agencies?*

**Response**

During the winter, secondary treated wastewater is discharged through the Novato Sanitary District's 54" force main pipeline to San Pablo Bay. The secondary level of treatment provided is adequate to protect the water quality of the Bay during the winter months. During the summer months, the Bay discharge is prohibited. Therefore, to comply with this limitation and to put this effluent to a more beneficial use such as land irrigation, the treatment is upgraded to an advanced level. The pasture lands on either side of Highway 37 are irrigated with this effluent during the summer months. This advanced treated wastewater is proposed to be used in the golf course area of the proposed project. However, secondary treated reclaimed water is proposed to be used in the seasonal marsh/agricultural area. In either case the use of reclaimed wastewater proposed is subject to approval by the Regional Water Quality Control Board and the Novato Sanitary District, which enforces standards established by the Department of Health Services under the California Code of Regulations, Title 22. With adequate controls (e.g., no uncontrolled runoff or excessive ponding) no adverse effects would be expected from the use of reclaimed wastewater meeting Title 22 standards. The EIR/EIS text has been revised to add this potential impact (see FEIR/EIS Volume One).

**Comment J-5: Location of roadways or public schools within Runway Protection Zone.** *The potential for conflict between certain public uses and the Hamilton Field Runway Protection Zone needs to be described in one detail. Is the proposed Hamilton Field Connector Road in the right location.*

**Response**

The proposed Hamilton Field Connector Road that is intended to provide additional access to the BMK community is correctly shown on Figure 2.A-1. The road alignment would cross an active Runway Protection Zone if the future plans for Hamilton Air Field include aviation (whether military or general aviation). Such a road would be inconsistent with Federal Aviation Administration (FAA) guidelines, and would pose as a potentially significant unavoidable impact to future residents of the BMK community and other persons using the Hamilton Field connector.

The DEIR/EIS discusses in several locations the potentially significant impacts that would result from siting the public school or fire station within the Runway Protection Zone. These discussions may be found in DEIR/EIS Sections 5.A Land Use, 5.G Noise, and 5.J Public Health and Safety, on pages 5.7 & 5.8, 5.189, and 5.230, respectively. In all cases, the impacts are assigned a Class I level of impact significance when considered as adjacent land uses.

**Comment J-6: Public Lagoon Access.** *The security risk created by the addition of a perimeter road with long stretches of public access to the lagoon is a major concern. Increased public access increases the vulnerability of homes and boats to vandalism. The developer has proposed a landscaped berm and fence for security, but the potential for uncontrolled access to homes from the water still exists. Public perception is that homes should front all lagoons. A public marina would also increase non-resident access to lagoons, and therefore increase the security risk. Discuss the security risk involved and the necessity of hiring a private enterprise to provide added security on the lagoon and in other open areas of the development. The impact level of the potential for increased safety and security problems resulting from increased public access to lagoons should be raised from level III to level II. A security analysis for each alternative should be provided in the FEIR.*

**Response**

The stated security concerns involving public access to the lagoons is discussed in the DEIR/EIS Section 5.J, Public Services and Utilities, on page 5.231. However, incidents of burglary have occurred even in the existing BMK community (that do front on the lagoons). Non-BMK residents were determined to be the suspects in at least one incident (A. Crowder, BMKCSD, personal communication). However, it would be inappropriate for the EIR/EIS to recommend (through mitigation measures) preventing public access to the new lagoons since both the old and the new lagoons would be considered "Waters of the U.S."

Discussions with the Marin County Sheriff's Department have not indicated that an unusual condition exists for the Bel Marin Keys Community that does not exist in most residential communities. Based on this analysis the impact level for potential access to rear-yards remains at Class III.

The impact of hiring a private enterprise to provide added security has been investigated by the BMKCSD. The principal drawbacks to such an undertaking would be the requirement for two persons on marine patrols and insurance requirements whether such a security service were land-based or marine patrol-based. This additional cost would place an additional burden on the BMKCSD's limited resources and is not considered feasible.

**Comment J-7: Emergency Access and Manual Lock Operation.** *The DEIR discussion of emergency fire access describes the manual operation of the lock in the event of a power failure. The FEIR should identify both the lock and the bridge as capable of manual operation in the event of electrical power failure. Additionally, the bridge could serve as an "emergency" egress in the event of an earthquake or flood.*

**Response**

The text of the DEIR/EIS has been revised in the Final EIR/EIS to include the clarification that manual operation of the retractable bridge over the locks is possible in the event of a power failure. The time necessary to operate the retractable bridge is between three and five minutes (A. Crowder, BMKCSD, personal communication).

**Comment J-8: Crime Rate.** *How would the proposed addition of 1,190 homes and a commercial center affect crime rate and emergency response times in the area?*

**Response**

The addition of 1,190 homes and a commercial center would not be expected to alter the crime rate. While the increased population would certainly add to the burden of the County Sheriff's Department, it would not be expected to significantly increase the existing response time, provided the second access roadways were in place. According to the Marin County Sheriff's Department, a generally accepted level of service when responding to a call is approximately six minutes (G. Perlow, personal communication).

For additional information on police and fires services for the BMK community area refer to the response to Comment K-2., Capacity of Police Services.

**Comment J-9: Emergency Access for Emergency Response Personnel.** *Emergency access roads to the community are inadequate, and the Novato Fire Protection District will not consider the addition of a new station unless additional access roads are added.*

**Response**

The Proposed project would fund and construct a sub-station for the Novato Fire Protection District at one of two potential sites within the proposed Project. The intention for this sub-station is to reduce the first responder response time for the Novato Fire Protection District to call from within the existing and proposed BMK5 community. The Marin County Sheriff's Department has indicated that the proposed Project would not unacceptably increase the response time for their ability to respond to calls from within the proposed or existing communities. In the latter case increased funding from the BMK5 community is presumed to provide additional staffing and vehicles to offset potential increases in response times. In the case of the Marin County Sheriff's Department the additional access road was cited as a condition for their ability to respond to calls from within the BMK community in an acceptable time frame (six minutes or less).

**Comment J-10: Hamilton toxics.** *The EIR must include a detailed list of toxic materials present on the Hamilton Hazardous Materials Site. The list should include listed materials, remediation method, and a detailed map showing present contamination and the probability and direction of lateral migration. Residents are particularly concerned about toxic materials in future runoff from Hamilton Field entering and contaminating the Unit 5 lagoons.*

**Response**

The Final EIR/EIS discusses the toxic materials known to occur on the Landfill 26 site of the Hamilton Air Field, the proposed remediation method, and an analysis of the probability of the contaminants migrating to the BMK5 site. The analysis is presented in Section 5.J, Public Health and Safety, on page 5.231. The EIR/EIS states " No evidence was presented to indicate that contamination might be spreading into the wetlands near the site. Surface water contamination also was not detected, as water samples taken upstream and downstream of Landfill No. 26 showed no significant difference in quality".

A detailed list of all toxic materials present on the Hamilton Air Field Hazardous Waste Site (Landfill 26 or other sites) is not possible since excavation of the landfill and characterization of toxic substances at the level of detail suggested by the comments has not been performed. However, the Remediation Investigation/Feasibility Study (RI/FS) performed on Landfill 26 is incorporated by reference into this EIR/EIS.

The primary contaminants in the soil/refuse zone at Landfill 26 were found to be petroleum hydrocarbons and, to a lesser degree, heavy metals, chlorinated pesticides, pesticide metabolites, and semi-volatile organic compounds -- especially polynuclear aromatic hydrocarbons (PNAs), several of which are carcinogens. All the reported contaminants are relatively immobile in the natural environment. Concentrations of several landfill contaminants, most notably lead and PNAs, were above regulatory guidelines and therefore high enough to classify the soils as hazardous wastes.

**Comment J-11: Miscellaneous Public Health and Safety Comments.** *The preliminary design does not include safeguards to prevent sailboat masts from coming into contact with overhead powerlines or to prevent these lines from arcing into masts. A safety cable, such as the one over the existing lock and bridge is recommended. This potential problem and mitigation should be referenced in Summary Sections pages S.17, S.19, S.65 and S.69.*

- *The discussion of electromagnetic radiation in Impact J.7 should include the potential effects of sailboat masts coming into contact with powerlines or those lines arcing into masts.*

- *Address the safety issues raised by locating houses adjacent to the golf course. Four holes appear to have golfers driving toward houses.*

- *Address the potential for hazardous materials to be present in dust generated by project construction.*

**Response**

Impact J.7 regarding the proximity to powerlines and electromagnetic effects has been revised in Section 5.J, Public Health and Safety, of the Final EIR/EIS (Volume One). The revisions reflect the U.S. Coast Guard proposed condition to provide a minimum vertical clearance of 85 feet above Mean High Water for any proposed BMK5 lagoon or lock areas that pass under electric power transmission lines.

Currently, the design of the golf course contained in the Master Plan application especially with regard to the final layout of the course is conceptual. The detailed design of the golf course would be completed during the development and approval of the Precise Development Plan. Nets and fencing may be necessary to protect certain homes from potential damage from errant golf balls.

The potential for hazardous material to be present in dust generated by project construction is considered low to nil, given the history of non-intensive agricultural use of the site. During construction there is always some potential for minor fuel spills from construction equipment. Any such spills would not be likely to raise significant public health concerns.

## K. PUBLIC SERVICES

**Comment K-1: Municipal Sludge Generation.** *Evaluate how much sludge will be generated by the Project and .. ..ate how it will be disposed of and/or used.*

**Response**

The commentor requests that an evaluation of the impact from an increase in municipal sludge be conducted. Municipal sludge is the solids that remain following the treatment of wastewater. Each residence from the proposed project would be expected to contribute to a net increase in municipal sludge that must be managed by the Novato Sanitary District.

