NOTICE IS HEREBY GIVEN that the Advisory Planning Commission of the Tahoe Regional Planning Agency will conduct its regular meeting at 9:30 a.m. on Wednesday, March 12, 2008 at the TRPA Offices, located at 128 Market Street, Stateline, NV. The agenda for the meeting is attached hereto and made a part of this notice.

March 5, 2008

John Singlaub
Executive Director
All items on this agenda are action items unless otherwise noted.

AGENDA

I. CALL TO ORDER AND DETERMINATION OF QUORUM

II. APPROVAL OF AGENDA

III. PUBLIC INTEREST COMMENTS

Any member of the public wishing to address the Advisory Planning Commission on any item not listed on the agenda may do so at this time. Public comment on Public Hearing items will be taken at the time those agenda items are heard.

NOTE: THE ADVISORY PLANNING COMMISSION IS PROHIBITED BY LAW FROM TAKING IMMEDIATE ACTION ON, OR DISCUSSING ISSUES RAISED BY THE PUBLIC THAT ARE NOT LISTED ON THIS AGENDA.

IV. DISPOSITION OF MINUTES

V. PLANNING MATTERS

A. Tahoe City Marina Expansion Project Review for Consistency with The Tahoe City Master Plan Environmental Impact Statement (EIS), Phase I Marina Expansion for the Tahoe City Marina Expansion Master Plan, 642 North Lake Boulevard, Placer County, California, Assessors Parcel Number (APN) 094-090-08, TRPA File Number 20061481

VI. PUBLIC HEARINGS


VII. REPORTS

A. Executive Director

B. Legal Counsel

C. APC Members

VIII. ADJOURNMENT
REGULAR MEETING MINUTES

I. CALL TO ORDER

Called to order at 9:45 a.m.

Members Present: Mr. Breuch, Mr. Donohue for Mr. Lawrence, Mr. Harris, Ms. Jamin, Mr. Jepsen, Mr. Kuchnicki, Mr. LeFevre, Mr. McIntyre, Mr. Morehouse, Mr. Plemel, Mr. Poppoff, Mr. Tolhurst, Mr. Upton

Mr. Riley arrived at 9:50
Ms. Schmidt arrived at 9:50
Mr. Zuckerman arrived at 10:15

Members Absent: Ms. Kemper, Mr. Maurer

II. APPROVAL OF AGENDA

Mr. Upton moved to approve the agenda.
Mr. McIntyre seconded the motion.
Motion approved unanimously.

III. PUBLIC INTEREST COMMENT

Karen Carey, Executive Director of Tahoe Women’s Services, last year one hundred and one clients were served in the Kings Beach area witnessing first hand the undue stress of inadequate living conditions has on families. We urge you to vote yes on any affordable housing for the Kings Beach area.

Waldo Walker, Chairman of the Washoe Tribe of California and Nevada, as the leader of the Tribe we would like to tell you we have a new direction. We will be becoming more involved in the decisions other government agencies are involved in. We may but heads however; this is how the process works. We have seen the impacts us, as a society have had on the lake. We will be making our presents known at all the public meetings.

IV. DISPOSITION OF MINUTES

Mr. Upton moved to approve the minutes as submitted.
Ms. Jamin seconded the motion.
Motion approved, Mr. McIntyre abstained.
V. ADMINISTRATIVE MATTERS

A. Election of New APC Chairman and Vice Chairman

Mr. Tolhurst opens the matter of Chairman for discussion.

Mr. Upton nominates Mr. Tolhurst to continue to serve as Chairman for the term of two years.

Mr. Tolhurst calls for any other nominations.

Hearing none, Mr. Tolhurst closes nominations.

Nomination of Mr. Tolhurst as Chairman approved unanimously.

Mr. Tolhurst opens the matter of Vice Chairman for discussion.

Mr. Tolhurst nominates Ms. Jamin to serve as Vice Chairman for the term of two years.

Mr. Tolhurst calls for any other nominations.

Hearing none, Mr. Tolhurst closes nominations.

Nomination of Ms. Jamin as Vice Chairman for the next two years approved unanimously.

VI. PUBLIC HEARING

A. Public Hearing and Comments for the Draft TRPA Environmental Assessment/Placer County Environmental Impact Report for the Proposed Tahoe Vista Partners, LLC. Affordable Housing and Interval Ownership Development Project at 6873 North Lake Blvd. in Tahoe Vista, Placer County, Tahoe Vista Partners, LLC., APN 117-071-29

Staff Member Theresa Avance provided summary of the Tahoe Vista Partner affordable housing project. This item was for the purpose of gathering comments only.

EDAW representative Nanette Hansel provided additional summary and short presentation on the project outlining the proposed alternatives.

Mr. McIntyre inquired about Placer County’s affordable housing component.

Mr. Breuch confirmed Placer County is working with each developer regarding the affordable housing component.

Mr. Tolhurst opened public comment period.
Ellie Waller, Tahoe Vista Resident, raised concern over the conversion of the seasonal RV Park into a year round destination and the negative impacts associated with not only this project but also the cumulative impact of all the proposed projects.

Dave McClure, Tahoe Vista Resident, raised concern over the TAU policy and the evolution of the TAU unit from a 600 square foot hotel unit into a full-blown residence. This development tests the very definition of a TAU. The other concern raised is the negative cumulative impact of the project.

Randy Hill, Tahoe Vista Resident, raised concern over cumulative impact of the project comparing it to the Vista Village project the community also opposed.

Mr. Tolhurst closed public comment period.

Mr. Poppoff agreed that concerns over the cumulative impact in the area are a real concern and mitigation fees do not offset this impact stressing the need for a community plan for the area.

Mr. Upton inquired about the community plan area.

Mr. Barrett confirmed the area currently has a community plan, which is in need of updating also providing clarification of mitigation and the use of mitigation fees for capital improvements to the area.

Mr. Donohue requested clarification of a TAU.

Mr. Barrett provided the current definition of a TAU, how the market has dictated the use of a TAU and how the use of a TAU may change in the upcoming Regional Plan Update.

This item was for the purpose of gathering comments only.

B. Public Hearing and Comments on the Draft Environmental Impact Statement for the Beach Club on Lake Tahoe at 346 Eugene Drive in Douglas County, Beach Club, LLC., APN 1318-22-002-002

Staff member Theresa Avance provided summary of the proposed Tahoe Beach Club project. This item was for the purpose of gathering public comments only.

Lew Feldman provided the history, existing site conditions and proposed project water quality improvements, proposed moderate housing mitigation, and proposed project alternatives.

Sidney Coatsworth of EDAW provided the summary of the proposed scoping information, issues addressed in the environmental analysis and the proposed alternatives.
Mr. Zuckerman expressed Douglas County is pleased with the project. Inquiring on the privacy of the 4-H dormitories and whether or not the meadow to the South of the project area would dry out during construction.

Paul Peterson, Nichols Consulting Engineers, extensive groundwater monitoring has taken place we believe the construction as proposed will not alter or degrade the SEZ in the area. We have been monitoring over the past five years enabling us to design the project appropriately.

Mr. Feldman outlined the steps taken to assure the privacy of the 4H dormitories.

Mr. Donohue complimented TRPA staff on requiring the moderate housing component and inquired about the permitting requirements for the pier.

Mr. Peterson stated the pier was permitted through Nevada Statelands when constructed and will go through the permitting process as necessary.

Mr. Tolhurst opened public comment.

Mike Englinoff, Tahoe Shores resident, stated current rents were raised by 44 percent the increased rent was used to computate the required the housing mitigation competent making the data used in the EIS unreliable.

Jan Christiansen, Tahoe Shores resident, the only alternative for this project is the no project alternative D.

Monroe Freedling, Tahoe Shores resident, stated when the current owners took over the rents went from affordable to the most expensive mobile home park in the state of Nevada. Please do not allow these developers to destroy our community.

Mr. Walker, Washoe Tribe, points out our concern is not just the environment but also the people who live here. The tribe is concerned with the area across from the meadow. We want to make sure the process is followed correctly.

Mr. Tolhurst inquired whether there was a culture resource section in the EIS.

Ms. Hansel stated the Washoe Tribe was consulted; the letter from the tribe is in Appendix G of the EIS. No cultural resources have been identified on the project site.

Mr. Tolhurst closed public comment.

This item was for the purpose of gathering comments only.

C. Recommendation for Reservation of Allocations (Commercial Floor Area Tourist Accommodation Units and Residential Units) for Projects Applying Under the Community Enhancement Program
Staff Member Brenda Hunt provided an outline of the staff recommendation for reservation of commodities for each project including an overview of each of the nine Community Enhancement Program (CEP) project applications received. Staff is requesting the APC allow all projects to remain part of the CEP application process by recommending the Governing Board adopt the Resolution regarding the designation of CEP proposals, the reservation of commodities and the requirements for continued participation in the CEP process.

APC inquires included area wide improvements, additional environmental benefits, transportation benefits, housing requirements, and the land coverage reduction requirements.

Staff confirmed the requirements for environmental and capital improvements and the need for a substantial reduction in land coverage.

Joanne Marchetta acknowledges the project development stage is a fluid process and the applicants concern over the firm language in the resolutions. Recommended language be added to final resolutions that reflect the fluid nature of the process.

Mr. Tolhurst opened public comment.

Ellie Waller, Tahoe Vista resident, inquired about the availability of a project matrix.

Ms. Hunt confirmed a project matrix is in development and will be provided to the Governing Board as well as available to the public.

Emilio Baca, Tahoe Vista resident, expressed support for the affordable housing component. Requested meetings be held in the evenings at times where the public can attend to allow for due process.

Alex Moralities, Tahoe Vista Business Owner, would like to see process move forward.

Karen VanEppes, Tahoe Vista resident, concerned over cumulative impacts and the number of projects in the area. Stated the need for more thought to go into the percentage of workforce housing available with each of the projects.

Carol Savory, Kings Beach resident, attended the community workshops expressing support for the projects and would like to see them all go forward.

Jennifer Merchant, Placer County, expressed appreciation of the staff’s efforts and concern about the language in the resolutions; glad to see the revisions mentioned by Joanne. Inquired about LEED certification and consistent with LEED certified status mentioned in the requirements.

Staff provides LEED project certification definitions and to meet the requirements of LEED certification without necessarily becoming certified.
Dave Ferrari, Kings Beach resident and project applicant, stated Kings Beach was built as a summer resort destination resulting in coverage issue unique to Kings Beach due to the size of the lots. Housing is at a crisis point in Kings Beach we have the opportunity to do something.

George Costner, Kings Beach resident, expressed support for the Domus project and Ferrari Family project, provided comment letters, and would also like to see meetings start later.

Letters read into the record by John Singlaub in support of Domus and Ferrari Family projects.

Gary Midkiff, Midkiff and Associates, stated Ferrari Family Project concern over height requirements would like some adjustments in the language of the resolution keeping in mind we are in concept stage.

Mike Hogan, West Shore resident, concern over the amount of misinformation is out regarding the Homewood project pointing out the correct information is out there.

Steven Brown, Owner of Kings Beach project B.B. LLC., summarizing the environmental benefits of the B.B. LLC project referring to the brochure provided to APC Members.

Whitney Bibbins, B.B. LLC, summarized the proposed parking garage water treatment filtration system. Pointed out as a result of public meetings the size of the parking garage has been reduced. Stating there is no objection from surrounding residents.

Wyatt Olgivy, Olgivy Consulting, pointed out affordable housing component as put forth by Placer County is being met by all the projects in Placer County.

Tony Pastore, Pastore Ryan, stated the project is not planning to seek LEED certification however will be meeting LEED requirements. Would like goals and requirements clarified and to see the process move forward.

Colleen Shade expressed the need for more public education regarding the CEP process and projects.

