

CALIFORNIA COASTAL COMMISSION

NORTH CENTRAL COAST DISTRICT
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5260
FAX (415) 904-5400

Th 11a

Filed:	March 15, 2004
49 th Day	Waived
Substantial Issue:	May 12, 2004
Approval with Conditions:	April 13, 2006
Staff:	YinLan Zhang-SF
Revised Finding	
Staff Report:	August 25, 2006
Hearing Date:	September 14, 2006

**REVISED FINDINGS FOR COASTAL DEVELOPMENT PERMIT
APPLICATION**

APPLICATION NO: A-2-SMC-04-005

APPLICANT: Pescadero Conservation Alliance

LOCAL GOVERNMENT: San Mateo County

LOCAL DECISION: Approval with Conditions

SUBSTANTIAL ISSUE: The Commission found that the appeal of the local government action on this development raised substantial issue on May 12, 2004.

PROJECT LOCATION: 12-acre portion of an approximately 120-acre parcel within Butano State Park, at 5601 Gazos Creek Road in the unincorporated Pescadero area of San Mateo County, APN 089-180-130

**PROJECT
DESCRIPTION:**

1. Operation of a year-round field research station for youth and adult environmental training and education programs at the existing Gazos Mountain Camp with the following use:
 - a. Day use of up to 63 people (staff and visitors excluding resident staff), with a restriction of no more than 20 visitor vehicles allowed on the camp property at one time,
 - b. Overnight accommodations in cabins for up to 24 people,
 - c. Up to four resident staff;
2. Installation of a groundwater well, 10,000-gallon water tank, a 6" fire water supply line and fire hydrants;
3. Renovations of existing buildings; and
4. Widening turnouts on internal access road.

APPELLANTS: Center for Biological Diversity, Coastside Habitat Coalition,
Committee for Green Foothills, and Jim Rourke.

COMMISSION ACTION: Approval with Conditions

PREVAILING

COMMISSIONERS: Clark, Haddad, Kruer, Neely, Reilly, and Shallenberger.

DATE OF ACTION: April 13, 2006

STAFF

RECOMMENDATION: Adopt Revised Findings

Appendix A: Substantive File Documents

Table of Contents

1.0	Staff Recommendation.....	3
2.0	Conditions of Approval.....	3
3.0	Findings and Declarations	6
3.1	Project Permitting History	6
3.2	Project Location.....	7
3.3	History of the Gazos Mountain Camp	8
3.4	Project Description	10
3.5	Sensitive Habitats	12
3.5.1	California Red-Legged Frog.....	14
3.5.2	San Francisco Garter Snake.....	15
3.5.3	Marbled Murrelet	16
3.6	Permitted Use	46
3.7	Public Access and Recreation.....	49
3.8	Site Alternatives	50
3.9	Alleged Violation	53
4.0	California Environmental Quality Act (CEQA).....	53
	Appendix A.....	54

Exhibits

1. Regional Location Map
2. Map of PCA Lease Area
3. Site Plans
4. Habitat Map (Pond Area)
5. Designated Marbled Murrelet Critical Habitat around Project Area
6. Map of Marbled Murrelet Nesting Habitat and Habitat Buffer in the 1999 Habitat Management Guideline by Steve Singer
7. July 14, 2005 CDFG Letter to Commission Staff
8. April 6 USFWS Letter to Commission Staff

9. October 31, 2005 Letter from C. J. Ralph to John Wade
10. November 17, 2005 Letter from David Suddjian to John Wade
11. February 28, 2006 Letter from CDFG to Commission Staff
12. February 23, 2006 Letter from USFWS to CDPR
13. April 7, 2006 Letter from Latham & Watkins to Meg Caldwell
14. April 6, 2006 Letter from David Suddjian to Meg Caldwell
15. April 6, 2006 Letter from Steve Singer to Meg Caldwell

STAFF NOTE AND SUMMARY

On April 13, 2006 the Commission approved the coastal development permit application for the project with conditions. Because staff was recommending denial of the project, revised findings are necessary to reflect the Commission's action. The Commission conditioned the permit in accordance with the protective measures proposed by the applicant plus three additional conditions, requiring submission of corvid population monitoring and food and trash control plans for the review and approval of the Executive Director prior to issuance of the coastal development permit, and limiting the permit to a term of three years, after which the applicant may seek renewal pending the outcome of the corvid monitoring program. Revisions to the Staff Recommendation and Findings to reflect this action are found throughout this staff report. Additions are shown with double underline and deletions are shown with ~~strikethrough~~.

1.0 STAFF RECOMMENDATION

The staff recommends that the Commission, after public hearing, adopt the revised findings in support of the Commission's action on April 13, 2006 concerning Coastal Development Permit A-2-SMC-04-005, as follows:

Motion. I move that the Commission adopt the revised findings in support of the Commission's action on April 13, 2006 approving with conditions the development proposed under appeal number A-2-SMC-04-005.

Staff Recommendation of Adoption. Staff recommends a **YES** vote. Passage of this motion will result in adoption of the revised findings as set forth in this report. The motion requires a majority vote of the members from the prevailing side who are present at the June 2006 hearing, with at least three of the prevailing members voting. Commissioners eligible to vote on the revised findings are Commissioners Clark, Haddad, Kruer, Neely, Reilly, and Shallenberger. If the motion fails, the revised findings are postponed to a later meeting.

Resolution. The Commission hereby adopts the findings set forth below for approval with conditions of a coastal development permit for the proposed development on the grounds that the findings support the Commission's decision made on April 13, 2006 and accurately reflect the reasons for it.

2.0 CONDITIONS OF APPROVAL

A. Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

B. Special Conditions

1. Corvid Monitoring Program.

A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Applicant shall submit a Corvid Population Monitoring Plan for review and approval by the Executive Director in consultation with the California Department of Fish and Game. The Plan shall be prepared by a qualified biologist and shall include the following:

1. A clear statement of the goals of the monitoring program.
2. A detailed methodology for establishing the pre-development baseline population of corvids at the Gazos Mountain Camp.
3. The specific monitoring methodology, including:
 - a. Location and survey of control/reference sites
 - b. Survey area of project site
 - c. Survey techniques
 - d. Frequency of surveys
 - e. The increment of change in the corvid population that would be considered a significant change with respect to potential impacts.
 - f. Methods for measuring the increment of change
4. Implementation Plan, including identification of responsible parties, and funding source.

5. A schedule and format for submission of annual reports and a final report of monitoring results to the Executive Director and California Department of Fish and Game for the duration of the required three-year monitoring period.
 - B. Monitoring shall be conducted by a qualified biologist acceptable to the Executive Director in accordance with the approved plan for a period of three years.
 2. Food and Trash Control Program.
 - A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for review and approval of the Executive Director in consultation with the California Department of Fish and Game, a Food and Trash Control Plan. The Plan shall include at a minimum:
 1. Goals, objectives, and performance standards
 2. Restrictions regarding garbage disposal and areas where food may be consumed
 3. Enforcement procedures to ensure strict compliance with the Plan
 4. Location and design specifications of animal-proof garbage cans
 5. Location and design specifications of the fully enclosed garbage storage area
 6. Frequency of garbage removal from the site
 7. Garbage removal activities along Gazos Creek Road
 8. Signage and other information materials explaining the purpose and importance of the food and trash control measures
 9. Maintenance of signage on site.
 - B. The applicant shall undertake development in accordance with the approved plan. Any proposed changes to the approved plan shall be reported to the Executive Director. No changes to the approved plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.
 3. Noise Control
 - A. The applicant shall install signage in the camp area to remind all staff and visitors on site to maintain noise at a minimum level.
 - B. No more than 20 numbered parking spaces shall be provided for visitors.
 4. Disturbance Control
 - A. Use of Gazos Mountain Camp shall be limited to a maximum of 63 day users, 24 overnight guests, and 4 resident staff.
 - B. No crossing shall be installed on Gazos Creek to access the 10 acre old-growth stand.

- C. A fence with an entrance gate shall be installed around the lower meadow and pond area. The gate shall be locked at all times during the marbled murrelet breeding season (March 23-September 15).
- D. Public and school day use programs during the marbled murrelet breeding season (March 23-September 15) may occur only between 9:30am and 2:30pm.
- E. The applicant shall provide one staff member or volunteer for every ten visitors during all public and school programs to ensure maximum supervision of all visitors.
- F. At no time during the marbled murrelet breeding season (March 23-September 15) shall Cabin Number 22 be occupied by more than two PCA staff or used for group gatherings.
- G. Tree removal to reduce fire hazards shall be limited to removal of ground and ladder fuels and limbs to 10 feet from the ground within 100 feet of all buildings.

5. Authorized Development. This coastal development permit shall be valid for three years from the date of issuance. This permit may be amended by the Commission to extend the life of the authorized development. Any amendment application shall include the monitoring results required by Special Condition 1.

3.0 FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

3.1 Project Permitting History

On September 24, 2003, San Mateo County Planning Commission approved coastal development permit PLN2002-00606 to allow the Pescadero Conservation Alliance (PCA) to operate a year-round field research station for youth and adult environmental training and education programs at the Gazos Mountain Camp, a former logging camp in the central Santa Cruz Mountains at the headwaters of Gazos Creek. The approved development included installation of a new well and water storage tank and other improvements to existing camp structures. The Center for Biological Diversity and the Coastside Habitat Coalition appealed the Planning Commission approval to the County Board of Supervisors. The Board of Supervisors denied the appeal and upheld the Planning Commission's decision to approve the coastal development permit. Subsequently, the Center for Biological Diversity, Coastside Habitat Coalition, Committee for Green Foothills, and San Mateo County resident Jim Rourke appealed the County permit to the Commission.

At the May 2004 hearing, the Commission found that the development, as approved by the County, raised a substantial issue with respect to conformity with sensitive habitat and locating new development policies of San Mateo County's certified LCP. The applicant subsequently requested postponement of the de novo hearing.

In January 2005, PCA submitted additional biological reports and a sound study, along with a response to the May 2004 Commission staff report. On March 4, 2005, Commission staff, including ecologist John Dixon, joined the applicant, appellants, biologists from CDFG and CDPR on a site visit to obtain first hand information of site conditions and discuss concerns and outstanding issues. Following the site visit, CDFG biologists conducted a marbled murrelet habitat assessment, the results of which are summarized in a July 14, 2005 letter from CDFG to Commission staff (Exhibit 7). CDFG determined that the proposed development would result in significant adverse impacts to nesting marbled murrelets due to increased risk of nest predation, noise, and other disturbance.

The U.S. Fish and Wildlife Service (USFWS) wrote a letter in April 6, 2005 stating that due to the potential for take of federally threatened and endangered species including California red-legged frog, San Francisco garter snake, and marbled murrelet, the applicant would need to apply for take authorization under the Federal Endangered Species Act (Exhibit 8).

After CDFG provided its July 14, 2005 habitat assessment, the applicant responded with two additional evaluations from murrelet biologists C.J. Ralph and David Suddjian, disputing the conclusion of the CDFG July 14, 2005 assessment (Exhibits 9 and 10).

Subsequently, CDFG and USFWS biologists, along with the applicant and CDPR staff, conducted another site visit and considered additional information provided by the applicant and independent marbled murrelet and corvid biologists as well as enhancements to the protective measures proposed by the applicant. After this site visit, CDFG revised its initial determination regarding the presence of additional potential nesting habitat within the camp area, outside of the known nesting habitat in the 10-acre old growth and 20-acre mature second growth stands. USFWS concurred with this determination that the camp area does not contain additional murrelet nesting habitat. In addition, CDFG also revised its conclusion regarding the potential impacts of the proposed development and concludes in its February 28, 2006 letter that “based upon the results of the field visit, discussion with PCA and our understanding of the proposed camp operation and associated activities and proposed minimization and avoidance measures, we do not expect the camp operation as described in the attached use description to adversely affect MAMU using the area.” Similarly, USFWS also changed its determination regarding the necessity for the applicant to seek take authorization and states in its February 23, 2006 letter “we believe with these measures, the likelihood of taking species under this Act [Endangered Species Act] would be low” (Exhibits 11 and 12)

3.2 Project Location

The project site (APN 089-180-130) is an approximately 120 acre-parcel within Butano State Park, which is owned by the CDPR (Exhibit 1). The proposed development is located in an approximately 12-acre portion of the parcel specifically leased to the applicant (Exhibit 2). The site is located at the end of the paved section of Gazos Creek Road in the central Santa Cruz Mountains, in the unincorporated Pescadero area of San Mateo County, approximately five miles from the coast. The Land Use Plan (LUP) designation for the site is Timber Production and the zoning designation is TPZ-CA.

The project site is located in the upper portion of the Gazos Creek watershed; three headwater streams forming Gazos Creek are located on the site (Exhibit 3). The Gazos Creek watershed is a predominately forested 7,000-acre watershed, which contains a breeding subpopulation of the marbled murrelet, a bird that is state listed as “endangered” and federally listed as “threatened”.

The camp is accessed via an existing paved access road connecting with Gazos Creek Road. In the southern portion of the property, this access road is located approximately parallel to the north fork of Gazos Creek and is located adjacent to (within 20-30 feet of) an artificial impoundment on the property. The access road crosses the south fork of Gazos Creek via a concrete bridge and continues to the north and west, with a loop around the existing cabins and camp facilities (Exhibit 3).

In the northern portion of the site, approximately five acres of the property are currently developed with approximately 15,000 square feet of structures, which consist of 22 small cabins, three central bathrooms, a lodge-kitchen building, a storage building and two meeting classroom buildings. There is also a small amphitheater with a fire ring and a small picnic area adjacent to the lodge.

A 7.4-acre-foot artificial impoundment, which was constructed in the mid-1800’s for logging operations, is located in the southwest portion of the property (Exhibit 3). The eastern portion of the impoundment has concrete sides and was used as a swimming pool by previous owners of the camp. There is a band of freshwater marsh vegetation on the western edge of the impoundment. South of the impoundment is an area described as the lower field, which supports non-native grassland. Between the impoundment and the camp buildings is South Gazos Creek. To the southwest of the lodge building is a grassy area, which had previously been irrigated.

The 120-acre property surrounding the camp consists of predominantly second-growth redwood and Douglas fir forests. A 10-acre residual old-growth stand is located across Gazos Creek approximately 350 feet from the closest cabin (cabin #22) in the camp. Both the old-growth stand and a 20-acre stand of older second-growth forest located approximately 400 feet from the eastern most cabin in the camp provide nesting habitat for marbled murrelets (Exhibit 6).

3.3 History of the Gazos Mountain Camp

The Gazos Mountain Camp was originally constructed as a logging camp in 1871 and served this purpose until the middle of the twentieth century. In 1964, the County granted a use permit to Charles A. Taylor to operate a summer camp with accommodations for about 200 people (youth and staff). In 1986 the Agape Christian Team bought the property and operated the camp facility as a religious retreat to 1990. In 1992, the Pacific Cultural Foundation bought the property and continued to operate the camp as a religious retreat.

In 1998, according to the Sempervirens Fund, the organization purchased the property for future transfer to CDPR for both permanent resource protection and public use. The Sempervirens Fund’s purchase of this property was subsequently supported with funds from settlement of state and federal litigation concerning the 1986 Apex Houston Oil Spill, which spilled an estimated 25,800 gallons of crude oil offshore of Marin, San Francisco, San Mateo, Santa Cruz, and

Monterey Counties. This oil spill is estimated to have killed 12 marbled murrelets. On April 24, 1998, the Apex Houston Trustee Council, the interagency committee entrusted with the authority to approve expenditures from the settlement of the litigation regarding the oil spill¹, adopted a resolution entitled, *Resolution Supporting Acquisition of Marbled Murrelet Nesting Habitat in the Gazos Creek Watershed*. This resolution was signed by members of the Council from the following agencies: the USFWS, CDFG, and the National Oceanic and Atmospheric Administration. Through this resolution, the Apex Houston Trustee Council approved the CDFG's recommendation that \$500,000 be transferred to the Sempervirens Fund to complete the purchase of lands containing residual old growth habitat in the Gazos Creek watershed. The overall purchase price for the property was \$1.55 million, with \$500,000 provided by the Apex Houston mitigation fund and \$1.05 million by the Sempervirens Fund.

A Habitat Acquisition Agreement between the Sempervirens Fund and the Apex Houston Trustee Council, executed in June 1998, included the following recitals:

There has been found to be substantial marbled murrelet activity, including behavior indicating probable nesting, in the Gazos Creek Watershed.

Sempervirens shall utilize \$500,000 of such funds for the purpose of the acquisition of land in the Gazos Creek Watershed ("Watershed") between Butano and Big Basin State Parks where potential nesting habitat is present and where marbled murrelets have exhibited "occupied behavior" as defined by the Pacific Seabird Group "Marbled Murrelet Survey Protocol" (1998).

It is the intent of the parties to this Agreement that the lands acquired by Sempervirens Fund in the Watershed under this Agreement, will become part of Butano State Park, and will be administered by the CDPR.

The Sempervirens Fund granted PCA a lease of the property for one year, commencing on June 1, 2000. This lease describes the use of the premises authorized by the lease as an "environmental education and ecological restoration and research facility and a Youth-At-Risk program." This authorization to use the site is conditioned by the requirement that PCA obtain all necessary approvals and permits and that PCA comply with all present laws and regulations with respect to its use of the property.

In 2001, Sempervirens Fund transferred the camp to the CDPR. In a November 28, 2001 letter to PCA, CDPR District Superintendent Ronald Schafer states:

In accordance with your request of May 22, 2001, this letter is to accept your request for renewal of the lease on the former "Mountain Camp" on Gazos Creek. In the meeting you presented information regarding the rehabilitation requirements as listed in Exhibit 1 of the Addendum to Lease. As you have

¹ The Apex Houston Trustee Council was entrusted with the authority to approve expenditures from the California Habitat Acquisition Trust under the consent decree in cases C89-0246-WHO and C89-0250-WHO, *United States of America v. Apex Oil Company* and *State of California v. Apex Oil Company*, in the United States District Court, Northern District of California, executed on June 3, 1998.

completed these requirements and the lease is now renewed effective June 1, 2001 for a term of 5 years ending on May 31, 2006.

The rehabilitation requirements referenced in this letter included removal of tennis and basketball courts, a rifle range and any other “playing field type” areas, removal and disposal of cement from the north end of the pond, and installation of a well and water storage tank. Since 2000, PCA demolished three structures, removed debris, and removed asphalt from the tennis and basketball courts all without the benefit of coastal development permit. At the request of the San Mateo Planning Department, PCA terminated overnight use of the camp by volunteers in June 2002 and submitted an application for coastal development permit. However, a full-time caretaker has continued to reside on the property, and events at the site, including monthly class lectures and ~~weekly~~ work parties have continued during the permitting process without an approved coastal development permit.

Historically the Gazos Mountain Camp property was used by significantly more people and with greater intensity than the level proposed by the applicant. The property was logged, hosted up to ~~200~~ 400 people, and contained tennis and basketball courts and a shooting range. The proposed use of the site for environmental education, restoration, and research would be lower in intensity than that of past uses. The applicant contends that the proposed use would result in significantly less impact to marbled murrelets than previous uses of the camp and may actually benefit the population by “controlling the corvid populations [in the area] and providing useful information on marbled murrelet population dynamics.”(Singer, June 17, 2005). While the proposed use of the camp would be less intensive than past uses, this comparison is not germane to the Commission’s review of the permit application. The standard of review for the permit application is whether the proposed development would conform with the requirements of the County LCP.

3.4 Project Description

The applicant is proposing to operate a year-round field research station focused on youth and adult environmental training and education programs, ecological research, and restoration at the existing Gazos Mountain Camp. The camp would host up to 63 people for day use (excluding residential staff) and up to 24 people for overnight stays. The applicant is also proposing residential use by up to four staff. The applicant would limit visitor vehicles to 20 and has estimated that seven or eight additional staff vehicles would be on site, but has not proposed a limit on the number of staff vehicles. Physical development proposed by the applicant includes converting a bathroom into a wet laboratory and existing cabins 14-16 into a Geographic Information System lab and library.

In addition to the above, the applicant must also undertake development required to meet County health and fire safety standards. Because County health department has determined that the camp’s existing water sources, which consist of a well located on an adjacent parcel and surface diversion from Gazos Creek, are unsuitable for use, PCA must install a new well 150 feet away from Gazos Creek. In addition, to meet County fire department requirements, the applicant must construct four turnouts on the access road to the camp, water tanks with 10,000 gallons of storage capacity, two fire hydrants, and pipes to connect the water tanks to the hydrants. The

turnouts would be constructed along the access road in the following locations: (1) adjacent to the lower field, (2) adjacent to the southwestern end of the pond, (3) immediately before the bridge over Gazos Creek, and (4) 50 feet east of cabin #20. The water tanks would be located on a hill 200 feet east of cabin #10. One fire hydrant would be located 50 feet north of the kitchen and another would be next to the laboratory. (Exhibit 3). The pipes would run along an existing path from the water tanks to the fire hydrants. To meet fire safety requirements, the applicant must remove ground and ladder fuels and limbs to 10 feet from the ground within 30 feet of all buildings. The fire department has also required the applicant to replace the access road bridge crossing Gazos Creek, if it cannot be certified by a licensed civil or structural engineer to support a live load of 25 tons. Based on an informal opinion, the applicant believes that the bridge may be retrofitted to support a live load of 25 tons. However, because there has been no formal evaluation, the question of whether the bridge needs to be replaced remains unanswered and, the applicant has not provided plans or a project description for either retrofit or replacement of the bridge. As such, the subject permit application does not address retrofit or replacement of the bridge and any such development must be the subject of a separate permit or permit amendment application.

Permitting Requirement

Consistent with Section 30106 of the Coastal Act LCP Policy 1.2 defines “development” as:

On land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with *Section 66410 of the Government Code*), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the *Z'berg-Nejedly Forest Practice Act of 1973* (commencing with *Section 4511*).

As used in this section, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line. [Emphasis added.]

To ensure that the camp meets County public health and fire safety standards, the applicant is required to develop a new water well, install water tanks with 10,000-gallon capacity and associated water pipes and fire hydrants, improve the access with four turnouts, ~~and possibly replace the existing bridge over Gazos Creek~~. The construction of these structures must therefore be considered part of the proposed project. As such, the proposed project meets the definition of development in the LCP because it would involve both construction and the placement of solid

materials and structures (i.e., the well, water tank, pipes, fire hydrants, road turnouts, and possible bridge replacement.)

In addition, the proposed project also meets the definition of development that requires a coastal development permit because the proposed use would change the intensity of use of land. Between the time that the Sempervirens Fund purchased the property in June 1998 and the commencement of the lease by PCA in June 2000, with the exceptions of some clean up work, the camp was not in use. Although the County's coastal development permit indicated that the proposed development constitutes a change in use of the property from seasonal use as a youth camp and religious retreat center, to a year-round field research station, the change in actual use at the property is from a camp that was not in use to a year-round field research station and environmental education center involving day use, overnight stays, and up to four permanent residences, which would be an intensification of the land use. Thus, in addition to the substantial construction and other physical development proposed, the proposed use of the site also meets the definition of development because it comprises a change in intensity of use of land.

~~The Commission notes that its position on the change in intensity of use, from non-use to year-round use is independently buttressed by the County's definition of abandonment, which defines "abandonment" as:~~

~~The voluntary termination of a land use or use of a building or structure for a period of at least 18 months. The inability to operate through no fault or intent of the owner, e.g., unsuccessful attempts to sell/lease property or litigation constraints, shall not be considered voluntary termination or constitute abandonment.~~

~~Because the Sempervirens Fund elected not to use the camp for more than 18 months, the property is considered abandoned under the LCP. The Commission also notes that neither the operations conducted prior to the time the Sempervirens Fund purchased the property in June 1998 nor the operations conducted after commencement of the lease by PCA in June 2000 were undertaken with the necessary coastal development permit.~~

3.5 Sensitive Habitats

As discussed below, as conditioned, the proposed development with proposed protective measures is inconsistent with the sensitive habitat protection policies of the LCP because the development would not result in significant adverse impacts on sensitive habitat areas that support the marbled murrelet and would prevent impacts that could significantly degrade the sensitive habitats and be incompatible with the maintenance of the biological productivity of this habitat.

The applicable policies from the Sensitive Habitats Component of the LUP include:

Policy 7.1 Definition of Sensitive Habitats

Define sensitive habitats as any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting “rare and endangered” species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes.

Sensitive habitat areas include, but are not limited to, riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, and habitats supporting rare, endangered, and unique species.

Policy 7.3 Protection of Sensitive Habitats

- a. Prohibit any land use or development which would have significant adverse impact on sensitive habitat areas.
- b. Development in areas adjacent to sensitive habitats shall be sited and designed to prevent impacts that could significantly degrade the sensitive habitats. All uses shall be compatible with the maintenance of biologic productivity of the habitats. [Emphasis added.]

Policy 7.4 Permitted Uses in Sensitive Habitats

- a. Permit only resource dependent uses in sensitive habitats...
- b. In sensitive habitats, require that all permitted uses comply with U.S. Fish and Wildlife and State Department of Fish and Game regulations.

Policy 7.5 Permit Conditions

- a. As part of the development review process, require the applicant to demonstrate that there will be no significant impact on sensitive habitats. When it is determined that significant impacts may occur, require the applicant to provide a report prepared by a qualified professional which provides: (1) mitigation measures which protect resources and comply with the policies of the Shoreline Access, Recreation/Visitor-Serving Facilities and Sensitive Habitats Components, and (2) a program for monitoring and evaluating the

effectiveness of mitigation measures. Develop an appropriate program to inspect the adequacy of the applicant's mitigation measures.

- b. When applicable, require as a condition of permit approval the restoration of damaged habitat(s) when in the judgment of the Planning Director restoration is partially or wholly feasible.

Policy 7.32 Designation of Habitats of Rare and Endangered Species

Designate habitats of rare and endangered species to include, but not limited to, those areas defined on the Sensitive Habitats Map for the Coastal Zone.

Policy 7.33 Permitted Uses

- a. Permit only the following uses: (1) education and research, (2) hunting, fishing, pedestrian and equestrian trails that have no adverse impact on the species or its habitat, and (3) fish and wildlife management to restore damaged habitats and to protect and encourage the survival of rare and endangered species.
- b. If the critical habitat has been identified by the Federal Office of Endangered Species, permit only those uses deemed compatible by the U.S. Fish and Wildlife Service in accordance with the provisions of the Endangered Species Act of 1973, as amended.

3.5.1 California Red-Legged Frog

The California red-legged frog (CRLF) is a California species of special concern and federally listed as threatened. The species ranges throughout coastal counties in California. The project site is within Unit 14 of USFWS designated critical habitat for CRLF.

The CRLF uses a wide range of habitats, including intermittent and perennial streams, riparian corridors, ponds, and grasslands. The project site contains potentially suitable habitat for the CRLF including a permanent pond (the artificial impoundment), perennial streams, riparian habitat, and grasslands. Past surveys of the site have documented the presence of CRLF in the artificial impoundment. However, surveys have also found introduced predatory fish including sunfish and bass in the impoundment, which prey on the CRLF. According to a 2005 habitat assessment of the project site prepared by the applicant's consultant, although the site contains suitable dispersal or migration habitat for the CRLF, due to the presence of predatory fish in the impoundment, the site likely constitutes a population sink. In a July 20, 2005 letter, CDFG states that the project site provides only marginal dispersal habitat for the CRLF at this time due to the presence of predatory fish in the impoundment. After the most recent site inspection conducted in January 2006, CDFG determined that the impoundment currently does not provide habitat at all for CRLF. (Exhibit 11). USFWS agrees; it stated that "[c]urrently the pond is inhabited by non-native fish species, and does not provide suitable breeding habitat for the California red-legged frog" in its February 23, 2006 letter (Exhibit 12).

The internal access road runs along the length of the impoundment within a distance of approximately 20-30 feet (Exhibit 3). Due to its proximity to the road, if CRLF were using the impoundment it would be ~~are~~ at risk of death and injury from vehicular access on the road. To avoid such impact in the event habitat is created in the future, CDFG has recommended that the applicant install one foot culverts at fifty-foot intervals along the road, construct a movement barrier on each side of the road and install motion triggered cameras to monitor the use of the culverts. CDFG has recommended installing these measures from the bridge over the middle fork of Gazos to about 100 feet past the area where the lower field is beside the access road. Any potential impacts to CRLF as a result of proposed development could be avoided and minimized through the mitigation measures recommended by CDFG. These protective measures have been incorporated into the project description by the applicant.

Additionally, CDFG recommends permanent relocation of the access road if the applicant decides to eradicate the invasive fish in the impoundment and restore it as high quality frog breeding habitat. However, restoration of the impoundment and the associated relocation of the road as recommended by CDFG are not a part of the proposed development under review and would require a separate coastal development permit. The Commission is only reviewing potential impacts from the currently proposed development to CRLF based on existing conditions at the project site. The proposed development consists of only activities discussed in Section 2.4, which does not include restoration of the impoundment. ~~Currently, the project area provides only marginal dispersal habitat for CRLF. Potential impacts to CRLF as a result of proposed development could be avoided and minimized through the mitigation measures recommended by CDFG.~~

Therefore, based on the conclusions of the CDFG and the USFWS, the Commission finds that the proposed development, ~~if conditioned to provide the mitigation measures recommended by CDFG~~, would not result in significant adverse impacts to CRLF habitat, and is consistent with the LCP's ESHA policies.

3.5.2 San Francisco Garter Snake

The San Francisco garter snake (SFGS) is listed as endangered under both California and federal Endangered Species Acts. The SFGS is found mostly in coastal San Francisco, San Mateo, and Santa Cruz Counties. Suitable habitat for SFGS is described as standing water including ponds, lakes, marshes and sloughs. The interface between aquatic and grassland habitats as well as the grassland habitat itself is also used by SFGS for basking while dense vegetation and open water are often used as escape cover. Small mammal burrows in upland habitat provide sites for winter hibernation.

According to the applicant's biological consultant, ~~The~~ the project site contains suitable habitat for the SFGS including the impoundment and adjacent grassland. The CRLF is an important prey species for the SFGS. The documented presence of the CRLF on the site in the past indicates that the site may also support the SFGS. ~~However, because there are relatively few CRLF on site due to the presence of invasive predatory fish, the project area is not considered high quality SFGS habitat.~~ The applicant's biologist concluded that the project site contains suitable migration and dispersal habitat, with which CDFG initially concurred. According to CDFG's

July 20, 2005 letter, “since CRLF are a significant prey item for SFGS, the absence of the former species lessens the probability of the latter being present. Under current conditions, population levels of either species are lower than they would be if the pond provided higher quality habitat.” After the most recent site inspection, CDFG determined in its February 28, 2006 letter that the project site “is well beyond the known distribution of the San Francisco garter snake in the Gazos Creek watershed,” and “[u]se of the road for camp operations is not likely to adversely affect” the species. (Exhibit 11) The applicant’s biologist concluded that the project site contains suitable migration and dispersal habitat, with which CDFG concurred.

As with the CRLF, if SFGS were present, potential impacts to SFGS from the proposed development would result due to the proximity of the impoundment to the internal access road and vehicle traffic on the access road that would cause death or injury to the snakes. CDFG has recommended the same mitigation measures for the SFGS as the CRLF to avoid ~~the~~ future potential impacts in the event that the site becomes SFGS habitat in the future and the applicant has incorporated those protective measures into the project description.

The project could provide higher quality SFGS habitat if significant CRLF populations are established on site through removal of predatory fish from the impoundment. However, the proposed development does not include the restoration of the impoundment. Therefore, based on the conclusions of the wildlife agencies, the Commission finds that the proposed development, if conditioned to provide the mitigation measures recommended by CDFG, would not result in significant adverse impacts to SFGS habitat and is consistent with the LCP.

3.5.3 Marbled Murrelet

The marbled murrelet is a seabird that occurs only in North America, from Alaska to California and winters as far south as Baja California, Mexico. The bird nests both in trees and on the ground, although in California, it is found to only nest in trees, typically within old-growth or mature second-growth coniferous forests. Most nesting habitat likely occurs within 50 miles of the shoreline throughout the breeding range. Due to the substantial loss and modification of nesting habitat (older forest) and mortality from net fisheries and oil spills, the Washington, Oregon, and California marbled murrelet population segment was federally listed as threatened in September 1992. The marbled murrelet was also protected under the California Endangered Species Act as an endangered species that same year. Marbled murrelet population sizes are larger in the species’ northern range than in the southern states, with approximately 90 percent of the species concentrated in Alaska and the Arctic. The California populations are considered the smallest and most vulnerable as recent studies estimate that only 0.5 percent of the breeding population is found in the state (McShane et al., 2004).