The Novato Sanitary District (NSD) currently disposes of 1.5 million pounds of dry solids (municipal sludge) per year generated by the approximately 58,000 in its service area. The additional population attributed to the BMK5 Project would constitute an approximate 6% increase in dry solids generation that would need to be managed. According to the NSD, this would not significantly affect its solids management program.

Currently, the Novato Sanitary District disposes of all their municipal sludge through land application on 15 acres of dedicated lands north of Highway 37 in Marin County. The NSD estimates that the 15 acre sludge disposal area contains sufficient capacity for the projected quantity of sludge to be disposed of by the NSD for at least 50 years. Additionally, NSD has indicated that since the sludge disposal lands are diked historic baylands ongoing settlement may extend the lifespan of the sludge disposal area significantly beyond the current 50-year horizon.

**Comment K-2: Capacity Of Police Services.**

- *Discuss the impacts on the Marin County Sheriff's Department including required manpower, budget and compare existing and proposed emergency response times, and number of patrols. Evaluate the anticipated increase in crime rate.*

**Response**

The commentors request that the impacts of the proposed project on the Marin County Sheriff's Department be discussed in the DEIR/EIS. A discussion of the existing levels of service (manpower and patrols) provided by the Marin County Sheriff's Department is provided in the DEIR/EIS on page 5.235. Anticipated impacts resulting from the proposed project and proposed mitigation measures are presented on pages 5.243 - 5.244 and pages 5.248 - 5.249, respectively. The text of the EIR/EIS has been amended (see Volume One of FEIR/EIS) to provide additional clarification of the anticipated effects to the Marin County Sheriff's Department.

Based on an assumed persons per household and vacancy rate (see Section 5.0 of the DEIR/EIS) the proposed development would add approximately 3,017 persons to the Bel Marin Keys population. Assuming a ratio of approximately 1.0 to 1.6 Sheriff's patrol officers per 1000 persons, the addition of three officers and three patrol vehicles would theoretically be required to provide a level of service recommended by a federal standard.

The emergency response times for the existing Bel Marin Keys Units 1-4 is between 5-10 minutes, depending on the time of day. The projected response times for the proposed development would remain essentially the same, according to the Marin County Sheriff's Department and assuming both the addition of the patrol officers and vehicles stated above and the completion of a second access connector to the BMK community.

The budgetary impact of the proposed development on the Marin County Sheriff's Department is discussed for each proposed development phase in section 5.N, Fiscal Economics. Please refer to response to Comment J.8 regarding crime rates.

**Comment K-3: School, Community Park and Fire Station Sites.** *Evaluate the phasing and need for reserving a combination school and community park site and a fire station site.*

- *Identify impact on need for (and provision of) a new school if project is reduced in size.*
- *The existing and proposed Bel Marin Community needs to reserve a fire station and school site, the appropriate time to make a decision will be at the precise development plan stage when more detailed information is known.*
- *Evaluate the cumulative impacts to school services, specifically the Hamilton and Renaissance Developments on the entire educational system.*
- *Clarification of the school bus service program.*
- *Clarification of site acreages for school and community park.*
- *Evaluate why construction of the Fire Station is based on the completion of the first 100 units.*

**Response**

The need for an elementary school site if a reduced size project is constructed would require the Novato Unified School District to analyze essentially the same factors (for the need and location of a school) that they would if the proposed Project is approved, namely:

- The projected number of Kindergarten through grade 6 children that are projected to attend such a school,
- The selection of the optimal school site based on the number of sites available, and
- The number of new and existing residential neighborhoods that would potentially utilize the school site chosen.

The decision regarding whether a new school is needed would be made following the County approval of the Precise Development Plan for BMK5, Hamilton Field Project, Renaissance Estates at Black Point, or other demographic factors that would be considered by the school district. However, a substantially reduced development at the BMK5 site (e.g. Reduced Size Alternative) would likely eliminate the need for a school site at this location. Please refer also to responses to Comment ALT-2.

The EIR/EIS analyzes the need for the BMK5 Project to reserve a school and fire station sites as proposed by the Project Sponsor. The Novato Unified School District, agrees with the EIR/EIS assessment that a school site should be reserved. The trustees of the Novato Unified School District would select the location of a new Kindergarten through Grade 6 school following County approval of a BMK5 Precise Development Plan and upon review of the other proposed projects that may be constructed in the area. The DEIR/EIS Project Description and Public Services and Utilities sections discuss the proposed school and fire station site reservation program on page 2.4 and 5.246, respectively.

The Novato Fire Protection District has indicated that the need for a fire sub-station would be determined following review of the BMK5 plans. The proposed Project retains at least one site (the 7 acre site adjacent to Headquarters Hill) that the Fire District has indicated is potentially suitable.

The DEIR/EIS provides an evaluation of the cumulative impacts on educational services in Section 5.K, Public Services and Utilities on page 5.248. An evaluation of the fiscal impact on education services is provided in the DEIR/EIS Section 5.N, Fiscal Economics on pages 5.277 - 5.282.

Further clarification of the School Busing Program is provided in the Final EIR/EIS (Volume One), Section 5.K.

The acreages stated in the Final EIR/EIS for the area reserved for a school site have been corrected on page 2.16, (DEIR/EIS page 2.9), 5.230, and 5.248 to reflect a 10 acre school site and a 10 acre community park site. To further clarify the impact on school services the DEIR/EIS has been amended in the Final EIR/EIS (Volume One).

The proposed mitigation measures in the EIR/EIS are intended to reduce or avoid the significant impacts of the proposed Project. Although some benefit to the existing BMK community would be realized by the completion of the Novato Fire Protection District BMK substation, the proposed mitigation measures are not required to correct adverse existing conditions (excessive fire response times). The provision of requiring an operational fire station before completion of the first 100 units is intended to ensure that an operational fire station would be completed before the significant impact of excessive response times to the new community is realized.

**Comment K-4: Novato Sanitary District's Force Main and Seasonal Marsh.** *Assess the potential impacts of seasonally flooded marsh/agricultural area on wastewater force main and outfall (Novato Sanitary District) and identify mitigation measures.*

- *Proposed seasonal flooding of the 247 acre marsh/agricultural area would be a significant impact unless properly mitigated to allow access to the force main. This issue should be considered a significant impact and mitigation should require the developer to design the marsh so as to provide adequate access to the force main.*

**Response**

The Novato Sanitary District (NSD) submitted comments on the DEIR/EIS text with respect to their force main outfall pipeline and easement that crosses the BMK5 site (see Comment

Letter LA-2). To provide further clarification of the existing easement conditions the text of the DEIR/EIS Section 5.K, Public Services and Utilities is amended in the Final EIR/EIS (Volume One).

As a result of the NSD clarification of the conditions contained in the existing easement, the force main portion of Impact K.10 has been separated into a new impact, K.10a. The significance level for impact K.10a is Class II, or significant before the implementation of mitigation measures and less than significant following mitigation measure completion. Figure 4.A-2 depicts the existing pipeline easement corridor.

In summary, the conditions of the NSD easement require that year-round access to the 54-inch force main be provided. Additional mitigation measures included in the Final EIR/EIS include the construction of a roadway above the elevation of the flooded seasonal marsh area that will provide all-year access to the 54" reinforced concrete pipeline.

**Comment K-5: North Marin Water District Water Service.**

- *The Precise Development Plan approval by the County is required before a water agreement can be approved. The Project Sponsor must complete arrangements for construction of additional Zone A storage, in-tract pipelines, and off-tract pipelines (to connect the existing NMWD distribution system) before a water agreement and service can be offered.*

- *The new Marin Municipal Water District bypass aqueduct (Novato bypass) is now complete.*

- *A more recent analysis of water use in single family detached homes indicates the demand during the average day of the peak month of the year is 636 gallons.*

- *The DEIR should note the relationship of water consumption, potentially as high as 925 acre feet per year (520 acre-feet/year if the golf course uses recycled water only) ,to project size and composition.*

**Response**

Commentors have requested an evaluation of the relationship between water consumption and project size/composition. The amount and type of landscaping, the clustering of residences, residential construction utilizing dual plumbing, and the installation of water conserving appliances will decrease water consumption. Additionally, the size of a proposed residential project, including BMK5, will incrementally increase the amount of water that would be consumed. Current water consumption estimates for residences in the Novato area during the average day of the peak month is 636 gallons for each residence.

According to the North Marin Water District (NMWD), the rate of consumption for townhouses/condominiums is approximately 80% of that for single family detached residence. This reduction includes irrigation requirements for townhouse common areas and landscaping.

According to the NMWD, the BMK5 project will not significantly affect their ability to supply existing or future water users. The BMK5 project has been included in the NMWD's future projections of needed water capacity, and with the recent completion of the Novato bypass by the Marin Municipal Water District (southern Marin's water district that was using NMWD facilities until last year to transport Russian River water to their facilities) the full capacity of NMWD's facilities can be utilized. Intertie agreements between NMWD and the Marin Municipal Water District will result in even greater efficiencies in water use in the future. Further clarification of the existing and future raw water supplies can be found in the FEIR/EIS (Volume One), Section 5.K.

The NMWD requirements for the use of reclaimed treated wastewater for the proposed golf course and large turf/landscaping areas will result in greater efficiency of water use.

**Comment K-6: Water as a Natural Resource.** *Evaluate impacts of water consumption and the depletion of a natural resource.*

- *Evaluate the impacts of increased demand for water as a depletion of a natural resource.*

**Response**

To clarify the relationship between the size and composition of the proposed project and water consumption the DEIR/EIS is amended in the Final EIR/EIS in Section 5.K, Public Services and Utilities on pages 5.237 through 5.238, 5.244 through 5.245, and 5.249. Impact K.7a has been added to the Final EIR/EIS, Volume One. The text of impact K.7a is as follows:

Impact K.7a:

The Proposed Project would result in an increase in the use of water, a natural resource. This impact is not considered significant (Class III).