Mr. Tolhurst closed public comment

Mr. Breuch would like to see the PRC recommendation honored by distributing the CFA placed back into the Special Projects pool be distributed evening among the projects. Concerned over use of local jurisdictions CFA obligations to meet the CFA short fall for the CFA.

Mr. Upton would like to urge we listen to the staff recommendations that the 6000 square feet of CFA be put back into the Special Projects pool. Stating the need to look at the amounts of CFA local jurisdictions have and use that as a decision point.
Mr. Upton moved to recommend the Governing Board approve the resolution as modified by council and the modification of table 1.

Mr. Donohue seconded the motion.

Motion carried unanimously.

VII. REPORTS

A. Executive Director

January Governing Board Decisions
Approved Executive Director Salary increase
Approved the Tree Removal Recommendation
Approved the Water Quality Maps
Approved the South Y Community Plan Amendment
Approved the Residential Allocations

Status Report on Blue Ribbon Commission

In the process of putting together findings and recommendations, the deadline is Friday February 15. Response to the nine-point letter submitted by the Fire Chiefs addressing all of there issues.

Mr. McIntyre stated he is very pleased with the TRPA response to the Fire Commission.

Mr. Upton agrees with Mr. McIntyre regarding TRPA’s response.

Monday California and Nevada Lieutenant Governors met forming a tentative agreement to move forward with Shorezone with certain conditions. This month we will ask the Governing Board to provide direction to move forward with something in writing sometime over the summer.

Report on the Regional Plan was provided to the APC members present.

B. Legal Counsel

No Report

C. APC Members

Mr. Kuchnichki would like to see more discussion on the public’s request to see meetings moved to evenings for the public to be able to attend.

Mr. LeFevre stated the Lake Tahoe Federal Advisory Committee has seats available.
Mr. Tolhurst would like to see the APC representative to the TTC on the agenda for discussion.

VIII. ADJOURNMENT

Meeting Adjourned at 3:05

Respectfully submitted,

Patricia Sandoval
Clerk to the Advisory Planning Commission

The above meeting was taped in its entirety. Anyone wishing to listen to the tapes of the above mentioned meeting may call for an appointment at (775) 589-5277. In addition, written documents submitted at the meeting are available for review at the TRPA Office, 128 Market Street, Stateline, Nevada.
MEMORANDUM

To: TRPA Advisory Planning Commission

From: TRPA Staff

Date: February 26, 2008

Subject: Phase I Marina Expansion Project for Tahoe City Marina Expansion Master Plan

Requested Action: Staff requests that the Advisory Planning Commission (APC) make a recommendation to the Governing Board that the project conforms with the mitigation measures of the Final EIS/EIR for the Tahoe City Marina (TCM) Expansion Master Plan. The draft project permit will be provided at the APC meeting.

Staff Recommendation: Staff recommends that the APC determine that the project conforms with the applicable mitigation measures of the Final EIS/EIR, and make a recommendation to the Governing Board to approve the project.

Required Motion(s): To recommend approval of the proposed action, the APC should make the following motions, based on this staff summary and the evidence in the record:

1) A motion that the project conforms with the Master Plan and applicable mitigation measures of the Final EIS/EIR; and

2) A motion to recommend approval by the Governing Board and make a finding of no significant effect

Background: Both Placer County and TRPA have previously approved the TCM Expansion Master Plan. On February 23, 2005, the TRPA Governing Board certified the Final EIS and approved the Master Plan. The Placer County Board of Supervisors certified the Final EIR for the Master Plan on March 30, 2005. The proposed expansion of the marina, as contemplated in the master plan, will be achieved through three phases of development (phases 1, 1a, and 2).

Phase 1a includes the Harbor Master Building and relocation of the Tahoe City Public Utility District's (TCPUD) sewer pump station to be housed within the Harbor Master Building. Phase 1 includes the marina expansion project and other project area infrastructure improvements (BMP Retrofit permit) as required by the Final EIS/EIR. The previously proposed parking structure is not included as part of the project at this time, and parking for the marina expansion will be provided on-site within the TCM project area (Attachment G). Placer County Redevelopment Agency is currently awaiting the outcome of the approval process for the marina expansion project, to determine whether to proceed with the parking structure. Phase 2 includes further expansion of the marina lakeward of the Boatworks Mall. Indirectly related to the proposed master plan, is the
The development of the Lakeside Bicycle Trail. The Lakeside Bicycle Trail is a joint project of the TCPUD and California Tahoe Conservancy, which would run along the marina waterfront in an existing 15-foot easement. The permit approvals for all phases of development are subject to the prescribed mitigation measures and monitoring requirements of the Final EIS/EIR.

A permit for Phase 1a (File No. 20051708) was issued at staff level and was acknowledged by TRPA on March 23, 2007. The Phase 1a permit included the Harbor Master Building and relocated sewer pump station. TRPA staff is currently processing the Phase 1 permits for the marina expansion and BMP Retrofit permit. The BMP Retrofit permit includes landscaping needed to meet the scenic requirements for all Phase 1 projects, restoration and mitigation of excess land coverage within the project area, grading for utility line installations, and installation of the stormwater management system for the project area. The improvements associated with the BMP Retrofit permit are directly linked to the scenic analysis, land coverage requirements, and project area BMP requirements for all other Phase 1 permits. The BMP Retrofit permit is expected to be issued at staff level prior to the March 12, 2008, Advisory Planning Commission meeting for the marina expansion project.

Another aspect of the Phase 1 marina expansion project includes proposed maintenance dredging and fill. This project component is subject to the permitting requirements of not only TRPA, but also the Lahontan Regional Water Quality Control Board (LRWQCB), California State Lands Commission, U.S. Army Corps of Engineers, and California Department of Fish and Game. In accordance with the Memorandum of Understanding (MOU) between the TRPA and the LRWQCB, the LRWQCB has primary responsibility for the permitting of maintenance dredging projects at marinas within the California side of Lake Tahoe. Therefore, TRPA has delegated its permitting authority to the LRWQCB for the approval of maintenance dredging for marinas. The project is scheduled to be considered by the California Regional Water Quality Control Board at its March 12, 2008, Water Board public meeting as Board Order Resolution R6T-2008-(Proposed). The project will be considered by the California State Lands Commission at its March 25, 2008, Commission meeting and will be reviewed under General Permit 16 by the U.S. Army Corps of Engineers.

Project Location: The project area is primarily located lakeward of the mean high water line of the TCM project area, with the exception of the new boat wash and lift station (Attachment B).

Project Description: As noted above, this Phase 1 project is before the APC for its consideration and recommendation for conformance with the mitigation measures of the Final EIS/EIR. The project serves as the Phase I marina expansion for the Tahoe City Marina Expansion Master Plan (sheets L-1 and L-2 of Attachment B). The existing fueling dock at the west end of the marina will be removed, and the existing fueling tanks on the landward side of the bulkhead wall will be relocated on the landward side of the existing boathouse building. The Phase 1 project includes the following uses:

- Expansion of 728-foot public pier with breakwater foundation.
- Expansion of floating docks to accommodate 81 new boat slips, ranging in size from 20 to 65 feet in length.
- Relocation and expansion of fuel stations and sewage and bilge pump-out facilities.
- New boat wash and boat lift gantry structure.
- Installation of additional sheet pile paneling along the existing shoreline bulkhead.
- Reconfiguration of the existing marina mooring buoy field and navigation buoys.

The floating docks, pier, and floating wave attenuators will be supported by steel pilings. The pilings for the pier will support a crib wall design for the first 324 feet of the pier, and a sheetpile wall for the remaining 404 feet to serve as a breakwater for the marina. The sheetpile wall section of the pier will include holes near the base of the wall to allow for fish passage and circulation of water. The floating docks, pier, and floating wave attenuators will include new electric, sewer, fuel, and water utility lines encased within the platforms of these structures, to provide associated services for the public. Low level lighting along the deck of the floating docks is proposed. Public restrooms will be available at the existing marina facilities.

The project will require 24 square feet of relocated land coverage within the backshore of the project area for the boat wash area. The project must meet a composite contrast rating score of 25, which includes vegetative screening of shoreland structures. The scenic score for the project was analyzed as part of the BMP Retrofit permit. See Attachment D for further discussion of project related scenic impacts.

The marina expansion will include maintenance dredging to occur over two winter seasons, and will remove approximately 2,600 cubic yards of sediment from the lake bottom. The dredging will occur within a portion of the project area lakeward of the existing shoreline bulkhead wall, within an area of approximately 30,782 square feet (Exhibit E). As discussed above, in accordance with the MOU between TRPA and LRWQCB, LRWQCB has primary responsibility for the permitting of maintenance dredging at marinas within the California side of Lake Tahoe. The project permit has been conditioned that no dredging is authorized to occur until approved by the California Regional Water Quality Control Board. See Attachment D for further discussion of project related water quality and fisheries impacts.

The terminus of the pier is proposed to be located within the location of the existing buoy field operated by Tahoe Yacht Club, on the lakeward side of the existing marina. As a result, a portion of the existing buoy field (consisting of 41 buoys, including navigation buoys) will be reconfigured as illustrated on Attachment C.

The project will require 81 people at one time (PAOTs), which are expected to be allocated from the PAOTs distributed to the Tahoe City Community Plan. Although no waterborne transit uses are proposed as part of the marina expansion project, the pier has been designed to accommodate potential future waterborne transit.

The Final EIS/EIR identifies (Section 5.7) that the project would considerably improve boat circulation within the marina through improved protection at the marina entrance from prevailing winds, and relocation of the fueling dock and boat launching area away from the entrance and mooring slips to reduce congestion. New operational and directional signage is proposed for the new marina facilities, and the harbor entrance will be marked appropriately to meet U.S. Coast Guard regulations. The proposed marina expansion will generate the need for 29 parking spaces, which will be provided on-site within the marina project area (Attachment G).
Issues/Concerns

Chapter 5 of the Final EIS/EIR provides a full analysis of all affected resources and associated mitigation measures. The Final EIS/EIR identifies potentially significant impacts associated with the following affected resources:

- Water Quality
- Fisheries;
- Transportation and Parking;
- Air Quality;
- Land Use;
- Recreation;
- Vegetation;
- Noise;
- Scenic;
- Cumulative Impacts;

Attachment D provides a discussion of the potentially significant impacts identified for the Phase 1 marina expansion project, and how the project will conform with the associated mitigation measures identified in Chapter 5 of the Final EIS/EIR.

Regional Plan Compliance: The proposed project complies with all required findings in Chapters 6, 18, 33, 50, 51, 54, and 55 of the TRPA Code of Ordinances (see Attachment A for details). The proposed marina expansion, including all proposed shorezone uses, are subject to Section 54.12 of the TRPA Code for marinas. The TCM is subject to consistency with the adopted Master Plan and certified EIS. The following aspects of the proposal are consistent with the Master Plan and with Code Section 54.12.

- The lakeward expansion of the proposed pier, floating docks, and boat slips will extend to a distance of 472 feet from high water line instead of 293 feet (existing marina).
- The proposed lakeward limits of the reconfigured buoy field will be determined from the submittal of a final site plan, which shall not exceed a maximum lake bottom elevation of 6,193 feet.
- The first 310 feet of the pier from high water line will have a width of 12 feet instead of 10 feet.
- The setback requirements for the new pier are proposed to be zero instead of 20 feet, as the pier is proposed to be located within and along the northwestern side property line of the project area.

See Attachment D for further discussion of Regional Plan compliance.