In California, murrelets nest in large old growth and mature Coast Redwood and Douglas fir, which provide suitable nesting platforms (Hamer and Nelson 1995). In the Santa Cruz Mountains, nests have been found up to 10 miles inland (Evans Mack et al. 2003). Murrelets lay a single egg in a mossy depression, usually on a large horizontal limb. Adults exhibit site tenacity by returning to the same nesting stands year after year, and sometimes re-nesting in the same tree (Nelson 1997). Adults raise at most a single chick per year, but do not necessarily nest every year. The murrelet breeding season in California extends from March 24 through September 15 (Evans Mack et al. 2003).

Murrelet adults and chicks have cryptic plumage and are usually secretive near the nest, presumably to avoid predators. Nests of the species are generally high off the ground and are difficult to find and observe; the first verified nests in North America were not discovered until 1974. Thus, few nests have been found in the region, and it is difficult to determine the number of nests in a given forest or the success of these nests. The Pacific Seabird Group's accepted protocol for conducting murrelet surveys in forests (Evans Mack et al. 2003) relies upon the observation of "occupied behavior" to indicate a high likelihood of murrelet nesting in the vicinity.

Murrelets forage at sea, feeding on small schooling fish, which they carry inland to the nest to feed the nestling. Both adults of a pair alternate incubation duty, with exchanges usually taking place in the early morning before sunrise, although eggs are sometimes left unattended for 3-4 hours (Nelson and Hamer 1995a). After the chick is 3 days old, it is left alone at the nest for much of the day while both parents forage at sea; the chick is thus vulnerable to predation for the 27-40 days it is alone on the nest (Nelson 1997). Chick feedings occur during the day, with up to eight trips per day (mean = 3.2 trips/day); although feedings peak at dawn and dusk, feedings have also been observed between the hours of 11:00 and 17:00 (Nelson and Hamer 1995a).

The project site, while not officially designated as Critical Habitat, is surrounded by marbled murrelet Critical Habitat designated by the USFWS, and includes ~~is a~~ known marbled murrelet nesting sites (Exhibit 5). The nesting population on the site is within the Santa Cruz Mountains Conservation Zone (Zone 6) for marbled murrelets, which is the southernmost end of the recovery range delineated by the USFWS in *The Recovery Plan for the Marbled Murrelet in Washington, Oregon and California* (USFWS 1997). The Recovery Plan states the following regarding marbled murrelets in the Santa Cruz Mountain Conservation Zone:

The Santa Cruz Mountains Zone extends south from the mouth of San Francisco Bay to Point Sur, Monterey County...The southernmost population of marbled murrelets in the North America occurs in this Zone. This population is important to maintaining a well-distributed marbled murrelet population in the three-state area. Because this population is small and isolated from other marbled murrelet populations, it is considered to be especially vulnerable. (p. 130)

Since the publication of the Recovery Plan, a five-year monitoring effort by the USFWS produced the following report in 2004: *Evaluation Report for the 5-Year Status Review of the Marbled Murrelet in Washington, Oregon, and California* (McShane et al. 2004) which states that:

...the very small populations in Conservation Zones 5 and 6 [Santa Cruz Mountain Conservation Zone] are likely at or near levels that are not self-sustaining (i.e. "non-viable") and therefore have the highest risk of extinction and shortest time to extinction relative to other zones. At this time, no significant improvements in breeding habitat are expected, such that poor breeding success will likely continue, a major factor affecting populations. (p. 6-28)

...

Threat of extinction in Zone 6 has been increased due to very poor breeding success, small population size, increasing predators/predation, and reduced murrelet use of Big Basin Redwood State Park. (P. 6-29)

The latest available estimate (2002) establishes the population in Zone 6 at only 619 (pg. 3-15, McShane et al. 2004). The declining Santa Cruz population makes breeding habitat on the subject property especially important.

Marbled Murrelet Habitat within Gazos Mountain Camp Property

Based on the 1999 report by murrelet biologist Steve Singer, *Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA*, nesting habitat within the subject property is found within the 10-acre residual stand across Gazos Creek and the 20-acre stand of older second-growth to the northeast of the camp (Exhibit 6). However, in their July 14, 2005 letter, CDFG biologists considered the entire contiguous forested area, including the camp buildings area, as potential nesting habitat and occupied by marbled murrelets. CDFG states:

During DFG's March and April 2005 site inspections of the camp area, staff noted redwood and Douglas fir trees with potential marbled murrelet nest platforms outside the 10-acre known occupied stand...The potential nest trees [i.e conifers with limbs or platforms greater than four-inches wide (Hamer and Nelson 1995)] were observed inside the camp area, immediately adjacent and outside of the camp area scattered along the north and south forks of Gazos Creek...Some potential nest trees appeared to be located less than 300 feet from existing camp buildings and cabins, and some potential nest trees rooted near Gazos Creek have platforms that are visible from a horizontal line of sight from the uphill cabin decks.

...

From the site inspection, potential nest trees located in and adjacent to the camp area along the Gazos Creek riparian areas connect to the occupied stands lying on both sides of the camp area. Based on this and a review of air photos, DFG believes that all potential nest trees from the "Inhabited Old-Growth Stand" east to the occupied stand partially located in the eastern portion of the 120-acre parcel, are contained within a continuous forest stand comprised of residual redwood and Douglas-fir trees.

The marbled murrelet survey protocol states that if a portion of a stand is determined to be occupied by murrelets, then the entire stand is considered occupied (Evans Mack 2003). This consideration reflects the high level of nest stand/tree philopatry² exhibited by marbled murrelets (Nelson 1997). Additionally, as noted on page 6 of the survey protocol, murrelets may nest in different locations within a stand in successive years. Therefore, DFG considers

² Philopatry--Refers to the drive or tendency of an individual to return to, or stay in, its home area.

this entire continuous forested area, including the camp area, to be occupied by marbled murrelets.

The July 14, 2005 CDFG determination of the presence of potential nest trees within the camp areas and other areas closer to the developed areas was based on criteria described in the manual titled *Methods for Surveying Marbled Murrelets in Forests, a Revised Protocol for Land Management and Research* developed by the Marbled Murrelet Technical Committee of the Pacific Seabird Group (2003). This manual prescribes the standards of habitat assessment and survey for marbled murrelets and is widely used by professionals engaged in the study, research, and management of marbled murrelets. Specifically, regarding assessing potential habitats, the protocol states:

...potential habitat that should be surveyed for murrelets is defined as (1) mature (with or without an old-growth component) and old-growth coniferous forests; and (2) younger coniferous forests that have platforms. A platform is a relatively flat surface at least 10 cm (4 in) in diameter and 10 m (33 ft) high in the live crown of a coniferous tree.

...

It is important to note that murrelets have occupied small patches of habitat within larger areas of unsuitable habitat (Nelson and Wilson 2001). Some occupied sites also have included large, residual trees in low densities, sometimes less than one tree per acre (Grenier and Nelson 1995, Ralph et al. 1995). The presence of platforms appears to be the most important stand characteristic for predicting murrelet presence in an area (Hamer et al. 1994). Platform presence is more important than tree size, which alone is not a good indicator of platform abundance (Hamer 1995; S. K. Nelson, pers. comm.). Therefore, any forested area with a residual tree component, small patches of residual trees, or one or more platforms should be considered potential murrelet nesting habitat.

Subsequent to the July 14, 2005 letter by CDFG, the applicant obtained the opinions of two murrelet biologists, C.J. Ralph and David Suddjian, who both contend that the CDFG habitat assessment was flawed because the agency used the presence of conifers with limbs or platforms greater than four inches wide as the criterion for determining potential nesting trees, while the range of platform size for known nests in the Santa Cruz Mountains is significantly larger (11.4 to 27.6 inches according to Suddjian). Ralph and Suddjian also state that the camp area should not be considered a part of the continuous stand with the 10-acre old growth and 20-acre mature second growth stand because trees in the camp area are distinct in terms of age class, spacing, and size.

Dr. C.J. Ralph states:

[T]he entire forested area from the old-growth section west of Gazos Creek to the second growth section east of the camp does not constitute a continuous forest stand of occupied murrelet habitat. While murrelets will fly over the intervening areas of the parcel, the habitat is too patchy, in my opinion, to be occupied by

murrelets throughout the project area. In my opinion, in order to constitute a single continuous forest stand (as defined by the Society of American Foresters), the areas should be reasonably uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit. I feel that the areas west and east of the camp site appear from the aerial photos to be substantially different with respect to these elements of forest structure and so should be considered three stands, rather than one. Certainly from the aspect of murrelet habitat, most of the habitat appears to me to be unsuitable as nesting habitat. (Ralph 2005).

With respect to platform size, Ralph continued:

From the published literature, and my knowledge of nesting habitat of Marbled Murrelets in the Redwood region of California, which includes the Santa Cruz Mountains, [a four inches wide] platform size might, at most, be considered the absolute minimum theoretically possible...would estimate that the modal size of nest limbs in the redwood region is approximately twice that size. I would suggest that a limb diameter of 8 to 10 inches would more accurately represent what would be required for a murrelet nesting platform in the Santa Cruz Mountains. Using a platform size as small as four inches as nesting habitat is simply not supported by the existing scientific data.(Ralph 2005).

Suddjian agreed that the developed camp area does not provide nesting habitat: “[r]esearchers familiar with murrelet’s habitat associations and requirements in the Santa Cruz Mountains agree that the forest within and around the camp is not murrelet nesting habitat.” (Suddjian 2005). Steve Singer also recently reaffirmed his 1999 finding: “the murrelet nesting areas and the developed camp area [are] physically separated from each other”; there is a “natural division of the property into separate forest stands” and there are only “two areas separate from the developed camp area that provide existing or potential nesting habitat for the marbled murrelet.” (Singer 2006).

Ralph and Suddjian’s conclusions regarding the size of potential platforms is supported to some extent by Finally, the size of marbled murrelet nesting platforms in the Santa Cruz Mountains is also discussed in an article titled “Nesting Habitat Characteristics of the Marbled Murrelet in Central California Redwood Forests” (Baker et al. in press), which describes the habitat characteristics of 17 nests (of the 18 known nests in the Santa Cruz Mountains) in stands of old-growth redwood forests, and which states:

The presence of multiple ‘suitable’ platforms does not necessarily indicate that a tree is suitable for nesting. Mean limb diameter was 59.8 cm, considerably larger than the 10 cm criteria used to identify suitable platforms during platform counts. Counts of limbs >10 cm, which are often used by managers to determine if a site is suitable for murrelet nesting, is probably not a useful index of nest site availability in central California, as the smallest nest limb we found was 29 cm in diameter.”

~~However, this study described the habitat characteristics of only 17 nests (of the 18 known nests in the Santa Cruz Mountains), and all were in stands of old growth redwood forests.~~

After the most recent site visit by CDFG and USFWS biologists, the wildlife agencies agreed that potential nesting trees are not likely present in the camp area and outside of the 10-acre old growth stand and 20-acre mature second growth stand based on the lack of sizable platforms, the wide spacing between the trees in the camp area, and the characteristics of the understory. The revised conclusions were based both on the additional field site evaluation, consideration of additional biological analysis by Singer, Ralph and Suddjian and analysis of additional protective measures proposed by the applicant. Both CDFG and USFWS state:

The central camp area was evaluated for the presence of potentially suitable MAMU [marbled murrelet] nest trees. Several large Douglas fir are present in and adjacent to the camp, on and off the larger DPR property. These are single trees that are generally exposed, with limbs that are at the lower end of what could potentially be used by MAMU. These trees are present in a forest of smaller second growth redwood and Douglas fir and generally appear to be marginally suitable has MAMU nesting habitat. The camp area does not exhibit the habitat characteristics of old growth stand to the west of the north fork of Gazos Creek and the meadow area where MAMU occupation is assumed based on past observations of occupied behaviors.

Along the west bank of the north fork of Gazos Creek west of the camp are several large trees which support limbs that were agreed to be of appropriate size, shape, and cover to be suitable nesting habitat. These trees are approximately 100 meters from the camp area where activity would be concentrated.

Two areas of potential MAMU occupation are present within the larger DPR property outside the PCA lease area—the old growth stand discussed above and the second growth stand to the southwest [northeast]³ of the camp along the south side of the south fork of Gazos Creek and the county road. (CDFG February 28, 2006 and USFWS February 23, 2006)

~~The initial CDFG determination of the presence of potential nest trees within the camp areas and other areas closer to the developed areas was based on criteria described in the manual titled 67. *Methods for Surveying Marbled Murrelets in Forests, a Revised Protocol for Land Management and Research* developed by the Marbled Murrelet Technical Committee of the Pacific Seabird Group (2003). This manual prescribes the standards of habitat assessment and survey for marbled murrelets and is widely used by professionals engaged in the study, research, and management of marbled murrelets. Specifically, regarding assessing potential habitats, the protocol states:~~

³ The second growth stand identified by Singer is northeast of the camp. The south fork of Gazos Creek flows from northeast of the camp to south of the camp and joins the north fork. The statement that the second growth stand is southwest of the camp is an error by CDFG and FWS.

~~...potential habitat that should be surveyed for murrelets is defined as (1) mature (with or without an old growth component) and old growth coniferous forests; and (2) younger coniferous forests that have platforms. A platform is a relatively flat surface at least 10 cm (4 in) in diameter and 10 m (33 ft) high in the live crown of a coniferous tree.~~

~~...~~

~~It is important to note that murrelets have occupied small patches of habitat within larger areas of unsuitable habitat (Nelson and Wilson 2001). Some occupied sites also have included large, residual trees in low densities, sometimes less than one tree per acre (Grenier and Nelson 1995, Ralph et al. 1995). The presence of platforms appears to be the most important stand characteristic for predicting murrelet presence in an area (Hamer et al. 1994). Platform presence is more important than tree size, which alone is not a good indicator of platform abundance (Hamer 1995; S. K. Nelson, pers. comm.). Therefore, any forested area with a residual tree component, small patches of residual trees, or one or more platforms should be considered potential murrelet nesting habitat.~~

~~While the usefulness of the four inch diameter branch size for evaluating potential nesting trees in the Santa Cruz Mountains has been called into question by the Baker et al. study (in press), the study's conclusions have not resulted in any changes to the established survey protocol. In addition, too few nests have been found in this region to be able to adequately characterize the region's nesting habitat, and therefore deviation from the accepted protocol is not justified. Thus, the method for assessing potential marbled murrelet nesting habitat initially used by CDFG remains valid.~~

Because the marbled murrelet is a rare and secretive bird whose nests are difficult to find and thus not widely studied, it is common for biologists to have different opinions regarding the specific habitat needs of the species. Therefore, the Commission finds that there is insufficient evidence to determine conclude the presence of that there is potential nesting habitat in areas within and around the immediate camp area, outside of the 10-acre old growth and 20-acre mature second growth forest is inconclusive. However, tThe Commission also finds that suitable marbled murrelet nesting habitat is present within the 10-acre old-growth and 20-acre second-growth stands.

Potential for Impacts on Marbled Murrelet from Increased Nest Predation

~~The proposed development would likely result in an increase in the number of corvids such as ravens and Stellar's jays in and around the project site as corvids are attracted to areas of human activity within forested areas. Corvids prey on marbled murrelet eggs and hatchlings. Numerous reports have identified nest predation by corvids as a primary threat to the reproductive success of marbled murrelets.~~

The Recovery Plan prepared by U.S. Fish and Wildlife Service includes the following statements relevant to the issue of nest predation by jays and ravens (corvids):

From 1974 through 1993, of those marbled murrelet nests in Washington, Oregon, and California where success/failure was documented, approximately 64 percent of the nests failed. Of those nests, 57 percent failed due to predation (Table 4). Corvids (ravens, crows, and jays) are suspected to have caused the majority of known nest failures. (P.51)

...

Increased human activities in forests, such as picnic grounds, can attract corvids and thus increase the chances of predation (Singer et al. 1991, Marzluff and Balda 1992). More importantly, these activities can increase survival of corvids and result in potentially higher populations of corvids. (p. 54)

According to McShane et al. (2004):

Marbled murrelets are highly vulnerable to nest site predation. Most active murrelet nests that have been detected and monitored have been found to fail, and most failures appear to be the result of predation (Nelson and Hamer 1995; Hamer and Meekins 1999; Manley 1999; Manley and Nelson 1999; Bradley 2002; Hébert and Golightly 2003; Nelson and Wilson 2002; Manley 2003; Peery et al. in prep.) (see Section 4.5.6 for more detail). Common ravens (*Corvus corax*) and Steller's jays (*Cyanocitta stelleri*) are known to take both eggs and chicks at the nest, while sharp-shinned hawks (*Accipiter striatus*) have been found to take chicks.

~~Further documentation of the impacts of human activities that attract and support jay and raven populations, which feed on marbled murrelet eggs and hatchlings in the Santa Cruz Mountains is provided in the 2004 *Command Oil Spill Final Restoration Plan and Environmental Assessment* jointly prepared by USFWS, NOAA, CDFG, CDPR, and the California State Lands Commission as a proposal for mitigation of impacts to the marbled murrelet from the Command oil spill. This report includes the following:~~

~~The Marbled Murrelet population of the Santa Cruz Mountains is small, isolated and declining. At present, their rate of reproduction is insufficient to sustain the population.~~

~~In the Santa Cruz Mountains, nesting is largely limited to five adjacent watersheds: Pescadero Creek, Butano Creek, Gazos Creek, Waddell Creek, and Scott Creek. The nesting area thus encompasses approximately 15 miles from north to south and 10 miles from east to west.~~

~~Several studies suggest that the Santa Cruz Mountain population is declining. The longest available data set, audio/visual detections from Redwood Meadow near Big Basin State Park headquarters, suggests a continuous and pronounced decline in the number of nesting birds in that area. Formerly the site of the greatest detections, the current surveys report only a small fraction of the numbers recorded in the early 1990s.~~

~~The reason for the current decline is thought to be low reproductive success. Recent studies of the Santa Cruz Mountain population suggest that reproductive success has fallen to near zero...this fecundity rate implies that the Santa Cruz Mountain population, without immigration from other populations, will be extirpated within 25 years.~~

~~Nest predation is thought to be one of the primary causes behind the lack of reproduction of the Santa Cruz Mountains Marbled Murrelets...corvids (i.e., ravens and jays) are some of the primary nest predators of murrelets.~~

~~It is suspected that the recent increase in ravens, especially around campgrounds within the parks where murrelets nest, is a significant reason for the decline in the murrelet population.~~

~~Recent surveys have suggested that corvid density is especially elevated in campgrounds. This finding comes as no surprise, as these species readily scavenge human garbage, discarded food, and spilled food around picnic tables and other outdoor locations. (Liebezeit and George 2002).~~

~~Corvid predation of Marbled Murrelet chicks and eggs around the campgrounds in the Santa Cruz Mountains is known to occur and has been witnessed on several occasions (D. Suddjian, pers. comm.)~~

As of 2001, the fates of only 71 murrelet nests were known for all of North America. Only one third of these nests fledged young, and it is estimated that between 38% ($n = 27$) and 59% ($n = 42$) of nests were depredated (Luginbuhl et al. 2001). Nelson and Hamer (1995b) reported that 57% of 14 nests in California, Oregon, and Washington had failed as a result of predation. The extent of corvid predation on murrelet nests is not well documented, because so few active murrelet nests have been found. Nonetheless, in two studies of predation on simulated murrelet nests corvids were the most important predator during the incubation stage (Luginbuhl et al. 2001).

Marbled Murrelets in the central California region (San Mateo and Santa Cruz counties) have an exceptionally poor nesting success rate. Peery et al. (2004) summarized the fate of the 19 nests found in the region up to and including their study, and reported an 84% nest failure rate, due primarily to predation (67-81%). Of the nine nests for which the cause of failure was determined conclusively, six were depredated, including four by corvids. All seven of the central California nests located during the two years of Peery's study failed.

Common Ravens and Steller's Jays have been documented preying on both murrelet eggs and chicks (Nelson 1997). In the central California region, Peery et al. (2004) reported that predation on murrelet nests, primarily by Steller's Jays and Common Ravens, was "observed frequently." Predation of murrelet adults at the nest site can also occur. There is a record from central California in which a Common Raven flushed an adult murrelet from its nest and was later seen carrying an apparent carcass (Singer et al. 1991). Nelson and Hamer (1995b) "hypothesize that because this seabird has a low reproductive rate (one egg clutch), small increases in predation

will have deleterious effects on population viability” [emphasis added]. The combination of low annual nesting success, low fecundity, and low, declining population sizes could impact the survival and recovery of this threatened species (Nelson and Hamer 1995b).

Potential for Impacts of the Proposed Development on Corvid Population and Nesting Marbled Murrelets

Many studies have shown a positive correlation between corvid abundance and predation rates on nearby bird nests. Luginbuhl et al. (2001) found that average corvid abundance and average rate of predation for various types of landscapes were closely correlated, although there was only a weak correlation between corvid abundance and murrelet predation at the plot-level, due to high variability in corvid abundance and nest predation rate. More specifically, Nelson and Hamer (1995) concluded that areas heavily used for recreational activities can attract corvids, and this may increase the chance of murrelet nest predation within these areas. Corvids are opportunistic, visual predators, and it is likely that if the number of corvids at a site increases, the risk of murrelet nest predation would also increase.

Forest fragmentation can also affect the abundance and distribution of corvids, as some predators such as Steller’s Jays are more abundant in patchy and fragmented landscapes (such as exists at Gazos Mountain Camp), and this might lead to higher rates of predation on murrelet nests. However, Raphael et al. (2002) found that corvid predation increased with proximity to forest edges only if there were human settlements and recreation areas nearby, but not when the area was dominated by regenerating forests.

The evidence concerning corvids and marbled murrelet nest predation suggests that the project could result in significant impacts to marbled murrelet in the vicinity if the project results in an increase in corvid populations in the area. This potential is summarized in the 2004 *Command Oil Spill Final Restoration Plan and Environmental Assessment*, which was jointly prepared by USFWS, NOAA, CDFG, CDPR, and the California State Lands Commission as a proposal for mitigation of the impacts to the marbled murrelet from the Command oil spill. This report summarizes:

The Marbled Murrelet population of the Santa Cruz Mountains is small, isolated and declining. At present, their rate of reproduction is insufficient to sustain the population.

In the Santa Cruz Mountains, nesting is largely limited to five adjacent watersheds: Pescadero Creek, Butano Creek, Gazos Creek, Waddell Creek, and Scott Creek. The nesting area thus encompasses approximately 15 miles from north to south and 10 miles from east to west.

Several studies suggest that the Santa Cruz Mountain population is declining. The longest available data set, audio/visual detections from Redwood Meadow near Big Basin State Park headquarters, suggests a continuous and pronounced decline in the number of nesting birds in that area. Formerly the site of the greatest detections, the current surveys report only a small fraction of the numbers recorded in the early 1990s.

The reason for the current decline is thought to be low reproductive success. Recent studies of the Santa Cruz Mountain population suggest that reproductive success has fallen to near zero...this fecundity rate implies that the Santa Cruz Mountain population, without immigration from other populations, will be extirpated within 25 years.

Nest predation is thought to be one of the primary causes behind the lack of reproduction of the Santa Cruz Mountains Marbled Murrelets...corvids (i.e., ravens and jays) are some of the primary nest predators of murrelets.

It is suspected that the recent increase in ravens, especially around campgrounds within the parks where murrelets nest, is a significant reason for the decline in the murrelet population.

Recent surveys have suggested that corvid density is especially elevated in campgrounds. This finding comes as no surprise, as these species readily scavenge human garbage, discarded food, and spilled food around picnic tables and other outdoor locations. (Liebezeit and George 2002).

Corvid predation of Marbled Murrelet chicks and eggs around the campgrounds in the Santa Cruz Mountains is known to occur and has been witnessed on several occasions (D. Suddjian, pers. comm.)

The proposed development would result in ~~substantial~~ year-round human activity, including youth programs of up to 63 day users, 24 overnight guests, and up to four resident staff, in close proximity to marbled murrelet nesting habitat. The camp includes a dining room and kitchen which would be potential sources of food waste that would attract corvids. ~~Predation of marbled murrelet eggs and chicks by jays and ravens is known to occur and has been identified as a significant cause of the recent decline of marbled murrelet nesting success.~~ Jays and ravens also are known to be attracted to areas with human activity, including campgrounds and areas with food and garbage. ~~Thus, these resulting human activities from the proposed development would likely result in increased corvid populations and nest predation, and consequently reduced marbled murrelet reproductive success.~~

As stated above, during the past five years, the project site has been used for day lectures and has been occupied by a resident caretaker (without the authorization of a coastal development permit). According to ~~the applicant's~~ biologist David Suddjian, "both ravens and jays already reside on and around the property, and are no doubt acclimated to human presence in the area" (Suddjian November 17, 2005). A study by Neatherlin and Marzluff (2004), though, shows that the abundance of American crows is closely associated with the size of campgrounds, and that larger campgrounds with more consistent users have a greater concentration of crows. Thus, it seems that, if ravens and jays are already occupying this area during this period of relatively low level of human activity, their numbers ~~would likely~~ might increase with the higher activity levels proposed. Given that predation of marbled murrelet eggs and chicks by jays and ravens is known to occur and has been identified as a significant cause of the recent decline of marbled

murrelet nesting success, the project has a potential to result in adverse impacts to marbled murrelets in the vicinity of the project. A study by Neatherlin and Marzluff (2004) shows that the abundance of American crows is closely associated with the size of campgrounds, and that larger campgrounds with more consistent users have a greater concentration of crows

Potential Impacts of the Proposed Development Related to Subsidized Food Sources

The applicant contends that the link between human activities and increases in corvid populations is only due to increases in availability of food waste (i.e. subsidized food) and that as long as anthropogenic food sources are strictly controlled, the proposed development would not “cause an increase in corvid numbers and would not increase the risk of nest predation to nesting marbled murrelets” (Latham and Watkins October 28, 2005). ~~These assertions are based upon the assumptions that (1) the proposed garbage and food control measures would be effective in preventing an increase in corvid populations, and (2) corvids would not be attracted to an area with human activity if no subsidized food were available.~~

Effectiveness of Mitigation Measures

Therefore, tTo mitigate address potential impacts from increased corvid predation, the applicant has proposed the following measures which have been developed in coordination with corvid expert David Suddjian, marbled murrelet expert Steve Singer and biologists from CDFG, USFWS and CDPR:

1. Use fully enclosed animal proof indoor garbage areas with regular removal of garbage.
2. Use animal-proof garbage cans.
3. All meals would be served in the dining room, and no food would be permitted outdoors.
4. Patrol site for litter and food debris three times per day after meals; record results.
5. Corvid monitoring and control developed in accordance with CDPR.
6. Conduct ongoing cleanup of trash left by others (non-camp related individuals) along Gazos Creek Road (a County public road), as well as conduct patrols of the area to prevent activities likely to cause murrelet disturbances.
7. Coordinate with DPR and CDFG on existing and future corvid control plans and policies; including participation in existing California State Parks mitigation programs and corvid control program at Butano and Big Basin State Parks.

Mitigation Measures that Control Food Sources

The proposed ~~mitigation~~ measures are intended to avoid significant adverse impacts to the murrelet from increased nest predation by controlling garbage and other subsidized food sources available to corvids. The applicant proposes to restrict food consumption on the property to the indoor dining facility, install a fully enclosed garbage containment area, and provide extensive training to visitors to the site on the food and garbage control measures. The applicant, the biological experts supporting the project, CDFG and USFWS believes that with these and other proposed ~~mitigation~~ measures the project would not significantly adversely impact the adjacent marbled murrelet habitat. ~~To approve the project consistent with the sensitive habitat protection policies of the LCP, the Commission must determine based on substantial evidence that the~~

~~proposed development would not result in significant degradation or significant adverse impacts to marbled murrelet habitat and would maintain the biological productivity of this sensitive habitat.~~

The applicant's consulting biologist (Steve Singer) and ~~two~~ three marbled murrelet researchers (C.J. Ralph ~~and~~ David Suddjian, and Ron Le Valley) who wrote letters in support of the project believe that the proposed ~~mitigation~~ food and trash control measures would be adequate to ensure that the proposed development would not result in increased nest predation of murrelets. Singer states that "operation of the field biological station, as conditioned, will not cause an increase in corvid numbers and will not increase the risk of nest predation to nesting marbled murrelets" (Singer 1999). Ralph states that there is no convincing evidence that corvids would be attracted, except perhaps briefly, to human presence itself and that he "believes the corvid control measures proposed for this project would effectively restrict subsidized food and avoid increases in corvid populations." (Ralph 2005). Suddjian states that both ravens and jays already reside on and around the property, and that "no significant increase in corvid populations over the existing levels would be anticipated" (Suddjian 2005). Le Valley states that "the currently proposed project will not increase, and will likely decrease, the amount of human disturbance or predation risk associated with historic uses of the site, and therefore will not increase, and will likely reduce, impacts to marbled murrelets." (Le Valley 2005). In addition, both CDFG and USFWS concur that with the proposed measures to control food and garbage within the project area and to implement a corvid monitoring and control program, the proposed development would not result in adverse impacts to marbled murrelets.

~~However, notwithstanding these assertions, as discussed further below, there does not appear to be evidence demonstrating that the proposed measures to control subsidized food, such as those proposed by the applicant, would be effective in preventing an increase in local corvid populations. The applicant's position is supported by a~~ The report by CDFG (Liebezeit and George 2002) entitled *A Summary of Predation by Corvids on Threatened and Endangered Species in California and Management Recommendations to Reduce Corvid Predation*, which states that "[a]vailability of subsidized food and water may be the most important underlying cause for the increase in corvid populations throughout the west (Boarman and Heinrich 1999). Not surprisingly, controlling these sources may be the most effective means of limiting corvid population growth for the long-term (Boarman and Heinrich 1999)." Control of subsidized food sources is the number one management recommendation made in the CDFG report:

Management Recommendation #1: Reduce the influence of corvids in areas where they are negatively affecting (or have the potential to affect) listed species by reducing availability of anthropogenic food and water sources. This may include the following actions:

- Limit corvid access to landfills, sewage treatment plants, dairy farms, ranches, and road kills
- Deploy self-closing garbage cans in public-use and residential areas

Justification: The principal reason for the increase in corvid populations over the last few decades is access to anthropogenic food and water sources. Therefore, reduction in the availability of this subsidy will help reduce corvid numbers. This

management action should be performed at different spatial scales depending on the type of corvid species...Reduction of food sources adjacent to areas of listed species activity may be one of the most important and cost effective means of immediately curtailing corvid activity at specific sites (C. Caffrey, pers. comm.). Spillage from conventional garbage cans was often responsible for attracting gulls and corvids to areas near Least Tern colonies (C. Caffrey, pers. comm.). The installation of self-closing (corvid proof) garbage cans near listed species breeding areas cannot be overstressed.

The report lists the advantages of controlling subsidized food sources as:

- Non-lethal;
- Principal cause of increases in corvid populations;
- Long-term solution; and
- May benefit entire ecosystem;

~~but~~ The report also lists the disadvantages of controlling food sources, which include:

- Very labor intensive;
- No empirical data that indicates effectiveness;
- May be impractical in some areas;
- Difficult to ensure strict compliance; and
- Largely untested.

~~[Emphasis added.]~~

For example, ~~t~~The report (Liebezeit and George 2002) states, “little research has been done and no published studies have documented the effect of reductions in subsidized food and water sources on local corvid populations.” Similarly, ~~o~~One of the most well known studies on corvid predation of protected species is by William Boarman who researches predation of desert tortoises by ravens. Boarman has also acknowledged the lack of data to support the efficacy of the management actions he recommends to reduce ravens and their predation on tortoises. Boarman recommends reducing subsidized food sources to reduce the predation of desert tortoises by ravens. Specifically he recommends that landfills be compacted and covered by a tarp until a layer of dirt can be placed on top to reduce presence of ravens, and to close dumpsters and garbage cans to reduce available food. However, of their proven effectiveness, he notes:

Some landfills appear to be greatly reducing the number of ravens present by employing these methods (personal observation), but no scientific data have been collected except at EAFB [Edwards Air Force Base] (Boarman unpublished data).

It is not known what proportion of raven forage is received from these sources [dumpsters, garbage cans, grain dropped from trains, livestock carcasses] nor what effect their reduction would have on raven populations.

~~In addition, not only have the mitigation measures, such as those proposed by the applicant, not been proven effective, they would also be difficult to enforce.~~

However, one of the protective measures for the proposed project, discussed *infra*, is to conduct research on the efficacy of the subsidized food source control program. This research conducted at the site as part of the proposed project will use adaptive management techniques to evaluate the strict garbage control measures and other limitations proposed by the applicant to avoid an increase in corvid predation. This information could help develop a new model for protecting sensitive species from predation caused by corvids. A corvid monitoring study would counter the lack of testing data and would provide critical and valuable empirical data in this real life situation.