The proposed project would result in the depletion of a natural resource, namely water. However, the North Marin Water District (NMWD) has indicted that the BMK5 Proposed Project has been included in their projections of future water service demand and current fresh water supplies have been allocated to the MNWD to meet the demand projected by the Sonoma County Water Agency (the supplier of NMWD's Russian River Water). Specifically between 520 and 925 acre-feet of water per year has been allocated for the BMK5 project. Additionally, an unallocated reserve of Russian River water currently exists in addition to that committed under the Sonoma County Water Agency's existing eight contracts.

**Comment K-7: Golf-Course Irrigation Using Reclaimed Water.**

*The Project Sponsor must provide capital financing for the reclaimed water treatment and distribution facilities necessary to deliver reclaimed water to the proposed golf course.*

*Preliminary indications are that the least cost alternative is to modify the Novato Treatment Plant to provide reclaimed water.*

*The DEIR report contains very little detail in regards to the proposed golf course and serving same with recycled water.*

**Response**

As discussed in the DEIR/EIS Section 5.K, Public Services and Utilities, the Project Sponsor has agreed to provide capital financing for the reclaimed water treatment and distribution facilities necessary to deliver reclaimed water to the proposed golf course. Subsequent discussions with the North Marin Water District (NMWD) confirm statements, contained in their BMK5 Draft EIR/EIS comment letter. (Letter LA-4)

These findings are as follows:

> A recent feasibility study by the Novato Sanitary District and NMWD to investigate the use of reclaimed water from the Novato Sanitary District indicate that the least cost alternative is to modify the Ignacio Treatment Plant Reclamation Facility to produce filtered advanced treated water for golf course irrigation purposes. The scope of work, agreed to and funded by the Project Sponsor, did not consider providing reclaimed water to wetlands areas on the proposed Project. A draft report has been received by the NMWD addressing recycled water service to the golf course and it appears that this proposed use is feasible. This report has not had benefit of review by the Sanitary District, Water District, or the Project Sponsor and therefore has not been released to the public.

Assuming the final report shows recycled (advanced treated) water as cost-effective, the Project Sponsor would be required to use recycled water for irrigating the golf course and all large turf (over 5 acres) areas. The feasibility study assumes that storage ponds located on the proposed golf course would be used for pumping by the golf course owner for irrigation system use. These requirements are contained in the NMWD guidelines for water service.

**Comment K-8: Miscellaneous Public Services and Utilities Issues.**

- *Phasing of construction of elements that provide public benefit,*
- *Would the existing and proposed BMK5 utilities wiring be placed underground? Would new wiring include the use of fiber optic cables?*
- *The use of maximum energy and water conservation techniques and devices is recommended.*

**Response**

Several of the "public benefit" elements are to be constructed before or during the completion of Phase 1. The commentor is correct in that some of the public benefit elements of the proposed project would not be completed until the later stages of the project. Examples of elements that would be completed before or during Phase 1 are as follows:

- Construction of new lock on Novato Creek,

- Construction of the Hamilton Drive Extension,
- Completion of a new fire station,
- Location of new school site,
- Financing in-place for new Zone-A finished water reservoir/fire flow pipelines/off-tract pipelines, and
- Designation of a dredge spoil disposal site.

Speculation of what would happen if the developer fails to complete construction of the proposed Project including any particular public benefit element, would not be appropriate in a CEQA/NEPA document. Delays in construction and even termination of projects can occur for a variety of reasons. A determination of which public benefit elements would still be completed or conversely which ones would not can only be determined after future events have occurred. The best protection to the local community is to follow their own land-use planning process and guidelines for providing input into the selection of proposed mitigation measures. The Marin County Board of Supervisors may wish to require that the Project Sponsor post sufficient Bond or reserve financing to complete particular public benefit mitigation measures.

This EIR/EIS has provided performance standards for the implementation of proposed mitigation measures. Such standards provide the public and the lead agency with a means to determine if a particular mitigation measure has been completed or implemented satisfactorily. Additionally, such performance standards also attempt to provide a greater assurance that if a project is approved for construction than certain safeguards will be in-place with regards to financing mechanisms for the implementation of mitigation measures.

BMK5 wiring systems, placement, and material specifications would be designed following approval of a Master Plan application and specifically during the Precise Development Plan project approval stage. A determination of cable types i.e., fiber optic cables would also be determined at that approval stage.

## L. CULTURAL RESOURCES

There were no specific comments submitted with regard to cultural resources. However, some additional analysis of cultural resources has been completed subsequent to DEIR/EIS publication and is provided as Appendix O of the Final EIR/EIS, Volume Four. Section 5.L, Cultural Resources, in Volume One of the FEIR/EIS has been revised to reflect the additional information. The additional analysis did not result in any materially different conclusions with respect to potential for impacts.

## M. AGRICULTURAL RESOURCES

**Comment M-1: Seasonal Agricultural Use.** *Describe in more detail operation and function of the proposed 247-acre seasonal agricultural site.*

*The FEIS should address the potential for securing a firm and adequate volume of fresh water necessary to ensure the proposal's success. Potential water sources, acquisition and delivery costs, legal/policy requirements and obstacles, and the logistics of delivering fresh water to the site should be presented, as well as the effects of using reclaimed water versus water from Pacheco Pond.*

- *Discuss the feasibility of dual-function seasonal marsh and agricultural land. Include the effect of flooding the freshwater marsh from the adjacent brackish lagoon, and the timing involved of pumping out the marsh for agricultural use in spring.*

- *Evaluate the financial viability of growing oat-hay on a parcel of less than 500 acres. If this area is too small to be sustainable for oat hay, identify other potential agricultural uses Would its agricultural viability be diminished if it were flooded part of the year.*

**Response**

Potential water sources for the managed seasonal marsh agriculture area include treated effluent from the Novato Sanitary District, potable water from the North Marin Water District, rainfall accumulation from the Bel Marin Keys community, well water, or brackish water from either Pacheco Pond or Novato Creek. Each of these water sources have some drawbacks associated with them such as supply, water quality, or delivery. In view of California's recent drought potable water is generally viewed to be an inappropriate use for seasonal flooding although such water supplies are currently available.

The most likely source of water would be from the Novato Sanitary District (NSD). The NSD could potentially supply secondary or filtered advanced treated wastewater. The availability of higher quality filtered water or secondary water from the force main (or a new pipeline) for winter flooding has not been secured from the NSD[1].

The Project Sponsor would bear the costs for supplying whatever water supply was eventually chosen. These costs could include providing the necessary funding to upgrade the NSD Ignacio Reclamation Facility to supply the additional advanced treated water for both the seasonal marsh, summer agriculture, and irrigation of large turf areas on the proposed BMK5 golf course. All of these suggestions are speculative at this time since the managed seasonal marsh and farmland area is a programmatic component of the proposed Project. Further discussion of this component is provided below.

The proposed Project would retain approximately 247 acres of the 1,610 acre site as a managed seasonal marsh and farmland area. The design for the seasonal marsh and farmland area is currently developed in concept only. A detailed management plan for this area would be developed during the Precise Development Plan stage. Subsequent environmental analysis would be required. Consequently, many of the questions raised in the comments cannot be answered at this time. However, as noted on page 35 of this document,

agricultural use and habitat preservation are compatible in many respects. County policy for such dual use specifically promotes both uses without emphasizing either over the other. Discussions with the North Marin Water District and additional details contained in the Master Plan application provide some additional general information on the operation of the proposed seasonal marshland. These details are presented below and in the FEIR/EIS Volume Four, Appendix K:

> The managed seasonal marsh management scenario would presumably be initiated in the fall of each year. The area would be flooded with secondary treated wastewater from the Novato Sanitary District's 54" reinforced concrete force main outfall pipeline (secondary treated wastewater is the treatment level of the effluent currently discharged through the pipeline). This pipeline is located approximately 3 feet below grade and crosses the proposed 247 acre area from west to east. Other than rainfall no additional water is currently anticipated. The Novato Sanitary Disrtict has indicated that their pipeline easement would be violated if all year access to their pipeline were not maintained. This restriction could require a road to be constructed on top of the existing pipeline easement to allow access to the force main pipeline during the winter months.
>
> In the spring of each year, the area would be drained. The details of this operation are not available. However, the water from the seasonal marsh could not be pumped into San Pablo Bay without obtaining Regional Water Quality Control Board approval and a National Pollution Discharge Elimination Permit (NPDES). Additional operational permits may be necessary.
>
> Following the drying of the soil (presumably by natural evaporation), the farmland would be managed to produce grass, or other crop types to produce "green chop" or one of the ingredients for the production of silage feed. The exact management plan including the length of time necessary for natural drying to allow the soil to be worked would greatly influence the crop type that could be grown during the "growing season".
>
> The seasonal marsh and farmland would not be implemented until Phase 3. The future management of this area might not be secured until Phase 2. At that time capital investments into equipment would become feasible. To attempt to determine what the costs, crop types and the feasibility (profitability) of agriculture in this area at this time would be speculative without a detailed management plan. Such a mangement plan would contain information on the length of the growing season, water source (quantity or quality), as well as financial feasibility and criteria for selection of crop.
>
> As described in the DEIR/EIS, page 5-269, continued oat hay production on the site of less than 500 acres would not be financially viable. The planned seasonal flooding of the agricultural land on the site would further reduce the site's viability to produce other higher value crops such as corn.