Environmental Documentation: As discussed in the Background section, the proposed Phase 1 Marina Expansion activities and uses were evaluated by the Final EIS/EIR for the Tahoe City Marina Expansion Master Plan, which was certified by the TRPA Governing Board on February 23, 2005. The Final EIS/EIR identifies that the project is not expected to create any significant impacts that cannot be mitigated to a less than significant level (Chapter 6 of FEIS/EIR). The certified EIS/EIR will be made available at the Governing Board hearing and at the TRPA offices.
If you have any questions please contact Jason Ramos at (775) 589-5268 or via email at jramos@trpa.org.

Attachments:
- Required Findings/Rationale (Attachment A)
- Project Site Plans (Attachment B)
- Buoy Field Reconfiguration Site Plan (Attachment C)
- Project Conformance with FEIS/EIR Mitigation Measures (Attachment D)
- Maintenance Dredging Project Narrative (Attachment E)
- Engineering Letter for Breakwater Design and Project Construction Methodology (Attachment F)
- Parking Site Plan (Attachment G)
- Project Vicinity (Attachment H)
Reserved for Governing Board meeting.
TAHOE CITY MARINA
MARINA EXPANSION

TRPA SUBMITTAL
AUGUST 2006

OWNER
TAHOE YACHT HARBOR, LLC
JIM PHelan, GENERAL MANAGER
530-583-1038 (TEL)
530-581-3249 (FAX)

PROJECT ADDRESS
700 N. LAKE TAHOE
P.O. BOX 8110
TAHOE CITY, CA 96145

CARTEL SIZE AND APN
PARCEL SIZE 122,840 SQ. FT (2.82 ACRES) LANDSIDE
APPROX. 140,700 SQ. FT (3.23 ACRES) LAKESIDE
APNS: 094-090-020, 094-090-019,
094-090-030, 094-090-031

CIVIL/ENGINEER
IMI DESIGN GROUP
1600 VIA CABELLO MARINA
SUITE 200
SAN PEDRO, CA 90731
310.548.3121 (TEL)
310.548.1924 (FAX)

REFERENCES
1. TAHOE CITY MARINA EXPANSION MASTER PLAN,
PREPARED BY DESIGN WORKSHOP, REV. JUNE 2005
2. FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL STATEMENT FOR THE TAHOE CITY MARINA MASTER PLAN,
PREPARED BY EDAM, FEBRUARY 2005.
A. GENERAL CONSTRUCTION NOTES

1. All work shall conform to these project specifications and the applicable provisions of the United States Department of Commerce, Bureau of Navigation; Standard Specifications and Standards, Alaska Edition and the Prince County General Specifications, as used herein.

2. The Contractor shall comply with all Federal, State, County and City laws and regulations relating to health, safety, welfare, environment and labor. As per the written, power and labor agreement, the work shall not be delayed by strikes or lockouts. The Contractor shall, at all times, maintain a clean and safe workplace and maintain all necessary permits and licenses, and the proper use of all necessary equipment, power and labor, in accordance with the provisions of the contract.

3. Contractor agrees to assume full and complete responsibility for all work done as herein directed, by the Contractor under the terms of this contract and the construction contract agreement. The Contractor shall be fully responsible for any and all damages in workmanship and material caused by the Contractor or its agents, employees, subcontractors or anyone acting under the Contractor's authority.

4. All work shall be done in accordance with the current edition of the Mayor County General Specifications.

5. Contractor shall comply with all permits for the work. Copies of all permits are available from the Contractor. All Contractors shall keep clean, sanitary and orderly at all times. The Contractor shall be responsible for the work done by its subcontractors or anyone acting under the Contractor's authority.

6. This document contains general and special details of the work. Where conditions are not specifically addressed but are of similar nature to those described, similar details of construction shall be used, subject to the review by the Engineer.

7. Contractor shall provide and maintain sufficient turning basins to provide for the safety of the public and to the satisfaction of the Engineer.

8. The Contractor shall use standard practice and materials in the construction of any structure. Where conditions are not specifically addressed but are of similar nature to those described, similar details of construction shall be used, subject to the review by the Engineer.

B. GENERAL SPECIFICATIONS

1. All material and equipment shall conform to these drawings and specifications. The Contractor shall be responsible for all work performed by his subcontractors.

2. The contractor shall be solely responsible for all work performed by his subcontractors.

3. No work shall be done in accordance with the current edition of the Mayor County General Specifications.

4. All work shall be done in accordance with the current edition of the Mayor County General Specifications.

5. All work shall be done in accordance with the current edition of the Mayor County General Specifications.

C. MATERIAL SPECIFICATIONS (continued):

10. Dock System

   a. All materials shall be in accordance with the current edition of the Mayor County General Specifications.

   b. All materials shall be in accordance with the current edition of the Mayor County General Specifications.

   c. All materials shall be in accordance with the current edition of the Mayor County General Specifications.

D. PILE INSTALLATION NOTES:

1. Pile shall be installed as specified in the plans and as the final inspection.

2. Contractor shall be responsible for the proper location of piles.

3. Contractor shall be responsible for the selection of driving equipment and the proper installation of piles as specified.

4. Contractor shall be responsible for the proper location of piles.

5. Contractor shall be responsible for the proper location of piles.

6. Contractor shall be responsible for the proper location of piles.

E. DESIGN CRITERIA:

1. Dead Load:

   a. Live Load: 0.5 kip.

   b. Live Load: 0.5 kip.

   c. Live Load: 0.5 kip.

   d. Live Load: 0.5 kip.

   e. Live Load: 0.5 kip.

2. Operating Load:

   a. Operating Load: 4 kips.

   b. Operating Load: 4 kips.

   c. Operating Load: 4 kips.

   d. Operating Load: 4 kips.

   e. Operating Load: 4 kips.

F. Construction Notes:

1. All work shall be done in accordance with the current edition of the Mayor County General Specifications.

2. All work shall be done in accordance with the current edition of the Mayor County General Specifications.

3. All work shall be done in accordance with the current edition of the Mayor County General Specifications.

4. All work shall be done in accordance with the current edition of the Mayor County General Specifications.

5. All work shall be done in accordance with the current edition of the Mayor County General Specifications.

6. All work shall be done in accordance with the current edition of the Mayor County General Specifications.
TYPICAL DOCK FRAMING - PLAN AND SECTION VIEWS

NOTE: EXACT FRAMING DIMENSIONS OF DOCK SECTIONS AND SIZE AND NUMBER OF FLOATS TO BE DETERMINED BY MANUFACTURER TO MEET LOADING AND FREEBOARD REQUIREMENTS.
Attachment D
Project Conformance with Final EIS/EIR Mitigation Measures

The following is a discussion of the potentially significant impacts identified for the Phase 1 marina expansion project, and how the project will conform with the associated mitigation measures identified in Chapter 5 of the Final EIS/EIR. Chapter 5 provides a full analysis of all affected resources and associated mitigation measures.

Water Quality: The primary types of marina related activities that have potential to contribute to water quality degradation includes, maintenance dredging, construction of the breakwater and installation of new piling, marina operations, motorized watercraft operations, and disruption of littoral processes and water exchange within the marina. Marina related operational activities include watercraft fueling, vessel sewage pumping, bilge draining, boat and vehicle maintenance, and boat and vehicle washing.

Section 5.2 of the Final EIS/EIR identified the following Phase 1 potentially significant impacts pertaining to water quality, and the associated mitigation measures to reduce these impacts to a less than significant level.

**Impact 5.2-11: Effects of Marina Enclosure on Water Exchange.**
*Mitigation Measure 5.2-11: Maximize Water Exchange Through Design Changes.*
The proposed expansion of the marina basin enclosure (breakwater) would affect water exchange in two ways. First, the new marina enclosure would provide an additional barrier to water exchange between the existing marina basin and the lake. Second, a larger basin reduces the ability of water located near the center of the basin to exchange with lake water. Thus, the marina expansion has the potential to decrease water quality by reducing water exchange. Marina basin enclosures can increase water temperature and concentrate nutrients, raising turbidity levels and algae production.

The proposed breakwater will consist of a crib wall design for the first 324 feet, and a sheetpiling wall for the remaining 404 feet of the breakwater. The crib wall includes large pores for significant water exchange, while the sheet pile wall includes holes near the base of the wall to allow for circulation of water and fish passage. Attachment F serves as a report from Bluewater Design Group, the project engineer for the design of the breakwater, which provides an assessment of how the breakwater was designed to achieve conformity with Mitigation Measure 5.2-11 and Section 54.11 of TRPA Code.

Impact 5.2-12 of the Final EIS/EIR concluded that Phase 1 marina expansion impacts to littoral processes would be less than significant.

**Impact 5.2-13: Degradation of Water Quality During Dredging**
*Mitigation Measure 5.2-13: Implement Best Management Practices* To mitigate for the potential adverse impacts of dredging, TCM has developed a Dredging Plan, which includes a methodology for installation of BMPs and all dredging operations for consistency with TRPA (Code Section 54.14) and LRWQCB regulations. In accordance with the MOU between TRPA and LRWQCB, LRWQCB has primary responsibility for the permitting of maintenance dredging at marinas within the California side of Lake Tahoe. The
Plan has been reviewed by LRWQCB for consistency will all mitigation requirements associated with Mitigation Measure 5.2-13 and all applicable TRPA and LRWQCB water quality regulations. The project is scheduled to be considered by the California Regional Water Quality Control Board at the March 12, 2008, Water Board public meeting as Board Order Resolution R6T-2008-(Proposed). The Water Board has lead responsibility for the approval of the maintenance dredging for this project.

Dredging operations will include a barge-mounted, long-arm excavator that will deposit material directly into lined trucks via a barge or conveyor. The transport of the dredged material will be within the turbidity curtain barriers surrounding the perimeter of the dredged area. The trucks will haul away the dredged material to an approved landfill (Eastern Regional Landfill in Truckee). Construction activities outside of the maintenance dredging area associated with the breakwater, pier, and boat slips include installation of pilings, sheetpile paneling, crib wall framing, and placement of boulders within the crib wall and sheetpile walls. A plan has been submitted for maintenance dredging, construction methodology, BMPs, and monitoring requirements during construction activities. The project, as conditioned, is expected to reduce water quality impacts during construction to a less than significant level. See Attachments E, F, and sheets S-6 and S-7 of attachment B for further detail regarding construction methodology, dredging operations, BMPs, and breakwater design.

Impact 5.2-14: Degradation of Water Quality from Increased Boating Activity. Mitigation Measure 5.2-14: Boating Pollution Reduction Program.

Prior to Phase 1 construction, TCM shall develop and implement a TCM-specific Boating Pollution Reduction Program (BPRP) that includes measures consistent with the programs proposed in the Draft Shorezone EIS (1999). The BPRP shall include all the measures identified in the Final EIS/EIR for Mitigation Measure 5.2-14. The project permit has been conditioned for consistency with all other procedural requirements. Among other requirements, the BPRP requires the following:

- Installation of a spill prevention system at fuel pumps.
- Implementation of an ONRW boat sticker program to address and help fund resolution of water quality issues associated with increased marina capacity.
- Development and implementation of a public education program designed to inform boaters of boating activities that degrade water quality, and actions they can take to minimize that degradation.
- Development of a pre- and post-project monitoring program to verify that increased boating activity does not result in unacceptable elevation of pollutants of concern. A baseline for PAH (polycyclic aromatic hydrocarbons) concentrations shall be established to measure potential changes resulting from the proposed TCM expansion. Objectives for PAH should not exceed the baseline.

The bilge pump-out facilities would be located in front of the Boathouse building next to the new launch and boat wash area. Untreated water from the bilge pump-out facility would be stored in a catchment basin beneath the launch area and then collected in a
tank and treated for use in the boat wash facility (i.e., oil and gas removal). Water that
has been recycled through the system several times would be discharged into the sewer
system. Section 54.12.C of the TRPA Code requires boat washing facilities to be
connected to a sewer system. The boat wash system shall include a high-pressure spray
gun with a minimum water temperature of 140 degrees fahrenheit for treatment of
quagga and zebra mussels.