Effective enforcement of the stringent garbage control measures could also ~~may not~~ be infeasible despite concerted efforts by the applicant since the proposed development would include use of the camp by school groups with children as young as kindergartners, who may unintentionally break the rules by snacking during a guided walk and dropping a piece of food. In addition, food scraps, especially small pieces difficult to detect, may not always be picked up by those patrolling the camp for garbage. Still, the applicant and biologists supporting the project submit that while food control measures may be difficult to enforce at campgrounds, such measures would be easier to enforce at Gazos Mountain Camp because of the proposed measure to closely supervise all visitors by PCA staff (as discussed in the Noise section below). CDFG's July 14, 2005 letter also comments on the difficulty of ensuring that no scrap of food would be accidentally left available in the entire camp area. The letter states:

~~Corvids in general are known to watch and follow people and would be attracted to the camp area and associated human activity even without direct food hand-outs, and with minimal anthropogenic food availability (e.g. small crumbs/crushed food particles that are unlikely to be picked up by camp controls).~~

~~It would only take a few pieces of dropped food for corvids to associate the camp area with food. In the book *Rare Bird: Pursuing the Mystery of the Marbled Murrelet* (Ruth 2005) the author quotes murrelet biologist Rick Golightly who remarks: "People bring food into the forest and the corvids have learned to follow the people into the forest where they don't usually go — even if it's for just one potato chip. It doesn't take much to feed a jay or for a jay to connect the slamming car door to that potato chip." Despite the applicant's best efforts, inherent difficulties in the enforcement of the mitigation measure would likely undermine their effectiveness and result in increased corvid populations.~~

~~The applicant asserts that because the mitigation measures have been developed in accordance with corvid management programs in the Santa Cruz Mountain state parks, specifically the Command Oil Spill Final Restoration Plan and Environmental Assessment (2004), that the measures would also be applicable and effective in the context of the proposed development at Gazos Mountain Camp. The applicant further contends that because CDFG and USFWS have concurred with the corvid management measures proposed in several state and national parks to reduce corvids in existing, heavily used campgrounds that the only recommended means to limit corvid population is through control of food sources and not human presence. The applicant~~

states “to control corvid numbers, human food sources should be controlled or banned, not people.” (Latham and Watkins October 28, 2005).

~~Corvid management programs to control anthropogenic food sources, as proposed by the applicant, have been implemented in existing campgrounds and day use areas such as in Big Basin Redwoods State Park, Redwood National Park, and Prairie Creek National Park. In these cases, measures to control food sources have been developed to reduce corvid populations in areas with established high levels of human use. The CDFG report (Liebezeit and George 2002) notes:~~

~~Reduction of food sources adjacent to areas of listed species activity may be one of the most important and cost effective means of immediately curtailing corvid activity at specific sites (C. Caffrey, pers. comm.). [Emphasis added.]~~

However, contrary to the applicant’s assertions, control of subsidized food is not the only method recommended to control corvid populations. In the CDFG report, *A Summary of Predation by Corvids on Threatened and Endangered Species in California and Management Recommendations to Reduce Corvid Predation* (Liebezeit and George 2002), one of the recommended management actions to reduce predation by corvids on protected species, along with controlling anthropogenic food sources is locating campgrounds and recreation areas away from sensitive habitat areas:

~~Management Recommendation #5: Develop recreational public use areas that are designed to limit potential corvid impacts on species of concern.~~

~~Justification: Campgrounds, parks, and other outdoor public use sites are often placed in remote areas or in the remnant fragments of pristine habitat (e.g. old-growth forest) that are often inhabited by threatened and endangered species. Because corvids are often attracted to areas of human use, maintaining campgrounds in these locations may increase the potential impacts of corvids on the species of concern. To limit the impact of corvids, campgrounds and other recreational sites should be placed in locations away from areas used by species of concern (see Raphael et al. in press). This management action will take cooperation between research biologists, land managers, and park planners. This action should be considered throughout the state at all public areas that have listed species and corvids present. In addition, seasonal closures of certain areas (e.g. beaches for plovers) may be necessary. [Emphasis added.]~~

In addition, the USFWS *Evaluation Report for the 5-Year Status Review of the Marbled Murrelet in Washington, Oregon, and California* (McShane et al. 2004) recommends:

~~...lowering the risk of predation will require creating and maintaining abundant, large, complex structured forest in areas isolated from human development. In addition, in a fragmented landscape, predation at murrelet nests could also be reduced by surrounding stands with simple structured forest and by minimizing~~

~~the effects of human recreation and settlement (Marzluff et al. 2000, Ripple et al. 2003). [Emphasis added.]~~

There are some concerns regarding lack of data on the effectiveness, enforceability, and suitability of the proposed measures to control subsidized food to reduce the potential for increases in corvid population. However, the biologists supporting the proposed development and both CDFG and USFWS have concurred with the applicant's conclusions concerning the proposed measures to control food. In addition, the concerns about the effectiveness of the measures are partly addressed by conditioning the project to include a specific Food and Trash Control Program (Special Condition 2). Thus, the Commission finds that, with the proposed food control measures and Special Condition 2, the project will be sited and designed to prevent impacts that could significantly degrade sensitive marbled murrelet habitats from increased corvid presence due to subsidized food sources. As further discussed below, any remaining uncertainty with the food and trash control measures is addressed through the required corvid monitoring and by limiting the length of development authorization to 3 years so that potential impacts may be reevaluated in the near future.

Potential Increase in Corvids without Subsidized Food.

Concerns have been raised that ~~Even~~ if strict garbage and food control measures were rigorously enforced, it appears that corvids would still be attracted by an increase in human activity at the camp. "Corvids are well known camp followers in parks and other outdoor recreation areas, and frequently follow or approach people in forested areas" (Ralph et al. 1995). Humboldt State University murrelet researcher Dr. Rick Golightly has conducted research on human-caused disturbance on nesting marbled murrelets in Redwood National and State Park (e.g., Golightly et al. 2002; Hébert and Golightly 2003). Based on his research, Golightly states without reservation that corvids would definitely be attracted to an outdoor gathering of people and traffic, even in the absence of a food reward (Golightly 2006). CDFG's July 14, 2005 letter states:

Corvids in general are known to watch and follow people and would be attracted to the camp area and associated human activity even without direct food hand-outs, and with minimal anthropogenic food availability (e.g. small crumbs/crushed food particles that are unlikely to be picked up by camp controls).⁴

A study on the effect of repeated human intrusion into forests on Gray Jay numbers indicated that gray jays were attracted by the experimental intrusions, even though the jays were not rewarded by food during the intrusions (Gutzwiller et al. 2002). The study showed that human intrusions by one person for just one or two hours a week led to significantly greater jay numbers and probability of recurrence on intruded versus control sites. The average differences in number of jays (up to 225%) were evident over 10-week periods during two consecutive years;

⁴ However, CDFG also concluded more generally in a follow-up letter that with the "proposed minimization and avoidance measures, we do not expect the camp operations...to adversely affect MAMU [marbled murrelet] using the area." (Exhibit 12)

the attraction effect of intrusions lasted beyond the intrusion events themselves, for about three days afterward. The researchers stated:

It is reasonable to expect that the potential for avian nest predation at a site depends in part on the number of predators that are attracted and the extent to which they recur. If repeated human intrusion attracts gray jays to sites, periods during which predators are present are lengthened and opportunities for nest detection and predation increase accordingly.

The researchers concluded that even without food rewards to reinforce the behavior, “intrusion-induced attraction of avian nest predators can seriously exacerbate predation on eggs and nestlings” (Gutzwiller et al. 2002). ~~The applicant contends that because the study (Gutzwiller et al., 2002) involves gray jays in sub-alpine regions of Montana, it is not applicable to the situation at Gazos Mountain Camp. However, G~~gray jays are part of the Corvidae family that includes ravens and Steller’s jays, and thus, their behavior ~~is likely to~~ may be indicative of that of Steller’s jays and ravens.

Corvids have relatively large home range sizes: common ravens forage up to three miles from their roost, and can travel up to ten miles a day to exploit anthropogenic food sources (Luginbuhl et al. 2001). A study of two Steller’s jays in Redwood National Park indicated a probable maximum travel distance of approximately 1 km (0.6 miles) (Liebezeit and George 2002). Singer reported that in the Santa Cruz Mountains, ravens roost in large numbers in forested canyons with little or no supplemental food sources, and then commute to agricultural or rural settlements during the day to feed (Singer, January 2005). These ravens have thus learned to associate human congregations and settlements with food sources, and potentially would ~~likely~~ be attracted by an increased human activity at Gazos Mountain Camp.

The ravens around Gazos Mountain Camp are likely being subsidized by the anthropogenic food sources that are within their home range. Singer listed multiple rural settlements and campgrounds within a 3-mile radius of Gazos Mountain Camp. This subsidized food has likely increased the population size of ravens and jays in the camp area, and trained them to seek food in areas of human activity. Thus, ~~it is likely that these~~ corvids might ~~would~~ be attracted to the proposed human activity at the Gazos Mountain Camp. Marzluff and Neatherlin (in press) examined the response of American Crows, Common Ravens, and Steller’s Jays to human settlements and campgrounds in Washington. They reported that ravens responded positively with smaller home ranges, higher reproduction, and increasing abundance; crows responded strongly with smaller home ranges, higher reproduction, and higher survivorship. The relative abundance of Steller’s Jays did not increase near human settlements, although they were the most common corvid in the study area; this may result from the jays’ territoriality, lesser mobility, and higher reproductive success. Another study concluded that human settlements fueled crow population growth, and remote campgrounds absorbed this growth through colonization (Neatherlin and Marzluff 2004).

The applicant’s biologist and several other experienced biologists disagree with the conclusion that the mere presence of humans attracts corvids, and further point out that the Gutzwiller study

is not applicable in this case because it involves gray jays in sub alpine regions of Montana. With regard to whether or not humans alone attract corvids, biologist David Suddjian states:

It has been my consistent experience over many years of study in the Santa Cruz Mountains that ravens and jays are only attracted to people where a food reward is regularly available, whether in a campground where it is continually available, or at other outdoor sites where food is consumed periodically. For example, at Big Basin, Portola and Butano State Parks, Stellar's Jays and Common Ravens generally avoid people as they walk on trails away from areas with regular food availability, including trails that are used on a daily basis and by large numbers of visitors on weekends, and despite the fact that some hikers eat as they walk or stop at intervals to snack. But these same corvids may be attracted at a main trailhead or a popular destination because food is regularly consumed there and made available to corvids.(Suddjian 2006).

Dr. C.J. Ralph, a U.S. Forest Service biologist, agrees that "[t]here is absolutely no evidence that mere human presence, even in relatively close proximity to murrelet nests, causes significant impacts on nesting and feeding behaviors." Further, Steven Singer states that "there is no significant scientific support for [the position that human presence will increase corvid populations in an area in the absence of food sources] and the broad consensus of murrelet experts disagree with this contention. (Singer 2006). Finally, both CDFG and USFWS concur that the applicant's planned subsidized food source control measures "would serve to minimize the potential for attracting and increasing the number of corvids in the area." (CDFG 2006; USFWS 2006).

With regard to the applicability of Gutzwiller study, the applicant's biologists argue that the results are inapposite. Suddjian states that "[w]hile many corvids share various characteristics, many species also have unique elements in their behavior and life history. The Gray Jay is well known for its exceptional curiosity and boldness toward humans. This curiosity is not shared by the Common Raven or Stellar's Jay." (Suddjian 2006). "Secondly, the type of human activity measured in this study was directed human intrusions in which individual researchers deliberately walked toward every Gray Jay (*Perisoreus canadensis*) that they detected, and there was a deliberate effort to confront the bird." (Singer 2006). Singer concludes that because the human activity that will occur at Gazos Mountain Camp will be entirely different and will aim not to attract corvids, the results cannot be relied on for impacts at the camp. Furthermore, "the article's authors caution against extrapolating their findings to other areas of the Rocky Mountains (where it was conducted) even if within the same type of forest," thus applying their findings "to a different species in an entirely different bioregion" is not appropriate. (Singer 2006).

With all due respect to the expert opinions of the murrelet researchers who support the proposed development, no evidence has been provided demonstrating that the proposed food and garbage control measures would be effective in preventing increased nest predation by corvids. Moreover, available evidence suggests that even with strict garbage and food control measures in

~~place, ravens and jays would be attracted to the Gazos Mountain Camp by the proposed human activity, which in turn would lead to an increase in murrelet nest predation.~~

While there is some disagreement among biologists regarding the potential for corvid population to increase at the project site without the availability of subsidized food and with strict garbage and food control measures, the biologists supporting the proposed development have significant experience and expertise with marbled murrelets and corvids in the Santa Cruz Mountains. In addition, both CDFG and USFWS have concurred with the applicant's conclusions. The Commission therefore finds that, with the food and trash control measures proposed by the applicant and in conjunction with Special Condition 2, the project would be sited and designed to prevent impacts that could significantly degrade the sensitive marbled murrelet habitat. As discussed below, to the extent that there is any remaining uncertainty regarding the effectiveness of the food and trash control measures to avoid impacts to marbled murrelet, this is addressed through a corvid monitoring program and by limiting the length of development authorization.

Mitigation Additional Protective Measures to Monitor and Control Corvids

In addition to controlling food sources, the applicant is proposing to monitor corvid population so that the effects of the proposed camp area could be evaluated. The details of the study and the duration have not been provided. PCA has also offered to undertake a program of lethal removal of corvids from the camp (by shooting or trapping) if the results of the monitoring study show this step is warranted. ~~However,~~

~~g~~Given the natural temporal and spatial variability in corvid abundance, it is questionable unclear whether the proposed monitoring would be able to reliably detect changes in corvid abundance at the site without the expenditure of a very large amount of money and effort. For example, in a study of corvid predation on 905 simulated Marbled Murrelet nests in Washington, 48% of the eggs showed predation by corvids (38% by jays), as did 5% of the chicks (Luginbuhl et al. 2001). This study, though, found a high variability in measures of nest predation rate and corvid abundance that obscured the relationship between these metrics when examined at the scale of a single forested plot (0.5–1.0 km², about 124 to 247 acres). Although averaging many repeated measures of predation rate and corvid abundance in plots of similar structure within similar landscapes reduced this variability and exposed a strong correlation, the authors concluded that using measurements of corvid abundance to assess nest predation rate should be considered useful only at a broader, landscape scale on the order of 5–50 km² (about 1,000 to 12,000 acres).

~~It is also doubtful whether a lethal control program would be effective, or for that matter, even allowed. Lethal removal of corvids has been used to protect other endangered species when an immediate reduction in the corvid population is necessary, but at least one study has shown that reductions are temporary, with no carryover benefits one year after removal (Liebezeit and George 2002). In this case, there are also large numbers of ravens roosting in nearby valleys, which forage at agricultural and rural settlements each day (Singer, January 2005). These ravens may provide a nearby supply of birds to fill any vacant territories created through removal of corvids.~~

~~It would be difficult to predict the intensity of murrelet nest predation from estimated corvid abundance, because estimated corvid numbers at the scale of a forested plot are poorly correlated with the actual rate of murrelet predation. In a study of corvid predation on 905 simulated Marbled Murrelet nests in Washington, 48% of the eggs showed predation by corvids (38% by jays), as did 5% of the chicks (Luginbuhl et al. 2001). This study found a high variability in measures of nest predation rate and corvid abundance that obscured the relationship between these metrics when examined at the scale of a single forested plot (0.5–1.0 km², about 124 to 247 acres). Averaging many repeated measures of predation rate and corvid abundance in plots of similar structure within similar landscapes reduced this variability and exposed a strong correlation. The authors concluded that using measurements of corvid abundance to assess nest predation rate should be considered useful only at a broader, landscape scale on the order of 5–50 km² (about 1,000 to 12,000 acres). Therefore, it does not appear likely that the proposed corvid baseline study at the 12-acre Gazos Mountain Camp lease site would prove useful in detecting an increase in actual corvid predation.~~

~~It is also unlikely that a corvid monitoring study would be able to detect significant increases in corvid numbers at this project site. Indeed, it is not at all clear what a significant increase would be. Even if there was little change in density at any given time, if more birds periodically check the site, predation risk could increase. By the time a local corvid population increase was detected, it would probably be too late to respond and the damage would already have been done to murrelet nests as it would take some time to trap or shoot the corvids in order to reduce the population. However, these birds have large foraging ranges, and it seems likely that other individual corvids would move in to take the place of the removed birds. There are also large numbers of ravens roosting in nearby valleys, which forage at agricultural and rural settlements each day (Singer January 2005), and may provide a nearby supply of birds to fill any vacant territories.~~

~~Lethal removal of corvids has been used to protect other endangered species when an immediate reduction in the corvid population is necessary, but reductions are temporary, with no carryover benefits one year after removal (Liebezeit and George 2002). Therefore, the available evidence does not support a conclusion that the proposed corvid monitoring and removal mitigation measure would be an effective adaptive management strategy for minimizing significant degradation or significant adverse impacts to nesting murrelets.~~

~~Monitoring marbled murrelet radar detections can also not be relied upon as a way to be kept quickly apprised of any declines in murrelet use of the Gazos Mountain Camp area, in order to determine when to initiate corvid removal. The 2004 biannual monitoring report of murrelets at Gazos Mountain Camp (Singer and Hamer 2004) concluded that “there is a large amount of both day-to-day and year-to-year variation in both the number of total detections and the number of occupied behaviors from 1998 to 2004.” The applicants have not proposed to continue the current murrelet radar survey monitoring program after 2006.~~

Monitoring, though, is nonetheless one of the management recommendations of the CDFG to address predation by corvids on protected species, discussed in its report, *A Summary of Predation by Corvids on Threatened and Endangered Species in California and Management Recommendations to Reduce Corvid Predation* ((Liebezeit and George 2002):

Management Recommendation #3: Monitor local Corvid populations that are known to be negatively impacting listed species at specific sites. Monitoring should be implemented to: provide reliable estimates of both local and regional population sizes, to track the response of Corvid populations to management actions (monitoring should occur before *and* after management is implemented), and to bolster local life history information (specifically information relative to foraging behavior).

Justification: Ideally, a marked Corvid population would provide the most reliable data and is necessary to obtain information for demographic models. We strongly encourage agencies to provide funding to study marked Corvid populations. However, monitoring an unmarked Corvid populations can still provide meaningful information and may be the only option for land managers in many locations.

The specific Corvid monitoring protocol will vary from site to site. However, we recommend constant-effort surveys (e.g. point counts) of corvids at sites used by the species of concern and at anthropogenic food sources. Over time, such monitoring would provide information on the effectiveness of management actions implemented to reduce Corvid use of such sites. We also recommend locating and monitoring Corvid nests within the vicinity of breeding listed species. Monitoring Corvid nests will provide an estimate of their local productivity. In addition, identification of prey delivered to the nestlings may provide strong evidence (it must be confirmed that corvids are not obtaining prey by scavenging or kleptoparasitism) that corvids are preying on the listed species. Moreover, monitoring nests will enable identification of the specific corvids that are responsible for depredations on listed species.

In addition to being a management recommendation, the monitoring of corvid populations at the proposed development site is encouraged by both the CDFG and USFWS:

To further minimize impacts to marbled murrelets, DPR and PCA have proposed a study to establish a baseline of corvid use in the camp area so that the effects of the proposed camp operations can be evaluated...The proposed corvid monitoring and control measures have the potential to provide valuable information on the effects of camp operations on corvid numbers and the efficacy of corvid control, the results of which will have applicability for other parklands in the region and the state.(CDFG 2006).

Again, although there is some uncertainty as to the reliability of corvid monitoring, there is also scientific evidence in support of the importance of monitoring to address potential impacts to marbled murrelet. In addition, effective monitoring would help address any remaining uncertainty about the ability to eliminate potential impacts to marbled murrelet through rigorous food and trash control measures. This is particularly true if the permit authorization of the

proposed development is limited in duration so that the Commission may reevaluate the potential for impacts to marbled murrelet from the proposed activity.

Special Condition 1 therefore requires that a corvid monitoring program be implemented to evaluate any changes in on site corvid populations. In conjunction with control of subsidized food, this program will assure that the potential for impacts to the marbled murrelet from an increase in corvids is avoided. In particular, Special Condition 5 limits the term of this approval to three years. The intent of this limited authorization is to allow the Commission to reevaluate the potential for impacts to marbled murrelet based on monitoring data of the corvid population in the project area. It will be important that the monitoring program establish a baseline, as well as identify what increment of change in the corvid population would indicate a significant change for purposes of reporting back to the Commission in three years. As conditioned, the Commission finds the proposed development is consistent with the sensitive habitat protection policies of the San Mateo County LCP.

Overall, with the proposed protective measures of the applicant, and with the special conditions requiring a food management program, a corvid monitoring program, and a limited permit term to allow reevaluation of the project, the Commission finds that there is substantial evidence that the project would not result in significant adverse impacts on sensitive marbled murrelet habitat areas and that it would prevent impacts that could significantly degrade these sensitive habitats, as well as be compatible with the maintenance of the biological productivity of this habitat. As conditioned, therefore, the project is consistent with the sensitive habitat protection policies of the San Mateo County LCP concerning the potential impacts to marbled murrelet from corvid predation.

~~The proposed mitigation measure to monitor and control corvids have not be proven to be effective in adequately detecting corvid increases. Even if the monitoring program could immediately determine corvid increases, corvid control measures may not be implemented quickly enough to prevent injury to marbled murrelets and have not been proven effective in preventing nest predation. Furthermore, the proposal of this specific mitigation measure indicates a lack of certainty that the mitigation measures to eliminate subsidized food would be effective in preventing increases in corvid populations at the site.~~

~~Overall, the proposed mitigation measures to control garbage and subsidized food sources would not be adequate in preventing nest predation of marbled murrelets by corvids because the mitigation measures have not been proven to be enforceable, effective in reducing local corvid populations, or preventing corvids from occupying an area that is largely unused but would experience intensified human activity. The proposal to implement a corvid monitoring and control program is also inadequate since there is no evidence to support that such measures would be effective and the lag time between detecting corvid increases and implementing any control measures may be significant enough to allow the predation of murrelet nests by corvids.~~

~~Because there is a lack of substantial evidence to support the assertion that the proposed mitigation measures would be effective in preventing increases in corvid populations and nest predation at Gazos Mountain Camp, the proposed mitigation measures should be considered experimental and as such, should not be relied on to prevent significant degradation or~~

significant adverse impacts to marbled murrelets. Furthermore, as noted above, corvids may be attracted to Gazos Mountain Camp despite these mitigation measures simply because of the increases in human activity.

Corvid Abundance Effect on Nest Predation Rate

The lack of proven effectiveness of the mitigation measures combined with the possibility that corvids would migrate to the project area simply because of increase in human activity lead to the conclusion that the proposed development would likely result in increased corvid populations in the project area. As corvids are attracted to the camp, predation on murrelet nests in the nearby forest would likely increase. Many studies have shown a positive correlation between corvid abundance and predation rates on nearby bird nests. Luginbuhl et al. (2001) found that average corvid abundance and average rate of predation for various types of landscapes were closely correlated, although there was only a weak correlation between corvid abundance and murrelet predation at the plot level, due to high variability in corvid abundance and nest predation rate. Nelson and Hamer (1995) concluded that areas heavily used for recreational activities can attract corvids, and this may increase the chance of murrelet nest predation within these areas. Corvids are opportunistic, visual predators, and it is likely that if the number of corvids at a site increases, the risk of murrelet nest predation would also increase.

Forest fragmentation can also affect the abundance and distribution of corvids, as some predators such as Steller's Jays are more abundant in patchy and fragmented landscapes (such as exists at Gazos Mountain Camp), and this might lead to higher rates of predation on murrelet nests. However, Raphael et al. (2002) found that corvid predation increased with proximity to forest edges only if there were human settlements and recreation areas nearby, but not when the area was dominated by regenerating forests.

Conclusion Regarding Potential Nest Predation of Marbled Murrelets

In the 2001 Annual Report for the Gazos Creek Marbled Murrelet Monitoring Program produced by Steve Singer and Hamer Environmental, the authors note the importance of the nesting habitat associated with Gazos Creek due to its relative low density of marbled murrelet predators. The report states:

We believe that as other canyons with murrelet breeding populations become more densely populated with murrelet predators (such as the common raven and the peregrine falcon), the remaining canyons with a low density of these predators, such as Gazos Creek Canyon, will become more valuable as breeding habitat.

Due to the small and declining population of the Santa Cruz Mountain marbled murrelets, nesting and breeding sites within this region that have not been heavily colonized by murrelet predators are especially important and valuable as it is those areas that will serve as sources for the rest of the population. Thus, at sites such as Gazos Mountain Camp, any amount of impact from human activities that could potentially increase corvid populations and the risk of nest

~~predation and failure would have significant implications for the entire, vulnerable Santa Cruz Mountain marbled murrelet population.~~

~~Due to the proposed development's potential to increase corvid populations in marbled murrelet nesting habitat and increase the risks of marble murrelet nest predation and nest failure, the Commission finds that the proposed development would significantly degrade and significantly adversely impact the marbled murrelet, in conflict with Policy 7.3 of the LUP, which prohibits any land use or development that would significantly degrade sensitive habitat areas and requires that development in areas adjacent to sensitive habitats be sited and designed to prevent impacts that could significantly degrade the sensitive habitats.~~

~~The Commission finds that the proposed development is also inconsistent with LUP Policy 7.5, since the applicant has not demonstrated that the proposed development's mitigation measures proposed would result in no significant adverse impact on the sensitive marbled murrelet nesting habitat. In contrast, there is evidence that there would be significant degradation and significant adverse impacts from increased nest predation of the marbled murrelets by jays and ravens, which are attracted to human activity and associated food and garbage.~~

Impacts of Proposed Development on Marbled Murrelets from Noise Disturbance

To prevent impacts due to noise-related disturbance to nesting marbled murrelets, the USFWS recommends that human-generated noises not create receiving sound levels in murrelet nesting areas that exceed the ambient noise level. The USFWS has made similar recommendations as a precautionary measure regarding sound attenuation for other bird species including the California gnatcatcher, vireo, and willow flycatcher (USFWS 2003).

As shown on Exhibit 3, the access road is located within 150 feet of the 10-acre old-growth stand where the bridge crosses the South Fork of Gazos Creek. Cabin 22, which the applicant proposes to use as housing for up to four year-round staff is located approximately 350 feet from the 10-acre old-growth stand. The main camp compound is located approximately 400 feet from the 10-acre old-growth stand and approximately 400 feet from the 20-acre mature second growth stand. Noise generated by the proposed development, including traffic noise on the access road, car horns, shouting, construction noise, and the use of a generator, would result in increased human-generated noise levels in the murrelet nesting areas contrary to USFWS recommendations. However, it is ~~unclear whether~~ unlikely that increased noise from the proposed development would significantly affect the biological productivity of the murrelet habitat areas.

To analyze potential disturbance impacts to nesting murrelets due to noise generated by the proposed development, the applicant conducted two noise studies, one in March 2000 and another in November 2004.

The 2000 noise study measured manmade noise emitted approximately 1,600 feet away from the occupied stand. However, as stated above, the proposed development would create noise sources much closer to the murrelet nesting areas. According to the 2000 noise study, the ambient noise level in the occupied 10-acre stand ranges from 51-79 decibels. This ambient noise level is

based on four measurements taken for a duration of one minute each. For three of the four measurements, the ambient noise level measured was 51-60 decibels, and included sounds from wind, nearby Gazos Creek, and birds. During one measurement, a plane flew overhead, which measured 60-79 decibels on the sound meter. Based on these measurements, the study concludes that the ambient noise level within the occupied stand is as high as 79 decibels.

According to the California Environmental Resources Evaluation System (CERES), “ambient noise” is defined as:

The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location. http://ceres.ca.gov/planning/genplan/appendix_a.html).

Thus, ambient noise, should not include occasional and transient intrusive noise sources, but rather the constant, normal level of environmental noise, which in the 10-acre old growth stand includes sounds from the wind, birds, and nearby creek, but not the airplane. Only at or near an airport or airfield should sounds from airplanes be considered part of the ambient noise.

Measurements of decibel levels in common environments show that 40 decibels is the typical measurement for a quiet residential area at night, 50 decibels is the sound of a quiet restaurant inside, 60 decibels is the noise level inside an office or restaurant, 70 decibels is the sound of busy traffic at 5 meters, 80 decibels is noise level for a vacuum cleaner at one meter, and 90 decibels is the measurement inside a loud factor or heavy truck running one meter away (<http://en.wikipedia.org/wiki/Decibel#Acoustics>). Sound studies specifically in forested environments show that ambient noise levels in remote forest areas such as Gazos Mountain Camp are typically around 40 decibels. Hébert and Golightly (2003) measured ambient noise levels at randomly chosen sites in Redwood National and State Parks and found ambient noise averaged 40.8 ± 0.9 decibels. The USFWS (USFWS 2004) determined that ambient noise in Olympic National Forest also averaged 40 decibels. ~~Based on these studies, it is more likely that the ambient noise level in the murrelet nesting areas is at or below the low end of the range (51 decibels) measured in the 2000 study.~~

Because the 2000 noise study assumes an inappropriately high ambient noise level for the murrelet nesting areas and does not consider impacts from noise sources, such as the access road, that would be located in relatively close proximity to the habitat areas, this study is of limited value for the purpose of evaluating the potential impacts of the proposed development.

The applicant took another measurement of ambient noise level for the 2004 study, which showed that ambient noise near the creek (measured from the bridge over the middle fork of Gazos Creek) was 62 decibels and the ambient noise level 30 feet away from the creek was less than 50 decibels. While the occupied 10-acre old-growth stand borders Gazos Creek for approximately 1,000 feet on the west bank, the majority of the areas in this stand is located away from the creek. ~~Thus, it seems fair to assume, given the discussion above regarding typical ambient noise levels in common human environments and the sound studies in Redwood National and State Parks and Olympic National Forest, that the 62 decibels could be considered the ambient noise for a thin strip of the old growth stand bordering the creek (approximately 10~~

~~to 20 feet wide), but that for the large majority of the occupied forest stand, the ambient noise level is less than 50 decibels.~~

The 2004 study measured manmade noise, including loud shouting and car horn between 100 to 1,000 feet from the noise source at 100-foot intervals. Shouting was measured at 60 decibels and 56 decibels at 100 feet and 200 feet from the noise source respectively. Car horn noise was measured at 68 and 63 decibels at 100 feet and 200 feet from the noise source respectively. The 2004 study did not evaluate other noise sources associated with the proposed development, such as traffic noise on the access road, operation of the generator, or construction noise. However, it appears that even without considering these additional noise sources that the proposed development would result in human-generated noise levels in excess of ambient noise at least in the 10-acre old-growth stand.

~~Although the proposed development would not comply with the USFWS recommendation to prevent human-generated noise in excess of ambient levels, evidence regarding specific impacts of noise disturbance on marbled murrelets is inconclusive.~~ According to the USFWS (2004) “To date, there have been no tests of the visual or decibel levels or distances from sounds and/or visual stimuli at which murrelets react or flush from the nest, or the effect of such disturbance on productivity.” According to McShane et al. (2004), much of the information on murrelet response to auditory disturbance is anecdotal and stems from observations of nests located in Big Basin State Park, close to areas of heavy use by park visitors. There has only been one scientific study of noise disturbance on murrelets conducted by Hébert and Golightly (2003). In Redwood National and State Parks, Hébert and Golightly found that short-term noise from a chainsaw did not cause adults to flush from the nest, and did not reduce reproductive success. However, the chainsaw noise did change the behavior of adults, as they spent significantly more time in alert behavior during the noise event.

Although recreational activity on the forest floor is generally thought to minimally disturb birds nesting high above in the canopy, disturbance may possibly result in physiological effects, such as elevated stress hormones. McShane et al. (2004) suggests that the large-scale effects of increased energy expenditure may be significant at the population level. The Marbled Murrelet Recovery Plan (U.S. Fish and Wildlife Service 1997) states: “Due to the significant lack of disturbance-related information on marbled murrelets, it should be assumed that any amount of disturbance would result in negative impacts....”

The applicant has proposed measures to ~~mitigate for~~ address potential noise and other disturbance including:

Noise Control:

1. No amplified sound permitted anywhere on site.
2. No loud noises during murrelet breeding and nesting season (March 23-September 15).
3. Limit cars to 20 maximum

Disturbance Control:

1. No entry into the 10-acre old-growth stand located on the west side of the Camp.
2. Fence off lower meadow and pond area.

3. No use of any kind of the lower meadow 2 hours after sunrise or 2 hours before sunset during murrelet season.
4. Minimum use of lower meadow at other times (limited to walking through the area), during murrelet season.
5. Limit larger day use groups on site to the hours 9:30-2:30 during murrelet season.
6. Enforcement by PCA staff of compliance.
7. Educate and enlist all visitors in murrelet protection program.
8. Work with DPR to ensure no picnicking near 20-acre second growth stand.
9. Prohibit visitors from leaving the developed camp area without a trained staff member.
10. Limit use of cabin closes to the creek and occupied stand during murrelet season.
11. Limit tree removal in the developed camp area expect as required to address safety.