**Comment M-2: Agricultural Productivity.** *Use measures other than 1990 crop data to evaluate significance of agricultural productivity.*

- *Discuss the value of hay production provided by the land in question as well as the relative value of agricultural lands. Hay production in Solano County should have been included in the analysis to determine whether the loss of oat hay production is a significant impact. A significant reduction in local forage resource would probably make Marin County and North Bay dairies and horse ranches more reliant on imported forage. These impacts are not discussed in the EIR.*

- *The discussion of viability of agriculture on the site is limited to historical uses. These historical uses should include beyond the 1990 harvest, and the potential for more intensive agricultural use should be evaluated.*

- *The issue of mitigation for the loss of agricultural lands should be revisited. The mitigation measures presented in the DEIR/EIS are unacceptable.*

**Response**

The Draft EIR/EIS in Section 5.M, Agriculture discusses the current value of the oat hay crop in relation to oat hay and total agriculture within Marin, Sonoma and Napa Counties. This is an adequate regional context in which to determine whether loss of oat hay production is a significant impact. The EIR/EIS considers the loss of agriculture land that is considered Farmland of Local Importance a significant unavoidable impact of the proposed project.

The EIR/EIS does provide a general evaluation of "potentially more productive [agricultural] land uses of the site" on pages 5.263 and 5.267. Of particular relevance is the paragraph that states that with longer leases and proper soil management the soil classification could be raised to Level II, which would qualify it for prime agricultural land designation.

The comment concerning acceptability of mitigation measures for the loss of agricultural lands on the BMK 5 site is acknowledged. The EIR/EIS concludes that this is an unavoidable, significant adverse environmental effect of the project as proposed.

**Comment M-3: Relation to State and Federal Acts.** *Discuss agricultural conversion in relation to Farmland Protection Act, Williamson Act.*

- *A discussion of impacts on Williamson Act contracts and the provisions for contract nonrenewals and cancellations.*

- *The degree of consistency with the Farmland Protection Act should be demonstrated, as should the extent of loss of any lands which the EPA has designated Environmentally Significant Agricultural Lands.*

- *These are farmlands in or contiguous to environmentally sensitive areas, farmlands important for waste utilization, and farmlands with significant capital investments in best management practices.. One letter provides a list of possible alternatives and mitigations to lessen the impacts of the project.*

- *A discussion of agricultural conversion should include a map identifying agricultural land use.*

**Response**

The Project site is not currently covered by a Williamson Act contract. Consequently the Williamson Act does not apply to the proposed Project.

The federal Farmlands Protection Policy Act (Act) (see also Comment A-4) sets out the guidelines and criteria for federal agencies to identify and take into account the adverse effects of their programs, to consider alternative actions that could lessen adverse effects and "to ensure that their programs, to the extent practicaable, are compatible with state and units of local government and private programs and policies to protect farmland".[1] The relevant federal "program" in this instance is assertion of Corps of Engineers' regulartory authority over wetlands and consequent NEPA review.

The applicability of the Act to the BMK5 site is discussed in the DEIR/EIS on page 4.56. The Act lays out a two step procedure for determinimg whether prime farmland exists on a project site proposed for conversion from agricultural to nonagricultural uses, and for evaluating its relative value. The responsible federal agency (in this case the Corps of Engineers) must first submit a request to the Soil Conservation Service to determine if the site is subject to the Act. The SCS then would measure the relative value of the site as farmland on a scale of 0 to 100 according to criteria contained in 7 CFR Part 658. The SCS then applies a site assessment to obtain a combined score. Once this score is computed the United States Department of Agriculture (USDA) makes appropriate recommendations in accordance with the priority of the site for preservation.

An informal review of criteria reveals that the Project site would fall short of being considered prime farmland by USDA SCS and thus would not be designated for preservation under the Farmland Protection Policy Act.

A figure depicting the spacial location of other agricultural land use parcels is not necessary in order to assess the significant impacts from the loss of agriculture or oat hay production on this site.

**Comment M-4: Land Use Conflicts.** *Oat hay fields are not only a nuisance to those with allergies, but burning of these fields force mice to move into adjacent homes. Replacing oat hay fields with Unit 5 may cause nuisances during construction, but when completed there will be a new lagoon with more fish, seagulls, etc. The DEIR fails to address the negative impacts of agricultural land on the adjacent residential community.*

**Response**

Although the existing agriculture use of the proposed Project site is generally viewed as a positive aesthetic landscape feature, this does not mean that continued use of the project site for oat hay production is compatible with other land uses or without adverse effects (see also Comment A-2). The commentors suggested several evident adverse environmental effects (pollen and dust allergies and periodic exposure to smoke from agricultural burning).

Additional adverse effects associated with the continued use of the site for oat hay production include vector control requirements (mosquitos, mice and small mammal controls), generation of dust and particulate matter following harvesting, and potential discharge of agriculture pollutants (lime, fertilizers, pesticides) into surface waters.

**Comment M-5: Agriculture Production Analysis.** *Include Solano County in the Agriculture Production Analysis. Include Solano County in the North Bay hay production figures.*

**Response**

The intention of the EIR/EIS agriculture production analysis is to compare the Project site oat hay production with other "local" areas within the three-county region that constitutes most of the North Bay. Even though Solano County would be expected to produce considerable hay among its other agricultural products, the only area that could be considered "local" would be the southwestern corner of the county (west of Vallejo). Consequently, Solano County was not included.

## N. ECONOMICS AND FISCAL

**Comment N-1: Costs of Project Elements.** *Estimate costs and analyze fiscal impacts of the following project elements or effects:*

- *increased maintenance dredging of the channel, Novato Creek, lagoons and inlet culverts resulting from the increase in boat traffic, and decrease in flood flows,*
- *cost to the County of dredging the proposed new channel,*
- *water quality impacts resulting from decreased water velocity and flushing in lagoons during flood season, in channel and creek from circulation from channel;*
- *pump operation required for continuous discharge of salt water back into San Pablo Bay;*
- *the real costs of the proposed amenities including the marina and golf course;*
- *maintenance of flood control structures;*
- *subsidence of roads, and possibly buildings;*
- *dredge soil disposal and maintenance of mitigation measures for wetland fills;*
- *management of the conversion of the mudflat from spoil site to shorebird habitat and maintenance of appropriate water depth;*
- *increased lagoon flushing schedule;*
- *the internal operation costs to the BMK CSD for routine management of the community, including dredging and flushing of the lagoons and creek, landscaping, maintaining water quality, locks, wildlife habitats, street lights, levees, parks and other public areas;*
- *Funding of the "ultimate street system." What would be the cost and the "proportional share" of the project sponser? How much other development would need to occur to fully fund this mitigation?*

*Also, identify the financially responsible parties or the source of funding for:*

- *dredging activities, and dredge spoil disposal;*
- *the golf course, marina and other public facilities in the event that Venture Corp. were to pull out of the project after completion;*
- *costs not covered by property tax revenues;*
- *capital costs for expansion of public service facilities;*
- *residents responsible for dredging expenditures. Would residents of non-waterfront developments also be required to contribute?*

**Comment N-2: Impacts to BMK CSD.** *Analyze fiscal impacts on BMK CSD. Will revenues generated by the proposed project offset costs for increased services, including management, of BMKCSD. All implied costs to the District should be identified more clearly and quantified. These include:*

- *new cost factors such as monitoring and maintenance of the seasonal marsh/agricultural land, management and pumping of the managed mudflat/shorebird habitat, increased dredging of the lagoons and Novato Creek, increased flushing of the lagoons, flood control expenses, and potential provision of backup to the County Sheriff Department for maintenance of water safety and security;*

- *routine management costs incurred by the BMK CSD, including dredging and flushing of lagoons, dredging of Novato Creek, landscaping, maintaining water quality and wildlife habitats, and the inspection and monitoring , maintenance and repair of street lights, locks, levees, parks and public areas. Would these costs be compensated by increased revenue from the proposed development. Are any portions of the new revenues designated for particular projects such as flood control?*

- *Would the costs to the BMK CSD exceed the tax revenues and increased economic base resulting from the project? How would this vary with differing numbers of homes? How would the commercial center affect the tax base? Would the CSD form of government continue to be viable, either fiscally or operationally, with the addition of the propose development?*

- *Evaluate the levels of the fiscal impacts of certain measures, specifically management of the perennial mudflat/dredge spoil site, increased flushing schedule of lagoons, and mitigation of the cumulative impacts of dredging, resuspension of sediments and lagoon flushing. Is cost to the District considered when assessing level of impact? An example is B.21. mitigation of the cumulative impacts of dredging, resuspension of sediments, lagoon flushing etc. is stated to be the responsibility of the BMK CSD. This is a long-term commitment of significant funds, yet it is classed as a Class III impact.*

**Comment N-3: Capital Costs.** *Identify the capital costs for expansion of infrastructure and facilities necessary to accommodate the project. Identify which party or parties incur the responsibility of providing funding for the capital costs.*

**Response (to Comments N-1, N-2 and N-3)**

This set of comments asks for cost information on specific project components that, for the most part, cannot be estimated at this time. The estimates that are requested would be highly speculative. Therefore, this response summarizes the information that is available, regarding the financially responsible parties or sources of funding for various project components that are of concern to the commentors. It also describes some approaches for protecting the County of Marin and its taxpayers from unforeseen fiscal burdens that could potentially occur due to the project. It is the potential for these fiscal burdens that has given rise to many of the concerns expressed in this set of comments.

Dredging. The maintenance of lagoons in Bel Marin Keys involves periodic sediment removal, which is the responsibility of the Bel Marin Keys Community Service District (BMK CSD). The newly created lagoons in BMK5 would be excavated to a depth that would preclude the need for dredging for many years, but sedimentation would be expected near the new lock entrance. The increased lagoon areas for BMK5 could increase very minimally the requirements for maintenance dredging within the Bel Marin Keys community.