The project permit has been conditioned for consistency with all mitigation measures
and applicable Code requirements for these impacts, to reduce these impacts to a less
than significant level. Section 5.2 of the Final EIS/EIR contains a full analysis of these
impacts and the required mitigation measures.

Fisheries: The TCM is located in an area mapped as prime fish habitat by TRPA. TCM is
located on a map border between feeding and cover habitat to the west, and spawning
habitat that occurs to the east. Phase 1 expansion is proposed primarily for an area in
deeper water that has little or no gravel substrate and provides negligible spawning
habitat, although larger cobbles and small boulders provide feed and cover habitat. The
Final EIS/EIR identifies that no fish species currently listed as threatened or endangered
inhabit the project area, nor are any sensitive species found in the area.

Fisheries impacts associated with the project include barriers to fish movement and
alteration and removal of habitat associated with maintenance dredging and installation
of the breakwater and piling structures. The project also has potential for the introduction
of exotic fish species.

Section 5.9 of the Final EIS/EIR identified the following Phase 1 potentially significant
impacts pertaining to fisheries, and the associated mitigation measures to reduce these
impacts to a less than significant level.

Impact 5.9-2: Effects from Increased Boating Use.
Mitigation Measure 5.9-2: Implement Information Program.

Impact 5.9-4: Expanded Barriers to Fish Movement.
Mitigation Measure 5.9-4: Provide Holes for Fish Movement.

Impact 5.9-5: Direct Alteration of Substrate.
Mitigation Measure 5.9-5: Replace Feed and Cover Habitat.

Impact 5.9-6: Indirect Alteration of Substrate.
Mitigation Measure 5.9-6: Replace Altered Substrate

Impact 5.9-7: Degradation of Fish Habitat from Sedimentation During
Construction.
Mitigation Measure 5.9-7: Implement Sediment Control Measures

Impact 5.9-8: Removal of Boulders.
Mitigation Measure 5.9-8: Replace Boulders

The mitigation measures for these impacts include habitat creation and replacement
requirements, including the replacement of habitat at a 1.5:1 ratio. The breakwater, as
illustrated on sheets L-2, S-6, and S-7 of Attachment B, will be partially constructed with a cribwall design and partially constructed with a sheetpile wall design. The cribwall will be constructed with boulder fill materials retained by steel pilings and cross beams. The sheet pile wall will also include boulder fill materials, and will be constructed with holes near the base of the wall for fish movement. The project engineer, Bluewater Design Group, is currently working with TRPA fisheries staff to coordinate the design of the breakwater to provide functional feed/cover/escape habitat value to contribute towards the habitat replacement requirements. Based on the total area of impact to fisheries habitat and the available area of the breakwater to incorporate boulder materials, there is potential for the breakwater to incorporate the entire area of required habitat mitigation.

The final details of the habitat mitigation plan are expected to be available at the time of the Advisory Planning Commission meeting. The Final EIS/EIR identifies that the overall design and methodology of habitat replacement is subject to approval by the TRPA and the California Department of Fish and Game.

TCM is also required to implement an information program to educate marina users about the negative consequences of non-native fish introduction.

The permit has been conditioned for consistency with all mitigation measures for these impacts, to reduce these impacts to a less than significant level. Section 5.9 of the Final EIS/EIR contains a full analysis of these impacts and the required mitigation measures.

Transportation and Parking: Table 5.7-4 of Section 5.7 of the Final EIS/EIR presents existing LOS at signalized and unsignalized intersections along SR 28 in the project vicinity, and detailed worksheets can be found in Appendix D of Volume II of the Final EIS/EIR. The SR 28 roadway segment between SR 89 and Jack Pine Street is currently operating at LOS F, an unacceptable level, during the summer PM peak hour with an estimated average travel speed of 6.8 miles per hour. Traffic generated by the additional boat slips and marina expansion is described in Table 5.7-5 of Section 5.7. Impact 5.7-7 identifies that average travel speeds on SR 28 between SR 28 and Jack Pine Street, currently operating at LOS F, would be slightly lowered as a result of the project, which is considered a significant impact. Construction traffic in the study area would slightly increase delays at the study intersections during the construction period, which is considered a temporary, significant impact. The Phase 1 TCM expansion would generate approximately 240 new daily trips in the North Lake Tahoe area, which is considered a significant impact with respect to vehicle miles of travel (VMT). Mitigation measures for these impacts include payment of air quality mitigation fees and traffic mitigation fees, and preparation of a Traffic Control Plan for review and approval by TRPA, Placer County Department of Public Works, and Caltrans prior to construction activities. Boat launching would be prohibited from 12:00 noon to 6:00 p.m. to reduce vehicle activity at the waterfront and potential conflicts with cyclists of the Lakeside Bicycle Trail during the peak traffic period. The project permit has been conditioned for consistency with all mitigation measures for these impacts, to reduce these impacts to a less than significant level.

The Placer County parking standards for marinas requires one parking space for every three boat slips, plus 1 space for each full-time employee on the largest shift. The Phase 1 marina expansion parking demand increase is estimated at 29 spaces (81 slips divided
by three, plus two new employees). All required parking is proposed to be on-site within
the marina project area (Attachment G). The Parking Plan has been reviewed by TRPA
and Placer County Department of Public Works staff for consistency with applicable
development standards, and the project permit has been appropriately conditioned.

Air Quality: The Final EIS/EIR evaluates air quality impacts associated with all Phase 1
activities as described in the Background section. The attainment status designations for
the Lake Tahoe air basin with regard to National Ambient Air Quality Standards,
California Ambient Air Quality Standards, and the TRPA Environmental Threshold
Carrying Capacities are presented in Table 5.5-3 of Section 5.5 of the Final EIS/EIR.
Construction of the parking structure and marina expansion would temporarily generate
emission of ROG, NOx, and PM10 due to site grading and excavation, paving, application
of architectural coating, motor vehicle exhaust associated with construction equipment
and employee commute trips, material transport (especially on unpaved surfaces), and
other construction operations. Table 5.5-7 in Section 5.5 of the Final EIS/EIR provides a
summary of daily construction emissions for Phase 1 project construction activities.
Mitigation Measure 5.5-1 requires TCM to submit to TRPA and Placer County Air
Pollution Control District a Construction Emission/Dust Control Plan and receive
approval prior to groundbreaking. The Plan is expected to reduce ROG, NOx, and PM10
levels to a less than significant level, and reduce fugitive dust emissions. The project
permit has been conditioned for consistency with these mitigation measures.

Land Use: The proposed breakwater could involve construction in the lakezone, which is
prohibited under Section 51.2 of TRPA Code. Mitigation Measure 5.3-13 requires TCM
to conduct bathymetric surveys to identify the northern boundary of the lakezone, and if
necessary, modify the design of the breakwater to ensure it does not extend into the
lakezone. The permittee has provided a site plan with lake bottom elevation contours,
which identifies the lakeward limits of the breakwater at an elevation of approximately
6,210 feet, well within the lakezone boundary of 6,193 feet elevation. The reconfigured
buoy field is also prohibited from being located within the lakezone.

Vegetation: Dredging and construction of the proposed breakwater, boat slips, and boat
launching facility would result in impacts to Waters of the U.S. Increased boating activity
associated with the marina expansion has the potential to increase the spread of
Eurasian watermilfoil. To reduce these impacts to a less than significant level, the
mitigation measures for these impacts (Section 5.8 of the Final EIS/EIR) require TCM to
obtain the applicable permits from the U.S. Army Corps of Engineers, LRWQCB,
California State Lands Commission, California Department of Fish and Game, and
TRPA (Mitigation Measure 5.8-3). TCM is also required to implement management and
monitoring strategies to prevent the establishment of Eurasian watermilfoil, including a
pre-construction/dredging survey to determine if the species is present in the project
area (Mitigation Measure 5.8-4). A Eurasian watermilfoil survey of the project area has
been performed and submitted by a qualified environmental scientist. The applicant has
also applied for, and is currently seeking project approval from the applicable agencies.
The project permit has been conditioned for consistency with all mitigation measures for
these impacts, to reduce these impacts to a less than significant level.

Noise: Noise sensitive land uses located in the vicinity of the project site include the
Placer County Library and the Tahoe City Inn (Attachment H). The 2001 Threshold
Evaluation Report concluded that the Lake Tahoe Basin remains in non-attainment for
Community Noise Equivalent Level (CNEL). Therefore, any increase in community noise levels in PAS 001A caused by Phase 1 projects would be considered a significant impact. Phase 1 construction noise levels associated with the marina expansion have the potential to create potentially significant impacts with the noise sensitive land uses in the project vicinity. The marina expansion would result in a substantial increase in the number of boats using the marina, which has the potential to increase ambient noise levels and community noise levels, which is considered potentially significant. Phase 1 projects have potential to create a negligible increase (<3 dBA) in long-term operational noise associated with off-site traffic, which is considered a significant impact. Mitigation Measure 5.6-5 requires compliance with the techniques prescribed by Mitigation Measure 5.6-1 to reduce noise associated with construction equipment, which is expected to reduce these impacts on the nearby noise sensitive land uses to a less than significant level. Mitigation Measures 5.6-7 and 5.6-8 require TCM to prepare a Noise Study to ensure that boat noise levels and off-site operational traffic noise do not exceed community noise levels (CNEL). The permit has been conditioned for consistency with all mitigation measures for these impacts, to reduce these impacts to a less than significant level.

Scenic Resources: Section 5.10 of Volume I and Appendix G of Volume II of the Final EIS/EIR provides a full analysis of scenic impacts and mitigation measures for the Phase 1 marina expansion. After implementation of the marina expansion project, lake views from SR 28 down the view corridor of the TCM driveway would include additional boats, slips, and the new breakwater. Impact 5.10-5 identifies that the marina expansion would have a less than significant scenic quality impact to Roadway Travel Unit 15.

The scenic assessment in the Final EIS/EIR provides an evaluation of all existing and proposed shoreland and shorezone structures associated with Phase 1a and 1 development (see Project Description for Phase 1a and 1 development). The project area for the scenic assessment includes the lake frontage from the western TCM property line to the eastern edge of the Boatworks Mall parcel, because the existing marina and proposed marina expansion would occupy the shorezone in front of both shoreland parcels. Appendix G provides the contrast rating scores for the existing structures, and the proposed contrast rating scores and composite contrast rating score for all Phase 1a and 1 development, including an analysis of the additional square footage of visible marina expansion development to be mitigated in the shoreland of the project area (see Exhibit 2 of Appendix G). Table 5.10-5 of Section 5.10 summarizes the existing and proposed conditions. Due to Shoreline Travel Unit 15 being in non-attainment, TRPA Code Section 30.15.H requires a 50% increase in additional shorezone square footage to be mitigated in the shoreland. Based on drawings developed to illustrate the effectiveness of scenic mitigation plantings (see Appendix G), full scenic BMPs can achieve a substantially improved, composite contrast rating of 25 (compared to the existing 19) by visually screening structures (vegetative screening) and reducing visible rooflines.