~~While some noise generating activities such as construction can be limited to outside the murrelet breeding season, certain noises associated with proposed year round use of the project area by vehicles and school groups could not be easily controlled. For example, it would be impossible to prevent school children from shouting or to ensure that no car horns would sound off or that no car alarms would be accidentally triggered.~~

While the proposed development would create noise greater than ambient levels in marbled murrelet nesting habitat, based on evidence provided in Hébert and Golightly 's study and other observations, it would be fair to assume that noise associated with the proposed development would not cause marbled murrelets to flush from their nests. Noise disturbance may have other physiological impacts to marbled murrelets that could affect nesting success, however, the extent of those impacts are unknown. Thus, the Commission finds that evidence documenting adverse impacts to marbled murrelet as result of noise disturbance from the proposed project is inconclusive insufficient, and that the proposed project with the proposed measures to control noise and other disturbances would not result in significant adverse impacts on sensitive habitat areas that support the marbled murrelet, would prevent impacts that could significantly degrade the sensitive habitats, and would be compatible with the maintenance of the biological productivity of this habitat.

Conclusion Regarding Marbled Murrelets

Due to its secretive nature, scientists have only been able to observe a small number of marbled murrelet nests and much remains unknown about the species. What is certain is the declining trend in marbled murrelet population throughout California and especially in the Santa Cruz Mountains, which is calculated as being likely to be extirpated within the next 25 years unless measures are taken to stop the decline (Command Trustee Council, 2004). What is also widely accepted is that nest predation by corvids is among the primary causes of marbled murrelet nest failure and lack of reproductive success. ~~It is also undisputed that corvids are more concentrated in areas with human activity.~~

However, the proposed development would include strict garbage, food source, noise and disturbance control measures, would be designed and operated by trained conservation scientists and would control human activity in ways far different from recreational campgrounds. Thus, the opinion of the marbled murrelet experts supporting the proposed development and the

agencies responsible for protection of the species is that the project would not adversely impact marbled murrelets.

Steven Singer concludes:

In light of the best available scientific information ... and the measures PCA is incorporating into the Mountain Camp Project, it is unlikely that the proposed use will have any adverse impact in nesting marbled murrelets, and in fact, may produce significant benefits by controlling the corvid population and providing useful information on marbled murrelet population dynamics.

(Singer 2005).

The PCA proposal to operate a research station at the existing camp facilities, as conditioned, does not pose any threat to the marbled murrelet, and has my full and unconditional support.

(Singer 2006) (emphasis in original).

David Suddjian concludes:

In my opinion the proposed protective measures and other conditions of the proposed project are effective, feasible and reasonable, and such protective measures and conditions will effectively prevent potential impacts to nesting Marbled Murrelets. I recommend that the Commission approve the project with these conditions.

(Suddjian 2006).

C.J. Ralph concludes:

Overall, based on the avoidance and protection measures that Pescadero Conservation Alliance has incorporated into this project, including those developed by Steve Singer, who has a wide knowledge of the bird in the region and is well-respected, I believe that the proposed youth camp can be operated without any adverse impacts to Marbled Murrelets in the vicinity of the camp. In fact, the overall educational effect and research potentially associated with the camp would likely have a net benefit to the murrelet.

(Ralph 2005).

The California Department of Fish and Game concludes:

Based upon the results of the field visit, discussions with PCA and our understanding of the proposed camp operation and associated activities and proposed minimizations and avoidance measures, we do not expect the camp

operation as described in the attached use description to adversely affect MAMU using the area.

(CDFG 2006).

The U.S. Fish & Wildlife Services concludes:

[T]he Service's review [of the project] concluded that the likelihood of taking marbled murrelets is low with the conservation measures to be undertaken by CDPR and PCA....the Service supports the purpose of the proposed project. We believe the positive conservation benefits of the proposal significantly outweigh any possible negative impacts.... We believe the proposed project is a reasonable, measured approach at providing important environmental education opportunities while minimizing the potential for short-term localized impacts to marbled murrelets.

(USFWS 2006).

The Commission finds, as proposed, the measures to eliminate subsidized food would reduce the impact of corvid predation on nesting marbled murrelets to a less than significant level and that Special Condition 2 would ensure that the proposed development would be undertaken with maximum precaution to eliminate all sources of subsidized food to corvids. To address the remaining uncertainty due to unresolved disagreements among experts in the marbled murrelet research community and to assure that the potential impacts of nest predation would be less than significant, the Commission finds it necessary to limit development authorization for a period of three years (Special Condition 5) during which a corvid monitoring program (Special Condition 1) shall be implemented to evaluate any changes in on site corvid populations. As conditioned, the Commission finds the proposed development is consistent with the sensitive habitat protection policies of the San Mateo County LCP.

~~These facts, combined with the lack of evidence showing that any mitigation measures developed to reduce corvid populations and marbled murrelet nest predation have been effective, make it clear that intensifying human use in areas close to marbled murrelet nesting habitat would not be compatible with the protection and restoration of marbled murrelets. Rather, the more effective method to protect known marbled murrelet nesting habitat is to avoid establishing human uses in close proximity to such habitat.~~

The Commission therefore finds that the proposed development is inconsistent with LUP Policy 7.3 ~~due to~~ since the proposed development with the proposed avoidance and protective measures and as conditioned would not result in significant degradation to marbled murrelets from increased nest predation. The proposed development would ~~not~~ be compatible with the maintenance of biologic productivity of sensitive habitat for marbled murrelets, since the direct and indirect impacts from the development would not likely reduce nesting success of marbled murrelets. The Commission finds that the proposed development, as conditioned, is also inconsistent with LUP Policy 7.5 since the applicant has ~~not~~ demonstrated that there will be (1)

no significant adverse impact to the marbled murrelets from the development and (2) adequate mitigation to protect the marbled murrelet.

3.6 Permitted Use

The project site is zoned TPZ-CZ (Timberland Preserve Zone-Coastal Zone). Permitted uses in the TPZ-CZ Zone include any “compatible use”, which is defined as: “any use which does not significantly detract from the use of the property for, or inhibit growth and harvesting timber...” Enumerated uses allowed in the TPZ-CZ Zone include outdoor education facilities or development, scientific research, and residential housing. The proposed development is comprised of these three types of uses, all of which are permitted uses under the applicable zoning consistent with all other policies of the LCP.

~~However~~, Policy 1.8(a) of the LUP “allow[s] new development (as defined in Section 30106 of the California Coastal Act of 1976) in rural areas only if it is demonstrated that it will not: (1) have significant adverse impacts, either individually or cumulatively, on coastal resources and (2) diminish the ability to keep all prime agricultural land and other land suitable for agriculture (as defined in the Agriculture Component) in agricultural production.”

As discussed in Section 2.5.3 of these findings, the proposed development, as conditioned, would not have significant adverse impacts on coastal resources. The Commission finds that since the proposed development is located in a rural area and the development, as conditioned would not have significant adverse impacts on coastal resources, the development is ~~in~~consistent with Policy 1.8(a) of the LUP.

Allowable Density

The density and intensity of development allowed on any particular parcel in the rural areas of the San Mateo County coast is determined on a case-by-case basis in accordance with a “density credit” analysis contained in the certified LCP. In accordance with LUP Policy 1.8.c, density credits are required for all non-agricultural development in rural areas. The allowable density and intensity of any particular type of use on a parcel is determined based on: (1) the density credit requirements for the type of use proposed as specified in LUP Table 1.5, and (2) the number of density credits allocated to the parcel in accordance with LUP Table 1.3. Table 1.3 provides that every existing legal parcel is allocated one density credit regardless of the size of the parcel. Additional density credits may be allocated to a parcel based on several factors, such as soils, slope, proximity to roads, and hazards.

In this case, because the parcel on which the development would be located is considered “remote lands,” only one density credit may be allocated to the project site. In accordance with LUP Table 1.5, the proposed development would require two density credits. ~~Thus, the proposed development would exceed the allowable density and intensity of use for the site inconsistent with the density provisions of the certified LCP.~~

The applicant contends that the proposed development would not exceed the allowable density for the site because the development is entitled to the higher density provided by the LCP for

higher priority visitor serving, commercial recreation, and public recreation uses. In accordance with LUP Policy 1.8.c.3(a), visitor serving, commercial recreation, and public recreation uses may be developed at a density 1.5 times that provided in Table 1.5 and are allowed a residential dwelling unit associated with the visitor-serving facility that is occupied by the owner or operator. PCA states that the proposed development is a visitor serving facility and the County found that the proposed development is a public recreation facility. ~~However, it does not appear that the proposed development meets the LCP definition of a visitor serving, commercial recreation, or public recreation facility.~~

Policy 1.8(d) defines the terms “visitor-serving, commercial recreation, and public recreation uses” based on LCP Policies 11.1, 11.2 and 11.3, as follows:

11.1 Definition of Visitor-Serving Facilities

Define visitor-serving facilities as public and private developments that are exclusively available to the general public and provide necessary, basic visitor support services such as lodging, food, water, restroom and automobile services. Visitor-serving facilities include, but are not limited to, hotels, motels, hostels, campgrounds, group camps, grocery stores, food concessionaires, auto serving stations, public drinking water, restrooms, public parking for coastal recreation or access, restaurants, and country inns no more than two stories in height. ~~[Emphasis added.]~~

11.2 Definition of Commercial Recreation Facilities

Define commercial recreation facilities as developments serving primarily a recreation function which are operated by private business for profit and are exclusively available to the general public. Commercial recreation facilities include, but are not limited to, beaches, stables, golf courses, specialty stores and sporting equipment sales and rentals. ~~[Emphasis added.]~~

11.3 Definition of Public Recreation Facilities

Define public recreation facilities as lands and facilities serving primarily a recreation function which are operated by public agencies or other non-profit organizations. Public recreation facilities include, but are not limited to, public beaches, parks, recreation areas, natural preserves, wild areas and trails. ~~[Emphasis added.]~~

~~The proposed development is not a visitor serving facility or a commercial recreation facility as these terms are defined in the LCP because~~ Although the proposed development would not be exclusively available to the general public. ~~The applicant contends that the development would qualify as a visitor serving use because the camp it would provide programs for both students and adults and therefore serve all – important segments of the public – and thus, the project is somewhat of a quasi-public facility. There is no doubt that the project proposes an important environmental education purpose. Unlike visitor serving and commercial recreation facilities that~~

~~are exclusively available to the general public during times of normal operation, the proposed use would at most times be closed to the general public and only occasionally hold events that members of the general public would be allowed to attend. Under the proposed use, during most times the camp would only be available to the members and employees of PCA and specific groups that PCA would invite to the camp. Such restrictions are not consistent with the LCP requirement that visitor serving and commercial recreation facilities be exclusively available to the general public. Therefore, the Commission finds that the proposed development is neither a visitor serving facility nor a public recreation facility as defined by the LCP.~~

In addition, the proposed development is neither a commercial recreation facility nor a public recreation facility as these terms are defined in the LCP because the proposed use would not serve primarily a recreational function. The stated purpose of the proposed development is environmental education, research and restoration. The applicant contends:

~~Only an unnecessarily narrow definition of recreation would eliminate volunteer work and learning about ecological issues from the concept of recreation. These are common ways that people choose to spend their free time through activities that involving experiencing and appreciating nature. Surely these concepts fall under a reasonable definition of recreation” (Latham and Watkins, January 18, 2005).~~

The applicant offers a broad definition of the term recreation that would include any activity that a person chooses to participate in during their free time. According to such a definition, virtually any type of development could be considered a recreational facility. Such an expansive interpretation of public recreation facilities as suggested by the applicant would be inappropriate and undermine the purposes for classifying distinct land use types and zoning categories for land use planning purposes. For the purposes of land use planning and regulation, such as those served by the LCP, a narrower definition of the term recreation than that proffered by the applicant is both necessary and appropriate. Therefore, the Commission finds that the proposed development is neither a commercial recreation facility nor a public recreation facility as defined by the LCP.

Because the proposed development does not qualify for the higher density afforded visitor-serving, commercial recreation, and public recreation uses, it would exceed the allowable density and intensity of development allowable for the project site.

In addition, visitor-serving facilities under the County LCP expressly include “campgrounds” and “group camps” such as the Field Research Station. The Field Research Station would not only be open to “members,” but to all segments of the general public interested in learning about and caring for the environment. As stated in the original permit application, visitors would include “elementary school groups from kindergarten to eighth grade, high school groups, college and university students, graduate students, adults, community groups and family groups.”

Finally, the definition of “public recreation facilities” in the County LCP expressly includes “parks, recreation areas, natural preserves, wildlife areas and trails,” all of which describe aspects of the proposed field research station. Most persons using the Field Research Station

would be from schools and community groups, including those serving at-risk and disadvantaged children. These groups come to enjoy the natural surroundings of the Gazos Creek watershed while learning about, appreciating, and actively restoring natural areas.

Therefore, the Commission finds that the proposed development is inconsistent with LUP Policy 1.8.

3.7 Public Access and Recreation

The applicant states that the proposed development would further the goals of the LCP and Coastal Act to promote public access. ~~However, b~~Both the Coastal Act and the LCP contain policies that require the public access and public recreation policies to be implemented in a manner that takes into account the need to regulate the time, place and manner of public use depending on the facts and circumstances in each case. Accordingly, public access and recreation may be restricted in areas lacking the capacity to sustain such uses due to such factors as the fragility of natural resources.

LUP Policy 10.10 states:

Fragile Resources (Sensitive Habitats)

- a. Require the establishment of public access to sensitive habitats or their buffer zones, through grants or dedications of easements or other means, at the time a Coastal Development Permit is processed. Open the access in sensitive habitats or their buffer zones for public use only when development standards and management practices are adequate to protect the resources (see Sensitive Habitats Component) and Policies 10.23 and 10.25.
- b. Discourage public use of existing established access trails if the present level of use is causing the deterioration of a sensitive habitat. Specifically,
 - (1) Close such trails when an existing or potential alternative trail is available for the same beach or bluff area.
 - (2) When no alternative is available, mitigate the access impacts through improved management and design consistent with Policies 10.25 and 10.26, wherever possible. Close trails only if permanent, irreversible damage to a habitat is causing its destruction.
 - (3) Where a trail to the beach is closed, provide a bluff top access point or trail for public viewing of the shoreline consistent with Policy 10.9(a).
 - (4) Prohibit development that would prevent the future provision of improved access.
 - (5) Allow closely monitored access for scientific and educational research by organized study groups.

LUP Policy 11.12 states:

Sensitive Habitats

- a. Permit recreation and visitor-serving facilities to locate on lands adjacent to sensitive habitats only when (1) there is adequate distance or separation by barriers such as fences, (2) the habitat is not threatened, and (3) there would not be substantial impacts on habitat, topography, and water resources.
- b. Permit recreation or visitor-serving facilities to locate adjacent to sensitive habitats only when development standards and management practices are adequate to protect the resources, consistent with Policy 11.18 and the Sensitive Habitats Component.
- c. Discourage the expansion of public recreation into locations within or adjacent to sensitive habitats until the level of improvement and management of existing public recreation areas within or adjacent to sensitive habitats are consistent with the Sensitive Habitats Component.

LUP Policy 10.10.b specifically discourages public access use of existing trails where such use is causing deterioration of sensitive habitat and requires closure of such trails where alternatives exist. LUP Policy 11.12 permits public recreation and visitor-serving facilities to be located adjacent to sensitive habitat areas only when the habitat is not threatened and the use would not result in substantial impacts to the habitat. In this case, as discussed above, the proposed development would not result in significant adverse impacts to sensitive habitat. ~~As such, even if the proposed development is a visitor serving or public recreation facility, the project site is not capable of supporting the proposed use due to the fragility of the natural resources on and adjacent to the site.~~ Therefore, the proposed development is not prohibited from being located at the Gazos Mountain Camp site in accordance with LUP Policies 10.10 and 11.12.

3.8 — Site Alternatives

~~The applicant contends that no reasonable and feasible alternative exists for the proposed development because the Gazos Mountain Camp site “offers a representative coastal ecosystems for environmental study and restoration, and the existing development footprint within an inspiring natural setting make Gazos Mountain Camp a singularly appropriate site for the project.” The applicant also argues that “in order to provide the certainty necessary for meaningful, sustained environmental research, a consistent site is necessary to serve as a base for this research” and that “the project requires a setting with sufficient biological resources and potential for restoration to allow for significant attempts at developing successful and useful ecological restoration techniques. The project also requires a close connection with the land in order to achieve its inherent purposes. The project would offer children and volunteers an inspirational setting to instill a profound respect for the natural world and enthusiasm for environmental restoration work” (Latham and Watkins January 18, 2005)~~

~~Whether or not an alternative site is available that would support the activities of the PCA is not the determinative factor in the Commission's consideration of the coastal development permit application. The Commission's action on the permit application is based solely on whether or not the proposed development is consistent with the San Mateo County LCP.~~

3.8 Site Alternatives

~~As discussed above, as conditioned, the proposed development would be consistent with the LCP and all significant adverse impacts would be avoided. Furthermore, as discussed below, the applicant has provided supporting evidence that no feasible alternatives exist that would accomplish the core objectives of the project. This LCP requires that proposed development avoid any significant degradation or significant adverse impacts to sensitive habitat. Even if no other site were available that could accommodate the proposed use, the Commission would only be able to approve the permit application on the grounds that the proposed development is consistent with the LCP. In addition, because the project site is located on publicly owned land, there is no issue under Coastal Act Section 30010, which prohibits the Commission from acting in a manner that would result in "take" of private property. As such, the Commission may not override the LCP policy conflicts presented by the proposed development and approve the permit application based on a determination that no alternative site is available for the proposed use or that denial of the permit application would deprive the applicant of all reasonable economic use of the site.~~

~~Contrary to the applicant's claim however, it appears that alternative sites are available that would provide suitable facilities and ecological characteristics to support the proposed environmental education and restoration activities. While no other location would provide exactly the same characteristics as the Gazos Mountain Camp, alternative locations are available that would allow PCA to provide similar services as those proposed at the project site without adversely impacting sensitive habitat.~~

Regarding the availability of less environmentally sensitive sites for the proposed development, ~~In~~ a letter dated April 16, 2004, Jim Rourke, one of the appellants, provided a list of the following locations on the San Mateo Coast that he contends can be or have been used as outdoor education locations:

1. Elkus Ranch –U.C. Extension, located on Purrrissima Road, near Half Moon Bay
2. Sheriff's Honor Camp – located in Pescadero Creek County Park (currently unoccupied)
3. Girl Scout Camp – Santa Clara Council – Butano Creek
4. Redwood Glen Baptist Camp – Wurr Road, Loma Mar
5. Jones Gulch Camp – San Francisco YMCA, Loma Mar – houses 500 people
6. Boysville – located on State Route 84, San Gregorio
7. YMCA – Metro America – Butano State Park area
8. Pigeon Point Lighthouse – Pigeon Point, Pescadero
9. Venture Retreat – Eden West Road, Pescadero

Mr. Rourke also provided a list of available meeting places in the vicinity of Pescadero, in addition to the facilities listed above:

1. Pescadero Native Sons Hall, Pescadero
2. I.D.E.S. Hall, Pescadero
3. Protestant Church Hall, Pescadero
4. Russell Administration Center, North Street, Pescadero
5. Multipurpose Room, Pescadero Elementary School, North Street, Pescadero
6. Gymnasium, Pescadero High School, Pescadero
7. Costanoa Resort Meeting Facility, State Route One, near Año Nuevo
8. La Honda Fire Brigade Meeting Room – La Honda
9. Loma Mar Fire Department Meeting Room – Loma Mar

Mr. Rourke states that “the alternative locations are not situated in our most sensitive habitat areas” and “The Mountain Camp, located 5.5 miles up Gazos Creek Road from Highway One, is the least accessible of any of the potential meeting locations on the rural coastside, except perhaps the Sheriff’s Honor Camp.

The applicant submits that no reasonable and feasible alternative exists for the proposed development because the Gazos Mountain Camp site “offers a representative coastal ecosystems for environmental study and restoration, and the existing development footprint within an inspiring natural setting make Gazos Mountain Camp a singularly appropriate site for the project.” The applicant also argues that “in order to provide the certainty necessary for meaningful, sustained environmental research, a consistent site is necessary to serve as a base for this research” and that

“the project requires a setting with sufficient biological resources and potential for restoration to allow for significant attempts at developing successful and useful ecological restoration techniques. The project also requires a close connection with the land in order to achieve its inherent purposes. The project would offer children and volunteers an inspirational setting to instill a profound respect for the natural world and enthusiasm for environmental restoration work” (Latham and Watkins January 18, 2005)

In addition, according to the applicant, none of the above options indicated in Mr. Rourke’s letter meet the core objectives of the project. All but one of the nine outdoor education locations are currently or seasonally occupied by other groups. These locations are not feasible because the Field Research Station requires a long-term home for meaningful, sustained environmental research. The one camp location which is not occupied, Sheriff’s Honor Camp, is located in an even more remote site than Gazos Mountain Camp with comparable ecological sensitivity. The Field Research Station must be located in an area with sufficient ecological resources so that visitors may experience hands-on environmental learning, research, and restoration. None of the nine indoor “meeting places,” which include church and fire halls and a high school gym, are suitable locations for the project because they provide neither the requisite connection to nature, nor the capacity for overnight use by youth groups or researchers. (Latham and Watkins, April 7, 2006)

~~Use of existing facilities, such as those listed above, as an alternative to the proposed development would prevent significant adverse impacts to sensitive habitat at the subject property. PCA has not demonstrated that it would be infeasible to use one of the alternative locations listed above, or other sites in San Mateo County. Therefore, the Commission finds that there are alternative locations for the proposed development that would avoid and/or lessen adverse impacts on coastal resources. However, as stated above, even if no other location were available to accommodate the applicant's proposed activities, the Commission would still be required to deny the permit application because it is inconsistent with the sensitive habitat policies of the LCP.~~

3.9 Alleged Violation

Since 2000, without benefit of a coastal permit, the applicant undertook development consisting of demolition activities, part-time residency by PCA staff person(s), lectures, field trips, mushroom walks, and other publicized events, as well as overnight use.

Although development has taken place prior to submission of this permit amendment application, consideration of the application by the Commission has been based solely upon the policies of the LCP and the public access and public recreation policies of Chapter 3 of the Coastal Act. Approval of the permit does not constitute a waiver of any legal action with regard to the alleged violation, nor does it constitute an admission as to the legality of any development undertaken on the site without a coastal permit.

4.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the California Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse effect which the activity may have on the environment. The Commission incorporates its findings on the consistency of the proposed project, as conditioned, with all applicable LCP policies at this point as if set forth in full. ~~For the reasons described in the Commission findings above, the Commission finds that there are feasible mitigation measures and alternatives that would substantially lessen the significant adverse impacts of the development on the environment. The proposed development is located on public land, leased by the applicants from the California Department of Parks and Recreation. Feasible alternatives to the proposed development include obtaining authorization from State Parks to perform the development at a different location where the development would not have significant adverse impacts to sensitive habitats, and/or collaborating with other organizations to use existing facilities without significant adverse impacts to sensitive habitat. The Commission thus finds that the proposed project cannot be found to be consistent with the requirements of the Coastal Act and does not conform to the requirements of CEQA. The environmental review of the project conducted by Commission staff involved the evaluation of potential impacts to relevant coastal resource issues, including coastal access, and sensitive marble murrelet nesting habitat. This analysis is reflected~~

in the findings that are incorporated into this CEQA finding as if set forth in full. This staff report responds to all public comments that have been received as of the date of the Commission's action. Avoidance measures have been incorporated into the project description by the applicant and protective measures are incorporated as conditions of this approval. As so proposed and conditioned, all significant adverse impacts on the environment from the proposed project will be avoided. Therefore, the Commission finds that the proposed project is consistent with CEQA, as there are no feasible alternatives or feasible mitigation measures, beyond those required, that would substantially lessen any significant adverse effect that the activity may have on the environment.

APPENDIX A

Substantive File Documents

- Apex Houston Natural Resources Trustee Council. April 24, 1998. Resolution Supporting Acquisition of Marbled Murrelet Nesting Habitat in the Gazos Creek Watershed.
- Baker, L.M., M.Z. Peery, S.R. Beissinger, E. Burkett, S.W. Singer, and D. L. Suddjian. In press. Nesting Habitat Characteristics and Associations of the Marbled Murrelet in Central California. *Journal of Wildlife Management*.
- Beissinger, S. B. 1995. Population trends of the Marbled Murrelet projected from demographic analysis. Pages 385-393 in C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). *Ecology and conservation of the Marbled Murrelet*. USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.
- Boarman, William I. 2003. Managing a subsidized predator population: reducing common raven predation on desert tortoises. *Environmental Management* 32: 205-217
- Command Trustee Council. 2004. Command Oil Spill Final Restoration Plan and Environmental Assessment. Unpublished report dated June 2004. County of San Mateo. 2003. Staff Report on Use Permit and Coastal Development Permit for Gazos Mountain Camp (Pescadero Conservation Alliance). Unpublished report dated September 10, 2003.
- Evans Mack, D., W. P. Ritchie, S. K. Nelson, E. Kuo-Harrison, P. Harrison, and T. E. Hamer. 2003. Methods for surveying Marbled Murrelets in forests: a revised protocol for land management and research. Pacific Seabird Group Technical Publication Number 2.
- Golightly, R.T., P.N. Hébert, and D.L. Orthmeyer. 2002. Evaluation of Human-Caused Disturbance on the Breeding Success of Marbled Murrelets (*Brachyramphus marmoratus*) in Redwood National and State Parks, California. Progress Report. Humboldt State University, Department of Wildlife, Arcata, CA, and U.S. Geological Survey, Western Ecological Research Center. 61 pp.
- Gutzwiller, K.J., S.K. Riffell, and S.H. Anderson. 2002. Repeated Human Intrusion and the Potential for Nest Predation by Gray Jays. *Journal of Wildlife Management* 66(2):372-380.
- Hamer, T.E., and S.K. Nelson. 1995. Characteristics of Marbled Murrelet nest trees and nesting stands. Pp. 69-82 in Ralph, C.J., G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, tech. eds.

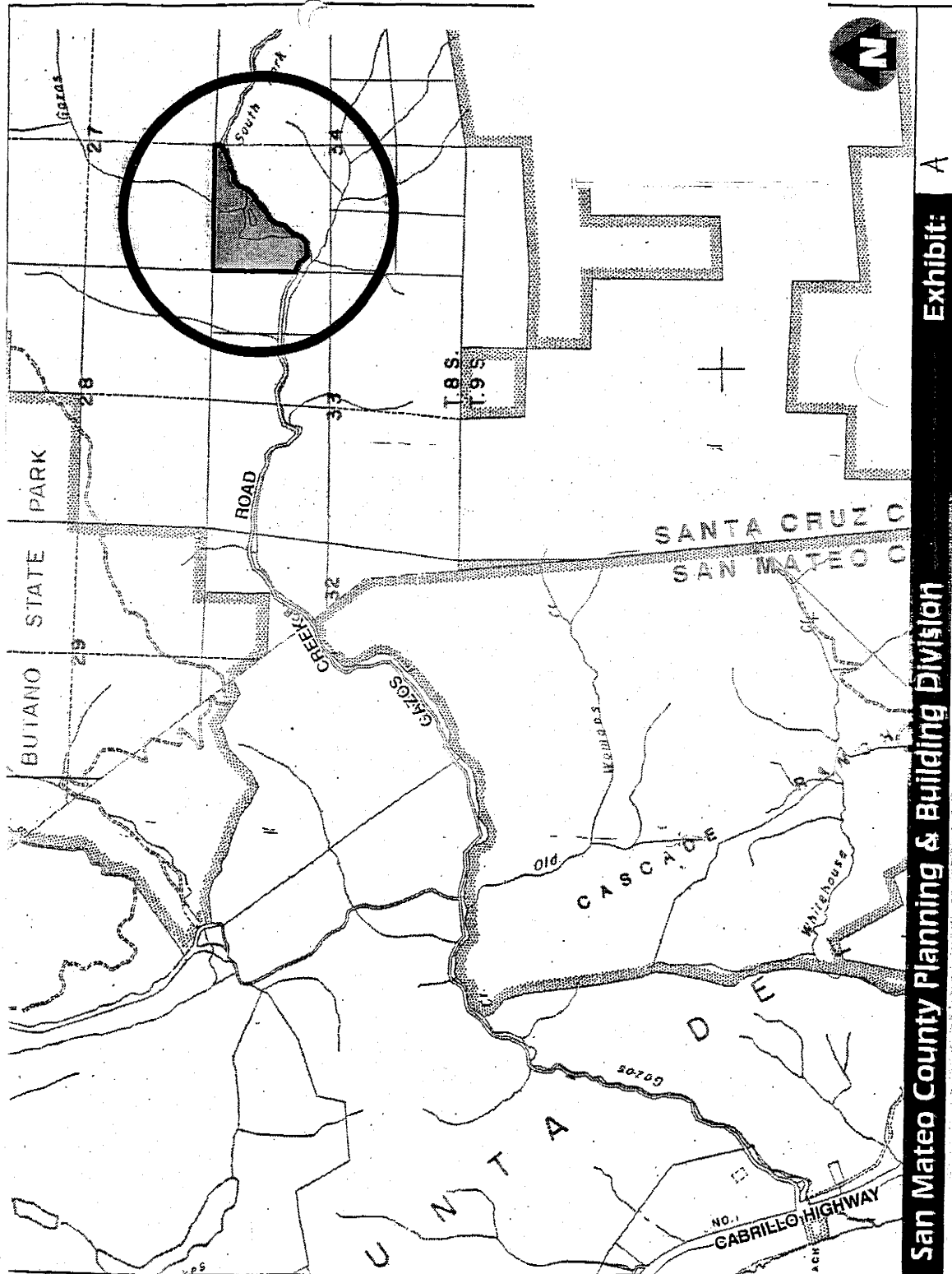
- Ecology and conservation of the Marbled Murrelet. USDA Forest Service General Technical Report PSW-GTR-152, Albany, CA
- Hébert, P.N., and R.T. Golightly. 2003. Breeding Biology, and Human-Caused Disturbance to Nesting of Marbled Murrelets (*Brachyramphus marmoratus*) in Northern California. Progress Report 2002. Humboldt State University, Department of Wildlife, Arcata, CA, and U.S. Geological Survey, Western Ecological Research Center.
- Liebezeit, J.R. and T.L. George. 2002. A Summary of Predation by Corvids on Threatened and Endangered Species in California and Management Recommendations to Reduce Corvid Predation. Calif. Dept. Fish and Game, Species Conservation and Recovery Program Report 2002-02, Sacramento, CA. 103 pp.
- Long, L.L., and C.J. Ralph. 1998. Regulation and Observations of Human Disturbance near Nesting Marbled Murrelets. Unpublished report. U.S. Forest Service, Redwood Sciences Laboratory, Arcata, CA.
- Luginbuhl, J.M., J.M. Marzluff, J.E. Bradley, M.G. Raphael, and D.E. Varland. 2001. Corvid survey techniques and the relationship between corvid relative abundance and nest predation. *Journal of Field Ornithology* 72: 556–572.
- Houston, David. March 2000. Noise Report, Gazos Creek Field Research Station and Gazos Mt. Camp.
- Houston, David. November 2004 Noise Report, Gazos Creek Field Research Station and Gazos Mt. Camp.
- Latham & Watkins. 2005. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to Y.L. Zhang (CCC) dated January 18, 2005.
- Latham & Watkins. 2005. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to Y.L. Zhang (CCC) dated January October 28, 2005.
- LeValley, R. (Mad River Biologists). 2005. Marbled Murrelet Issues at Gazos Mountain Camp/Field Research Station. Letter to J. Wade (Pescadero Conservation Alliance) dated January 17, 2005.
- Marzluff, J.M., and Neatherlin, E. (In press). Corvid Response to Human settlement and Campgrounds: Causes, Consequences, and Challenges for Conservation. *Biological Conservation*.
- McShane, C., T. Hamer, H. Carter, G. Swartzman, V. Friesen, D. Ainley, R. Tressler, K. Nelson, A. Burger, L. Spear, T. Mohagen, R. Martin, L. Henkel, K. Prindle, C. Strong, and J. Keany. 2004. Evaluation report for the 5-year status review of the marbled murrelet in Washington, Oregon, and California. Unpublished report. EDAW, Inc. Seattle, Washington. Prepared for the U.S. Fish and Wildlife Service, Region 1. Portland, Oregon.
- Neatherlin, E.A., and J. M. Marzluff. 2004. Responses of American Crow to Campgrounds in Remote Native Forest Landscapes. *Journal of Wildlife Management* 68(3):708–718.
- Nelson, S.K. 1997. Marbled Murrelet (*Brachyramphus marmoratus*). In *The Birds of North America*, No. 276 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and the American Ornithologists' Union, Washington, D.C.