According to the CSD, major dredging at approximately five-year intervals is necessary because Bel Marin Keys waterways silt up rapidly after dredging. This is an existing permitted activity that is unlikely to change significantly with addition of the Unit 5 expanded lagoon and increased boating activity. The Project Sponsor is working with the BMK CSD to determine the probable frequency of dredging the Novato Creek and San Pablo Bay boat navigational channel in order to develop a permanent dredge material disposal program. The Project Sponsor has proposed a permanent disposal site as part of the BMK5 project area. The availability of this permanent disposal site would be a significant benefit to the CSD and, indirectly, the whole Bel Marin Keys community.

Fiscal Impacts of the Project on BMK CSD. A number of commentors note the increase in responsibilities that would be experienced by the Community Service District if the project were approved. These responsibilities could include monitoring and maintenance of the seasonal marsh/agricultural land, management and pumping of the managed mudflat/shorebird habitat, increased dredging of the lagoons and Novato Creek, increased flushing of the lagoons, flood control, and maintenance and repair of street lights, locks, levees, parks and public areas.

Maintenance costs for park land and landscape maintenance for BMK5 by the CSD are projected to be $153,000 per year, based on 22.5 acres and costs of $6,800 per acre (BMK CSD, 1991). Private recreation facilities in the project would be maintained by individual owners or homeowner associations. Estimated annual costs for street lighting would be approximately $14,000 at buildout, base on $15.24 per light and one light per 80 feet of public street (Community Electric, BMK CSD, 1991). Project residents would make use of the new Unit 5 lock to be maintained by the CSD. The annual cost for maintaining the existing lock, which serves Bel Marin Keys Unit 3 and 4, is approximately $13,000. The BMK SCD would maintain the new lock when completed. The project could increase the demand for CSD general services, which falls in to a wide range of activities. Presently such general services cost about $150 per home per year, or an estimated $202, 300 for Bel Marin Keys Unit 5 at buildout. No additional costs are estimated here for dredging the expanded lagoon, because siltation in the lagoon would be controlled primarily by locks operation. The property tax revenues generated by the Unit 5 project would help to pay for the maintenance dredging of Novato Creek. Annual total costs to the CSD, then, would be about $382,300 at buildout.

The CSD receives a portion of Unit 1-4 property taxes and revenues from special levies, such as bonds for dredging and operation of the locks. As noted in the DEIR/DEIS (p. 5.241), the District's projected budget for Fiscal Year 1990/91 was $228,000. The fiscal impact analysis in the DEIR/DEIS concludes that the CSD would receive $703,732 per year from property tax revenues at full buildout of the project as proposed. Added to existing

revenues, this amount would result in a quadrupling of the District's budget over 1990/91. and provide a net annual budget surplus of about $321,400.

To ensure that the CSD does not incur an adverse fiscal impact due to the proposed project, a mechanism for increasing the allocation of funds for the BMK CSD could be incorporated into the residential fee structure in order to assure the District of adequate funds to maintain the services provided to the Bel Marin Community. The Project Sponsor should verify that consultation has occurred with the BMK CSD regarding the level of funding necessary to provide services. In addition, the County needs to approve of the mechanism to increase the allocation of funds to the BMK CSD. Both of these activities should be included in the Administrative Record prior to the Tentative Map approval.

Capital Costs for Expansion of Infrastructure and Facilities. Extensive information on the capital costs for expansion of infrastructure and facilities necessary to accommodate the project is contained in Section 5.K, "Public Services and Utilities," and Section 5.N, "Fiscal Economics," of the DEIR/DEIS. This response summarizes that information.

Fire Protection. Financing for construction of a fire substation would be provided by the Project Sponsor. The DEIR/DEIS contains the following mitigation for impacts to fire protection services: The fire station site, building size, building configuration and specifications should incorporate the requirements of the Novato Fire Protection District (NFPD). The cost for the fire station construction and fire engine should be borne by the developer. Construction financing for the BMK Novato Fire Protection District should be secured prior to approval of the Tentative Map. The station should be fully operational by the end of the construction of the first 100 dwelling units. This mitigation was proposed by the Project Sponsor.

Police Protection. The proposed Project would increase the demand for services from the Marin County Sheriff's Department. The additional police protection services would include sheriff's scheduled patrols, calls for assistance, and marine (water) patrol services. Additional patrol deputies and patrol vehicles are estimated at an annual cost of $56,600 per deputy and annual maintenance costs of $6,850 per patrol vehicle. These additional costs to the County could be accommodated within the net new revenues to the County of about $1 million that would be generated annually by the project. (See Response to Comment APP-4.)

Transportation and Circulation. The Project Sponsor proposes to pay a "fair share" of the construction costs for projected improvements to the Highway 101 and Bel Marin Keys/Ignacio Boulevard interchange. The costs would be financed through development fees or through the formation of a proposed special assessment district. The Project Sponsor also proposes to pay a "fair share" for two other improvements, termed "second access" roads: (1) the acquisitiion of ROW and construction of a local two-lane minor arterial street connecting BMK5 and Hamilton Field; and (2) necessary improvements for a Hamilton Drive extension to Highway 37. The Project Sponsor would also be responsible for providing a stub road to connect to the boundary of Hamilton Field. The Hamilton Drive Extension would require signalization at the intersectiion of Frosty Lane and Bel Marin Keys Boulevard. A mitigation measure in the DEIR/DEIS recommends that completion of the second access roads should occur prior to completion of Phase 1 development.

Water. The Project would increase the demand for water service beyond the North Marin Water District's existing Zone A or low-elevation local water storage capacity. The existing Zone A storage capacity serving the BMK5 is fully committed. A new storage reservoir would be required to serve this project. The Project Sponsor has proposed that arrangements be completed with the North Marin Water District for the construction of additional Zone A storage and in-tract pipelines prior to receiving Precise Development Plan approval from the County. Verification of construction financing and the proposed location of the Zone A storage and in-tract pipelines should be included in the Administrative Record for the proposed Project. Costs associated with construction of these facilities would be the responsibility of the Project Sponsor. The Project Sponsor should provide verification for all Zone A water storage and in-tract pipelines, including property rights, easements and financing arrnagements, prior to receiving Tentative Map approval.

Schools. At buildout, the proposed Project would generate approximately 475 additional students. This number would exceed the capability of the elementary schools in the southern portion of the Novato Unified School District. It appears that a new elementary school facility would be needed with development of Phase 2. The Martin Group Hamilton Field and BMK5 development proposals would affect the need, timing, and the location of the elementary school. The Project Sponsor includes provisions in the Master Plan for a 20-acre site for a school/park combined use.

Solid Waste. No adverse impacts to solid waste collection are anticipated due to the construction of the proposed Project. With recycling programs in place, that solid waste generated from the proposed BMK5 development could be accommodated by existing and planned landfill operations.

**Comment N-4: Neighborhood Commercial Center.** *Evaluate need for and potential viability of commercial center (See also Land Use). Compare with similar shopping centers in Novato which have larger service populations, yet are struggling financially. Demonstrate whether the impacts associated with its construction are greater than the need. Evaluate the economic impacts associated with providing boat slips for shopping by boat.*

**Response**

From the perspective of good land use planning, it is usually desirable to place residences near to places of work and shopping. This minimizes the length of trips between home, work and stores, thereby alleviating traffic congestion and air quality degradation. The commentor asks about the need for and potential viability of the proposed commercial center in BMK5. While a market feasibility study is beyond the scope of work for this EIR/EIS, some general comments about shopping patterns can be made. First, the proposed Commercial Village in BMK5 is of a size that qualifies it as a neigborhood-serving center, with likely anchor tenants being a grocery store and a drug store. The anchor stores are proposed at a size (40,000 sq. ft. and 25,000 sq. ft., respectively) that would make them full-service, rather than just convenience, stores. Market studies have consistently shown that shoppers tend to patronize stores within a 1-1/2 mile radius from where they live, unless they are comparison shopping or intending to purchase a "big-ticket" item, such as an appliance.

There are no existing shopping centers in the Bel Marin Keys community, thus, there is an appropriate market for a neighborhood-serving center. Is this market large enough to support the proposed commercial center? The existing population in Units 1 - 4 is about 2,000 persons. The proposed project would add another 3,330 for a total of about 5,330 in the Bel Marin Keys community. To this should be added the number of workers that would be employed at the commercial center -- roughly 375, assuming about 400 sq. ft. per employee overall. Just to explore some general numbers, let's say disposable income per capita of the residents and employees is about $12,000. If half this amount were available to be spent on basic items, like groceries, sundries, fast food and regular restaurant meals, the proposed commercial center could capture up to $34,200,000 in annual sales, or about $228 per sq. ft. This figure is at the high-end of the range for sales in this kind of commercial facility. Whether or not this level of sales could be realized depends on the type and quality of stores that locate in the center and how well they market their products to the community. For example, the relatively remote location of the Bel Marin Keys community from other urban areas may make the center less attractive to "chain" commercial enterprises. Consequently, while the financial numbers suggest that the commercial center could be viable, the nature of the business enterprises that might actually locate there is less certain.

The economic impacts of providing boat slips for shopping by boat are not expected to be significant. The most likely reason for boaters to patronize the center would be for fast food or the occasional grocery item.

**Comment N-5: Project Delay or Termination.** *Assess impacts of potential delay, suspension, or premature termination of the project. Evaluate the financial risks to current residents which would result from delay or premature termination of the project. Analyze the effect of significant delays in project construction on property values. Include a discussion of legal remedies and alternatives that are available to ensure successful completion of all project features and mitigations. Are any measures available which could ensure successful completion? Address the requirement that the developer post adequate reserve funding to complete required mitigation measures.*

**Response**

This comment asks for a level of speculation that would not be appropriate under CEQA or NEPA. Delays in construction or even termination of projects can occur for a variety of reasons that are completely unforeseen, including national or regional recessions, changes in national policy regarding local defense spending, etc. The regulatory and policy, not to mention financial, climate in which private sector development occurs in California is extraordinarily complex and changeable. The best protection for the local community is to follow their own land-use planning documents and guidelines. The Marin County Board of Supervisors should require that the developer be bonded and post adequate reserve funding to complete required mitigation measures. This would be a local policy decision.