The TCM is located within TRPA designated Scenic Shoreline Unit No. 15, which is currently out of attainment. Therefore, TCM is required to make a fair share contribution towards attainment, by making a scenic quality rating increase of ¼ of a point within Shoreline Scenic Unit No. 15. This will be achieved by repainting the existing light grey boat house, existing white nautical flag pole, and existing white bollards with TRPA approved colors.
Mitigation measure 5.10-6 requires implementation of all scenic BMPs in the shoreland with mitigation planting areas, and the submittal of a scenic design plan consistent with the scenic analysis contained in Appendix G, prior to approval of development permits for Phase 1 projects. Since the approval of the TCM Expansion Master Plan, some deviations have occurred from the scenic analysis contained in Appendix G of the Final EIS/EIR. The structural design of the harbor master building, as approved with TRPA Permit No. 20051708, was substantially changed from its original design including the landscape screening as analyzed in Appendix G. The parking structure is also not proposed as part of the Phase 1 development at this time. TCM is currently in the process of providing a revised Scenic Design Plan with all the required shoreland vegetative screening to achieve a composite contrast rating score of 25 as consistent with the scenic quality improvements contained in Appendix G. The revised Scenic Design Plan is required to be submitted for staff review prior to the March 12, 2008, APC meeting for this project, and prior to project approval by the Governing Board. Project compliance with Mitigation Measure 5.10-6 is expected to reduce scenic impacts to Shoreline Travel Unit 15 and Shoreline Scenic Unit No. 15 to a less than significant level.

The original design of the breakwater and pier for the marina expansion, as analyzed with the Final EIS/EIR, was identified as being visible from Commons Beach Recreation Area (Scenic Resource 16-1). This was identified as a potentially significant impact. TCM has provided a revised site plan, illustrating a breakwater/pier design that does not extend lakeward of the Motamedi pier as viewed from Commons Beach for conformance with Mitigation Measure 5.10-7.

The project permit has been conditioned for consistency with all mitigation measures for these impacts, to reduce these impacts to a less than significant level.

Public Services and Utilities: Pursuant to Mitigation Measures 5.13-1 and 5.13-3, TCM and Tahoe City PUD shall prepare and submit an Emergency Access Plan to TRPA, Placer County Department of Public Works, and the North Tahoe Fire Protection District for review and approval prior to issuance of construction permits. The Plan shall include detailed descriptions of how emergency access will be maintained throughout the construction phases of the project. The project permit has been conditioned for consistency with these mitigation measures.

New fuel dispensing and pumpout facilities would be located on the lakeward 180-foot leg of the Phase 1 breakwater. All fuel delivery lines would be double-walled or steel encased. All fuel and sewer lines would be encased with moisture detection and alarm systems. Section 54.12.C of TRPA Code requires gas pumping facilities to include emergency and standard shut-off systems to avoid gas leakage to the lake. The project permit has been conditioned for consistency with all applicable development standards of Section 54.12.C for marina support facilities.

Cumulative Impacts: Section 5.14 provides a cumulative impact analysis for the resources affected by Phases 1a, 1, and to some extent, Phase 2. This section identifies potentially significant cumulative impacts pertaining to the following affected resources for the Phase 1 marina expansion:

- Water Quality
- Air Quality
• Noise
• Transportation
• Vegetation
• Fisheries
• Scenic Resources
• Cultural Resources
• Public Services and Utilities

The cumulative impacts associated with the affected resources will be mitigated to a less than significant level through implementation of the mitigation measures discussed above for each of the individual affected resources. Impact 5.14-40 identifies, that it is possible that buried or concealed cultural resources could be present and detected during project ground disturbance activities at the project site. TCM, Placer County Redevelopment Agency, and Tahoe City PUD shall implement Mitigation Measure 5.11-2, which requires that ground disturbing activities shall immediately cease, if previously unknown archaeological resources are discovered during any construction related land alteration activities. A qualified archaeologist approved by TRPA and Placer County shall be consulted to evaluate the resource in accordance with state and TRPA guidelines. The project permit has been conditioned for consistency with this mitigation measure.
Attachment E

Revised Maintenance Dredging Project Narrative

for

Phase I Tahoe City Marina Expansion

Prepared for
Tahoe Regional Planning Authority

Submitted by
Tahoe Yacht Harbor, LLC
Jim Phelan
700 N. Lake Tahoe
Tahoe City, CA 96145

Prepared by
BLUEWater Design Group
2500 Via Cabrillo Marina, Suite 200
San Pedro, CA 90731

September 18, 2007
I. Project Description

The Tahoe City Marina Expansion Master Plan and the certified Final Environmental Impact Report/Environmental Impact Statement for the Tahoe City Marina Master Plan, both completed in 2005, identify maintenance dredging as a necessary element to the expansion of the Tahoe City Marina. The expanded marina area is proposed just southwest of the existing marina stretching to the property line. Maintenance dredging will occur in several areas. As much as 4-5 feet of material has accumulated in part of the area due to deposition of eroded material from behind the adjacent shoreline bulkhead. Another area requires dredging to remove material left behind in a channel area when a portion of the existing marina wall was rebuilt. The project also involves demolition of the existing fuel dock and a portion of the existing cribwall. In addition 30 to 60 boulders of 1 foot or more in diameter located where the new marina will go may need to be removed from the basin. There is also a limited quantity of marine railway track which poses a potential navigation hazard and will be removed during this project. A figure showing the proposed marina expansion and the existing facilities is shown on Figure 1 in Appendix A. Figure 1 is a reduced copy of sheet L-2 of the accompanying drawings.

II Dredging History

Historically, dredging has occurred both inside and outside the marina. Maintenance dredging inside the existing marina and in an area immediately adjacent to the existing marina along the shoreline bulkhead and existing fuel dock was permitted by Lahontan Regional Water Quality Control Board (Lahontan) in Board Order 6-89-72. Board Order 6-89-72 defined a lower dredging limit elevation of 6217 (Lake Tahoe Datum) except in channel areas. In these areas, the lower limit is defined as 6216. A copy of Board Order 6-89-72 is included in Appendix B.

Additionally, the Tahoe Regional Planning Agency (TRPA) has recognized approved dredging areas further to the southwest and within the property as identified in Exhibit 5.2-1 of the 2005 EIS/EIR. This area was last dredged prior to 1989 to accommodate tour boat use. Dredging for the proposed project is identified in two ways, based on where it is occurring in the basin. Areas to be dredged identified in the 2005 EIS/EIR are called EIS areas. Additional areas, not identified in the EIS but previously permitted by Lahontan Board Order 6-89-72 are called 6-89-72 areas. All dredging is considered maintenance dredging since these areas have been legally dredged before.

Removal of portions of the abandoned marine railway track is also part of this project. The old marine railways were set on piles and oriented perpendicularly from the bulkhead. They were used to launch boats into the lake during lower water levels. The portions of the track closest to shore were removed when the existing marina was constructed. Portions that are further offshore still exist in various conditions of repair. These sections are always under water since the lake is now maintained at higher levels. Some portions pose a navigational hazard while others are sufficiently deep. Sections of the marine railway that are deep enough will be left for their historic value. Sections that
pose a navigational threat, which are typically the sections in disrepair, will be cut and removed from the lake.

III. Dredging Quantities

A layout of the areas to be dredged as part of the marina expansion project is shown in the attached Figure 2. In it, the dredging volumes for EIS areas and 6-89-72 areas are given as 2,502 cubic yards (cy) and 91 cy, respectively. The total volume to be dredged in the area outside the existing marina is 2,593 cubic yards. The area (foot print) over which dredging will occur is 30,782 square feet. Sections of the proposed dredging are seen in Figure 3. Figures 2 and 3 are reduced copies of sheets L-7 and L-8, respectively, of the accompanying drawings.

IV. Soil Conditions

Fine silts and sand brought in by natural processes accounts for most of the sediment which has accumulated in the project area since previous dredging. The cobbles and larger boulders that exist in the area are both indigenous and left from previous construction and repair activity. A Geotechnical Investigation was prepared for a project just landward of the marina expansion site by Kleinfelder in 2005. In it, soils at lakebed elevation are classified as hard and stiff clays. Since the limit of dredging for the channel areas (elevation 6216) was not reached during the last dredging, it is not clear what percentage of the sediment to be removed during this project will be older deposits of cobbles, boulders and clays and what percentage will be more recent silt and sand sediment deposits. It is likely that there will be a mix of both old and new soil types.

V. Selected Method of Dredging

There are two general categories for dredging from a lake bottom, hydraulic dredging and mechanical dredging. In hydraulic dredging, sediment is removed from the lakebed using pure suction (loose sand only) or a rotary cutting tool which dislodges the material and suspends it into solution. A pump on shore provides suction through a flexible tube and removes the solids in dredging slurry that is typically 20% solids. The slurry is then deposited onshore for dewatering, directed to the sanitary sewer or directed to trucks to be hauled away. Because of the tremendous amount of water sucked up by the hydraulic dredge, the volume of slurry to be hauled away is about five times the volume of sediment that is removed. In the case of this project that would mean over 2.6 million gallons of slurry (2,593 cy x 5 x 27 cf/cy x 7.48 gal/cf = 2.62 M gal) would need to be treated, hauled offsite or sent to the sanitary system. If the slurry is deposited in settling basins on shore, those settling basins require a volume equal to about 1.3 times the sediment to be removed. In this case that volume would be about 2.1 acre-feet (2,593 cy x 1.3 x 1 af/1613 cy = 2.09 af) of material. An acre-foot is the volume of material that covers an acre of ground to a depth of 1 foot. Hydraulic dredging is not able to remove large boulders or other debris (railway pieces) and has difficulty removing hard clays since they do not breakup and suspend easily. Because of the large amount of slurry, hauling away by trucks or sending effluent to the sanitary sewer system is impractical.
Because of limited land space on site, construction of a 2.1 acre-foot settling basin is not feasible. Because of the mixture of soils types, at least some mechanical dredging will be required on site. For these reasons, Tahoe City Marina (TCM) is proposing a mechanical dredging program for this project.

Mechanical dredging involves the use of heavy machinery located on shore or on a barge which grabs material of the lakebed with a bucket, scoop or clamshell. The material is scooped up, bringing up much less water than hydraulic dredging, and is transported to shore by conveyor or in a barge. The conveyor or barge is then off loaded in trucks to be hauled off site. Depositing the material onshore has the same disadvantages as it does with hydraulic dredging, namely that a large area is required to dewater the sediment. Placing the material directly onto trucks is much more feasible with mechanical dredging because the volume is limited by less water being brought up out of the lake. The impact of the bucket on the lakebed causes turbidity in the otherwise clear water, which is the major drawback of mechanical dredging. However, turbidity can be confined to the project area, and allowed to settle insitu by use of silt barriers, often called turbidity curtains. For this project, TCM is proposing dredging using a barge mounted long arm excavator which will ultimately deposit material into waiting lined trucks via a barge or conveyor. Transport of the dredged material over the lake will occur within the confines of a turbidity barrier. The trucks which will haul away the dredge spoils to an approved landfill. Contact information for the landfill is Eastern Regional Landfill, Cabin Road, Truckee 587-4235. The trucks will leave the site via the main driveway and proceed west on Highway 28 to it's intersection with Highway 89 north then proceed for approx 12 miles to Cabin Creek Road and turn left and proceed to landfill. Trucks have a capacity of approximately 18 cubic yards. Estimating bulking at 30%, it will take approximately 187 truck trips to dispose of the dregge spoils.

Lahontan has organized maintenance dredging projects into two classifications, simple dredging and complex dredging. Criteria for simple dredging are 1) no temporary storage of onsite materials, 2) no onsite dewatering of dredged spoils, 3) no use of flocculent for settling spoils, 4) no discharge of decant water to surface waters, and 5) no beach replenishment. TCM proposes to perform the dredging for this project according to the criteria for simple maintenance dredging.

VI. Work Plan

Prior to the dredging work, TCM will construct a sheetpile breakwater, which is also a part of the expansion project. The erection of the breakwater will provide protection of the work area and turbidity curtain against waves coming in from the deep water of the lake.