- Nelson, S. K. and T. E. Hamer. 1995a. Nesting Biology and Behavior of the Marbled Murrelet. Pp. 57-67 in *Ecology and Conservation of the Marbled Murrelet*. C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.
- Nelson, S.K., and T.E. Hamer. 1995b. Nest Success and the Effects of Predation on Marbled Murrelets. Pp. 89- 97 in *Ecology and Conservation of the Marbled Murrelet*. C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.
- Peery, M.Z., S.R. Beissinger, S.H. Newman, E.B. Burkett, and T.D. Williams. 2004. Applying the Declining Population Paradigm: Diagnosing the Causes of Poor Reproduction in the Marbled Murrelet. *Conservation Biology* 18(4): 1088-1098.
- Ralph, C.J., et al. 1995. Ecology and Conservation of the Marbled Murrelet in North America: An overview. Pp. 3-22 In *Ecology and Conservation of the Marbled Murrelet*. C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.
- Raphael, M.G., D. Evans Mack, J.M. Marzluff, J. M. Luginbuhl. 2002. Effects of Forest Fragmentation on Populations of the Marbled Murrelet. *Studies in Avian Biology* 25(1): 221–235.
- Rudd, Marina Ruth. 2005. Rare Bird: Pursuing the Mystery of the Marbled Murrelet. Rodale.
- Sempervirens Fund, Incorporated and the Apex Houston Trustee Council. June 3, 1998. Habitat Acquisition Agreement.
- Singer, S.W., N.L. Naslund, S.A. Singer, and C.J. Ralph. 1991. Discovery and Observation of Two Tree Nests of the Marbled Murrelet. *Condor*: 93:330-339.
- Singer, S. 1999. Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA. Unpublished report prepared for the Sempervirens Fund and The Apex Houston Trustee Council.
- Singer, S. W. 2005. A review and analysis of Marbled Murrelet (*Brachyramphus marmoratus*) issues raised in the Coastal Commission's "Appeal staff report, substantial issue determination, and De Novo review" for the Proposed P.C.A. Biological Field Station at Gazos Mountain Camp. Unpublished report dated January 2005.
- Singer, S.W., and T.E. Hamer. 2002. Gazos Creek Marbled Murrelet Monitoring Program: 2001 Annual Report. Unpublished report submitted to Apex Houston Trustee Council, and Sempervirens Fund, prepared by Steven W. Singer Environmental and Ecological Services, Santa Cruz, CA.
- Singer, S.W., and T.E. Hamer. 2004. Gazos Creek Marbled Murrelet Monitoring Program: 2004 Biannual Report. Unpublished report submitted to Apex Houston Trustee Council, and Sempervirens Fund, prepared by Steven W. Singer Environmental and Ecological Services, Santa Cruz, CA.
- Suddjian, D. 2005a. Summary of 2004 Corvid Monitoring Surveys in the Santa Cruz Mountains. Unpublished report, prepared for Command Oil Spill Trustee Council.

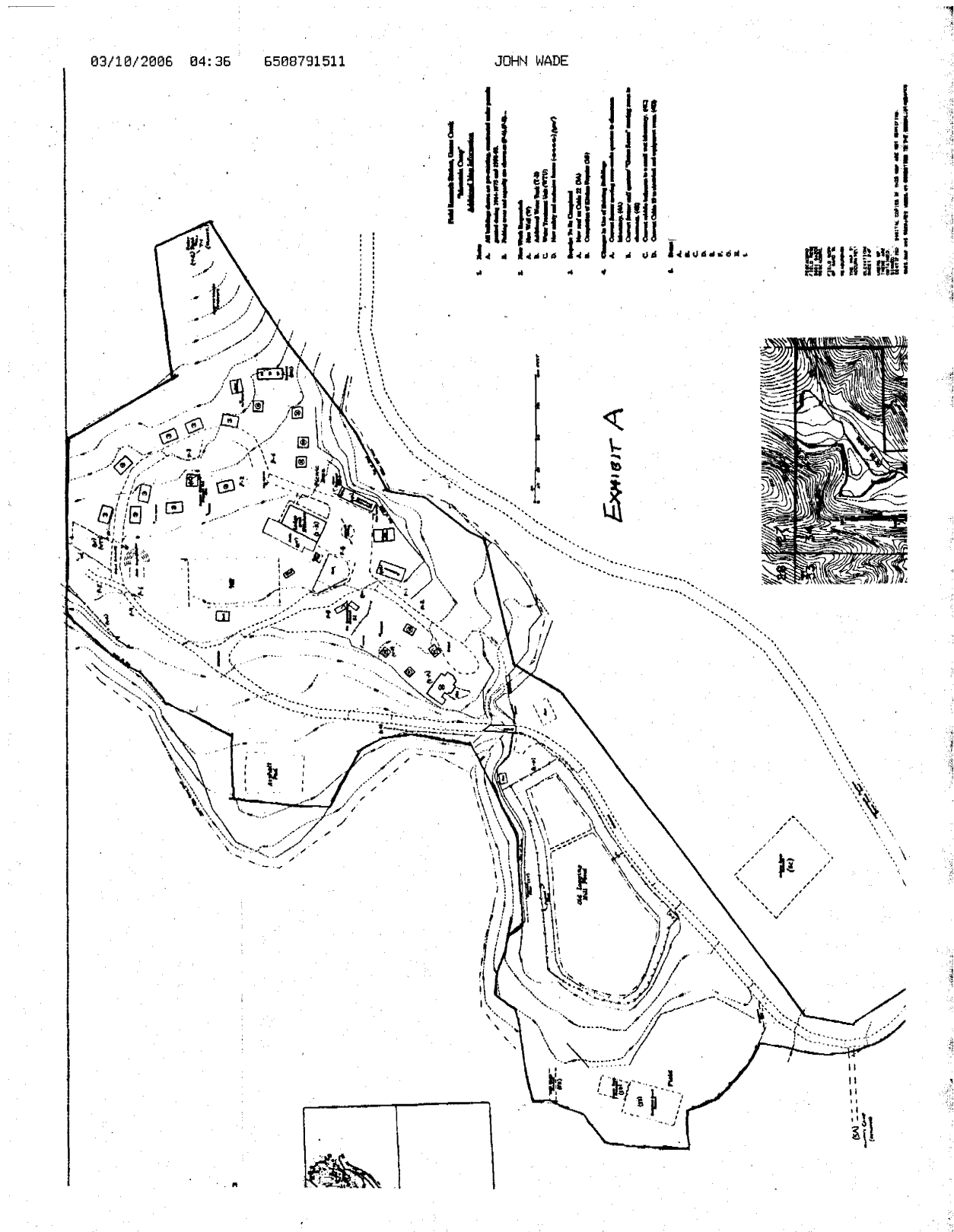
U.S. Fish and Wildlife Service. September 1997. The Recovery Plan for the Marbled Murrelet in Washington, Oregon and California.

U.S. Fish and Wildlife Service. July 2003. Biological Opinion for the Proposed 14-Mile Border Infrastructure System, San Diego County, California.

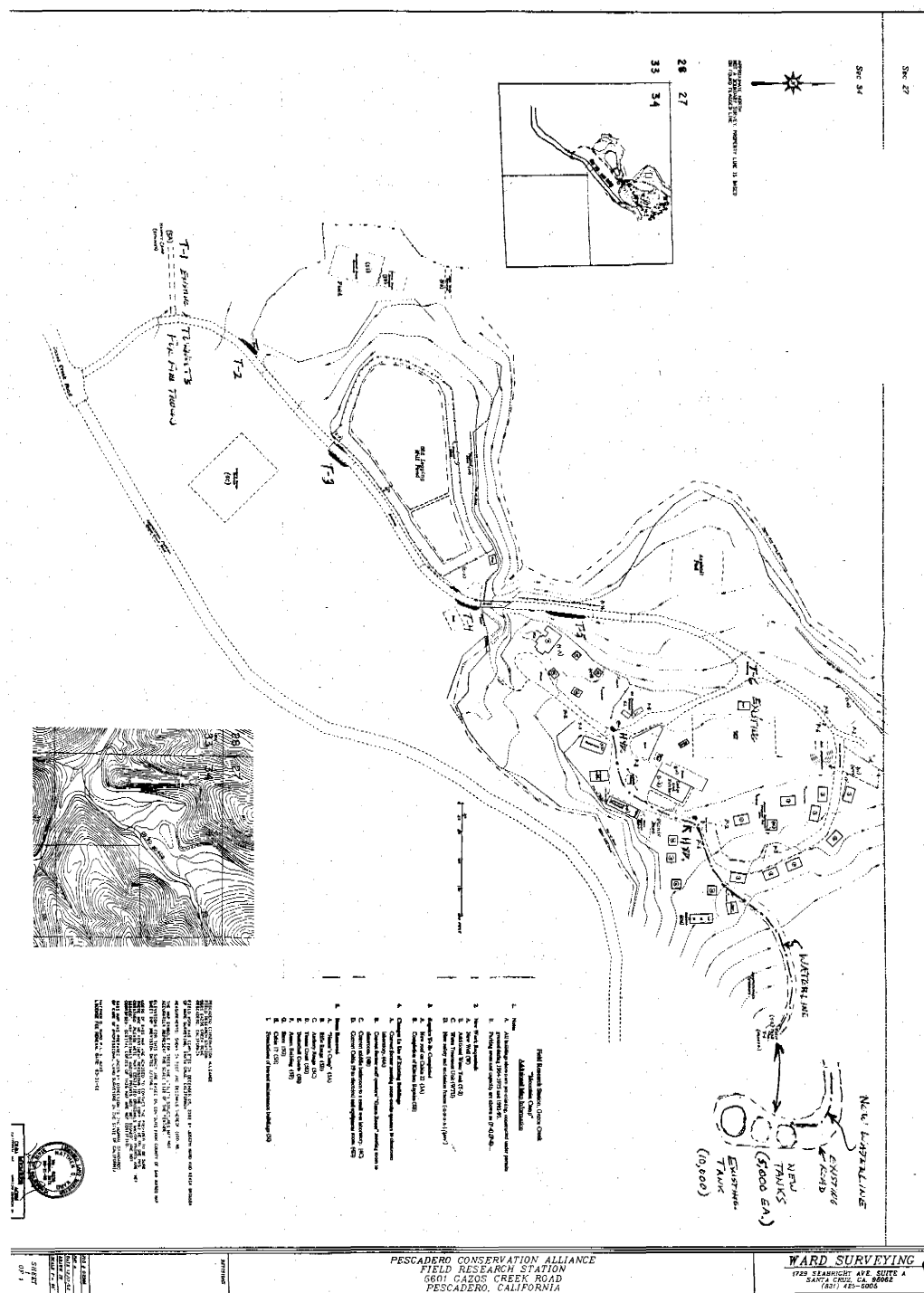
U.S. Fish and Wildlife Service. September 2004. Biological Opinion and Letter of Concurrence for Effects to Bald Eagles, Marbled Murrelets, Northern Spotted Owls, Bull Trout, and Designated Critical Habitat for Marbled Murrelets and Northern Spotted Owls from Olympic Forest Program of Activities for August 5, 2003 to December 31, 2008.

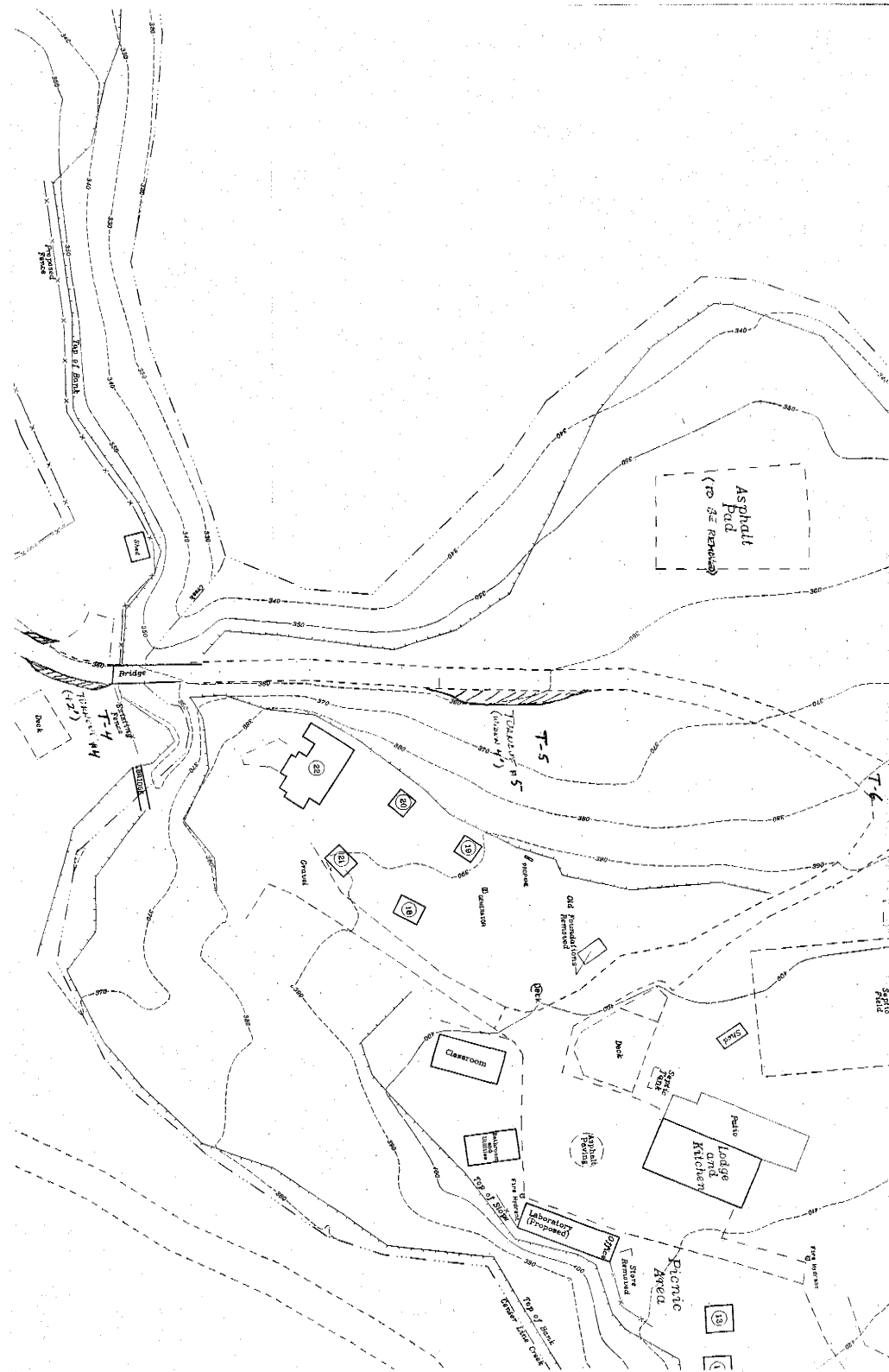


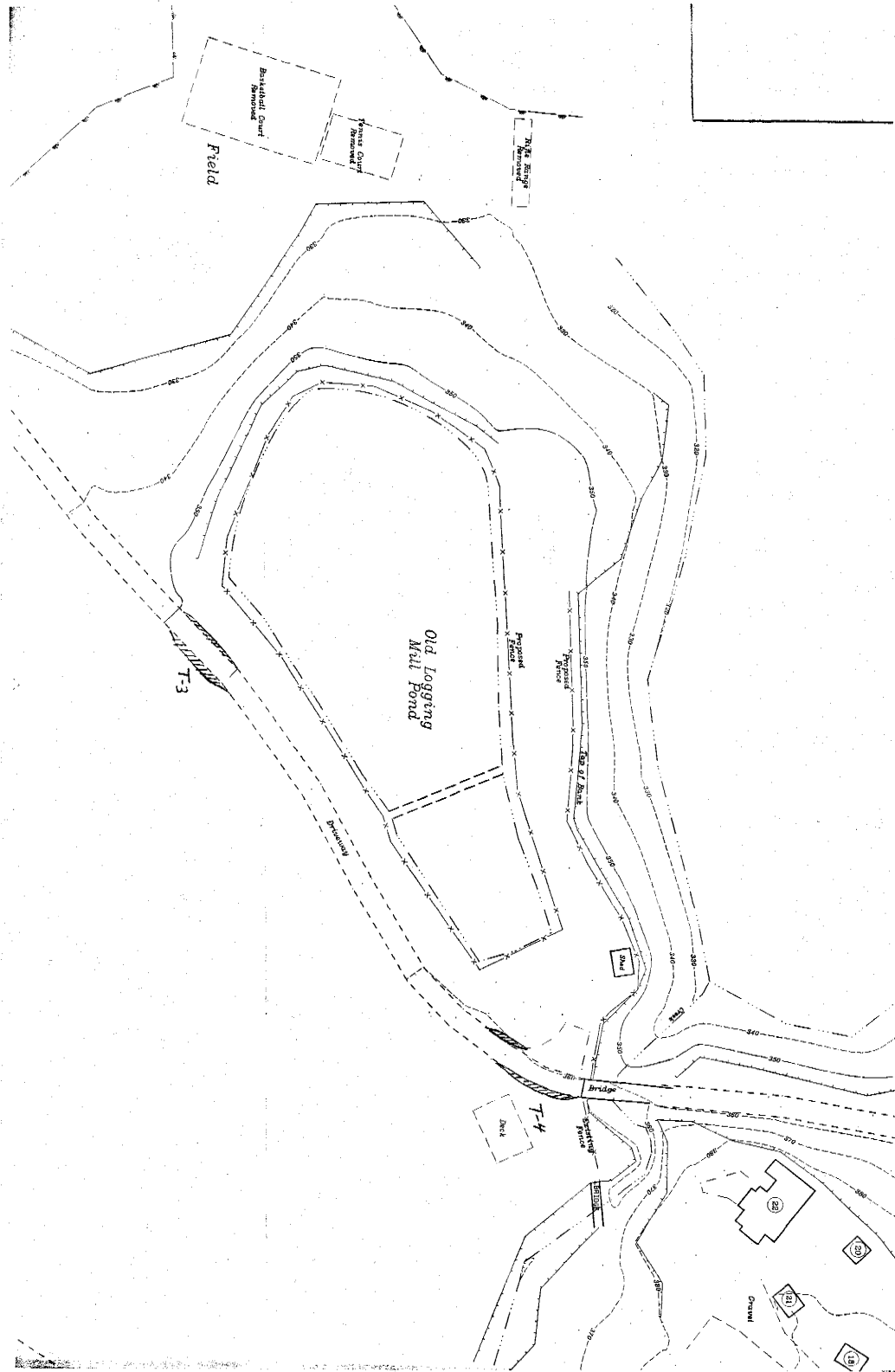
A-2-SMC-04-005
 Pescadero Conservation Alliance
 Exhibit 1
 Regional Location Map

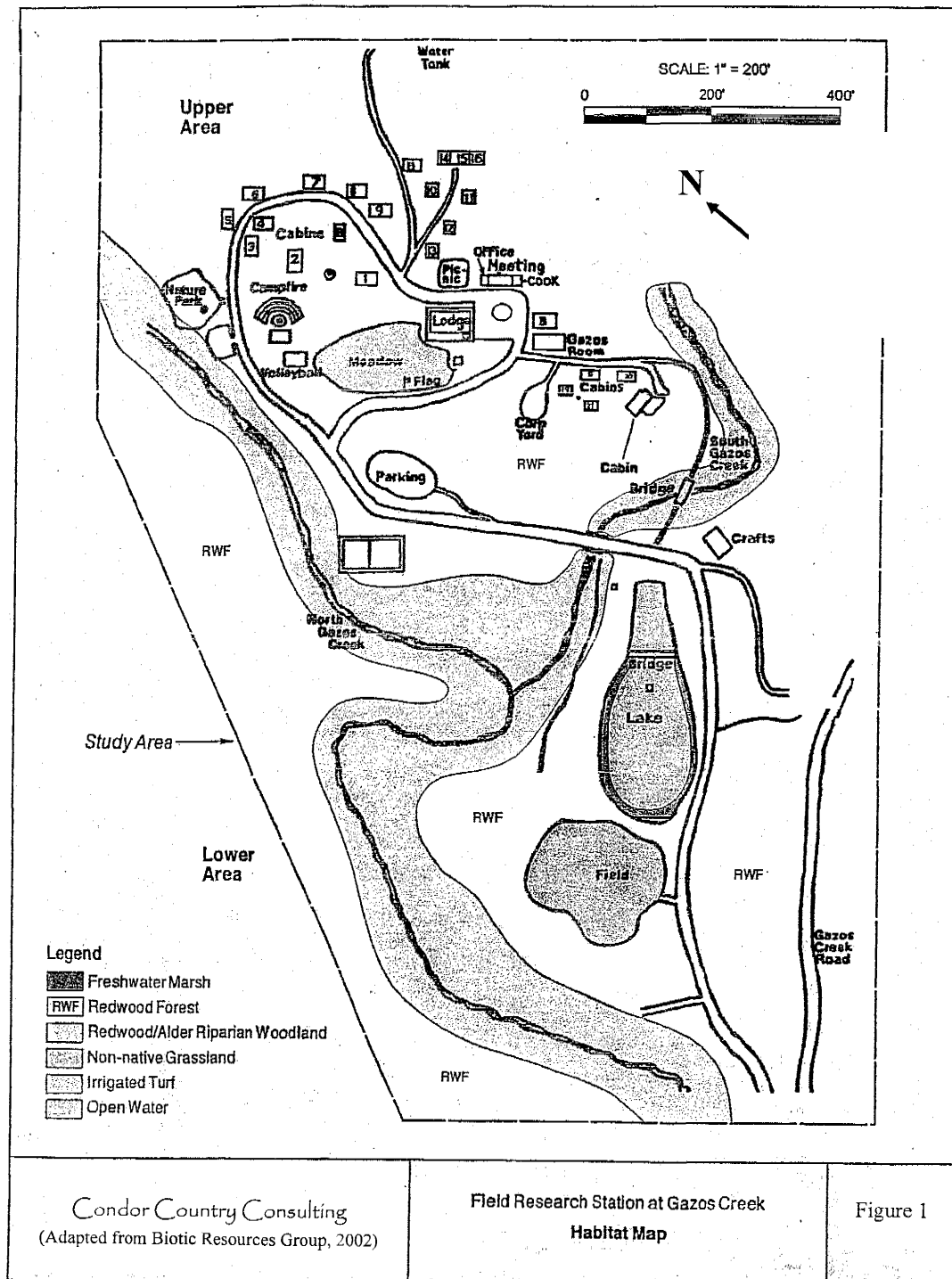


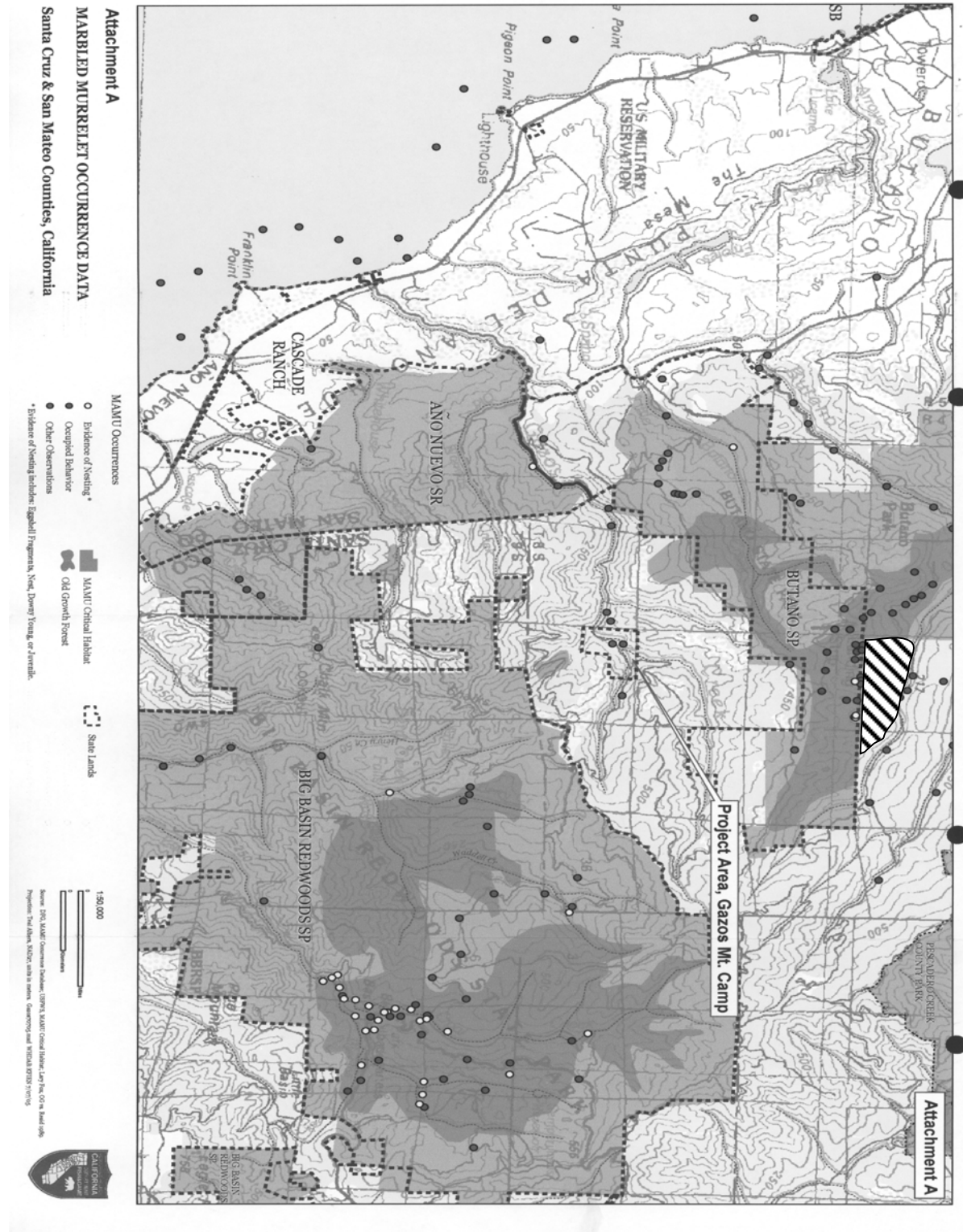
A-2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 2
Map of PCA Lease Area







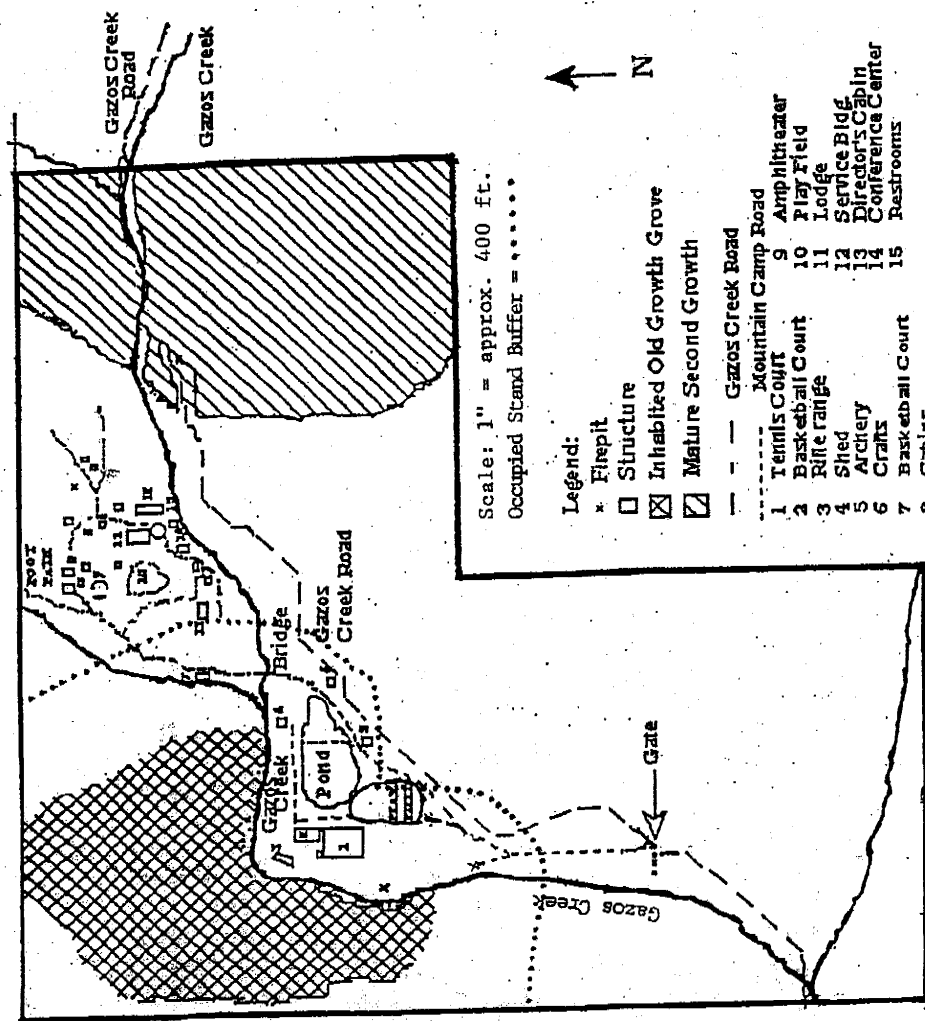




A-2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 5
MAMU Critical Habitat Near
Project Area

Note: All grey areas are designated MAMU Critical Habitat. Hatched area is not Critical Habitat.

FIGURE 2 - FACILITIES OF GAZOS MTN. CAMP



S. Singer: Habitat Management Guidelines for Gazos Mtn. Camp

Page 14 of 14



State of California -- The Resources Agency
DEPARTMENT OF FISH AND GAME
<http://www.dfg.ca.gov>

POST OFFICE BOX 47
YOUNTVILLE, CALIFORNIA 94599
(707) 944-5500

ARNOLD SCHWARZENEGGER, Governor



July 14, 2005

Ms. YinLan Zhang
Coastal Program Analyst
California Coastal Commission
45 Fremont Street
San Francisco, CA 94105-2219

CEIVED
JUL 18 2005
CALIFORNIA
COASTAL COMMISSION

Dear Ms. Zhang:

Comments on Marbled Murrelets and the
Gazos Mountain Camp Field Research Station, Gazos Creek Watershed,
San Mateo County

The California Department of Fish and Game (DFG) has reviewed pertinent documents and conducted site visits pertaining to the proposed creation of the Gazos Creek Field Research Station (hereafter camp area) by the Pescadero Conservation Alliance (PCA). We hereby provide comments on the likelihood for this project, as proposed, to result in take or have adverse effects on the State-listed endangered marbled murrelet (*Brachyramphus marmoratus*). DFG personnel are available to work with the applicant, California Department of Parks and Recreation (DPR), California Coastal Commission (CC), and the U. S. Fish and Wildlife Service (USFWS) to discuss project modifications that will minimize the likelihood of take and to avoid adverse impacts to the species.

The proposed project site is an existing 12-acre camp area situated approximately 4.5 miles from the Pacific Ocean and lies at the confluence of two Gazos Creek forks in San Mateo County (Section 34; T08S, R4W, MDB&M; Franklin Point 7.5' USGS quadrangle map). The camp area is included within a 120-acre parcel that is currently owned by DPR and comprises a portion of Butano State Park (see Attachment A).

The 120-acre parcel was purchased using settlement funds deposited into the California Acquisition Habitat Trust pursuant to the Consent Decree and Settlement in *United States v. Apex Oil Company* and *State of California v. Apex Oil Company*. The parcel was purchased to restore damages to the Santa Cruz Mountains marbled murrelet population from the Apex Houston oil spill, with the goal of protecting and conserving marbled murrelet nesting habitat. DFG is concerned that certain aspects of the project are inconsistent with the above-stated intent.

Conserving California's Wildlife Since 1870



Ms. YinLan Zhang
July 14, 2005
Page 2

DFG has jurisdiction over the conservation, protection and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Fish and Game Code §1802). Also, DFG is a Trustee Agency under the California Environmental Quality Act (CEQA), Section 15386, and is responsible for ensuring appropriate conservation of fish and wildlife resources, including rare, threatened, and endangered species pursuant to the California Endangered Species Act. The marbled murrelet is listed as State endangered pursuant to Fish and Game Code § 2050 *et seq.*, and is Federally threatened pursuant to Section 1531, Title 16, United States Code *et seq.*

At issue is the project's potential to adversely affect marbled murrelets by increasing human presence and disturbance in the camp and surrounding areas. The project proposes a field station which will provide educational and research facilities to students, researchers and conservation groups. Day use of the camp will be for 63 people, including staff, residents and visitors. Overnight use of the camp will be limited to 24 people. Documents reviewed indicate that activities in the camp area could potentially be expanded within the 120-acre DPR property [e.g., creation of a small walk-in campground for backpackers and mountain bikers, retreat or mini-conference center, and trailhead parking and day use park with interpretive center or museum (Singer 1999)]. Also, possible future programs include a use permit to increase human capacity in the camp area to accommodate 80 people during the day and 70 people overnight. Currently, and for the past eight years, human presence and activity in the camp area have been minimal, and conditions overall have remained relatively undisturbed and quiet.