**Comment N-6: Cost of Public Services for Alternatives.** *Estimate cost of services, such as fire protection and schools, for lower density alternatives. Examine the potential impacts and mitigation measures which would result from a project of insufficient size to trigger a new school, or to financially provide other desired amenities. Discuss the minimum size necessary to make the project financially viable.*

**Response**

The fiscal impacts of alternatives are addressed in Section 3 of the EIR/EIS. Please also refer to the Alternatives comments and responses in this volume.

## O. POPULATION, HOUSING, AND EMPLOYMENT

**Comment O-1: Affordable Housing Program.** *Fully describe affordable and below market housing in the following terms: cost of senior housing and first-time buyer housing; amounts and distribution of affordable housing components (below and at market rates); size and characteristics of affordable townhouses; and qualifications for buyers of affordable housing. Explain the differences between the three categories of affordable housing: senior housing units, first-time buyer units, and moderate income-buyer units. Clearly state the cost of each type of unit, and clarify what portion of the affordable housing would be offered at below market rates. Discuss the affect on resale value of the proposed segregation of affordable and low-cost housing into three high-density clusters. What would be the impact of the resale value on the proposed county fund for future affordable housing?*

**Response**

The Project Sponsor's affordable housing program targets three different groups: moderate income buyers, first-time home buyers, and senior buyers. Through this program, 390 homes would be available using different approaches to "affordability" for each group.

Inclusionary housing as defined by the Marin County Zoning Codes is housing that is part of a development that is made affordable to households of moderate or low income[1]. The following is a brief description of the proponent's affordable housing program for each group.

*The Moderate Income Buyer Program*, would offer 80 waterfront townhomes to moderate income families that make no more than 100 percent median income for the San Francisco Primary Metropolitan Statistical Area (PMSA, which is made up of San Francisco, San Mateo and Marin counties), adjusted by household size. Moderate income is considered from 80 to 120 percent of the San Francisco PMSA median income, adjusted by household size, and is updated yearly. The Marin County Housing Authority would be responsible for qualifying those households eligible for this program. The program would be administered by the County, and the developer has requested that the homes be offered to Marin County families with a preference for Bel Marin Keys residents, Northern Marin families and Marin County public service employees such as teachers, police officers and nurses[1].

The Moderate Income Buyer Program's 80 townhomes would be priced based upon the area's median income and interest rates at the time of purchase, and the home size. They are expected to range from about $155,000 to about $165,000, based on 1992 income and interest rates and may differ when the townhomes are completed. Buyers would be offered fixed-rate mortgages at interest rates expected to range between 7 percent and 8 percent. The mortgages would be arranged through a special bond program that would provide very low interest rates to borrowers, and cash down payments can be as low as 10 percent of the purchase price. Resale of the homes would be restricted by an inflationary index, so these homes would remain affordable to other families when the original buyers decide to resell. It would be expected that payments would range from $728 to $1,206 per month.

[1] Marin County Zoning Code.

The townhomes would range in size from 800 to 1,100 square feet, and would be two stories, with two or three bedrooms, and two bathrooms. All homes would include garages and would be designed in four- and six-home clusters on or near the water. All homes would have access to docks and boat slips.

*First Time Buyer Program* would offer 200 townhomes to those who have not owned homes before and have been priced out of the Marin County market. The program would be offered to families that make no more than 120 percent San Francisco PMSA annual median income, adjusted by household size.

The First Time Buyer Program's 200 townhomes are expected to average $250,000 in price. An innovative double mortgage would allow for those families who qualify to make monthly payments on the first mortgage. This mortgage is expected to have an interest rate of between 7 percent and 8 percent. The mortgages and rates would be offered through a special bond program. The developer would provide a second mortgage at 5 percent interest, and the buyer would make no payments of principal or interest on the second mortgage for the first five years and interest-only payments for the next five years. Interest would accrue during the first five years to the second mortgage. The second mortgage would be due in 10 years and can be refinanced when it is expected that the buyer's annual income has increased. Cash payments can be as low as 10 percent of the purchase price. Upon selling, the owner would share 50 percent of the net profit from the sale of the townhome with the County. Payments are expected to range from a low of $873 to $1,447 per month depending upon down payment, interest rate and purchase price.

The townhomes would range from 1,100 to 1,500 square feet in size and would be two stories, with two or three bedrooms, and two bathrooms. All homes would include garages and would be designed in four- and six-home clusters on or near the water and would have access to docks and boat slips.

*The Senior Buyer Program*, would offer 110 townhomes to people age 55 or older and it is anticipated that in most cases these people own homes and have a large equity. The program would offer ten units restricted to households with an income that does not exceed 100 percent of the San Francisco PMSA median income, adjusted by household size, and 100 units restricted to households with income that does not exceed 120 percent of the San Francisco PMSA median income, adjusted by household size.

The Senior Buyer Program's 110 townhomes are expected to average $250,000 in price. A minimum cash down payment of 25 percent of the purchase price of the home would be required. For those who can make a cash down payment of 75 percent of the purchase price, the developer would provide fixed-rate financing at 6 percent interest for the remaining 25 percent. The buyer would make monthly interest payments, but no principal payments would be required for 20 years and the loan would be due on sale of the home. Otherwise, the loan would be come due at the end of twenty years.

It is difficult to predict the effect on those residents who remain longer than 20 years. The real estate market in California is expected to pick-up by 1995. Although it may not resume its recent rate of increase, it is safe to assume that home values in the Bay Area would rise 4 to 8 percent per year. A family residing longer than twenty years in the townhome would be required to refinance that portion of the mortgage held by the developer. It is quite

probable that with a moderate 8 to 10 percent yearly increase in existing housing prices would generate a sufficient amount of equity to give the owner a range of options other than having to sell. It is impossible to predict what a person would decide 20 years hence, due to the unknown amount of increase in the value of the property, the person's income and other factors. It is expected that several choices would face the homeowner, and each person's individual situation would determine the outcome.

If the buyer makes a cash down payment of only 25 percent, 50 percent of the remaining mortgage would be arranged through a special bond program and would provide very low interest rates to borrowers with a current maximum loan amount of $124,890 for a single person household and $142,732 for a two person household. The developer would provide a second mortgage at 6 percent interest and the buyer would make no payments of principal or interest on the second mortgage for twenty years. The maximum amount of the second mortgage would be 25 percent of the purchase price of the new home. For those people who use the 75 percent down payment and 25 percent mortgage on a $250,000 townhome, the payments would be approximately $312. For those who finance the 75 percent, the monthly payments would range from $873 to $1,123, depending upon the loan amount. The 25 percent loan would be due upon sale of the home.

The townhomes would range from 800 to 1,500 square feet in size and would be one or two stories in height, with two or three bedrooms, and two bathrooms. All homes would include garages, and would be designed in four- and six-home clusters on or near the water and would have access to docks and boat slips. The clusters would be located a short walking distance to the new waterfront shopping center.

The proposed housing would be segregated as townhome clusters into affordable and senior living areas. As proposed, most of the affordable housing is not housing that is being offered at reduced rates, except for the 90 units, but is made affordable through the offering of double mortgages that would be held by the developer for 10 years for the first time buyer's program and 20 years for the senior buyer's program. All the townhomes would be subject to inflation in housing prices, and this should be reflected in the resale pricing, except for the 90 units, which will be subject to an inflationary index. Due to the nature of the development, it is not anticipated that the segregation would have any measurable effect on the value of townhomes except for those market forces that govern attached housing. Generally, under zoning principles, different housing types are normally segregated. Rarely are townhouse, apartment or other mulit-unit family residential units mixed with single family dwelling units. In that sense, the project, as proposed, follows good planning principles. However, clustering and segregating affordable housing areas is not consistent with policy in the Marin Countywide Plan (Community Development Policy C-3).

The County's fund for future affordable housing is a fund that developers may contribute to, instead of providing affordable housing in their development projects. Since the developer is providing affordable housing, there is no requirement to provide money to the housing fund, and therefore the offer to provide the 50 percent of the net profit is an additional bonus to the County. Any money accruing to this fund would be a beneficial effect.

**Comment O-2: Marin County Jobs/Housing Balance.** *Explain how project contributes to jobs-housing balance in Marin County. Include a discussion of secondary effects on traffic, air pollution and local economy gained by providing affordable housing to individuals who work in Marin, but who can not currently afford to live in the County.*

- *Discuss potential financial effects on current Bel Marin residents and the rationale of locating affordable housing on "remote and expensive waterfront property" instead of in an area connected to urban services and mass transportation.*

- *Discuss the affordable housing shortfall in the County and the limited county-wide future development potential for affordable housing.*

- *Page C-1 of the addendum to the Final EA states "only 284 units outside of San Rafael's sphere of influence" are needed in the unincorporated county area. This should be discussed in Section 5.*

**Response**

As discussed in the EIR/EIS, Section 5.0, page 5-292, the proposed project would slightly alter the County's jobs/housing ratio negatively in the short-term and positively in the long-term. The proponents have indicated that certain eligible households should have priority for the affordable housing, including families who currently could not afford to live in Marin and who may be living in Sonoma County or other more distant areas. This would have the beneficial effect of reducing highway traffic, and a concurrent reduction in air pollution. Additionally, those families who did not previously reside in the County and move to the proposed development would contribute to an increase in local spending, thereby adding to the existing local economy. The proposed project would assist in providing a mix of housing size and price that should help meet the needs of workers in Marin County and would bring more balance to the existing jobs/housing ratio, while reducing some of the environmental effects of long-distance commuting.

(See responses to comments for 5.N. "Fiscal Economics," for fiscal effects on service providers and Bel Marin residents.)