After water sampling and analysis is completed, silt curtains and oil booms will be installed around the area where work is being performed. Because the marina will need to be accessible to boaters through the life of the project, the curtain will be installed and moved around with the moving construction area to provide both containment of disturbed lakebed and uninterrupted navigability. There are four anticipated operational
periods during which work within the lake will occur. They are 1st Winter, 1st Summer, 2nd Winter and 2nd Summer. The location of the turbidity barriers for each of these operational periods can be seen on Figure 2.

The turbidity barrier proposed is the Lightweight Turbidity Barrier by OMS Environmental Corporation of Melbourne Florida, with 18 oz. fabric and 3/8” anchor chain, or approved equal. The silt curtain will be attached to piles on the existing breakwater, the new breakwater and the bulkhead, as appropriate. The silt curtain will extend to the full depth of water in the work area and be anchored to the bottom per the manufacturer’s recommendation. Usually this is accomplished by providing a weight in a bottom hem of the curtain and anchoring continuously or at close enough intervals to maintain a “silt” seal on the bottom. A second silt curtain will be installed on the lakeward side of the area to be dredged. It will extend to the bottom and provide secondary containment where the curtain is not attached to other rigid containment structures (bulkhead, crib wall or sheet pile wall). The silt curtains will be inspected daily as the project progresses and will not be removed until the threat of sediment and nutrient transport ceases to exist as determined by the executive Director of the Lahontan RWQB. Details of the silt curtain and oil boom anchoring system are shown on the attached sheets.

After installation of the turbidity barrier, a barge mounted excavator will begin lakebed maintenance operations. The excavator is a tracked, long arm, Caterpillar 325 B model equipped with a one cubic yard bucket. The excavator bucket and arm will be steam cleaned prior to placement on the barge. After the barge is moved into place it will be temporarily anchored using spuds before work begins. The excavator will first remove large boulders, old railroad trestles and other debris which present a hazard to navigation. The debris and larger rocks, greater than 18 inches, will be retrieved from the lake bottom using an excavator equipped with a bucket and clamping foot so the material is picked off the bottom, not scooped. This method should not cause sediment to suspend. However, the rock will be collected from within the boundaries of the turbidity curtain and any suspended sediment will be prevented from migrating into the lake. These boulders will be loaded onto the same barge that supports the excavator and placed along the interior of the sheet pile wall. The debris will be placed in refuse bins and hauled to a landfill. After the large boulders have been picked up dredging of the lakebed substrate will begin.

Dredged material will be removed from the lake using the excavator with a one yard bucket. Rocks from 6 to 18 inches will be salvaged from the dredge spoils to be used as construction materials in the lake. Rocks of this size will be used for the crib wall fill. These rocks will be stockpiled on a barge and placed within the cribbing during the first winter. Rocks will be placed on the lake bottom to minimize impacts to the lake bed. The bucket will deposit the remaining material on the barge or a conveyor system to deliver the spoils to the shore. At the shore, lined trucks will be waiting to remove the spoils from the site and deliver to the landfill. Most of the dredging work will occur during the first winter. After the winter season, the perimeter of the turbidity barrier will be shortened and the area enclosed decreased during the 1st Summer, which is necessary
for operation of the marina during the boating season. No spoils will be removed from
the lake during the 1st Summer. During the 2nd Winter, the turbidity curtain will adjusted
slightly to allow construction of the new fuel dock. Also during the 2nd Winter the
existing fuel dock will be demolished and removed and dredging will occur beneath it
prior to placement of new floating docks. No spoils will be removed from the lake
during the 2nd Summer.

Some boulders to be picked off the bottom are located outside the turbidity curtain. Their
removal is necessary to ensure navigability of tour and transit boats mooring at the pier.
They will be picked using the excavator bucket with claw foot to avoid suspension of
sediments.

Removal of the marine railway tracks will be done by removing portions of track at joints
if possible. If joints are welded, corroded together, or do not occur relatively close to
limits of track to be demolished, cutting the steel portions of track will be necessary.
Cutting of the track will be accomplished using an underwater hydraulic saw or an
underwater exothermic cutting rod. Byproducts of a hydraulic saw will be fine steel
particles (similar to sawdust) which can be collected using a magnet. Exothermic cutting
is accomplished using special hollow rods which direct high amperage electric current
and oxygen to the steel to be cut. The resulting arc of electricity oxidizes the steel.
Byproducts are mostly consumed, the exception being a very small amount of carbon
soot which floats to the surface. Piles on which the tracks are mounted will be cut above
the mudline if they pose a hazard to navigation. They can also be cut with an underwater
hydraulic saw.

VII. Water Quality and Soil Sampling

Prior to dredging activity substrate samples will be obtained in the area to be dredged
according to protocols required by Lahontan. Soil samples will be tested for
contamination due to fuel products and marina operations. Soil samples will be
collected, maintained, tested and analyzed as discussed in the procedure developed for
this project by University of California at Davis, which is provided in a separate
document.

Prior to dredging activity water samples will also be obtained in the area to be dredged.
Water quality samples will be taken, analyzed and forwarded to TRPA and Lahontan for
review as discussed below. Water samples will be analyzed by a certified lab and will
determine the baseline turbidity for the project area. Regular water sample collection and
analyses will be done in accordance with Lahontan Board Order No R6T-2005-0015
Attachment Y and the Lahontan’s General Provisions for Monitoring and Reporting. A
description of the sampling program is presented in the next section and is summarized in
Table III of Attachment Y Monitoring and Reporting Program of Lahontan RWQB Board
Order N6T-2005-0015. Table III is reproduced at the end of this narrative.

Continuous visual inspections will be made of the containment structures, dredging
equipment, spoils scows, lined trucks and daily inspection logs kept noting problems or
violations. During dredging operations, turbidity measurements shall be taken every two hours both inside and outside of the silt curtain using field sampling equipment in compliance with US EPA method 180.1 for turbidity by the contractor. Results from the sampling and notes of problems or violations discovered during inspections shall be kept in daily log. If turbidity plumes or petroleum product sheens are detected outside the containments areas, dredging operations shall be halted immediately and corrective actions taken. Copies of all monitoring data shall be submitted to appropriate authorities within 30 days of completion of the project.

Upon completion of the dredging operations, a composite water sample shall be collected from within the contained area and analyzed for turbidity by a certified lab. Results of the sample analysis will be sent to the TRPA staff and Lahontan RWQB Executive Director or designated staff. Upon approval of Lahontan RWQB staff and TRPA staff, containment structure will be removed from the lake. Movement and/or removal of the silt curtain will only take place after approval of appropriate staff of these two agencies.

VIII. Best Management Practices

In order to minimize the impacts associated by maintenance dredging all applicable best management practices (BMPs) will be employed. Attachment H to Board Order R6T-2005-0015 lists identified BMPs for maintenance dredging of marinas in the Lake Tahoe Hydrologic Unit. Of those listed, the following are applicable to this project and will be employed.

1. Pre-dredging analysis of lakebed material will be submitted to Lahontan before dredging begins for determination of appropriate disposal site.

2. Discharge from spoils dewatering into the lake will be prevented by offsite hauling and disposal of dredged spoils.

3. Barge operators shall be familiar with proper use of equipment to minimize turbidity, such as appropriate cycle times, elimination of multiple “bites” of the bucket, careful bucket unloading to the scow, and careful transfer of material from the scow to the trucks.

4. All excavated sediments, shall be removed from the lake and disposed of above the high water rim of Lake Tahoe.

5. Lined trucks will be used to transport dredged material to prevent leakage of water contained in the sediments.

6. Temporary containment structures, namely silt curtains and oil booms, shall be designed, installed and maintained so that receiving water limitations are not violated outside of the project area. Structures will be designed to withstand anticipated wave loads. These structures will not be removed until the threat of nutrient, hydrocarbon and sediment transport has been eliminated.
7. All dredging activities shall cease if adverse weather conditions develop which threaten to transport disturbed sediments from the project area.

8. Perimeter berms or silt fences shall be placed around the truck loading area to capture and detain sediments spilled during truck loading. These silts will be cleaned up immediately and the truck loading area swept clean at the end of any loading day and prior to inclement weather.

9. Mechanical equipment such as the excavator arm and bucket shall be steam cleaned and inspected prior to placement in the lake.

10. Vehicle use will be limited to paved areas and to unpaved areas which will be re-stabilized and or re-vegetated as part of the concurrent Phase I expansion activities.
Excerpt from R6T-2005-0015, Attachment Y, summarizing monitoring requirements:

Table III

<table>
<thead>
<tr>
<th>Activity</th>
<th>Permit Section, Page</th>
<th>Number of Samples</th>
<th>Location</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Project Water Sampling</td>
<td>MRP, Section 1., a., 1., Page 9</td>
<td>One composite sample comprised of 3 separate samples</td>
<td>A representative sample collected from the area to be dredged</td>
<td>Once prior to dredging</td>
</tr>
<tr>
<td>Pre-Project Substrate Sampling</td>
<td>MRP, Section 1., a., ii., Page 9</td>
<td>One composite sample comprised of 3 separate samples</td>
<td>A representative sample collected from the same bottom elevation that will be achieved during the dredging project</td>
<td>Once prior to dredging</td>
</tr>
<tr>
<td>Sampling if Dredging Project Involves Beach Replenishment</td>
<td>MRP, Section 1.a., iii., Page 9</td>
<td>Two composite samples each comprised of 3 separate samples</td>
<td>One composite sample representing the dredged material and one composite sample representing the beach area proposed for replenishment</td>
<td>Once prior to dredging</td>
</tr>
<tr>
<td>Sampling During the Dredging</td>
<td>MRP, Section 1.b., i., Page 9</td>
<td>Project with Containment Structure: two samples each from a different location</td>
<td>Project with Containment Structure: one sample from inside the containment area and one sample from no more than 5 feet of outside the containment structure</td>
<td>Every 2 hours during active dredging</td>
</tr>
<tr>
<td>Visual Inspections During the Dredging</td>
<td>MRP, Section 1.b., ii., Page 10</td>
<td>Observe project site continuously</td>
<td>Observe the entire project site including the containment structures, spoil storage area, and the dredging equipment</td>
<td>Continuously during the Dredging Operation</td>
</tr>
<tr>
<td>Post-Project Dredging Prior to removing the containment structure</td>
<td>MRP, Section 1.c., Page 10</td>
<td>One composite sample comprised of 3 separate samples</td>
<td>Collected from the containment area</td>
<td>Once prior to removing the containment structure</td>
</tr>
</tbody>
</table>
APPENDIX A

FIGURES
February 26, 2008

Tahoe Regional Planning Agency
PO Box 5310
Stateline, NV 89449
Attn: Jason Ramos

Subj: Tahoe City Marina – Summary Deadline Additional Information

Mr. Ramos:

In response to your request for additional information and a statement addressing how the proposed design of the breakwater conforms with Impact/Mitigation Measure 5.2-11 of the final EIS/EIR and Section 54.11.B of the TRPA Code of Ordinances we present the following for your consideration.

1. Mitigation Measure 5.2-11 of the Final EIS/EIR states: **Phase I – Maximize Water Exchange Through Design Changes.** In keeping with TRPA’s code requirement and with U.S. EPA recommended management measures for marinas, the detailed design of the Phase I marina harbor shall explore and use designs and technologies that allow for and create maximum flushing and circulation of water while remaining economically feasible. This may include maximizing the quantity of crib wall, the use of baffles or other technologies that absorb energy while promoting water circulation, or the design of addition [sic] openings in the breakwater where this does not substantially reduce protection to boats within the harbor.