Background

According to documents reviewed by DFG, in 1998 the Apex Houston Trustee Council allocated funds to the Sempervirens Fund to acquire the 120-acre parcel expressly to protect marbled murrelets and their nesting habitat. The parcel contains residual coast redwood and Douglas-fir trees (unharvested legacy trees) along with second-growth redwood forest. Based in part on audio-visual and radar surveys, DFG considers this site an important component of available nesting habitat for marbled murrelets in the Gazos Creek watershed.

Singer (1999) documented occupied behavior in the camp area's meadow/playfield (immediately west of the pond) in 1996 and 1997. Recently, occupied behavior has been documented approximately 0.5-mile northwest of the camp area along a downstream tributary to Gazos Creek, and Gazos Creek approximately one mile to the northeast. A portion of Big Basin Redwoods State Park located in the upper portion of the Gazos Creek watershed approximately

Ms. YinLan Zhang
July 14, 2005
Page 3

1.6 miles to the east is known to be occupied by murrelets. Downstream of the property, occupied behavior was recorded along Gazos Creek in Butano State Park and in Año Nuevo State Reserve. A dead marbled murrelet in juvenile plumage was found approximately two miles downstream from the camp area in 1997 in the north end of Año Nuevo State Reserve (see Attachments A and B).

Marbled Murrelet Habitat Assessment

During DFG's March and April 2005 site inspections of the camp area, staff noted redwood and Douglas-fir trees with potential marbled murrelet nest platforms located *outside* the 10-acre known occupied stand referred to as the "Inhabited Old Growth Grove" shown in Figure 2 in Singer (1999); see Attachment B. The potential nest trees [i.e., conifers with limbs or platforms greater than four inches wide (Hamer and Nelson 1995)] were observed inside the camp area, immediately adjacent and outside of the camp area scattered along the north and south forks of Gazos Creek, and in the stand referred to as the "Mature Second Growth" stand [Figure 2 in Singer (1999)]. Some potential nest trees appeared to be located less than 300 feet from existing camp buildings and cabins, and some potential nest trees rooted near Gazos Creek have platforms that are visible from a horizontal line of sight from the uphill cabin decks.

Also, DFG is aware of marbled murrelet surveys that indicate the "Mature Second Growth" (which includes larger residual trees) stand that lies immediately to the east of the camp area, and which appears to occur on both DPR lands and on the neighboring Redwood Empire ownership, is occupied by marbled murrelets (D. Suddjian, pers. comm.).

From the site inspection, potential nest trees located in and adjacent to the camp area along the Gazos Creek riparian areas connect to the occupied stands lying on both sides of the camp area. Based on this and a review of air photos, DFG believes that all potential nest trees from the "Inhabited Old-Growth Stand" east to the occupied stand partially located in the eastern portion of the 120-acre parcel, are contained within a continuous forest stand comprised of residual redwood and Douglas-fir trees.

The marbled murrelet survey protocol states that if a portion of a stand is determined to be occupied by murrelets, then the entire stand is considered occupied (Evans Mack 2003). This consideration reflects the high level of nest stand/tree philopatry exhibited by marbled murrelets (Nelson 1997). Additionally, as noted on page 6 of the survey protocol, murrelets may nest in different

Ms. YinLan Zhang
July 14, 2005
Page 4

locations within a stand in successive years. Therefore, DFG considers this entire continuous forested area, including the camp area, to be occupied by marbled murrelets.

Potential Significant Impacts to Marbled Murrelets

Disturbance

As discussed in McShane, *et al.* (2004), the documented effects of noise disturbance at marbled murrelet nest sites are largely based on limited, anecdotal information. Experimental studies of disturbance on murrelets have been conducted on only a few pair of chicks and nesting adults (*e.g.*, Hébert and Golightly 2002). McShane, *et al.* (2004) point out that although noise disturbance at nest sites is generally thought to minimally affect individual birds and nesting pairs, large-scale effects of increased energy expenditure at the population level may be significant. For example, they cite population studies on other members of the alcid family such as black guillemots (*Cepphus grille*), tufted puffins (*Fratercula corniculata*) and least auklets (*Aethia pusilla*), which indicate potential adverse impacts of disturbance to breeding success and population viability.

Despite a low number of nest sites under observation, Hamer and Nelson (1998) documented the flushing of adult murrelets off a nest limb and aborted feeding visits in response to human presence near nest trees. An adult murrelet was also recorded abandoning a feeding visit due to the presence of car traffic on the road as it flew in with food. They concluded that visual human presence near nest trees caused the most disturbances to murrelet nesting behavior. Long and Ralph (1998) summarize field observations of marbled murrelet responses to human activities. They state that although loud noises such as radios, car door-slamming and loud voices near murrelet nests did not appear to disturb a small number of adults or chicks observed in Big Basin Redwoods State Park, they caution that the noise disturbance described above may be unique to the park and should not be "translated as acceptable disturbance in other areas."

We have attached a narrative account of human disturbance to marbled murrelets at Big Basin Redwoods State Park in 1997 (Attachment C); this incident was noted in Singer 2005^b. Such observations are extremely rare primarily because murrelet nests are hard to find and, as noted above, few studies have been conducted on this aspect of murrelet biology. We would also like to point out that, for the record, the nest referred to on page 5, bullet point 2 in Singer (2005^b) actually was *not* successful, but failed due to predation in the chick stage some time after the chainsaw incident. DFG believes there is

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 7
July 14, 2005 CDFG letter to
Commission Staff
Page 4

Ms. YinLan Zhang
July 14, 2005
Page 5

enough information on disturbance effects to warrant a cautionary approach to the development and enhancement of human-use facilities and maintenance activities in murrelet habitat.

The project proposes human noise and disturbance control to avoid impacting marbled murrelets during the breeding season (March 24 to September 15) (Singer 2005^{a,b}). However, it does not specify how noise in particular will be controlled. Noise control could be especially difficult or even unachievable when children and young adults visit or overnight in the camp area. Also, car door slamming, which produces a loud concussive sound, would be increased when groups of people arrive in multiple vehicles for gatherings and meetings. These noise disturbance levels (*i.e.*, type, volume, duration, and pattern) would be different and far exceed existing organic noises which include noise from watercourses, waterfall, bird vocalizations, wind, and high-flying airplanes (Houston 2004). Further, marbled murrelets nesting outside of the 10-acre occupied stand and closer to camp activities would be subjected to louder and sharper noises.

Based on the habitat assessment by DFG, it appears that marbled murrelets could be nesting in trees very close to camp activities. Due to the topographic location (*i.e.*, trees rooted near the bottom of watercourses on steep slopes where potential nest platforms are at eye level from some camp buildings), and distribution of some potential nest trees in and around the camp area, human presence could be visible to incubating and chick-rearing murrelets. This could lead to aborted feeding attempts, sudden flushing from the nest, and reduced nest attendance by adult murrelets. The chances of egg and/or chick death would likely increase. For these reasons, DFG is concerned that the project could degrade marbled murrelet nesting habitat and reduce local marbled murrelet breeding success.

Nest Predation

Singer (2005^{a,b}) addresses the need to control garbage in the camp area as a means of reducing the potential to attract common ravens (*Corvus corax*) and Steller's jays (*Cyanocitta stelleri*), known predators of murrelet eggs and chicks in the Santa Cruz Mountains and elsewhere (Singer *et al.* 1991; Hébert and Golightly 2003; Suddjian 2005). Both species are attracted to campgrounds and other park areas with high human use, where food is often readily available. Suddjian (2005) found that Steller's jay numbers were positively correlated with the number of occupied campsites in Big Basin Redwoods State Park. Peery, *et al.* (2004) report that for marbled murrelets in central California, including San Mateo and Santa Cruz counties, most nesting opportunities exist on public lands, including State Park campgrounds, where corvid populations are elevated

Ms. YinLan Zhang
July 14, 2005
Page 6

and the rate of nest failure from predation is high. They offer that relocating campgrounds away from murrelet nesting habitat could help reduce nest predation. DFG made the same point in two letters to DPR: August 15, 2001 comments on Humboldt Redwoods State Park Preliminary General Plan, and December 27, 2001 comments on the Notice of Preparation for Big Basin Redwoods State Park General Plan, Draft Environmental Impact Report.

DFG has reviewed PCA's garbage control measures outlined in Singer (2005^{a,b}); however, the attraction of predators into the camp area despite proposed garbage control measures remains a concern. Corvids in general are known to watch and follow people and would be attracted to the camp area and associated human activity even without direct food hand-outs, and with minimal anthropogenic food availability (e.g., small crumbs/crushed food particles that are unlikely to be picked up by any camp patrols). Gutzwiller, *et al.* (2002) found that gray jay (*Perisoreus canadensis*) numbers were higher in two consecutive years in forest stands that had been experimentally intruded by humans that did not offer food rewards. Therefore, the simple attraction of corvids into the camp area will, if only temporarily, likely elevate corvid numbers. Consequently, this could increase the risk of murrelet nest predation and ultimate failure. Given the poor reproductive success of marbled murrelets in central California, and the anticipated continued decline of marbled murrelets in this area (McShane, *et al.* 2004), the failure of even a small number of murrelet nests may be significant.

Conclusion

The original intent of the acquisition of the 120-acre property, including the camp area, was to restore damage to the murrelet population from the Apex Houston oil spill, and to conserve and protect murrelet nesting habitat. The proposed project offers little toward the restoration of murrelet habitat or recovery of murrelets in the area. Projected levels of human activity in occupied murrelet habitat, regardless of the proposed human control measures, jeopardizes the expected benefits of the acquired parcel. The proposed level and timing of activity poses an inherent risk to marbled murrelets by increasing chances of nest failure or preventing this area from serving as suitable nesting habitat. As such, DFG believes that the proposed project would contribute to the ongoing population decline of marbled murrelets in central California, and unless modified through further consultation with DFG and USFWS, an incidental take permit will be necessary.

The current absence of an intensive murrelet and corvid monitoring program on the DPR parcel is also of concern to DFG. It is our understanding there is only funding available for one more year (in 2006) of ornithological radar monitoring of murrelets at the parcel under the Apex Houston Trustee Council. The project does not propose any detailed monitoring program or identify

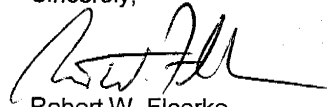
Ms. YinLan Zhang
July 14, 2005
Page 7

available funding beyond the ornithological radar work. Because the Santa Cruz Mountains murrelet population is declining and may soon become non-viable (McShane, *et al.* 2004), monitoring and adaptive management should be key components of any project that may affect murrelet reproductive success.

DFG would like to work with the applicant, CC, DPR, and USFWS to discuss alternatives, and develop a management plan for the parcel with provisions to minimize the likelihood of take of marbled murrelets.

If you have questions or comments, please contact Ms. Stacy Martinelli, Environmental Scientist, at (707) 539-1985; or Mr. Scott Wilson, Habitat Conservation Supervisor, at (707) 944-5584.

Sincerely,



Robert W. Floerke
Regional Manager
Central Coast Region

Attachments

- A: Occurrence of marbled murrelets in the vicinity of the project site.
- B: Marbled murrelet occupied behavior and habitat near the project site.
- C: Narrative account of murrelet response to human disturbance, May 25, 1997.

cc: See Next Page

Ms. YinLan Zhang
July 14, 2005
Page 8

cc: Stacy Martinelli
David Johnston
Department of Fish and Game
Central Coast Region

Esther Burkett
Julie Yamamoto
Lisa Wolfe
Paul Kelly
Department of Fish and Game
1416 Ninth Street
Sacramento, CA 95814

Mary Hammer
Dan Welsh
U. S. Fish and Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

Amedee Brickey
U. S. Fish and Wildlife Service
1655 Heindon Road
Arcata, CA 95521

John Wade, Executive Director
Pescadero Conservation Alliance
Post Office Box 873
Pescadero, CA 94060

Dave Vincent, District Superintendent
Department of Parks and Recreation
303 Big Trees Park Road
Felton, CA 95018

Kimberly McCormick
Latham & Watkins, LLP
8363 Sumanee Place, NE
Bainbridge Island, WA 98110

Robert Zatkan
140 Springdale Way
Redwood City, CA 94062

Ms. YinLan Zhang
July 14, 2005
Page 9

Documents Reviewed by DFG for this Consultation

Apex Houston Natural Resources Trustee Council Resolution Supporting Acquisition of Marbled Murrelet Nesting Habitat in the Gazos Creek Watershed, April 24, 1998 and Habitat Acquisition Agreement.

Heinrich, B. 1999. *Mind of the Raven, Investigations and Adventures with Wolf-Birds*. HarperCollins Publishers, Inc., New York, NY. 380pp.

Houston, David. 2000. Noise Report, Gazos Creek Field Research Station and Gazos Creek Mt. Camp Sound Measurements Report, March 2000.

Letter from Ms. Lisa Wolf, Staff Counsel with the Department of Fish and Game's Office of Spill Prevention and Response to Mr. Jim Rourke dated December 14, 2004.

Pescadero Conservation Alliance Use Permit Application to convert the former "Mountains Camp" to an environmental education center on Gazos Creek (undated).

Singer, Steven. 1999. Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA. 15pp.

Singer, Steven. 2005a. A Review and Analysis of Marbled Murrelet (*Brachyramphus marmoratus*) Issues Raised in the Coastal Commission's "Appeal Staff Report, Substantial Issue Determination, and Novo Review" for the Proposed P.C.A. Biological Field Station at Gazos Mountain Camp. 20pp.

Singer, Steven. 2005b. Marbled Murrelet White Paper, Pescadero Conservation Alliance Mountain Camp Project. Letter to CA Coastal Commission, June 17, 2005. 8 pp.

Zbur, Rick and Louis Leonard, III of Latham & Watkins letter to Ms. YinLan Zhang of the California Coastal Commission dated January 18, 2005.

Ms. YinLan Zhang
July 14, 2005
Page 10

Literature Cited

Evans Mack, D., William P. Ritchie, S. Kim Nelson, Elena Kuo-Harrison, Peter Harrison, and Thomas E. Hamer. 2003. Methods for surveying marbled murrelets in forests, a revised protocol for land management and research. Marbled Murrelet Technical Committee, Pacific Seabird Group, 89 pp. Pacific Seabird Group unpublished document available at <http://www.pacificseabirdgroup.org>.

Getzville, K.J., S.K. Riffell, and S.H. Anderson. 2002. Repeated human intrusion and the potential for nest predation by gray jays. J. Wildl. Manage. 66:372-380.

Hamer, T.E., and S.K. Nelson. 1995. Characteristics of marbled murrelet nest trees and nesting stands. In: Ecology and conservation of the marbled murrelet (C.J. Ralph, G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, eds.). U. S. Forest Service, Gen. Tech. Rep. PSW-GTR-152, Pacific Southwest Research Station, Albany, California.

Hamer, T.E., and S.K. Nelson. 1998. Effects of disturbance on nesting marbled murrelets: summary of preliminary results. Portland, OR, U. S. Fish and Wildlife Service, 24 pp.

Hébert, P.N., and R.T. Golightly. 2003. Breeding biology, and human-caused disturbance to nesting of marbled murrelets (*Brachyramphus marmoratus*) in Northern California: progress report 2002. Unpublished draft report, Humboldt State University, Dept. of Wildlife, Arcata, California.

Houston, David. 2000. Noise Report, Gazos Creek Field Research Station and Gazos Creek Mt. Camp Sound Measurements Report, March 2000.

Long, L.L., and C.J. Ralph. 1998. Regulation and observations of human disturbance near nesting marbled murrelets. 35 pp.

McShane, C., T. Hamer, H. Carter, G. Swartzman, V. Friesen, D. Ainley, R. Tressler, K. Nelson, A. Burger, L. Spear, T. Mohagen, R. Martin, L. Henkel, K. Prindle, C. Strong, and J. Keany. 2004. Evaluation report for the 5-year status review of the marbled murrelet in Washington, Oregon, and California. Unpublished report. EDAW, Inc. Seattle, Washington. Prepared for the U.S. Fish and Wildlife Service, Region 1. Portland, Oregon.

Nelson, K. 1997. Marbled Murrelet (*Brachyramphus marmoratus*). In: Birds of North America, No. 276 (A. Poole and G. Gill, eds.). Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC.

Ms. YinLan Zhang
July 14, 2005
Page 11

Peery, M. Z., S. R. Beissinger, S. H. Newman, E. B. Burkett, and T.D. Williams. 2004. Applying the declining population paradigm: Diagnosing poor causes of reproduction in the marbled murrelet. *Conservation Biology* 18: 1088-1098.

Singer, S.W., N.L. Naslund, S.A. Singer, and C.J. Ralph. 1991. Discovery and observation of two tree nests of the Marbled Murrelet. *Condor* 93(2): 330-339.

Singer, Steven. 1999. Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA. 15pp.

Singer, Steven. 2005a. A Review and Analysis of Marbled Murrelet (*Brachyramphus marmoratus*) Issues Raised in the Coastal Commission's "Appeal Staff Report, Substantial Issue Determination, and Novo Review" for the Proposed P.C.A. Biological Field Station at Gazos Mountain Camp. 20pp.

Singer, Steven. 2005b. Marbled Murrelet White Paper, Pescadero Conservation Alliance Mountain Camp Project. Letter to CA Coastal Commission, June 17, 2005. 8 pp.

Suddjian, David. 2005. Summary of 2004 Corvid Monitoring Surveys in the Santa Cruz Mountains. Prepared for Command Oil Spill Trustee Council.

Ms. YinLan Zhang
July 14, 2005
Page 11

Peery, M. Z., S. R. Beissinger, S. H. Newman, E. B. Burkett, and T.D. Williams. 2004. Applying the declining population paradigm: Diagnosing poor causes of reproduction in the marbled murrelet. *Conservation Biology* 18: 1088-1098.

Singer, S.W., N.L. Naslund, S.A. Singer, and C.J. Ralph. 1991. Discovery and observation of two tree nests of the Marbled Murrelet. *Condor* 93(2): 330-339.

Singer, Steven. 1999. Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA. 15pp.

Singer, Steven. 2005a. A Review and Analysis of Marbled Murrelet (*Brachyramphus marmoratus*) Issues Raised in the Coastal Commission's "Appeal Staff Report, Substantial Issue Determination, and Novo Review" for the Proposed P.C.A. Biological Field Station at Gazos Mountain Camp. 20pp.

Singer, Steven. 2005b. Marbled Murrelet White Paper, Pescadero Conservation Alliance Mountain Camp Project. Letter to CA Coastal Commission, June 17, 2005. 8 pp.

Suddjian, David. 2005. Summary of 2004 Corvid Monitoring Surveys in the Santa Cruz Mountains. Prepared for Command Oil Spill Trustee Council.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



IN REPLY REFER TO:
1-1-05-TA-0597

APR 06 2005

Ms. YinLan Zhang
Coastal Program Analyst
45 Fremont, Suite 2000
San Francisco, California 94105-2219

Dear Ms. Zhang:

Subject: Technical Assistance on the Gazos Mountain Camp Project, Butano Redwoods State Park, San Mateo County, California.

This letter is in response to the California Coastal Commission's (CCC) request, dated January 25, 2005, for the U.S. Fish and Wildlife Service's (Service) review of the proposed Gazos Mountain Camp project. Included in the information packet you sent was the project description, biological reports, and other documents regarding the proposed project. The Service received your request for review on January 27, 2005. Though the Service has not had the opportunity to thoroughly review the proposed project, we would like to provide some initial comments. We may have additional comments when we have the opportunity to more thoroughly review the project description and biological reports.

The applicant proposes to operate a year-round environmental education camp and field research station for youth and adults in Butano Redwoods State Park. Because the site was formerly used as a camp all facilities are present, though renovations may be necessary. The Service is concerned that the proposed year-round operation of the Gazos Mountain camp may result in disturbance to the threatened marbled murrelet (*Brachyranthus marmoratus*) (murrelet) which is known to use the project site and surrounding areas for nesting. Increased human presence on the project site will likely result in increased noise levels which may disturb nesting murrelets, potentially causing nest failure. In addition, improper control of trash on the project site may result in increased corvid (jays and crows) populations. Corvids are known to prey upon the eggs of murrelets. The *Recovery Plan for the Marbled Murrelet (Washington, Oregon and California Populations)* (Service 1997) states that the murrelet populations found in the Santa Cruz Mountains Zone (the zone encompassing the Gazo's Mountain Camp project) are small and isolated from other murrelet populations, making them especially vulnerable. The recovery plan also states that disturbances near murrelet nest sites that flush incubating or brooding adults from the nest site may expose adults and young to increased predation or accidental loss of eggs or nestlings by falling or being knocked out of nests. Human activities near nesting areas that result in an increase in the number of predators also could lead to a greater likelihood of nest predation. Though protective measures have been proposed to address the potential effects of camp operations on murrelets, the Service believes that further protective measures may be warranted.

TAKE PRIDE
IN AMERICA

Ms. YinLan Zhang

2

In addition, a monitoring program should be implemented to insure that the proposed protective measures are successful in minimizing the effects of camp operations on murrelets.

The Service is also concerned that camp operations and increased traffic associated with camp operations may result in take of the threatened California red-legged frog (*Rana aurora draytonii*) (red-legged frog) and/or the endangered San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) (garter snake). Red-legged frogs have been documented in a pond located adjacent to the road to the camp site. The road passes within 15 feet of the pond; therefore increased traffic on the camp road is likely to result in take of red-legged frogs and/or garter snakes. The project proposal states that as many as 50 vehicles per day may utilize the road to the camp; however few protective measures are proposed to address the effects of traffic on red-legged frogs or garter snakes. In addition, red-legged frogs have been documented in Gazos Creek, which runs through the project site. Some camp activities along Gazos Creek and at the pond may affect red-legged frogs and garter snakes.

Section 9 of the Endangered Species Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal. Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR 17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a *formal consultation* with the Service. During formal consultation, the Federal agency, the applicant, and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a *biological opinion* by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then the applicant should apply for an incidental take permit. The Service may issue such a permit if a satisfactory habitat conservation plan (HCP) for the species that would be affected by the project is submitted to us. Should surveys determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that the applicant work with this office and the California Department of Fish and Game to develop an HCP that minimizes the project's direct and indirect impacts to listed species and mitigates for project-related loss of habitat. The applicant should include the plan in any environmental documents filed.

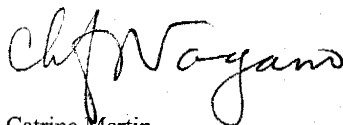

Though the Service supports the purpose of the Gazos Mountain Camp, at this time we do not believe that all potential effects to listed species have been addressed. The Service is available to assist the applicant in the development of additional protective measures, monitoring plans, and project design.

Ms. YinLan Zhang

3

If you have any questions regarding the Service's comments, please contact Mary Hammer or Ryan Olah at (916) 414-6625 for further assistance.

Sincerely


 Catrina Martin
Deputy Assistant Field Supervisor

cc:

John N. Wade, Pescadero Conservation Alliance, Pescadero, California

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 8
April 6 USFWS to Commission Staff
Page 3

United States
Department of
Agriculture

Forest
Service

Redwood Sciences Labora
1700 Bayview Drive
Arcata, California 95521
(707) 825-2992 FAX 707 825-2901
e-mail: cjr2@humboldt.edu

October 31, 2005

Mr. John Wade
Executive Director
Pescadero Conservation Alliance
P.O. Box 873 Pescadero CA 94060

Re: California Department of Fish and Game Letter Regarding Impacts To Marbled
Murrelets In The Vicinity of Gazos Mountain Camp

Dear Mr. Wade:

Thank you for forwarding to me a copy of the July 14, 2005 letter from Robert Floerke, California Department of Fish and Game, to the California Coastal Commission regarding the environmental youth camp proposed by the Pescadero Conservation Alliance for an existing camp site within a unit of Butano State Park. The letter is thorough and well documented, and I do appreciate the effort that went into it. However, I am writing because I disagree, at least in degree, with several of the assumptions used and the conclusions reached by CDFG in that letter. Please feel free to forward this letter to CDFG or the Coastal Commission as you see fit.

Professional Background

To give you some very brief, background of my experience with ornithology in general and the Marbled Murrelet in particular, I have degrees from Berkeley, San Jose State, and a doctorate from The Johns Hopkins University, in wildlife science, biology, and animal behavior. I have been studying birds for many years, was the co-founder of the Point Reyes Bird Observatory, later its director, taught college for three years, and took a position as a Research Ecologist with the U.S. Forest Service in 1976, first in Hawaii and since 1981 in California. My research has been diverse, largely on endangered species and bird monitoring, and I have been an author on close to 200 papers and edited several monographs and books on various aspects of ornithology, especially inventory and monitoring. Our research has received many national awards and honors including three this past year.

Our laboratory in Arcata has been researching Marbled Murrelets for about 13 years, and pioneered most of the methods used today, including diurnal forest surveys, at-sea surveys, and capture of adults. We have published some 30 papers on the species, and continue active research on the species to the present, including nesting habitat modeling and population surveys on the ocean. In the course of this work, I have read essentially every article written about the species and was primary editor of what many consider to be the definitive monograph on the species, a collection of papers on all aspects of Marbled Murrelet biology.

Response to CDFG Letter

In most portions of the letter from CDFG I find myself in agreement. However, in places the writers employ certain assumptions that I believe go beyond our current knowledge of the Marbled Murrelet, based on present data and publications. The letter also reaches some conclusions that are inconsistent with my professional opinion. I have identified these specific disagreements below. Overall, based on the avoidance and protection measures that Pescadero Conservation Alliance has incorporated into this project, including those developed by Steve Singer, who has a wide knowledge of the bird in the region and is well-respected, I believe that the proposed youth camp can be operated without any adverse impacts to Marbled Murrelets in the vicinity of the camp. In fact, the overall educational effect and research potentially associated with the camp would likely have a net benefit to the murrelet.

1. "Continuous Forest Stand"

The letter from CDFG concludes that "all potential nest trees from the 'Inhabited Old-Growth Stand' east to the occupied stand partially located in the eastern portion of the 120-acre parcel are contained within a continuous forest stand comprised of residual redwood and Douglas-fir trees." I found their argument unconvincing. I base my opinion on my visit to the camp site several years ago, and my recent review of aerial photographs. While I appreciate CDFG's desire to preserve every present and future potential nesting area, I would say that, in regards to the Marbled Murrelet, the entire forested area from the old-growth section west of Gazos Creek to the second growth section east of the camp does not constitute a continuous forest stand of occupied murrelet habitat. While murrelets will fly over the intervening areas of the parcel, the habitat is too patchy, in my opinion, to be occupied by murrelets throughout the project area.

In my opinion, in order to constitute a single continuous forest stand (as defined by the Society of American Foresters), the area should be reasonably uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit. I feel that the areas west and east of the camp site appear from the aerial photos to be substantially different with respect to these elements of forest structure and so should be considered three stands, rather than one. Certainly from the aspect of murrelet habitat, most of the habitat appears to me to be unsuitable as nesting habitat. The stand in which the camp buildings are located is young second-growth with an open tree spacing, a history of logging and disturbance from human activities, and few residual trees, and would be very unlikely to be adequate for murrelet habitat. The stand at the eastern end of the property appears to be older, second-growth with more residuals present, and a spacing of trees normal for the area. From the aerial photographs, these differences and clear breaks in the trees between these different stands can be seen. It is not impossible for murrelets to nest here, but in my professional judgment, it would be very unlikely.

2. Appropriate Santa Cruz Mountain Platform Size

The letter from CDFG states that any limb "greater than four inches wide" constitutes a Marbled Murrelet nesting platform. From the published literature, and my knowledge of nesting habitat of Marbled Murrelets in the Redwood region of California, which includes the Santa Cruz Mountains, this estimated platform size might, at most, be considered the absolute minimum theoretically possible. To conclude, as the letter seems to, that the minimum limb diameter ever recorded is, in fact, suitable habitat for the murrelet is, at the least, an unwarranted assumption in my opinion. I would estimate that the modal size of nest limbs in the redwood region is approximately twice that size. I would suggest that a limb diameter of 8 to 10 inches would more accurately represent what would be required for a murrelet nest platform in the Santa Cruz Mountains. Using a platform size as small as four inches as nesting habitat is simply not supported by the existing scientific data.

3. Human Presence In Murrelet Habitat

The letter from CDFG concludes that human presence would create significant impacts to Marbled Murrelets due to disturbance from "visual human presence" and increased noise. Specifically, the letter concludes that human presence at the camp would likely result in "aborted feeding attempts, sudden flushing from the nest, reduced nest attendance by adult murrelets." These potential impacts are, in my judgment, extremely unlikely. CDFG discusses a study prepared by us (Linda Long and me) at the Redwood Sciences Laboratory as part of its discussion in this section, I do not agree with the CDFG conclusions. On the contrary, based on what murrelet biologists have found, there is absolutely no evidence that mere human presence, even in relatively close proximity to murrelet nests, causes significant impacts on nesting and feeding behaviors. I would especially note that this is particularly true at locations such as the camp site at issue here, where prolonged human activity might have occurred within the vicinity of marbled murrelet populations, resulting in habituation to human disturbance.

4. Effective Corvid Control

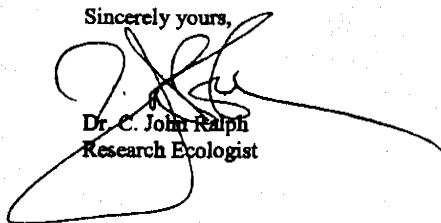
The letter from CDFG concluded that mere human presence "even without direct food hand-outs" would increase the presence of Common Ravens and/or Steller's Jays and predation of murrelet nests. The letter also indicated that no measures could successfully limit the availability of subsidized food that would attract corvids to the site. In my opinion, these conclusions are not supported by the scientific literature. Ravens, jays and other corvids are certainly attracted to residual human food or trash, but there is no really convincing evidence that they are attracted, except perhaps briefly, to human presence itself. The research quoted as representing the opposite is, at best, inconclusive. Corvids are, of course, curious. They may be attracted to new things in their environment, but if they receive no positive reinforcement, they will not persist.

The trash control, education and monitoring measures proposed by Pescadero Conservation Alliance and Steve Singer are well-conceived, careful, and are similar to measures that are being implemented throughout the state to reduce corvid populations. Given the small number of visitors to the camp, the prominent role that trained scientists will play in the operation of the camp, and the strong conservation ethic of the Conservation Alliance, I believe the corvid control measures proposed for this project would effectively restrict subsidized food

and so avoid increases in corvid populations. Further, as I have urged to the Alliance, if a consistent bird-monitoring effort is made part of the operations at the camp, further evidence of the potential role of predators could be documented.

Thank you for the opportunity to review and respond to the CDFG letter. Please do not hesitate to contact me if you have further questions or if I can be of additional help.

Sincerely yours,



Dr. C. John Ralph
Research Ecologist

David L. Suddjian
Biological Consulting Services
801 Monterey Avenue, Capitola, CA 95010
Telephone 831-479-9603, email dsuddjian@aol.com

November 17, 2005

Mr. John Wade
Executive Director
Pescadero Conservation Alliance
P.O. Box 873, Pescadero, CA 95060

**Re: Review of issues regarding impacts to Marbled Murrelets in the vicinity of the
Gazos Mountain Camp.**

Dear Mr. Wade,

This letter is in response to your request that I assess issues regarding impacts to Marbled Murrelets (*Brachyramphus marmoratus*) connected with the proposed field research station at Pescadero Conservation Alliance's (PCA) "Gazos Mountain Camp." In particular, I address issues raised in the letter dated July 14, 2005, by Robert W. Floerke of the California Department of Fish and Game (CDFG). My review was aided by visits to the camp site and vicinity in September 2004 and on November 7, 2005 to specifically consider the proposed camp use, and by examination of historic and recent aerial photographs of the area.

Professional Background

I have conducted research relating to Marbled Murrelets in the Santa Cruz Mountains since 1990. My studies have occurred at numerous sites in the watersheds of Pescadero, Butano, Gazos, and Waddell creeks, and the San Lorenzo River, and locally elsewhere. My research has included (1) evaluations of suitability of forest areas for potential nesting by murrelets, (2) dawn surveys to determine presence and occupancy and/or to provide long term monitoring of murrelet activity, (3) observation of murrelet nest sites, and (4) documentation of populations and behaviors of murrelet predators, including Common Raven (*Corvus corax*), Steller's Jay (*Cyanocitta stelleri*) and Peregrine Falcon (*Falco peregrinus*). I am a co-author of scientific papers relating to murrelet nesting biology and habitat selection. I have also served as a trainer and evaluator for those seeking to use the accepted protocol for conducting murrelet surveys at inland sites, a role for which I was approved by the CDFG.