The County requires that 10 percent of a proposed housing development be set aside and made affordable to moderate and low-income persons. Thereby, the proponents would be helping the County in satisfying these requirements by providing affordable housing. There are few sites left in Marin County for large scale development that could include the number of units being provided on an affordable basis. A neighborhood shopping center would provide local services as well as local employment; and seniors would be able to walk to these services.

ABAG has provided an estimate for each city and the County of the number of housing units needed between 1990 and 1995, and how many units are needed for each income level, i.e., low, moderate, above moderate, etc. Included within the County's figures are housing units that could be built within the sphere of influence for each city. These numbers are often subtracted from the County figures to provide an estimate of the actual number of housing units needed by the unincorporated County at buildout. Therefore, the reference to the 284 units outside San Rafael's "sphere of influence" in the EA, is the number of housing

units needed by the County minus those that would be built and annexed by the City of San Rafael. However, to use the figures as a restriction on the number of units that should be built in the unincorporated County would lead to a condition in which Marin County might not be able to meet its overall affordable housing goals. Many of the large parcels remaining in the County are in northern Marin; and, therefore, County-wide figures would be a more reliable basis for projecting housing needs. The County's General Plan Housing Element indicates that regional housing needs can be met without the BMK 5 project.

**Comment O-3: Reliability of Affordable Housing Program.** *Evaluate the reliability of the proposed Affordable Housing Program. Determine if this plan is sufficient to justify the increase in density credits over zoning laws. The discussion should:*

- *Evaluate the housing program with appreciation rate equal to inflation rate. Interest rates, inflation rate and appreciation rates are all interdependent. Discuss why the inflation rate used in Chapter 5 is conservative;*

- *Evaluate the first-time buyer program to determine who can buy the homes which sell for above the average cost home. The example given uses only maximum qualified income to buy the average cost home;*

- *Address the issue of segregating or clustering low-cost housing. The disregard for Policy C-3 on page 4.35 of the DEIR/S must be addressed;*

- *The first-time buyers program requires the buyer to share the profit with the County when the home is sold. Any improvements the buyer makes will be paid for 100% by the buyer. Evaluate the impact of these economics on the upkeep of the property and its appreciation rate;*

- *Evaluate the effect on senior citizens of the tax law which allows $150,000 profit from the sale of a home without any income tax if it is rolled into the purchase of a new home;*

- *Evaluate the impact of a 20 year mortgage on the senior citizen who pays only 25% down, is 65 years old, and lives more than 20 years. The consequences of this potentially questionable housing program is within the scope of the EIR/S.*

**Response**

It appears that the proposed Affordable Housing Program is a reliable program, offering moderate income families and first-time homeowner families the opportunity to own a home in Marin County when they might not have been able to do so otherwise. Additionally, it offers seniors, who may want to move but have been unable for some financial reason, the opportunity to move and either maintain or reduce their current expenses. The proposed development has requested an increase in density of approximately 50 percent and, in return, has offered to place 33 percent of the proposed project into an affordable housing program. Housing Policy H-1.9 would grant a 25 percent density bonus over the maximum allowable density for housing developments, in exchange for a percentage of the total units for either lower income households, low income household or for seniors. The policy also states "that the staff shall work to determine other incentives to encourage the provision of affordable units and where feasible, Housing Element policies and/or the zoning ordinance shall be amended to provide the incentives . . . under the density bonus program,"[2] thereby allowing the County flexibility in meeting the objectives of the affordable housing Program.

[2] Marin County, *General Plan, Housing Element*, Adopted July 9, 1991.

Actually, the annual rate of appreciation in Bay Area home values far exceeded the general rate of inflation for most of the 1978-1990 period. There is no reason to assume, as the commentor does, that the appreciation rate will equal the inflation rate in the future, although they will likely be closer in value than in thepast. The inflation rate used in Chapter 5 is based on generally-accepted forecasts, and is not conservative.

Persons of moderate income, as described above, would be eligible and should be able to purchase a home in the proposed project. The example was based on moderate income to purchase both below cost and an average townhome priced by the Project Sponsor as $250,000.

Although the first-time buyers program requires the buyer to share the profit with the County, the seller would still receive 50 percent of any money between the cost of the townhome and its future selling price. Additionally, it is anticipated that the homeowners' association would be responsible for most of the maintenance work required on the units. Under State law, any construction defects would be the Project Sponsor's responsibility for 10 years. Therefore, most maintenance would be minimal for each owner. It is assumed that other improvements would be evaluated by the owner and a decision would be based on a rate of return (50 percent) of resale value versus the cost of any improvement.

The comments raised regarding the impacts on senior citizens under various financial scenarios is beyond the scope of an EIR/EIS and appear irrelevant to the issue of affordable housing program reliability.

**Comment O-4: Low-Cost Housing Fund.** *Evaluate the impacts of 3a-f on the proposed County Low-Cost Housing Fund and the County's ability to continue a Low-Cost Housing Program as proposed.*

**Response**

The County's Low-Cost Housing Program is based on contributions from developers who opt to provide fees to the County in lieu of providing affordable housing within in proposed development. Since the Project Sponsor is proposing an affordable housing program, the County would not receive any monies for the Low-Cost Housing Fund. Therefore, any money received from this development is an added bonus to the Low-Cost Housing Fund. The Low-Cost Housing Fund is not dependent upon this development for its continuance.

**Comment O-5: Density Bonus for Low-cost Housing.** *Evaluate the growth inducing effects of allowing the proposed density bonus for low-cost housing on future projects in similar areas of the County.*

**Response**

While the bulk of remaining developable land is in the northern half of the County, Marin County is 97 percent developed. Much of the developable land within the City of Novato is in small parcels. Other large parcels in northern Marin also have environmental or infrastructure restraints[3]. While it is expected that developers would seek out the density

[3] Sedway and Associates, *Appendix C, Marin County Housing Study*, Revised: March, 1990.

bonus, since affordable housing is already a requirement, it is expected that each site would be reviewed on its own merits, based on the aforementioned restraints.

## P. GROWTH INDUCEMENT AND SECONDARY IMPACTS

**Comment P-1:Flood Control Channel.** *Analyze growth inducing impacts associated with the ultimate flood control alternative. Provide mitigation for any associated impacts.*

**Response**

To the extent that the "ultimate flood control channel" (i.e. bypass channel) removes an obstacle to growth, it would be considered growth-inducing. The bypass channel, if and when constructed, should be sized to accommodate planned growth within the watershed. This issue would be examined in depth during the subsequent environmental review process for this "programmatic" project element. While CEQA Guidelines require examination of growth-inducing effects in an EIR, there is not a requirement to develop mitigation measures for such effects if they are outside the control of lead agency and speculative in nature. However, alternatives to the proposed Project should be considered to the extent that they help reduce any growth-inducing effects. For example, the Reduced Size Alternative considered in this EIR/EIS could be considered less growth-inducing than the proposed Project because it may make the flow-through lagoon alternative more feasible since it could be easier to operate, provide more agricultural and/or wildlife habitat lands that could store flood waters.

**Comment P-2: Public Services.** *Analyze growth inducing impacts of added service capacity: water(tanks), sewage, road system. The analysis should include:*

- *the development of the "ultimate street system",*
- *Identify any other areas which would be opened to development by the construction of McInnis or the road through Hamilton.*

**Response**

The ultimate street system described in the EIR/EIS would be considered growth-inducing since it would remove an obstacle to growth, namely currently congested traffic conditions which have helped stall or halt several development proposals in the area. On a more local level the second access roadways, particularly the Hamilton Drive Extension, could also potentially stimulate growth pressure in the lands through which it would traverse. However, the area north of Bel Marin Keys Boulevard and south of Highway 37 is currently subject to a County Flood Control easement and would be constrained with respect to its potential developability. In addition most of the lands through which the Hamilton Connector and Hamilton Drive Extension would traverse are already developed. The McInnis Parkway, however, where it could potentially extend south of Hamilton Field, connecting with Smith Ranch Road, could increase development pressure in these bayfront lands.

**Comment P-3: Bayfront Conservation Zone.** *Analyze growth inducement associated with development in BFC zone.*

- *Discuss the precedent-setting nature of allowing this development.*
- *Identify appropriate mitigation which would reduce impacts to a less-than-significant level.*
- *Clarify the statement on page S.13 regarding "strong development pressure along the bayfront lands". Discuss the likelihood of the occurrence of additional development, and whether any additional development was considered in discussing cumulative impacts.*
- *Address the speculative nature of comments on the precedent-setting nature of allowing this development. Identify other sites in Marin County which might be approved for development if this proposal gains approval.*

**Response**

The Draft EIR/EIS notes in several instances (e.g. page S.9, page 6.2) that approval of the project may (author emphasis) establish a precedent for other future development on remaining privately owned land in the County and north Bay Area. The two other comparable bayland properties in the County that could conceivably be affected by such a precedent are the St. Vincent/Silveira Ranch and the Renaissance Estates sites. In both cases these properties are already under active development consideration, i.e. one could conclude that there is already evident development pressure at those locations. However, an approved development at the BMK 5 site could still potentially influence development decisions that are made at those other locations. While the Hamilton Field development proposal could also be somewhat influenced by actions concerning the BMK 5 site, that area is already urbanized and none of the proposed "new" development would occur in currently undeveloped baylands.

In addition to Marin County baylands, there are also baylands in southern Sonoma, Napa, and Solano Counties which could be subject to heightened development interest should the BMK 5 project as proposed be approved. In their comment letter submitted on the DEIR/EIS, Sonoma County planning staff indicated their concern about growth-inducing impacts of the proposed Port Sonoma-Marin ferry. All three counties have policies which stress preservation of these baylands in agricultural and/or wildlife habitat use, and particularly in the case of one Sonoma County property (Cullinan Ranch) the local agencies together with regional resource agencies and environmental organization demonstrated an extremely high level of support for upholding these policies. The extent to which these other baylands could actually be affected by increased development pressure attributable to development at the BMK 5 site is certainly unknown and somewhat speculative.