The proposed breakwater has been designed to allow maximum flushing and circulation of water in the harbor through the use of three breakwater technologies. A breakwater is necessary to reduce wave energy allowing for protection of boating activities (berthing, launching and motoring) in the marina. The portion of the breakwater closest to shore uses a crib wall technology which is the placement of boulders within parallel underwater timber fences or “cribs”. This allows for the passage of water through the voids between the boulders while absorbing much of the velocity and energy of waves and swells colliding with the crib. This is tried and true technology used extensively in the existing marina which, according to the final EIS/EIR has “relatively high water quality...attributable in part to...its ability to facilitate water exchange with the larger lake.” (5.2-47)

The outer part of the breakwater wall is situated lakeward of the crib section
and is designed using sheet piles. Crib cannot be used here due to greater depths and limitations of the structural strength of the steel piles required to anchor the cribs. Water exchange is less inhibited here due to the vicinity to the open lake and the large channel area between it and the next closest non-floating structure. The wall itself also lends to water exchange in two ways. First, the sheet piles provide a degree of flexibility which absorb and reflect most but not all of the oncoming wave energy. A portion of the wave energy is translated through the wall to agitate the volume of water on the lee side, promoting water exchange. Secondly, fish passage ways are included in the bottom of the wall. One in four of the sheet piles will terminate about three feet above the lake bed, allowing of passage of water, littoral transport and aquatic life. A pile of rocks will be placed behind each of the holes for additional fish habitat and to reduce effects of scour as water surges through the opening.

The last portion of the breakwater, and the part the “encloses” the marina on the northwest side is proposed to be a floating wave attenuator. As the name implies the floating wave attenuator floats on the surface and reduces water movement in only the first 6 feet (approximately) of depth. There is no obstruction to water passage below the attenuator.

2. TRPA Code of Ordinances Section 54.11.B also addresses Design and Construction Standards for jetties, breakwaters, rock cribs and fences in five standards. These are addressed in order:

(1) Except as provided in Subparagraph 54.11.B(2), jetties and breakwaters shall have openings which allow adequate free circulation of water and sediment.

The proposed breakwater allows for adequate free circulation of water through holes in the rock crib and sheet pile sections. In the area near shore, which is most susceptible to poor circulation, rock crib is being used to allow passage of water. This technology is currently in place and is performing adequately per findings in the Final EIS/EIR cited above. Along the sheet pile wall portion of the breakwater, holes for fish and water passage are proposed for every fourth sheet pile. This portion of the wall is not as vulnerable to poor circulation due to its location near the open lake and the wide channel area between it and the next closest structure.

(2) No jetty or breakwater shall be a solid or nearly solid structure unless TRPA finds that it will not interfere with littoral processes, cause shoreline erosion, or harm water quality or clarity and;

(a) The solid or nearly solid jetty or breakwater is a necessary part of a marina for which TRPA has approved a master plan; or

(b) The solid or nearly solid jetty or breakwater is necessary to protect the safety of persons using a public boat launching facility.
February 26, 2008
Page 3

A portion of the breakwater is of rock crib construction, which is considered porous. Another portion is floating and the middle portion is proposed as sheet pile wall. The Final EIR/EIS finds that that the otherwise solid sheet pile wall can achieve water exchange when holes are provided (p.5.2-48). Holes have been included in the design of the proposed sheet pile wall. Combined with its flexibility, which provides gentle transfer of wave energy to the lee side of the breakwater, its location near the open lake, and the holes, the sheet pile wall is unlikely to interfere with littoral processes, or harm water quality. The shoreline in the vicinity of the breakwater is guarded by a sheet pile bulkhead and shoreline erosion is not anticipated.

Furthermore, the breakwater is a necessary part of the marina, providing protection to boats stored in slips, boat launching, boat fueling and boat traffic within the marina. The marina expansion is discussed in the approved Tahoe City Marina Expansion Master Plan for which the final EIS/EIR was prepared.

(3) The size, number and locations of openings in jetties or breakwaters shall be sufficient to avoid interference with littoral drift, shoreline erosion, harm to underlying land and harm to water quality and clarity.

The proposed breakwater consists of crib wall, sheet pile wall and a floating wave attenuator. The crib wall is considered porous and extends about 311 feet from the shore. The sheet pile wall is designed to provide a 3 foot high “hole” at the lake bed for every fourth pile, leaving about 25% of its length open along the lakebed to provide for fish passage and littoral transport. These openings are adjacent to piles of rocks which will serve as fish habitat and provide lake bed erosion protection. The final portion of the breakwater is a floating structure, which does not significantly interfere with littoral transport or water exchange.

(4) Fences in the nearshore or foreshore shall be at least 90 percent open and shall be maintained to be kept free of debris.

No property line or boundary fences are proposed for this project.

(5) Rock and other material for construction of structures permitted under this subsection shall not be obtained within the shorezone or lakezone in the region.

The crib wall portion of the breakwater will be constructed in part from rocks and boulders which would have otherwise been removed from the lake during the maintenance dredging occurring with the project. Maintenance dredging permits do not allow removal of these boulders from the lake. Maintenance dredging, including the relocation of boulders from the defined maintenance dredging area, is necessary to provide safe navigation to boats using the marina. It is not likely that the intent of this standard is to prevent boulders removed during dredging from being relocated within the lake.
3. Construction methodology for the activities outside of the maintenance dredging area include working in the water and working on floating or fixed structures over the water. Much of this work will occur within the turbidity curtains used to surround the project. Methods for working over water are similar to land based work implemented with special BMPs, which are described in No. 4 below. Work in the water includes placement of sheet and round piles into the lake bed. Piles will be installed using a barge supported crane. There are two methods of pile installation: impact hammer method and vibratory method. Each process is described below:

**Impact Hammer Method**
An impact hammer installs piles by striking them from above, driving them into the sediment from the downward force of the hammer on the top of the pile. Impact hammers have a lead that holds the hammer and pile in place while a heavy rod moves up and down, striking the surface of the pile.

**Vibratory Hammer Method**
The vibratory hammer method is a common technique used in steel pile installation where sediments allow this method to be used. Steel pile installation will involve placing a choker around the pile and setting it in place at the mudline. The pile will be held steady while the vibratory hammer installs the pile to the required load bearing elevation. Once the pile has reached the required load bearing elevation, it will be “proofed” by striking it with an impact hammer. Proofing is a test method to ensure that the pile has met the design criteria. Once all the piles have been driven, the tops of the piles will be cut to the required elevation.

It is anticipated that piles will be driven using the vibratory hammer method. Empirical evidence for this area suggests piles will be driven to a “refusal” depth of around 8 feet and “proofing” may not be needed.

Either method of driving piles may produce a localized disturbance of sediment around the pile. Empirical evidence for this area of the lake suggests this disturbed area has a radius less than an inch larger than the radius of the pile itself. If turbidity develops due to the disturbance, it is mitigated by placement of a hollow caisson around the pile being driven. At the TRPA inspector’s discretion, the permittee shall install caissons while pile driving to prevent resuspension of lakebed sediments during pile installation. The contractor who will perform this work and has performed similar work in this part of the lake for many years, remarks that a TRPA inspector has never required him to install caissons for turbidity control. While is not a given that pile installation will cause turbidity issues, the maximum temporary impact associated with driving of piles would be equal to the area around each pile, multiplied by the number of piles. The area around a 10-inch pile (plus an inch of radius) is 0.785 square feet (sf). The area around a 12-inch pile (plus an inch) is 1.069 sf. The total area, based on 152 10-inch piles and 98 12-inch piles is 224 sf. This amounts to less than one percent of the proposed disturbed area by the project. Round piles will be installed throughout the duration of the project, as needed to
support the pier, or anchor floats. First bearing piles for the pier will be installed. Later guide piles, also called anchoring piles, for the floating docks and floating wave attenuator will be installed. Finally, bearing piles for the gantry crane will be installed.

The sheet pile wall to be installed is made up of interlocking sheet pile sections that are defined on Detail 5 of Sheet S-6 of the drawings. The section thickness will be no greater than 18.15 inches, comprised of steel sheet with varying thickness (0.591 inches to 0.748 inches) bent in a zig-zag pattern. The sheet pile running length and location is shown on Sheet L-2 and is 404 lineal feet. Additional details of the sheet pile section are shown on Sheet S-6. The impacted area is generously estimated at 18.15 inches times 404 feet or 611 square feet, realizing that most of this area is not occupied by any fill in the lake. The sheet piles are installed in a manner similar to the round piles. It is estimated that the vibratory hammer method will be sufficient to install the sheet piles. Sheet pile construction typically requires installation of a template, or temporary structure, against which the sheet pile sections can be aligned. In this case, the pier piles will be used as the template and no temporary piles will need to be installed. The sheet pile wall will be installed in the first winter season.

The location, length and fill of the crib wall are shown on sheet L-2. Additional detail can be seen on sheet S-7. The crib wall length is 324 feet. Its width is just under 10 feet. The crib wall will be constructed during the first winter season. First round piles will be installed using methods described above. Next, cribbing will be connected between the piles. Crib rails will be attached to the pilings by divers operating off boats and the barge. The materials will be stored on the barge and lowered into the water by crane. Finally rock fill will be placed by a crane, operating from a barge. Rocks will be placed, not dumped, to avoid damage to the cribbing and piles and to avoid disturbance of the lake bed.

Besides the confines of the crib wall, rock will be placed in mounds about 1 foot behind openings in the bottom of the sheet pile wall. The openings occur every fourth sheet so the total lineal dimension of the rock mounds is about one quarter the length of the sheet pile wall, or about 100 feet. The width of each mound is about four feet, depending on the angle of repose of the rocks. Each mound will be about 3 feet high, to match the wall opening. Area of the bottom covered in rocks will be about 400 square feet. The volume of rock placed will be about 44 cubic yards.

This rock, and the rock fill for the crib wall will come from the lake. Some of this rock has been stockpiled along the existing seawall over the years. The rest will come from the lake bottom within the confines of the existing marina and marina expansion.

The larger rocks, greater than 18 inches, will be retrieved from the lake bottom using an excavator equipped with a bucket and clamping foot so the boulder is picked off the bottom, not scooped. This method should not cause sediment
to suspend. However, the rock will be collected from within the turbidity curtain and suspended sediment will be prevented from migrating into the lake. These boulders will be loaded onto the same barge that supports the excavator and placed along the interior of the sheet pile wall.

The smaller rocks, from 6 to 18 inches, will be collected from the dredging operations, picked off the bottom similar to large boulders, or retrieved from the stockpile along the seawall for use in the crib wall. Any rock recovered from the dredging operations will not be disturbed until after the turbidity curtain is in place, per the dredging plan.

No other fill is expected to be placed in or relocated within the lake.

The floating wave attenuators are floating structures that are anchored with round piles. Round piles will be driven by methods described above. Volume of these round piles is also accounted for above and shown inclusive on Sheet L-2. The structures will be lowered into the lake and manipulated into position by a crane operating from a barge. Location and length of the attenuator can be seen on sheet L-2. Details of the floating wave attenuator can be seen on sheet S-4. The attenuator operates similar to a floating dock. However, it is equipped with wing walls that extend a few feet deeper than a typical dock, to provide dissipation of the energy of incoming waves. The wing walls do not reach the bottom of the lake.

4. Procedures for the proper use, storage, and disposal of materials and equipment on barges, boats and temporary construction pads for work on piers, docks and other activities over or adjacent to a water course are described in the Caltrans Construction Site BMP Handbook, BMP NS-13 and NS-14. Of those listed, the following are applicable to this project and will be employed:

A. Use of drip pans and absorbent materials for equipment used on barges and over water. An adequate supply of hydrocarbon absorbing and spill cleanup materials will be maintained on site throughout construction.
B. Drip pans shall be placed under all vehicles and equipment placed on docks, barges and piers when the vehicle or equipment is expected to be idle for more than an hour.
C. Equipment and vehicles shall be maintained in accordance with BMP NS-10 and when a leaking line cannot be repaired that equipment shall be removed from over the water.
D. All materials subject to wind displacement into the water shall be secured.
E. Where feasible and not damaging to the final construction product, toe boards or watertight curbs or berms shall be provided to contain spills and prevent materials, tools and debris from leaving the barge, dock and pier.
F. Good housekeeping policies will be employed, including the immediate cleanup of all debris in the water and cleanup of all debris on structures or floating in the water at the end of every day and before any major storm event. Construction materials, tools and equipment in excess of what is
needed for the day’s work shall be stored on shore in accordance with
equipment and material storage best management practices.