Over the years I have conducted or supervised approximately 2,000 dawn murrelet surveys in the Santa Cruz Mountains. In recent years I have conducted monitoring of

1

murrelets, ravens, and jays at Big Basin Redwoods, Portola Redwoods, and Butano State Parks, and San Mateo County Memorial Park. This work was conducted initially (2001-2002) under contract with the CDFG, and subsequently (2003-2005) for the Command Oil Spill Trustee Council, which includes representation by the personnel of the CDFG and U.S. Fish and Wildlife Service, among other agencies. The corvid monitoring has focused on comparing numbers of corvids in association with campgrounds and areas of parks removed from such human uses, and included extensive observation of interactions between corvids and people. Other corvid monitoring efforts documented long-term changes in populations in the relatively remote watershed of the South Fork of Butano Creek from 1992-2001.

My field research in the Gazos Creek watershed included surveys for murrelets in 1999 and 2000 on lands of Big Creek Lumber Company in the tributary watershed located directly west of the PCA camp, in Section 28, Township 8 South, Range 4 West, and surveys in 1997, 1999 and 2000 on lands of Redwood Empire to the east of the PCA camp in both the South and North Forks of Gazos Creek.

Issues Regarding Impacts to Murrelets

I focus on four issues that stem from the July 14, 2005 letter of the CDFG. (1) What is an appropriate potential nest platform in the Santa Cruz Mountains? (2) What constitutes "a continuous forest stand" in the PCA camp area? (3) Is there cause for concern about disturbance to murrelets resulting from human presence at the camp? (4) Would proposed camp use and management be likely to lead to increased predation by corvids on murrelets?

1. What is an appropriate potential nest platform in the Santa Cruz Mountains?

The CDFG letter identified potential nest trees as "conifers with limbs or platforms greater than four inches wide (Hamer and Nelson 1995)." This minimum size criterion does not reflect a suitable minimum size for a nest platform in the Santa Cruz Mountains region. Indeed, the range of platform size for known nests in the Santa Cruz Mountains is 11.4 to 27.6 inches (Baker et al. *in press*). Thus, the four inch criterion used by the CDFG is only about one third of the size of the smallest known nest platform in the region.

Based on documented scientific evidence and my personal experience, I consider 8-11 inches to be a more suitable minimum size criterion. Platforms smaller than that could theoretically be suitable, but small limbs in the range of 4 to 7 inches only rarely provide flat surfaces or depressions on their upper sides that would provide potential for secure egg placement on the limb. To the north of the Santa Cruz Mountains the effective size of platforms on small limbs may be enhanced by extensive growths of moss, lichen and other epiphytic vegetation, but such epiphytic growth is typically not substantial enough in the redwood and Douglas-fir trees of Santa Cruz Mountains to significantly improve potential value of limbs under 8 inches in diameter.

2. What constitutes a "continuous forest stand" in the PCA camp area?

The CDFG letter stated that "potential nest trees located in and adjacent to the camp area along the Gazos Creek riparian areas connect to the occupied stands lying on both sides of the camp area." The letter states that the "potential nest trees" in the camp area "are contained within a continuous forest stand comprised of residual redwood and Douglas-fir trees." Thus, they concluded that the developed camp area lies within an occupied stand of murrelet habitat.

I don't agree with this assessment. Helms (1998) defined a "stand" as "*a contiguous group of trees sufficiently uniform in age-class, distribution, and structure, and growing on a site of sufficiently uniform quality to be a distinguishable unit.*" Using this definition, my field observations, and review of the aerial photographs, I conclude there are at least three distinct stands in the area considered, possibly four. The residual 10-acre old growth stand to the west of the developed camp area (Singer 1999) is one stand. The "mature second-growth stand" identified by Singer (1999) to the east and southeast of the developed camp is distinct from the forest of camp area due to the prevalence of Douglas-fir; indeed where it extends up from the lower streamside slopes near the south fork of Gazos Creek it trends into a mixed evergreen forest of Douglas-fir and interior live oak. Further east, the forest on the steep, north-facing slope of the south fork (located mostly on land owned by Redwood Empire), although contiguous with the "mature second growth" identified by Singer (1999), is perhaps distinct as well, as it is comprised predominantly of coast redwood.

The developed area of the camp is distinct from the other adjacent areas of forest, and does not comprise part of a continuous stand with those bordering areas. Its history of human use, tree spacing, species composition and tree size mark it as distinct from the stands to the west and east. Past disturbance and recent human uses have left a stand with significantly greater spacing between trees and numerous sizeable gaps between trees. In contrast to the stands to the west and east, it is composed largely of coast redwood, most of which are relatively young second growth.

I also question the determination by the CDFG that "potential nest trees located in and adjacent to the camp area along the Gazos Creek riparian areas connect to the occupied stands lying on both sides of the camp area." The only tree I observed in the developed area of the camp that had a suitably large platform was a broken-topped redwood near the east end of the pond, with the platform formed by the broken top. However, I do not consider this a suitable potential nest tree because it is located in a second growth stand outside the context of old growth forest types that constitute suitable murrelet nesting habitat. It is also located in a comparatively isolated setting relative to adjacent trees, with large gaps surrounding its crown, and so does not provide cover from detection by predators if murrelets were to repeatedly visit the tree. Thus, I conclude the presence of the platform created by the broken top is not sufficient in and of itself to make the tree suitable for actual use by nesting murrelets.

I consider most of the trees in the "mature second growth" stand identified by Singer (1999) east and southeast of the camp to be unsuitable for nesting murrelets, although at least two had one or more limbs that might provide suitably large platforms. However, these platforms were generally of poor quality due to high exposure and low degrees of cover provided by vegetation. Furthermore, the character of the forest in the "mature second growth" area is unlike any forest known to support nesting murrelets in the Santa Cruz Mountains. It is heavy to Douglas-fir, most of which are of relatively small stature, and has a very limited component of coast redwood. A few Douglas-firs growing along the north fork of Gazos Creek near the northwest end of the developed camp area looked to be structurally suitable, but did not appear to me to be part of a contiguous old growth stand. Thus, I conclude the very small number of trees with platforms in and adjacent to the camp do not effectively provide any habitat connection between occupied stands to the west or east.

3. Is there cause for concern about disturbance to murrelets resulting from human presence at the camp?

The CDFG letter concluded that the noise and visual presence of humans associated with the PCA's proposed use of the camp would likely harm murrelets by interfering with nesting and feeding activities. I disagree with this conclusion for two reasons. First, the distance of suitable nest sites from the proposed uses together with the various proposed buffers and mitigations (e.g. Singer 1999) indicate human activities associated with PCA's project should not harm murrelets in the vicinity of the camp. Second, given the history of (more intense) human use of the camp any marbled murrelets in the area are likely acclimated to human presence.

Based on my experience and research, disruption of normal nesting activities due to mere human presence might only occur if they were to occur in very close proximity to the nests and involved potential for direct interaction with the birds, such that the human presence was viewed as a direct threat. The study by Long and Ralph (1998) cited in the CDFG letter found that "it appears that Marbled Murrelets are not easily disrupted from nesting attempts by human disturbance except when confronted at or very near the nest itself." In this case, however, suitable murrelet nesting habitat does not occur in the camp area itself, and I see no potential for such direct interactions given the types of human activity that would occur, and the buffers and other mitigations designed to remove any threat of direct disturbance.

In addition to a lack of scientific support for the idea that mere human presence would harm murrelets as a general matter, the long history of human use of the camp area and the continued presence of murrelets in the area suggest they are acclimated and accustomed to human presence and the typical activities associated with a camp. Indeed, past activities (e.g., team sports and gunfire) that occurred in closer proximity to the residual old growth stand than anything now proposed represented far greater sources of disturbance than any use or action presently proposed. The mitigations to avoid or minimize possible disturbance to nesting murrelets are adequate to alleviate any reasonable concern that negative impacts might occur from camp use, and represent an

improvement over historic conditions. This position is further strengthened by my assessment that the developed camp area does not provide viable resources for nesting murrelets, and nesting is decidedly unlikely to occur in other forest areas closest to the developed camp.

The CDFG letter cites noise from camp activities as a possible source of disturbance. However, a negative response from murrelets to noise, particularly of the types that would occur with camp use, has not been conclusively documented, and on the whole the available scientific evidence indicates otherwise. The CDFG letter cites the conclusion of McShane et al. (2004) that "noise disturbance at nest sites is generally thought to minimally affect individual birds and nesting pairs" of murrelets, but then goes on to raise an issue of large scale effects at the population level due to increased energy expenditure. I see no way a population level response could occur from the very local hypothetical effect at the PCA camp. Additionally, the other alcid species cited in the CDFG letter all nest colonially in open habitats in very different settings than do Marbled Murrelets in California, and it is not reasonable to conclude that their response to disturbance (and any resulting population level effects) would be the same as for murrelets.

The CDFG letter offers a narrative account of an observation at Big Basin in 1997 (Attachement C) which is purported to document disturbance from human noise to a murrelet during the dawn flight period. However, the circumstances described in Attachment C cannot be taken to indicate with certainty that the behavior of the murrelet in question was a response to the loud people nearby, or that a murrelet nest was present. Other explanations are equally plausible. And regardless, the circumstances of that observation would not be repeated at the PCA camp given the proposed mitigations and buffers.

4. Would proposed camp use and management be likely to lead to increased predation by corvids on murrelets?

The CDFG letter found that PCA's proposed activities would encourage murrelet nest predation by attracting new corvids to the camp area. Based on my experience studying both marbled murrelets and corvids in the Santa Cruz Mountains, I believe PCA's proposed corvid control measures will sufficiently limit corvid levels and avoid associated harm to murrelets.

The CDFG response on the issue of nest predation seems to ignore the long history of human use of the camp. There is no issue of attracting corvids to an undisturbed area; indeed, both ravens and jays already reside on and around the property, and are no doubt acclimated to human presence in the area. While there have been changes in the degree of use and types of activities in the camp area since PCA assumed management of the property, human presence at the camp (and immediately adjacent properties) has continued over the years, including near daily visitation of the PCA site by one or more people (J. Wade in litt.). Since the CDFG letter argues that mere human presence will

attract corvids (a point with which I disagree), it should be acknowledged that there has been an existing human presence that has continued to the present time.

I know of no scientific foundation for the conclusion by CDFG that corvids would be attracted to the camp area even without direct food handouts. I believe that if no significant food resource is available, then corvids will not be attracted to the camp, except in a temporary fashion. In support of that I offer my frequent observation from the local region that ravens and jays exhibit no particular attraction to people in forested regions except at locations where food has been offered or otherwise available in some consistent fashion.

I believe the management actions proposed by PCA and recommended by Singer (1999) that seek to control availability of human foods and garbage to corvids and other animals should be adequate to limit that resource to such a degree that no significant increase in corvid populations over the existing levels would be anticipated. Unlike a standard park campground or picnic area, the proposed use and management of the camp offer far greater opportunities for control of food and garbage.

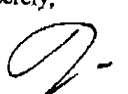
Furthermore, the suitable murrelet nesting habitat in the vicinity of the camp is sufficiently far removed from the developed area of the camp so that an increased incidence of nest predation would be unlikely even if corvid numbers were enhanced somewhat within the active camp area. My studies at even large campgrounds in the local state parks found corvid numbers (especially jays) declined markedly within only 100 meters of the camp margins.

Conclusion

I respect and appreciate the concerns expressed by the CDFG for the welfare of Marbled Murrelets occurring around the PCA Gazos Mountain Camp. However, the conclusions as stated in the letter of July 14, 2005 with regard to habitat suitability, stand continuity, potential for human disturbance, and potential for increased predation by corvids all represent extreme positions that are not supported by conditions on the site or the best scientific evidence.

Although I feel the proposed use and mitigations alleviate reasonable concerns, the issues related to human disturbance and attraction of corvids could be further assessed by an ongoing monitoring program designed to document the response of murrelets and predators, thus providing opportunities for adaptive management.

Sincerely,


David Suddjian
Wildlife Biologist

Literature and other documents cited

- Baker, L. M., M. Z. Peery, S. R. Beissinger, E. Burkett, S. W. Singer and D. L. Suddjian. In press. Nesting habitat characteristics and associations of the marbled murrelet in Central California. *Journal of Wildlife Management*.
- Floerke, R. W. 2005. Comments on marbled murrelets at the Gazos Mountain Camp Field Research Station, Gazos Creek watershed, San Mateo County. California Dept. of Fish and Game. Letter dated July 14, 2005.
- Hamer, T. E. and S. K. Nelson. 1995. Characteristics of marbled murrelet nest trees and nesting stands. In: *Ecology and conservation of the marbled murrelet* (C. J. Ralph, G. L. Hunt, M. G. Raphael, and J. F. Piatt, eds.) U.S. Forest Serv., Gen. Tech. Rep. PNW-GTR-152. Pac. Southwest Res. Sta., Albany, CA.
- Helms, J. A. 1998. *The Dictionary of Forestry*. Society of American Foresters. Bethesda, MD.
- Long, L. L. and C. J. Ralph. 1998. Regulation and observations of human disturbance near nesting marbled murrelets. 35 pp. Redwood Sciences Laboratory.
- McShane, C. T., T. Hamer, H. Carter, G. Swartzman, V. Friesen, D. Ainley, R. Tressler, S. K. Nelson, A. Burger, L. Spear, T. Mohagen, R. Martin, L. Henkel, K. Prindle, C. Strong and J. Keany. 2004. Evaluation report for the 5-year status review of the marbled murrelet in Washington, Oregon, and California. Unpubl. report. EDAW, Inc. Seattle, WA. Prepared for the U. S. Fish and Wildlife Service, Region 1, Portland, OR.
- Singer, S. 1999. Marbled murrelet habitat management guidelines for the Gazos Mountain Camp property, San Mateo County, CA. Unpubl. report prepared for the Sempervirens Fund and the Apex Houston Trustec Council.



State of California - The Resources Agency
DEPARTMENT OF FISH AND GAME

<http://www.dfg.ca.gov>
POST OFFICE BOX 47
YOUNTVILLE, CALIFORNIA 94599
(707) 944-5500

ARNOLD SCHWARZENEGGER, Governor



February 28, 2006

Ms. YinLan Zhang
Coastal Program Analyst
California Coastal Commission
45 Fremont Street
San Francisco, CA 94105-2219

Dear Ms. Zhang:

Proposed Use of Gazos Mountain Camp Field Research Station,
Gazos Creek Watershed, San Mateo County

This letter is a follow-up to the Department of Fish and Game's (DFG) letter of July 14, 2005 to the California Coastal Commission concerning the Gazos Mountain Camp, and reflects a better understanding of potential impacts based on clarification of the project proposal and an additional field site evaluation.

DFG personnel visited the Gazos Mountain Camp on January 20, 2006 along with a representative from the U. S. Fish and Wildlife Service (USFWS), staff from the California Department of Parks and Recreation (DPR), a representative of the Pescadero Conservation Alliance (PCA), and two local marbled murrelet biologists. The purpose of the site visit and meeting was to assess the presence of potential marbled murrelet (MAMU) nesting habitat within and around the camp, evaluate potential effects on the red-legged frog and San Francisco garter snake, and gain a clear understanding of PCA's proposed use of the camp and lease area in relation to our earlier comments.

The first order of business was to evaluate where uses would be concentrated under PCA's proposal. Camp programs will be centered in the portion of the old camp which houses the meeting hall, out buildings and cabins. This area makes up a small portion of the overall 12-acre lease area. The remainder of the lease area will be used for passive interpretive activities, research and restoration.

The central camp area was evaluated for the presence of potentially suitable MAMU nest trees. Several large Douglas-fir are present in and adjacent to the camp, on and off the larger DPR property. These are single trees that

Conserving California's Wildlife Since 1870

Ms. YinLan Zhang
February 28, 2006
Page 2

are generally exposed, with limbs that are at the lower end of what could potentially be used by MAMU. These trees are present in a forest of smaller second growth redwood and Douglas fir and generally appear to be marginally suitable as MAMU nesting habitat. The camp area does not exhibit the habitat characteristics of the old growth stand to the west of the north fork of Gazos Creek and the meadow area where MAMU occupation is assumed based on past observations of occupied behaviors.

Along the west bank of the north fork of Gazos Creek west of the camp are several large trees which support limbs that were agreed to be of appropriate size, shape and cover to be suitable nesting habitat. These trees are approximately 100 meters from the camp area where activity would be concentrated.

Two areas of potential MAMU occupation are present within the larger DPR property outside the PCA lease area—the old growth stand discussed above and the second growth stand to the southwest of the camp along the south side of the south fork of Gazos Creek and the county road. MAMU have been documented flying up the drainage to an area of the DPR property which has been surveyed as part of a proposed timber harvest plan. Both of these areas are well removed from the camp center and are not expected to be adversely affected by camp operations.

The pond area was visited to evaluate the potential for adverse effects to red-legged frogs and San Francisco garter snakes. The cement lined former mill pond and swimming pool currently supports predatory fish. In its current condition, it does not provide habitat for frogs and is well beyond the known distribution of the San Francisco garter snake in the Gazos Creek watershed. PCA proposes to restore the pond by removing the cement lining and predatory fish. Use of the road for camp operations is not likely to adversely affect either species.

The meadow area below the pond and adjacent to the old growth stand on the west side of the North Fork of Gazos Creek in which occupied behaviors have been documented was also visited. The meadow which formerly contained athletic facilities has been cleared of those facilities and is not proposed for active use. PCA proposes to restrict use of this area during the MAMU breeding season.

Based upon the field visit, occupied and potential MAMU habitat is present around the periphery of the camp site. The potential for nesting within the area of proposed active camp operations is low. The primary concerns associated

Ms. YinLan Zhang
February 28, 2006
Page 3

with operation of the camp was potential disturbance of nesting MAMU by camp operation and the potential for attracting corvids to the camp site and, in turn, increasing the potential for predation on nestling MAMU.

PCA intends to operate the camp for environmental education, restoration and research. PCA also intends to use the camp to provide temporary housing for researchers, environmental educators and restoration staff and volunteers. PCA would also utilize trails and roads within the 12-acre lease area as part of their environmental education program. However PCA would not allow access to the 10-acre patch of old-growth habitat or adjacent meadow area during the MAMU breeding season (March 24 to September 15). PCA has proposed to limit use below what is allowed in the County use permit for operation of the camp, with day use being limited to approximately 30 people. They are also willing to limit vehicle access (20 vehicles/day or less) and restrict parking to the immediate camp area. Day use groups would be limited to between 9:30 a.m. and 2:30 p.m. each day during the MAMU breeding season.

PCA would restrict food service and consumption to indoor areas and will also provide animal proof trash containers outdoors to minimize the potential food sources available to corvids. These measures would serve to minimize the potential for attracting and increasing the number of corvids in the area.

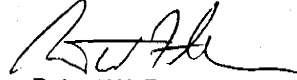
To further minimize impacts to marbled murrelets, DPR and PCA have proposed a study to establish a baseline of corvid use in the camp area so that the effects of the proposed camp operations can be evaluated. The corvid use study would be initiated during the spring of 2006 and would provide a baseline for the 2006 breeding season. Information from this study would be used in the development of corvid monitoring measures for subsequent breeding seasons under camp operations. The specific study protocol will be developed in consultation with DFG and the USFWS. PCA and DPR have also agreed to undertake this, as well as corvid control measures if warranted, to minimize potential impacts to MAMU. The proposed corvid monitoring and control measures have the potential to provide valuable information on the effects of camp operations on corvid numbers and the efficacy of corvid control, the results of which will have applicability for other parklands in the region and the state.

Based upon the results of the field visit, discussions with PCA and our understanding of the proposed camp operation and associated activities and proposed minimization and avoidance measures, we do not expect the camp operation as described in the attached use description to adversely affect MAMU using the area. Additionally, DFG does not believe the proposed use is inconsistent with the purchase agreement between the Sempervirens Fund, Inc. and the Apex Houston Trustee Council.

Ms. YinLan Zhang
February 28, 2006
Page 4

If you have any questions concerning this letter, please do not hesitate to contact Mr. Carl Wilcox, Habitat Conservation Manager, at (707) 944-5525.

Sincerely,



Robert W. Floerke
Regional Manager
Central Coast Region

cc: Mike Long, Field Supervisor
Arcata Fish and Wildlife Office
1655 Heidon Road
Arcata, CA 95521

Susan Moore
Acting Field Supervisor
U. S. Fish and Wildlife Service
2800 Cottage Way, W2605
Sacramento, CA 95825

Richard Rayburn, Chief
Natural Resources Division
Department of Parks and Recreation
1416 9th Street
Sacramento, CA 95814

John Wade
Pescadero Conservation Alliance
Post Office Box 873
Pescadero, CA 94060

✓ Rick Zbur
Louis G. Leonard, III
Latham & Watkins LLP
505 Montgomery Street, Suite 2000
San Francisco, CA 94111-2562

Lennie Roberts
Committee for Green Foothills
339 La Questa Drive
Portola Valley, CA 94028

Ms. YinLan Zhang
February 28, 2006
Page 5

Brenden Cummings
Center for Biological Diversity
Post Office Box 549
Joshua Tree, CA 92252

Dr. George Cattermole
Coastside Habitat Coalition
Post Office Box 71
San Gregorio, CA 94074

Jim Rourke
Post Office Box 222
Pescadero, CA 94060



In Reply Refer To:
AFWO

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1655 Heindon Road
Arcata, California, 95521
Phone: (707) 822-7201 FAX: (707) 822-8411



FEB 23 2006

Dave Schaub, Manager
Natural Heritage Section
California Department of Parks and Recreation
P.O. 942896
Sacramento, CA 94296-0001

Subject: Proposed use of Gazos Mountain Camp (8-14-2006-2853)

Dear Mr. Schaub

At the request of California Department of Parks and Recreation (CDPR), we visited the Gazos Mountain Camp on January 20, 2006, along with a representative from the California Department of Fish and Game, CDPR, a representative of the Pescadero Conservation Alliance (PCA) and two local marbled murrelet biologists. The purpose of the site visit was to assess potential marbled murrelet nesting habitat within and around the camp and gain a clear understanding of PCA's proposed use of the camp facilities and surrounding area of the Butano State Park.

During the site visit we visited the area where permitted uses would be concentrated under PCA's proposal. The focus of activity would be in the portion of the old camp which houses the meeting hall, outbuildings and cabins. This area makes up a small portion of the overall 12-acre lease area, but will be the center of camp programs and activities.

We evaluated the area around the central camp for the presence of potentially suitable marbled murrelet nest trees. Several large Douglas-fir trees are present in and adjacent to the camp. Some of these trees contained limbs that were at the lower end of what could potentially be used by marbled murrelets for nesting platforms. However, many of these platforms were exposed with little cover surrounding them. These trees were present in a forest of smaller second-growth redwood and Douglas-fir and generally appeared to be marginally suitable as marbled murrelet nesting habitat.

Along the west bank of the north fork of Gazos Creek west of the camp were several large trees which supported limbs that were found to be of appropriate size, shape and cover to be suitable nesting habitat. These trees were approximately 100 meters from the camp area where human activity would be concentrated.

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 12
2/23/06 Letter from USFWS to
CDPR
Page 1

The lease area also contains a small reservoir (old cement-lined mill pond) within the historic channel of Gazos Creek. The proposed project includes a proposal to conduct restoration of this site by either removing the cement lining of the pond and planting riparian vegetation or removing the pond altogether and realigning the creek. The entrance road to the camp is directly adjacent to the pond. Currently the pond is inhabited by non-native fish species, and does not provide suitable breeding habitat for the California red-legged frog. The restoration efforts will likely increase the suitability of this habitat for this species. The CDPR and the PCA have agreed to implement measures to minimize impacts to frogs from vehicle traffic along this road, once restoration of the pond site has been undertaken. Such measures would likely minimize impacts to San Francisco garter snake from vehicle traffic as well.

During the site visit we also visited a meadow which is adjacent to a stand of trees to the west of the camp that is old-growth forest and is considered to be occupied nesting habitat for the marbled murrelet. The meadow, which formerly contained athletic facilities, has been cleared of those facilities, and PCA has agreed to restrict visitor use and access to the site.

We then evaluated the second-growth forest stand to the southwest of the camp along the south side of the south fork of Gazos Creek. Marbled murrelets have been documented by neighboring landowners flying up this drainage into State Park lands.

Based upon the field visit, occupied and potential habitat is present around the periphery of the camp site. The potential for nesting within the immediate vicinity of the camp area is low. The primary concerns associated with operation of the camp are the potential disturbance of nesting marbled murrelets by camp operation adjacent to suitable habitat and the potential for attracting corvids to the camp site and in turn increasing the potential for predation on nestling murrelets. To address these concerns, PCA and CDPR will implement several "best management practices", or conservation measures.

PCA is proposing to operate the camp for environmental education, restoration and research. PCA intends to use the camp to provide housing for researchers, environmental educators and restoration staff in support of their program. PCA would also utilize trails and roads within the 12-acre lease area as part of their environmental education program. However, PCA would not allow access to the 10-acre patch of old-growth habitat or adjacent meadow area during the marbled murrelet breeding season (March 24 to September 15). PCA has proposed to limit use below what is allowed in the County use permit for operation of the camp, with day use being limited to approximately 30 people. They are also willing to limit vehicle access to 20 vehicles per day or less, and restrict parking to the immediate camp area. Day use groups would be limited to between 9:30 AM and 2:30 PM each day during the murrelet breeding season.

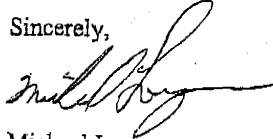
PCA would restrict food service and consumption to indoors areas and will also provide animal proof trash containers outdoors to minimize the potential food sources available to corvids. These measures would serve to minimize the potential for attracting and increasing the number of corvids in the area.

To minimize impacts to marbled murrelets, CDPR and PCA have agreed to undertake corvid surveys to establish a baseline of corvid use in the vicinity of the camp area so that the effects of future camp operation can be evaluated. PCA and CDPR will also undertake a corvid monitoring program to assess overtime potential corvid increases and implement corvid control measures, if warranted, to minimize impacts to the marbled murrelet.

The Service would like to thank CDPR and PCA for their work to incorporate many conservation measures into this project to address the conservation needs of species listed under the Endangered Species Act of 1973, as amended. We believe that with these measures, the likelihood of taking species listed under this Act would be low.

We appreciate your efforts to protect natural resources while providing educational and recreational opportunities to the public. If you have any questions concerning this correspondence, please contact Ms Amedee Brickey of my staff at 707-822-7201.

Sincerely,



Michael Long
Field Supervisor
Arcata Fish and Wildlife Office

cc: Carl Wilcox, CDFG, Yountville, CA
S. Moore, FWS, Sacramento

LATHAM & WATKINS

RECEIVED

APR 10 2006

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

April 7, 2006

Hon. Meg Caldwell
Chair, California Coastal Commission
Stanford Law School
559 Nathan Abbott Way, Owen House Room 6
Stanford, CA 94305-8610

Re: Pescadero Conservation Alliance
Coastal Commission Appeal A-2-SMC-04-005

Dear Chairwoman Caldwell,

We are writing on behalf of our *pro bono* client, the Pescadero Conservation Alliance, to respond to recommendations set forth in the Staff Report for the above-referenced appeal, dated March 24, 2006. A hearing on the Commission's De Novo Review of the Conservation Alliance's proposed environmental youth camp and Field Research Station is scheduled for April 13, 2006. We respectfully disagree with the Staff Report's denial recommendation, and we ask that the Commission approve the permit and allow this valuable environmental education and restoration project to go forward. We have attached here proposed general and special conditions that the Commission could use as part of its approval of the project.

I. BACKGROUND

The Pescadero Conservation Alliance is a non-profit environmental organization founded to preserve and restore the ecological health of the San Mateo Coast through environmental research, youth and community education and hands-on coastal restoration work. At the heart of the Conservation Alliance's mission is the restoration of Gazos Mountain Camp, an existing site with existing cabins and other buildings used as a logging facility and youth summer camp since 1870. We have attached pictures of these existing facilities here for your review. The Conservation Alliance proposes to continue using this facility, though on a smaller scale, for environmentally-focused youth education programs and as a base for important environmental research and restoration work.

The project would introduce children to the unique environment of the San Mateo Coast through hands-on experiences in environmental education and restoration conducted by leading conservation scientists and educators. The Conservation Alliance has developed partnerships with schools and youth groups in at-risk communities, to provide coastal access and environmental education for children who might not otherwise have these opportunities. The Conservation Alliance has conducted very successful "pilot programs" with both children and

SF556837.2

505 Montgomery Street, Suite 2000
San Francisco, California 94111-2562
Tel: (415) 391-0600 Fax: (415) 395-8095
www.lw.com

FIRM / AFFILIATE OFFICES

Brussels	New York
Chicago	Northern Virginia
Frankfurt	Orange County
Hamburg	Paris
Hong Kong	San Diego
London	San Francisco
Los Angeles	Shanghai
Milan	Silicon Valley
Moscow	Singapore
Munich	Tokyo
New Jersey	Washington, D.C.

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 13
April 7, 2006 Letter from Latham and
Watkins to Meg Caldwell
Page 1

Hon. Meg Caldwell
April 7, 2006
Page 2

LATHAM & WATKINS LLP

adults groups, many of whom have expressed great interest in visiting the Field Research Station upon approval by the Commission. We have attached letters from some of these supporters here; other letters of support are being sent to you directly.

The Field Research Station would also provide a home base for field biologists and graduate students to conduct sustained environmental research and to lead community members on volunteer environmental restoration projects along the San Mateo Coast. Cutting-edge environmental research and restoration techniques developed at the Field Research Station would be available for implementation throughout the California Coastal Zone.

The 12-acre Camp and the surrounding 120-acre parcel are part of the California State Parks system. Most other lands in the Gazos Creek watershed are owned by large logging companies, along with some private residential parcels. The Alliance has a lease with California State Parks to use the 12-acre Camp for these environmental education, research and restoration activities. California State Parks enthusiastically supports this project.

II. RESPONSE TO ISSUES RAISED IN THE STAFF REPORT

The Staff Report raises four main issues that form the basis of its denial recommendation: (1) human use of existing camp facilities constitutes "development" under the Coastal Act; (2) the Project would adversely impact marbled murrelets; (3) the Project is inconsistent with density limitations in San Mateo County's LCP; and (4) the Project could be conducted at alternative locations. We respectfully disagree with Staff's findings on these issues and submit that none of them warrants denial of the permit.

III. MERE HUMAN PRESENCE AT THE CAMP DOES NOT CONSTITUTE "DEVELOPMENT"

The proposed project would involve using existing facilities at an existing camp operated for logging and recreational purposes since 1870. Nonetheless, the Staff Report contends that the primary "development" subject to Commission approval is continued human presence at this existing site.¹ Mere human presence and continued use of existing facilities should not constitute development under the Coastal Act.

A. The Proposed Project Would Not Constitute An Increase In The "Density or Intensity of Use of Land."

The Staff Report argues that the Project constitutes "development" because it "would change the intensity of use of land . . . from a camp that was not in use to a year-round field

¹ The Conservation Alliance must undertake certain minor development required to meet San Mateo County health and fire safety standards, including the installation of a well and water tank and some minor improvements to the Camp's access road for emergency vehicle turnouts. The Alliance plans to complete these limited development projects in the manner most protective of coastal resources, and the Staff Report does not allege that this development will adversely impact sensitive coastal resources at the site.

SPV556837.2

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 13
April 7, 2006 Letter from Latham and
Watkins to Meg Caldwell
Page 2

Hon. Meg Caldwell
April 7, 2006
Page 3

LATHAM & WATKINS LLP

research station and environmental education center.” (Staff Report at 10). The Conservation Alliance’s proposed use of existing camp facilities for similar purposes, at a lower level of intensity than historical uses, does not constitute an increase in the “intensity of the use of land.”

In relevant part, the Coastal Act defines “development” as a “change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act . . . and any other division of land, including lot splits. . . .” Cal. Pub. Res. Code § 30106. When read in context, this phrase is linked to zoning changes, such as lot line adjustments, parcel subdivisions under the Subdivision Map Act or other land divisions or actions that change the use of the land. The California Courts have read this clause similarly.² This concept has also been extended to include activities that change the type of use at a site, when accompanied by increases in the number of visitors, traffic or other impacts.³

In this case, there will be no qualitative changes in the type of uses at the Camp, nor will there be legal changes with respect to the use or division of the land. Lectures, nature walks and human presence in the existing Camp buildings have occurred since the Gazos Mountain Camp was first used as a youth sports camp by Chuck Taylor four decades ago. The proposed project would actually reduce the intensity of use of the land over previous uses. Moreover, no zoning changes or other land divisions associated with the property are necessary for operation of the Field Research Station. The site has been zoned Timberland Preserve Zone/Coastal Zone District (“TPZ-CZ”) since before its acquisition by California State Parks. The Field Research Station is a proper conforming use in the TPZ-CZ zone.