As noted above, neither the CEQA Guidelines nor NEPA regulations explicitly require that mitigation measures be developed for off-site growth-inducing effects that are beyond the control of the lead agency. However, mitigation for such effects is inherent in the range of alternatives considered in the EIR/EIS. For example, the Reduced Size Alternative could be less growth-inducing than the proposed project in that it retains more of the property in agricultural and wildlife habitat use. Even for the proposed Project, it is somewhat subject

to interpretation to what extent the project would "overturn the effectiveness" of BFC Zone policies in regard to other BFC lands. Please refer to response to Comment A-2 for further discussion.

**Comment P-4: Density Bonus for Low-cost Housing.** *Analyze the potential growth inducing effects of allowing the proposed density bonus for low cost housing on future projects in similar areas in the county.*

**Response**

The density bonus provided for low-cost housing is a County policy contained in the adopted General Plan and is also a requirement of the State. The density bonus is also provided for in draft General Plan currently under review. The adopted General Plan was subject to a thorough environmental review which considered the potential environmental effects of implementing such a policy. In general, the density bonus is considered environmentally beneficial in that it helps improve the jobs/housing balance and reduces the transportation impacts caused by those living outside the County but working in Marin.

## CUM. CUMULATIVE IMPACTS

**Comment CUM-1: Combination with Other Significant Developments.** *The cumulative effects on the environment, transportation, air quality, safety, and other environmental factors of this project in combination with Hamilton Field, Vintage Oaks, Renaissance Estates and any other significant development in the immediate area need to be considered in the EIR/EIS.*

**Response**

Cumulative effects are discussed specifically in Section 5 of the EIR/EIS under pertinent topics. For example, transportation impacts are discussed under various development scenarios, including buildout of other planned proposed or potential development in the north Marin County area. Section 6.B of the EIR/EIS provides an overview of these and other cumulative effects.

**Comment CUM-2: Mitigation for Cumulative Impacts.** *Mitigations should be recommended for all cumulative impacts. Specifically, mitigation measures for the filling or excavation of all wetland types should be provided. Currently, no mitigation is being provided for tidal or seasonal wetland loss.*

**Response**

Mitigation measures are identified for cumulative impacts (e.g., fair share of regional roadway improvements) where reasonable options are available and can be feasibly applied to the proposed project. Please refer to response to Comment E-1 in this document for further discussion of cumulative wetland loss mitigation.

**Comment CUM-3: Multiple Golf Courses.** *Is there justification for two golf courses (i.e., at BMK site and Rennaissance Estates property)?*

**Response**

Should two or more of these proposed projects be approved including a golf course, market conditions may dictate that only one course would be constructed. Of the three properties being considered for a possible golf course, the BMK 5 site appears to be the least desirable with respect to potential impacts on existing and restorable wetlands as well as Bayfront Conservation Zone consistency.

## MIT. MITIGATION MEASURES AND MONITORING

**Comment MIT-1: Implementation Assurance.** *Identify how implementation of mitigation measures will be assured.What measures would be imposed to assure that all project features and mitigations would be completed? The criteria for defining the feasibility of a mitigation measure should be revised to add: the measure is capable of being implemented. Some of the main concerns expressed in assuring implementation are:*

*Mitigation*

- *Information about proposed mitigation measures, including new access routes, flood control components and the proposed ferry, is not presented in enough detail to evaluate either feasibility or effectiveness.*
- *Basing the DEIR/EIS on contingencies that are unknown is NOT acceptable. What happens if the proposed mitigation measures are not feasible or do not get the necessary approvals?*
- *Decisions on mitigation measures should not be deferred for future determination by certain agencies.*
- *The DEIR/EIS needs to list at least some mitigation measures that are within the control of the Project Sponsor.*
- *The Golden Gate Bridge, Highway and Transportation District supports the transportation mitigations recommended by the project sponser, but is concerned that mechanisms be established to insure their implementation.*
- *What assurances exist that all project features and mitigation would be constructed? What will result if the project runs out of money?*
- *The cost, funding source and responsble entity for the mitigation measures should be articulated, especially for the BMKCSD and Homeowners Associations. A comprehensive listing with responsible entity should be provided.*
- *Clarify the Project Sponsor's committment to adopt consultant-proposed mitigation measures.*

*Monitoring*

- *How will restrictions imposed as mitigation be monitored or policed? How would violations be penalized?*
- *Cost, source of funding and resposible entity for ongoing monitoring and maintanence should be articulated in the DEIS//EIR.*
- *Construction monitors must have the authority to stop construction related impacts from occurring.*

- *The Mitigation Monitoring and Reporting Program does not fulfill the requirements of the resource agencies and the Corps for a detailed mitigation and monitoring plan.*

**Response**

The function of an EIR and EIS is to disclose potentially significant effects of a proposed development and its reasonable alternatives and to identify measures to mitigate those effects. Which proposed mitigation measures identified in the EIR/EIS has not yet been determined because this document is the forum for identifying and evaluating the ability to mitigate potential impacts. The County Planning Commission, when it deliberates on project approval, will decide which measures to include (if the project or one of the alternatives were to be approved). This deliberation will follow completion of the EIR/EIS review process and will consider both Project Sponsor-proposed and Consultant-proposed mitigations. Likewise, the Corps, as it reviews the Project Sponsor's permit application to place fill in wetlands and waters of the U.S., will decide what mitigation measures to require.

If the project were to be approved, and if the mitigation measures identified in the EIR/EIS to mitigate potentially significant effects were not implemented, the project would result in a significant effect on the environment due to any such unmitigated impacts. Even without such a circumstance, the EIR/EIS has identified 20 significant environmental impacts that cannot be avoided, meaning that there is no mitigation available or sufficient to reduce the impact to a level of insignificance.

When the lead agency for project approval is different from the decision-making body for implementation of a mitigation measure, the lead agency would have no authority over implementation of such a mitigation measure. However, when preparing an EIR or EIS one must still disclose all available and feasible mitigation measures. NEPA Regulations in particular state that mitigation measures should not be eliminated from consideration in an EIS simply because they are outside the jurisdiction of the lead agency or because they are unlikely to be implemented. However, EIS preparers are advised to assess the probability that a particular mitigation measure will be implemented.

Neither CEQA nor NEPA require that detail regarding disclosure of all actions or voter approval required to implement a measure be included in an EIR or EIS. Nor does either CEQA or NEPA require that the likelihood of such actions be included, because such an assessment would be speculative in nature. CEQA does not require that identification of funds available for mitigation measures be included in an EIR. (See CEQA Guidelines Sections 15126(c), 15096(g)). Specifically with regard to NEPA, recent court decisions have upheld the fact that a lead agency need not present a detailed mitigation plan in an EIS or commit to implementing the mitigation measures.

Regarding the variability in mitigation detail in the EIR/EIS, it is true that mitigation measures for some project elements such as the proposed ferry, the new access routes, and off-site flood control components are developed at a more general level of detail than other project elements. This is the case because of the programmatic nature of these, and other elements (please refer to Section 1.E of the EIR/EIS). Further environmental review of these programmatic elements will be necessary before they could be approved for implementation.

The feasibility of all mitigation measures disclosed in the EIR/EIS was carefully considered. Further information on the feasibility of some of these measures (e.g. flow-through lagoon flood control, ferry, Hamilton Drive extension) is presented in the Final EIR/EIS (see responses to comments on Hydrology, Transportation, and other environmental topic of interest).

To assure implementation of mitigation measures that are ultimately determined by lead and responsible agencies to be required, these agencies could require execution of a development agreement and/or posting of a performance bond. This approach has been used successfully in other communities. The decision of whether such an approach is warranted or desirable for the BMK 5 project rests with the County, Corps, and other responsible agencies.

While not required under either CEQA or NEPA, this EIR/EIS includes a draft mitigation monitoring program (see Appendix B of Final EIR/EIS, Volume Four). Under state law, the mitigation monitoring program is required to be adopted at the time of project approval. The program's intent is to assure implementation and follow-through on the mitigation measures that are adopted by the lead agency. The responsible entity is identified in the monitoring plan. Typically, the monitors in the field do have the authority to stop construction if necessary.

The San Francisco District of the Corps of Engineers also has a policy to require preparation of detailed monitoring plans in conjunction with its Clean Water Act Section 404 permit process. The mitigation monitoring plan presented in the EIR/EIS is not intended to fulfill this requirement, although it does provide a broad outline of mitigative strategies for those project elements that involve wetland fill.

**Comment MIT-2: Mitigation Sequencing.** *How do mitigation measures generally follow sequence: avoidance, minimization, restoration, compensation and/or replacement*

- *A heirarchy of planning approaches for resource protection should be considered for siting project elements. The hierarchy should be: 1) sensitive habitat avoidance; 2)mitigation by restoration; 3) enhancement or replacement of haitat functions. Avoidance should be the mitigation measure of choice.*

**Response**

This comment is noted and the EIR/EIS preparers certainly agree with and follow the heirarchy stated. The mitigation measure sequence followed when identifying and evaluating available mitigation for a given impact first considers avoidance. If avoidance is not possible without jeopardizing the basic project objectives, then minimizing the impact is explored. This type of mitigation could include, for example, re-routing a road so that it impacts less wetland that at the proposed location. Minimization could also include establishing buffers around sensitive habitats to reduce the potential for human intrusion impacts, for example. If neither of the these approached appears workable, then restoration following disturbance (i.e. due to project construction)of the resource is considered. Only if these approaches are not considered feasible, is the approach of replacing or creating the resource at another nearby site considered.