G. Applications of paints, sealers and coatings over water will be limited to
those which must be done after the structure is constructed and in place,
(e.g. touch-up due to construction efforts). Coatings shall be applied in
advance and not over water in areas protected against spill contamination.

H. Spills shall be reported to the Regional Board within 48 hours and followed
by written notice within seven days. Spill reporting procedures shall be
outlined in the SWPPP.

I. Construction Manager shall be responsible for compliance with all necessary
permits for construction within and near the lake.

5. The construction is scheduled to begin as soon as permitting is completed with
installation of round piles that provide the skeleton of the fixed pier. Once
installed, these piles provide the support to pier and breakwater construction
and an anchor for the turbidity curtain necessary to perform maintenance
dredging. Over water work on the pier and installation of some docks in deeper
water will occur during the first summer and through the winter. Maintenance
dredging is restricted to the winter months and is planned to occur in the winter
(November 1 to April 30) of 2008-2009. Maintenance dredging will be
suspended during storms and high wave events. The second summer will see
continued over water work, demolition of the existing fuel dock and installation
of remaining floats and anchor piles and the new sheet pile bulkhead. The final
portion of maintenance dredging will occur during the second winter along with
remaining installation of utilities and appurtenant structures on the docks.

We have attempted to describe how the proposed design of the breakwater conforms to
the specific impact mitigation measures of the Final EIS/EIR and TRPA Code of
Ordinances Section 54.11.B and respond to your questions regarding construction
methods, schedule and BMPs. We trust this description will meet your needs. If you
have any other questions or require other information, please do not hesitate to call.

Best regards,
BLUEWater Design Group

Andrew S. Winje, P.E.
Project Engineer

Cc: Jim Phelan, Tim Bazley

Encl:
Requeste Action: Under Subsection 37.8.C, TRPA considers adjusting the IPES numerical level defining the top ranked parcels each year. No action is required as the findings could not be made to lower the IPES Line in Placer County.

Staff Recommendation: Staff is not requesting a formal action from the Advisory Planning Commission (APC) on this item. Staff will present a current status and progress report on the IPES Line in Placer County which will remain at 726 as the “Vacant Lot Equation” Attachment A, finding 2, cannot be made in that jurisdiction. As the IPES Line analysis failed on the aforementioned finding, the remaining four findings were not evaluated. Washoe, Douglas and El Dorado Counties have already reached the bottom of the numerical level for those jurisdiction’s and no further IPES line analysis is necessary.

Project Description/Background: The IPES Land Capability System was developed and implemented to respond to the apparent limitations of the Bailey System. This system was created through a consensus process in 1987 to evaluate the suitability of vacant lots proposed for single-family housing development. Parcels were initially scored and ranked; those parcels with scores of 726 and higher were deemed suitable for development. This system also provided a method by which parcels with scores below the cutoff score of 726 could become eligible by conducting an annual analysis. This staff summary is the result of this annual analysis. Chapter 37 of the TRPA Code of Ordinance sets forth five findings which must be made for the IPES line to be lowered for a jurisdiction (further defined in Volume I of the 1988 TRPA 208 Plan; see Attachment A).

Specifically Placer County did not meet the minimum criteria for the “Vacant Lot Equation”; the second element of the Required 208 Plan Findings (Attachment A). This finding requires the analysis of the “active” IPES parcel inventory and generates a numerator reflecting the number of active parcels within a given jurisdiction that have an IPES score of 725 or less. This numerator is then divided by the number of vacant parcels deemed sensitive (Bailey Class 1, 2, or 3) on January 1, 1986; for Placer County this number is 1,667 parcels. Once this ratio reaches a result of 20 percent, this finding can be made.
The current calculations are based on the 2007 IPES inventory and resulted in 454 parcels that are vacant and have a score of 725 or less.

Placer County (2007): 454/1667 = 27 percent

This analysis was last performed in 2005 and resulted in 504 parcels that met the above-referenced criteria. The result is shown below as a point of comparison.

Placer County (2005): 504/1667 = 30 percent

If you have any questions or comments regarding this agenda item, please contact Heather Gustafson at (775) 589-5313.

Attachments:
- Required Findings (Attachment A)
- Draft Resolution (Attachment B)
Attachment A, Required 208 Plan Findings

1. Finding: All parcels included in the top rank are otherwise eligible for development under the applicable state water quality management plan for the Lake Tahoe Basin (the “208 Plan”) and other legal limitations;

   Rational: The TRPA 208 Plan was certified by both California and Nevada, and approved by the US EPA in 1989. The 1990 TRPA amendment to the 208 Plan redefining “in place” monitoring was certified by Nevada in 1990, by California in 1992, and approved by the US EPA in August 1993.

2. Finding: For any jurisdiction, the number of parcels having scores below the level defining the top ranked parcels, divided by the number of parcels in that jurisdiction that were identified as sensitive by TRPA on January 1, 1986, does not exceed the following percentages:

   (i) El Dorado County - 20 percent
   (ii) Placer County - 20 percent
   (iii) Douglas County - 33 percent
   (iv) Washoe County - 33 percent

   Rational: Numerator = Number of vacant parcels with IPES scores of 725 or less
   Denominator = Number of vacant parcels deemed sensitive (Bailey Class 1, 2 or 3) on January 1, 1986.

   The current calculations are based on the 2007 IPES inventory. The denominator is taken from a September 1986 memorandum to the Governing Board from then Executive Director William Morgan this denominator does not change over time.

   Placer County: 504/1667 = 27 percent

   Staff recommends this finding cannot be made for Placer County.

3. Finding: The monitoring program for that jurisdiction is in place pursuant to Chapter 32 and the TRPA monitoring plan. "In place" is defined in the 208 Plan, Volume I, and p.119, as amended, as:

   ... This monitoring program shall be in place in a local jurisdiction, and shall characterize water quality conditions, before the numerical level defining the top rank for the jurisdiction is lowered (Goals and Policies, p.VII-25). The term "in place" means that a TRPA-approved monitoring system, with established procedures and responsibilities, is physically located on the selected tributaries, and samples have been collected and analyzed for the previous water year. The monitoring program, to be effective, should remain in place on a continuing and long-term basis. It is the intent of TRPA to collect, on a long term basis pursuant to stringent QA/QC procedures, improved tributary water quality data which will be used to better assess average and existing conditions and to understand water quality trends and compliance with state and federal water quality standards.
Rational: The program consists of permanent monitoring stations at the mouths of ten streams, stream flow gauges and monitoring at upstream locations on five of the ten streams (Incline, Trout, Ward and Edgewood Creeks and the Upper Truckee River), and eleven additional upstream sites in Nevada on both the monitored streams and in other watersheds (developed and undeveloped). The monitoring program meets the requirements of the 208 Plan and the Monitoring Sub-element in the Goals and Policies.

The expanded tributary monitoring program has been in place in Nevada since the spring of 1991. Samples have been collected for at least four previous water years (WY 00-01, WY 01-02 and WY 02-03, WY 03-04). The monitoring program is identical (in Nevada) to the program which was in place in 1993 and 1994 at the time the Governing Board lowered the IPES line in Washoe County.

Staff recommends finding that an adequate monitoring program is in place in Placer County.

4. Finding: Demonstrable progress is being made on capital improvement programs for water quality within that jurisdiction.

   a. Funding is committed and there is a strong likelihood that construction will commence on one or more high priority watershed improvement projects in the current or upcoming year and construction of one or more high priority projects has taken place in the previous or current year. (High priority projects are projects with substantial water quality benefit); OR

   b. The performance of the local jurisdiction on implementation of SEZ restoration and capital improvement projects is consistent with progress necessary to meet the benchmarks established in the 1996 Evaluation under the Environmental Compliance Form for Water Quality (WQ-2-A). Under WQ-2-A, an indicator for total expenditures on CIP projects is set for each local unit of government. However, since the 2001 Threshold review these quantitative targets were abandoned in favor of the Environmental Improvement program project list.

5. Finding: The level of compliance with conditions of project approvals within any jurisdiction is satisfactory. The four criteria listed in the 208 Plan are used as indicators of the level of compliance within a jurisdiction. The Governing Board has set numerical performance standards for the four criteria in Resolution 93-19 (see Attachment B).
RESOLUTION LOWERING THE NUMERICAL LEVEL DEFINING THE TOP RANKED PARCELS IN PLACER COUNTY

WHEREAS, the 1987 Regional Plan and Code of Ordinances implemented a new system for evaluating and determining eligibility for development of vacant residential parcels, which system is titled the Individual Parcel Evaluation System (“IPES”); and

WHEREAS, a component of IPES is the potential for annually lowering the numerical level defining the top ranked parcels (“IPES line”) in a given jurisdiction; and

WHEREAS, on March 8, 2006, the TRPA Governing Board adopted Resolution 2006-16 dropping the IPES line in El Dorado, Washoe and Douglas Counties to a score of “1”; and

WHEREAS, on March 23, 2005, the TRPA Governing Board adopted Resolution 2005-16 dropping the IPES line in El Dorado County to a score of “61”; and

WHEREAS, on February 26, 2003, the TRPA Governing Board adopted Resolution 2003-04 dropping the IPES line in Douglas County to “106”; and

WHEREAS, on January 27, 1999 the TRPA Governing Board adopted Resolution 1999-01 dropping the IPES line in Washoe County to “325”; and

WHEREAS, through the foregoing actions the TRPA Governing Board made the requisite findings required by TRPA Code of Ordinances (“Code”) Section 37.8.C(1); and

WHEREAS, through the foregoing actions TRPA intended for the IPES line to drop in El Dorado, Douglas and Washoe Counties such that every parcel other than the zero-IPES scored Stream Environment Zone parcels would be below the IPES line; and

WHEREAS, TRPA has identified that parcels in El Dorado, Douglas or Washoe Counties having scores below the levels set in Resolutions 2005-16, 2003-04 and 1999-01, as well as the possibility for parcels in those jurisdiction to receive such scores in the future; and

WHEREAS, TRPA intends to rectify this situation by lowering the IPES line in El Dorado, Douglas and Washoe Counties to “1”; and

WHEREAS, the findings required by TRPA Code Section 37.8.C(1) that were made to adopt Resolutions 2005-16, 2003-04, and 1999-01 remain satisfied.

NOW, THEREFORE, BE IT RESOLVED that the Governing Board finds based on substantial evidence in the record, that:

2/26/2008
HG/ps
The Governing Board hereby lowers the numerical value defining the top rank in El Dorado, Douglas and Washoe Counties to “1”, such that parcels scored “1” or better are now within the top rank of parcels in El Dorado, Douglas and Washoe Counties.

BE IT FURTHER RESOLVED that in accordance with the condition of certification by the California State Water Resources Control Board and the condition of approval by the U.S.E.P.A., the Governing Board hereby gives notice of its intent to lower the IPES line in El Dorado, Douglas and Washoe Counties effective 90 days from the date of adoption of this resolution, which date is March 22, 2006, and directs the transmittal of this resolution to both states and the U.S.E.P.A.

PASSED AND ADOPTED this 12th day of March 2008, by the Governing Board of the Tahoe Regional Planning Agency, by the following vote:

Ayes:

Nays:

Abstain:

Absent:

Mara Bresnick, Chairman
Tahoe Regional Planning Agency