A finding by the Coastal Commission that mere human presence constitutes development would represent a significant change in policy by the Commission concerning the definition of “development” under the Coastal Act. This policy shift would be particularly significant under the facts of this case where the Conservation Alliance merely proposes to continue using existing facilities at a decreased intensity when compared to the substantial and continuous historical use of the same site. We respectfully submit that this policy change is unwarranted in this case.

B. The Camp Was Not Abandoned by Previous Owners

The level of human presence under the Project, capped at 63 people per day and 24 overnight visitors, would be much lower than historical levels, which averaged 120-150 people for day-use and overnight activities and reached as high as 400 people per day during the mid-1990s. Furthermore, the limited activities that would take place at the Camp, such as lectures, supervised nature walks and environmental research, are much less intense than those conducted

² See, e.g., *La Fe, Inc. v. Los Angeles County*, 73 Cal. App. 4th 231 (1999) (lot line adjustment); *Ojavan Investors, Inc. v. California Coastal Comm’n*, 54 Ca. App. 4th 373 (1997) (subdivision of property); *California Coastal Com. v. Quanta Investment Corp.*, 113 Cal. App. 3d 579 (1980) (conversion of apartment building to stock cooperative).

³ See *Stanson v. San Diego Coast Regional Comm’n*, 101 Cal. App. 3d 38 (1980) (“qualitative” change in type of use would also increase number of visitors and associate foot and vehicle traffic).

SF556837.2

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 13
April 7, 2006 Letter from Latham and
Watkins to Meg Caldwell
Page 3

Hon. Meg Caldwell
April 7, 2006
Page 4

LATHAM & WATKINS LLP

by previous users. Such a decrease cannot be said to constitute "development," which necessarily implies growth or expansion.

Nonetheless, the Staff Report found that operation of the Field Research Station would increase the intensity of use of the property. To reach such a conclusion, the Staff Report found that the Camp had been "abandoned" between 1998 and 2000 by Sempervirens Fund, the group that initially purchased the property prior to transferring it to California State Parks. The Report cites San Mateo County zoning regulations' definition of "abandonment," to support its conclusion. (Staff Report at 10).

The Staff Report's conclusion that Sempervirens Fund "abandoned" the parcel is wrong on the law and wrong on the facts. First, San Mateo County's definition of "abandonment" applies only to non-conforming land uses and is not even part of the County LCP. The Field Research Station is a conforming use in the applicable zoning district. Second, the property was used between 1998 and 2000. Under the direction of Sempervirens Fund and California State Parks, the Conservation Alliance volunteers devoted over 200 days to clean-up and restore the Camp during this time. The Alliance also conducted some basic programs, including lectures and nature walks, similar to the activities proposed here.

Finally, finding abandonment here would be bad public policy; it would discourage the use of sound science as a planning tool. Sempervirens Fund prudently chose to study the parcel during this period to determine proper future uses for it. Under the direction of Sempervirens Fund, California Department of Fish and Game (CDFG), U.S. Fish & Wildlife Service (USFWS) and California State Parks, Mr. Steve Singer, evaluated potential impacts to marbled murrelets, while Mr. Don Alley, evaluated potential impacts to aquatic species. Sempervirens Fund and California State Parks properly believed that full time use of the Camp should not begin until the environmental impacts of such activities were assessed. Therefore, subject only to the proper regulatory delays associated with modern environmental policy and land use permitting, the proposed project would continue uses at a facility in operation for the past 135 years.

IV. THE PROJECT WILL NOT HARM MARBLED MURRELETS

The Staff Report's main concern with the Project is its possible affect on marbled murrelets, a protected species. Specifically, Staff contends that the project will significantly impact marbled murrelets through increased nest predation from corvids (ravens, crows and jays). The Report also states that it is "inconclusive" whether increased noise caused by the project will adversely impact murrelets. Although the Staff Report dedicates many pages to its discussion of marbled murrelets, it can point to no marbled murrelet biologist who supports its conclusions opposing the project. None of these issues are "inconclusive." The best science demonstrates the project will not harm murrelets.

The Conservation Alliance has worked with a collection of the most prominent marbled murrelet and corvid biologists working in the Santa Cruz Mountains: Mr. Steven Singer, Mr. David Suddjian, Dr. C. J. Ralph, Mr. Ron LeValley. These independent scientists have visited the Camp; they have devoted their careers working in this area, on these issues. Moreover, CDFG and USFWS, the government agencies responsible for protecting this species, have found

SP556837.2

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 13
April 7, 2006 Letter from Latham and
Watkins to Meg Caldwell
Page 4

Hon. Meg Caldwell
April 7, 2006
Page 5

LATHAM & WATKINS LLP

that the Project will not adversely affect marbled murrelets. Together with these biological experts and government regulators, the Conservation Alliance has developed an extensive list of protective measures to ensure that the Project will have no adverse impacts on marbled murrelets. These proposed protective measures are set out in full in the attached permit conditions, which the Alliance would gladly accept as requirements of the Project.

Nonetheless, the Staff Report reached its contrary conclusion after positing that (1) corvids are attracted to humans absent subsidized food sources, and (2) protective measures are generally difficult to enforce. Respectfully, neither argument has scientific support, and neither is sufficient to form the basis of the Staff's conclusion that the Project would significantly adversely impact marbled murrelets.

A. Mere Human Presence Does Not Adversely Impact Marbled Murrelets

The weight of the scientific evidence does not link mere human presence with an increase in marbled murrelet nest predation by corvids. Rather, the scientific consensus demonstrates that corvids are attracted to areas of human use only because humans tend to leave subsidized food sources for corvids.⁴ As detailed in the attached Proposed Permit Conditions, the Conservation Alliance has developed specific protective measures, including strict garbage and food control measures, to ensure that corvids are not lured to the site by subsidized food sources.

All prominent biologists studying marbled murrelets in the Santa Cruz Mountains agree that the Field Research Station, as conditioned, can be operated without harm to marbled murrelets.⁵ These experts agree that it is "not mere human presence or 'human activity', but the availability of food that attracts ravens and jays." (David Suddjian, letter to Hon. Meg Caldwell, dated April 7, 2006). Furthermore, the resource agencies charged with protecting marbled murrelets also agree that the presence of humans at the site will not significantly adversely impact murrelets.⁶ Because the experts agree that the Project's "protective measures and conditions will effectively prevent potential impacts to nesting Marbled Murrelets," there is no

⁴ The Staff Report cites only one study in support of its conclusion that corvids are attracted to mere human presence, a 2002 study by Gutzwiller et al., but this study does not even evaluate the type of corvids that are found in the Santa Cruz Mountains. Moreover, in the Gutzwiller study, the biologists actively tried to incite and attract corvids. At the Field Research Station, conversely, trained supervisors will be doing everything possible to avoid the attraction of corvids.

⁵ David Suddjian, letter to Hon. Meg Caldwell, dated April 7, 2006 (attached); Steven Singer, letter to Hon. Meg Caldwell, dated April 7, 2006 (attached); 2005 Steven Singer Report (attached to Coastal Commission Briefing Materials); 1999 Steven Singer Report (attached to Coastal Commission Briefing Materials); David Suddjian, letter to John Wade, dated November 17, 2005 (attached to Coastal Commission Briefing Materials); Dr. C.J. Ralph, letter to John Wade, dated October 31, 2005 (attached to Coastal Commission Briefing Materials); Ron LeValley, letter to John Wade, dated January 17, 2005 (attached to Coastal Commission Briefing Materials).

⁶ California Department of Fish and Game, letter to Yinlan Zhang, dated February 28, 2006 (attached to Coastal Commission Briefing Materials); U.S. Department of Fish & Wildlife, letter to Dave Schaub, dated February 23, 2006 (attached to Coastal Commission Briefing Materials).

SF556837.2

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 13
April 7, 2006 Letter from Latham and
Watkins to Meg Caldwell
Page 5

Hon. Meg Caldwell
April 7, 2006
Page 6

LATHAM & WATKINS LLP

scientific basis for rejecting the Project. (See David Suddjian, letter to Hon. Meg Caldwell, dated April 7, 2006).

B. The Carefully Controlled Environment Of The Field Research Station Will Allow Protective Measures To Be Successful

The Staff Report dismisses the Conservation Alliance's proposed protection measures arguing they are inherently difficult to enforce. This conclusion unfairly rejects measures that are more stringent than those that have been accepted by CDFG and USFWS and are currently in use at other facilities. Moreover, in reaching its conclusion, the Staff improperly analogizes the project to a typical campground setting. The Field Research Station will be unlike other campgrounds where kids play unsupervised and cooking and eating is done outdoors. At the Field Research Station, trained conservationists will oversee all visitors, all field outings will be held in small supervised groups, and all meals will be prepared and consumed indoors making enforcement of mitigation measures relatively easy. In his attached letter, Mr. Suddjian, an expert in corvids in the Santa Cruz Mountains, agrees with the effectiveness of these measures.

C. Refusing To Accept These Protective Measures Has Significant Policy Concerns.

Denial of the Project for lack of sufficient protective measures has far reaching policy implications for California State Parks. Should the Coastal Commission interpret controlled human presence in the vicinity of potential sensitive species habitat as a violation of the Coastal Act, many California State Parks properties would fail to meet this standard. For example, Big Basin Redwoods State Park, which employs garbage control measures, would need to close during marbled murrelet breeding season (mid-March through mid-September), due to the vicinity of campgrounds to possible habitat. In essence, if this carefully controlled Project, with limited public access, supervised by trained conservationists, fails to satisfy the Coastal Act, few uses in State Park lands will.

V. THE PROJECT QUALIFIES FOR A DENSITY BONUS

The Staff Report concludes that San Mateo County improperly determined that the Camp constitutes either a "public recreation facility" or a "visitor-serving facility" entitled to a density credit bonus under the LCP. We respectfully submit that the County properly applied its density limitations and that the Project constitutes both a public recreation facility and a visitor-serving facility.

A. The Field Research Station Constitutes A Public Recreation Facility

The Project is properly classified as Public Recreation Facility, defined as a facility which "serv[es] primarily a recreation function . . . operated by . . . non-profit organizations . . . [with examples including] parks, recreation areas, natural preserves, wild areas, and trails." (San Mateo County LCP Policy 11.3). The Field Research Station fits squarely under this definition. The Staff Report disagrees, however, concluding that the definition of recreation under the Coastal Act must necessarily be "narrower" than one which includes activities such as participating in volunteer restoration work on weekends and visiting the San Mateo Coast for

SP556837.2

Hon. Meg Caldwell
April 7, 2006
Page 7

LATHAM & WATKINS LLP

outdoor environmental education experiences. (Staff Report at 35). A definition of recreation which excludes volunteer environmental education and restoration activities is inconsistent the policies of the Coastal Act, and should not be used as a basis for rejecting this Project.

B. The Field Research Station constitutes a Visitor-Serving Facility

In addition, the Project also constitutes a Visitor-Serving Facility, defined as a facility which is "exclusively available to the general public and provides[s] necessary, basic visitor support services" and includes examples such as "campgrounds" and "group camps." While characterizing the project as a campground for purposes of its marbled murrelet analysis, Staff concludes that the Field Research Station does not meet this definition for these purposes. Instead, the Report describes the proposed Camp uses as open only to "members" and "at most times closed to the general public." (Staff Report at 35).

Limiting unfettered public access to a site does not transform it into a private club. All recreation facilities include some limit on their capacity to host visitors. Moreover, the Coastal Act recognizes limitations to coastal access, where, as here, it is necessary to ensure the protection of the valuable coastal resources. Furthermore, the Conservation Alliance does not limit its activities to "members." It is committed to offering programs to all segments of the public, while targeting underserved communities, including at-risk and underprivileged youth.

In furthering this mission, the Conservation Alliance conducted pilot programs in 2001 and 2002 involving a broad range of children, graduate students, teachers, and community groups to the Camp to learn about how to restore and protect the sensitive environment of the San Mateo Coast. These programs reached out to more than forty schools and community groups, many of which serve a significant percentage of minority and disadvantaged youth, as highlighted in our Briefing Materials. Attached are letters from children who participated in these programs, describing their experience at the Camp. The programs taught the participants about the importance of environmental protection, a lesson that the Conservation Alliance hopes to continue teaching to the public upon approval of the Field Research Station.

The Field Research Station's focus on environmental protection, education, restoration and research makes it more than a typical visitor-serving facility, but does not disqualify it as one. The Conservation Alliance has planned a unique and important program that will provide recreational and environmental education opportunities for children, graduate students, teachers and other community members from San Mateo County and throughout Northern California.

VI. **THERE ARE NO FEASIBLE ALTERNATIVE SITES FOR THE PROJECT**

Although the Staff Report agrees that "no other location would provide exactly the same characteristics as the Gazos Mountain Camp," Staff contends that alternative suitable sites, listed in the Report, are available for the Project. (Staff Report at 38). Because the Staff contends that those sites are available, the Report concludes that approval of the permit would violate the substantive requirements of the California Environmental Policy Act. However, even under CEQA, alternatives need not be selected if they are not feasible or fail to meet project objectives.

SF556837.2

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 13
April 7, 2006 Letter from Latham and
Watkins to Meg Caldwell
Page 7

Hon. Meg Caldwell
April 7, 2006
Page 8

LATHAM & WATKINS LLP

After a careful review of the proposed alternatives, the Conservation Alliance respectfully resubmits that Gazos Mountain Camp is the only feasible site for the Project.

The Staff Report lists several "alternative" sites, provided by Jim Rourke, an opponent of the Project. These include outdoor campgrounds, such as YMCA camps, and indoor facilities in a town or urban setting, such as church basements. None of these options meet the core objectives of the project and they are, for other reasons also, infeasible. All but one of the nine outdoor education locations are currently or seasonally occupied by other groups. These locations are not feasible because the Field Research Station requires a long-term home for meaningful, sustained environmental research. The one camp location which is not occupied, Sheriff's Honor Camp, is located in an even more remote site than Gazos Mountain Camp with comparable ecological sensitivity. Therefore, this "alternative" would not meet the CEQA standard of reducing environmental impacts.


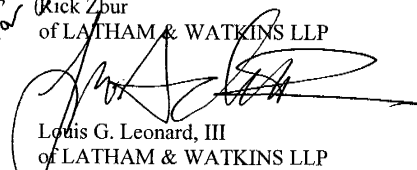
The Field Research Station must be located in an area with sufficient ecological resources so that visitors may experience hands-on environmental learning, research and restoration. None of the nine indoor "meeting places," which include church and fire halls and a high school gym, are suitable locations for the Project because they provide neither the requisite connection to nature, nor the capacity for overnight use by youth groups or researchers.

VII. CONCLUSION

We have attached draft proposed protective conditions which, upon approval, will ensure that operation of the Field Research Station will protect and enhance the environment surrounding the Camp. With respect to marbled murrelet protections, these conditions include both protective measures that are incorporated into the Conservation Alliance's existing lease with California State Parks and approved by the County, as well as new measures proposed by the Alliance after collaborating with CDFG, USFWS and Coastal Commission Staff.

We appreciate the opportunity to provide the Commission with this additional information about Pescadero Conservation Alliance's proposed Field Research Station. We respectfully submit that the Commission should affirm the County's approval of this greatly needed project and allow the Conservation Alliance to continue its stewardship of this unique unit of the California State Parks System.

Respectfully,


for Rick Zbur
of LATHAM & WATKINS LLP

Louis G. Leonard, III
of LATHAM & WATKINS LLP

Attachments

SF0556837.2

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 13
April 7, 2006 Letter from Latham and
Watkins to Meg Caldwell
Page 8

Hon. Meg Caldwell
April 7, 2006
Page 9

LATHAM & WATKINS LLP

cc: Coastal Commission Staff:

Ms. YinLan Zhang
Coastal Program Analyst
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Coastal Commissioners and Alternates:

Mr. David Allgood
10780 Santa Monica Blvd. #210
Los Angeles, CA 90025

Mr. Brian Baird
Resources Agency
1416 Ninth Street, Room 1311
Sacramento, CA 95814

Dr. William A. Burke
11110 West Ohio Ave., Suite 100
Los Angeles, CA 90025

Mr. Cruz Bustamante
Office of the Lieutenant Governor
701 B Street, #376
San Diego, CA 92101

Mr. Larry E. Clark
City of Rancho Palos Verdes
30940 Hawthorne Blvd.
Rancho Palos Verdes, CA 90275

Ms. Lorena Gonzalez
Office of the Lieutenant Governor
701 B Street, #376
San Diego, CA 92101

Mr. Patrick Kruer
Vice-Chair, California Coastal Commission
The Monarch Group
7727 Herschel Ave.
La Jolla, CA 9037

SF556837.2

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 13
April 7, 2006 Letter from Latham and
Watkins to Meg Caldwell
Page 9

David L. Suddjian
Biological Consulting Services

801 Monterey Avenue, Capitola, CA 95010
Telephone 831-479-9603, email dsuddjian@aol.com

April 6, 2006

Ms. Meg Caldwell, Chair
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

**Re: A-2-SMC-04-005: Appeal of San Mateo County Coastal Development Permit
PLN 2002-00606, issued to Pescadero Conservation Alliance and California Dept. of
Parks and Recreation.**

Dear Ms. Caldwell,

This letter responds to the California Coastal Commission Appeal Staff Report De Novo Review dated March 24, 2006 (referred to hereafter as the "Staff Report"). I protest the appeal of the San Mateo County Coastal Development Permit issued to Pescadero Conservation Alliance (PCA) and the California Dept. of Parks and Recreation. The Staff Report draws conclusions that are scientifically incorrect regarding potential impacts to Marbled Murrelets (*Brachyrhynchus marmoratus*) that could result from the proposed use of the Gazos Mountain Camp. **In my opinion the proposed protective measures and other conditions of the proposed project are effective, feasible and reasonable, and such protective measures and conditions will effectively prevent potential impacts to nesting Marbled Murrelets. I recommend that the Commission approve the project with these conditions.**

Professional Background

I have conducted research relating to Marbled Murrelets in the Santa Cruz Mountains since 1990. This has included (1) evaluations of suitability of forest areas for potential nesting by murrelets, (2) observation of murrelet nests, and (3) surveys to determine presence and occupancy and/or to provide long term monitoring of murrelet activity. I am a co-author of scientific papers relating to murrelet nesting biology and habitat selection (e.g., Singer et al. 1995 and Baker et al. in press).

My research has also focused on populations and behavior of murrelet predators in the Santa Cruz Mountains, including the Common Raven (*Corvus corax*) and Steller's Jay (*Cyanocitta stelleri*). For 10 years (1992 to 2001) I monitored corvid numbers and behavior in the Butano Creek watershed of San Mateo County, adjacent to the Gazos Creek watershed (Suddjian 2003). In 1995, 1996 and 2002 I studied the relative abundance of corvids in Big Basin Redwoods State Park, comparing areas of high human

David Suddjian Biological Consulting Services

1

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 14
April 6, 2006 Letter from David
Suddjian to Meg Caldwell
Page 1

use with campgrounds and picnic areas to areas away from such uses. From 2003-2005 I monitored ravens and jays at Big Basin Redwoods, Portola Redwoods, and Butano State Parks, and San Mateo County Memorial Park for the Command Oil Spill Trustee Council (e.g., Suddjian 2005). This work was part of a mitigation program designed to assess changes in corvid numbers in response to management actions designed to benefit nesting Marbled Murrelets. The corvid monitoring has focused on comparing numbers of corvids in association with campgrounds and with those in areas of the parks removed from such human uses. It has included extensive observation of corvid behavior and interactions between corvids and people.

Issues Regarding Impacts to Murrelets

I would like to address two issues covered by the Staff Report: (1) the presence of marbled murrelet habitat within the Gazos Mountain Camp property, (2) the effectiveness of the protective measures proposed by PCA and response by corvids to the project.

1. Marbled Murrelet Habitat Within The Gazos Mountain Camp

The Staff Report's treatment of this issue is misleading and does not represent sound scientific evaluation of the situation. It confusingly gives opinions expressed in a July 2005 letter from the California Department of Fish and Game (Floerke 2005) that have since been superseded and *reversed* by a subsequent February 2006 letter from the CDFG (Floerke 2006). The Staff Report concludes that "evidence to determine the presence of potential nesting habitat within and around the camp, outside of the 10-acre old growth and 20-acre mature second growth forest is inconclusive" (p. 18). But in fact, on p. 17 the Staff Report admits that the two resource agencies reviewing the project that have expertise in the matter (CDFG and United States Fish and Wildlife Service) both "agreed that potential nesting trees are not likely present in the camp area and outside of the 10-acre old growth stand and 20-acre mature second growth stand." Thus these agencies (Floerke 2006, Long 2006) are now in agreement with the expert opinions of the murrelet researchers who have commented on the proposed project (LeValley 2005, Ralph 2005, Singer 2005, and Suddjian 2005b): there is no potential murrelet nesting habitat on the site of the proposed project; only the old growth and mature second growth stands contain such habitat.

I find it disingenuous for the Staff Report to imply that biologists have "different opinions regarding the specific habitat needs of the species" (p. 18), suggesting that this is due to insufficient scientific evidence about the murrelet. Thus, the Staff Report finds the habitat situation in the camp "inconclusive." I counter that there is broad agreement among experts about the species' habitat needs, and the Staff Report's discussion of matter does not reflect the fact that details of a species' habitat requirements can and do vary somewhat over its geographic range. Researchers familiar with the murrelet's habitat associations and requirements in the Santa Cruz Mountains agree that the forest within and around the camp is not murrelet nesting habitat.

2. Effectiveness Of Protective Measures And Response By Corvids

Much of the discussion and conclusions given in the Staff Report regarding corvids is based on misrepresentations of the food resources that might be available to corvids at Gazos Mountain Camp, apparently limited knowledge of corvid behavior and biology, and an *a priori* assumption that the proposed conditions to prohibit food subsidies cannot be successful.

It must be clearly noted that the proposed camp and research facility on the PCA property, with its conditions and restrictions, does not in any way approximate a standard public campground or picnic area, such as are found in the state parks of the Santa Cruz Mountains. Other than installation of suitable garbage receptacles, public campgrounds in the parks have very limited opportunities for management of food or waste, and so food resources are nearly continually available to corvids in actively used public campgrounds and picnic areas. The Staff Report incorrectly states that "corvid management programs to control anthropogenic food sources as proposed by the applicant have been implemented in existing campgrounds and day use areas such as in Big Basin Redwoods State Park..." (p. 24). This is not the case, and nothing close to what the applicant has proposed has been implemented in the parks. In fact, among the conditions listed on pp. 21-22 of the Staff Report, none of the five items that pertain to control of anthropogenic food sources have yet been attempted fully elsewhere.

In contrast to standard public campgrounds, the PCA camp will be a far more structured environment where the types of controls included in the protective measures can be effectively implemented. Such controls could not be implemented in a standard campground, but they are feasible given the limited and closely monitored usage of the PCA camp. The significant opportunity for successful implementation cannot be simply dismissed. Scientific evidence for effective reductions of subsidized food resources may be limited, but common sense indicates it is feasible in a highly controlled setting to a sufficient degree that predator populations would not be attracted or subsidized. It is critical to realize the real potential for effective implementation of the measures, as much of the argument put forward in the Staff Report rests on the assumption that the measures are infeasible.

Another serious flaw in the reasoning of the Staff Report is the unfounded assertion that even without food subsidies mere human presence will attract Common Ravens and Steller's Jays to the property. The Staff Report repeatedly states that "human activity" will attract ravens and jays to the project site and vicinity. All of the citations of published and other written sources given in the Staff Report which mention the words "human activity" in connection with attraction of ravens or jays do so in the context of activities or land uses where food subsidies are readily available to those birds. In some instances this is plainly stated (e.g., citations of Singer et al. 1991 and Marzluff and Neatherlin "in press" [now published, 2006]). In other cases it is clearly implied from the context of the cited material. But the discussion in the Staff Report often omits this connection to food subsidies in applying these studies to the proposed project, and errs greatly in extending the attraction to mere "human activity" or human presence without any food reward. Thus, the staff report erroneously concludes that higher numbers of people on the site will lead directly to higher numbers of ravens or jays.

David Suddjian Biological Consulting Services

3

The only reference in the Staff Report to a claim from a biologist that corvids in general will be attracted by mere human presence is credited to "Golightly 2006" (p. 25). Presumably this is from a comment in a letter or personal communication, as it is not cited in the list of file documents at the end of the Staff Report, and it is not entirely clear which corvid species Golightly was referring to, as that is not stated. But in the Staff Report other reference to Golightly (on p. 23, citing a quote from the book "Rare Bird" by Maria Ruth), Golightly clearly gives food as the nexus for the attraction of corvids to people.

The only published report cited in the Staff Report which involves the attraction of a corvid to human presence in the absence of a food subsidy pertains to Gray Jays (*Perisoreus Canadensis*) (Gutzwiller et al. 2002). The Staff Report extrapolates from that study and states that as, "Gray Jays are part of the Corvidae family that includes ravens and Steller's Jays...their behavior is likely to be indicative of that of Steller's Jays and ravens" (p. 25). This is wrong. While many corvids share various characteristics, many species also have unique elements in their behavior and life history. The Gray Jay is well known for its exceptional curiosity and boldness toward humans. This curiosity and boldness is not shared by the Common Raven or Steller's Jay. A quick check of just one reference that provides an overview of the family Corvidae (e.g., Madge and Burn 1994) reveals that Gray Jay and Steller's Jay have significant differences in behavior, as might be expected for members of two different genera. For example, from the account for the Gray Jay on p. 102 of Madge and Burn (1994):

"...At the appearance of people it often appears as if from nowhere, sweeping in suddenly...its bold and cunning behavior is both endearing and annoying...it will enter forest camps, log cabins and tents with amazing boldness and fly off with anything it can carry, whether edible or not."

The account of the Steller's Jay (p. 69) states:

"Familiar about camp sites and picnic spots...where it can become very confiding. Otherwise generally shy and wary of man."

Furthermore, in the conclusion of their paper Gutzwiller et al. (2002) specifically caution against assuming their results apply in other situations even for the Gray Jay alone: "Even within a species, it is not safe to assume that [human] intrusion effects (or lack thereof) for 1 set of conditions will necessarily apply to another set of conditions" (p. 379).

It has been my consistent experience over many years of study in the Santa Cruz Mountains that ravens and jays are only attracted to people where a food reward is regularly available, whether in a campground where it is continually available, or at other outdoor sites where food is consumed periodically. For example, at Big Basin, Portola and Butano State Parks, Steller's Jays and Common Ravens generally avoid people as they walk on trails away from areas with regular food availability, including trails that are used on a daily basis and by large numbers of visitors on weekends, and despite the fact that some hikers eat as they walk or stop at intervals to snack. But these same corvids may be attracted at a main trailhead or a popular destination because food is regularly consumed there and made available to corvids.

David Suddjian Biological Consulting Services

4

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 14
April 6 Letter from David
Suddjian to Meg Caldwell
Page 4

Two ornithologists whose works are cited in the Staff Report have offered personal comments declaring that it is not mere human presence or "human activity", but the availability of food that attracts ravens and jays. When asked to compare the behavior of Steller's and Gray Jays in response to people, John Marzluff (the premier corvid expert in the western United States) stated, "Gray Jays often appear curious about people and seem to respond to them and check them out, but I don't think either species will stay with humans without food for long" (pers. comm. March 31, 2006). Ornithologist Martin Raphael commented: "...people can influence the occurrence of some corvids, crows in particular and to a lesser extent Steller's Jay and ravens. But any of these corvids depend on other more natural food items, such as berries and insects that occur in structurally complex forest with lots of understory or edge. And it is the food items that people leave that attracts the birds...I agree they are curious and may come in to take a look at a person, but I think this is only because they have learned that people often leave trash behind and that trash has good food..." (pers. comm. April 4, 2006). The temporary nature of the initial curiosity is even noted by Gutzwiller et al. (2002) for the Gray Jay: "during successive years of unrewarded approaches to experimental intruders, the proportion of Gray Jays living on and around our study sites that became disinterested in the intruders increased" (p. 377).

The Staff Report emphasizes the lack of documentary evidence for the effectiveness of the proposed measures to avoid food subsidies for corvids, but then takes the applicant to task for agreeing to monitor before and after implementation of the project, suggesting the monitoring indicates "a lack of certainty" that the measures can be effective (p. 27). In fact, monitoring was proposed and encouraged by the CDFG and USFWS, and it will help provide further documentary evidence. Monitoring of the implementation and effectiveness of protection measures is a proper and standard procedure, not a measure that should be used to discredit the proposed protective measures.

The Staff Report seems to have several problems with monitoring. It claims that it is "unlikely that a corvid monitoring study would be able to detect significant increases in corvid numbers" and, "the proposed mitigation measure to monitor and control corvids have not been (sic) proven to be effective in detecting corvid increases." (p. 27). I am left to conclude that the writers are unfamiliar with bird survey techniques, as there are several feasible field methods that would provide scientifically sound, useful data, both on bird numbers and specific responses to people.

The Staff Report gives a misleading impression that substantial numbers of corvids might be attracted to visit the camp. Even in forest campgrounds in the Santa Cruz Mountains where there are no strict controls of food subsidies, numbers of corvids may be small (Suddjian 2005a). Jays are by nature more numerous in forest settings than ravens, but they only gather in large groups where food is widely available, but such would not be the case at the PCA camp. It is characteristic to have but a single pair of ravens (and seasonally, their offspring) visiting a particular public campground. Large groups of ravens visiting a site like the PCA property would be quite at odds with what I have seen in these mountains. The Staff Report refers to "large numbers of ravens roosting in nearby valleys" (p. 27) close to the project site, but I can say from first hand experience that there are no large raven roosts in the region of the PCA property, and large breeding season roosts are actually rather rare in the Santa Cruz Mountains.

David Suddjian Biological Consulting Services

5

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 14
April 6, 2006 Letter from David
Suddjian to Meg Caldwell
Page 5

Furthermore, ravens which attend such roosts forage principally at landfills and in coastal agricultural areas, not forest settlements.

In its conclusions on the corvid issue, the Staff Report engages in hyperbole about the importance of the Gazos Mountain Camp property for the regional murrelet population. Given the rather small stands of potentially suitable nesting habitat on the property, it is silly to consider that it could function as a possible source "for the rest of the [Santa Cruz Mountains] population" (p. 29). The small areas of suitable habitat on the property indicate strongly that not more than one or two pairs of murrelets might nest there, and even then perhaps not annually. And given the declining trend apparent for the regional murrelet population, it is possible that nesting does not occur at the site any longer. But even if, hopefully, murrelets do nest there I cannot see how one could ever conclude (as the Staff Report does), that the risk of a nest failure at the property "would have significant implications for the entire, vulnerable Santa Cruz Mountains Marbled Murrelet population" (p. 29).

Conclusion

I hope the proposed project will be considered in light of sound scientific information and opinions, including those of biologists with substantial and established professional experience, who are experts on murrelets and corvids in the Santa Cruz Mountains region.

I restate my opinion that the proposed protective measures and other conditions of the proposed project are effective, feasible and reasonable, and that such protective measures and conditions will effectively prevent potential impacts to nesting Marbled Murrelets.

Sincerely,



David Suddjian
Wildlife Biologist

Literature and Other Documents Cited

Baker, L. M., M. Z. Peery, S. R. Beissinger, E. Burkett, S. W. Singer and D. L. Suddjian. In press. Nesting habitat characteristics and associations of the marbled murrelet in Central California. *Journal of Wildlife Management*.

Floerke, R. W. 2005. Comments on marbled murrelets at the Gazos Mountain Camp Field Research Station, Gazos Creek watershed, San Mateo County. California Dept. of Fish and Game. Letter to California Coastal Commission dated July 14, 2005.

David Suddjian Biological Consulting Services

6

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 14
April 6, 2006 Letter from David
Suddjian to Meg Caldwell
Page 6

Steven W. Singer, M.S.
Environmental & Ecological Services
218 Nevada Street, Santa Cruz, CA. 95060
Phone/Fax: (831) 427-3297

April 6, 2006

Ms. Meg Caldwell, Chair
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA, 94105-2219

SUBJECT: A-2-SMC-04-005: Appeal of San Mateo County Coastal Development Permit PLN 2002-00606, issued to Pescadero Conservation Alliance / California Department of Parks and Recreation

Dear Ms. Caldwell,

I would like to address the appeal of the issuance of a coastal development permit to the Pescadero Conservation Alliance (PCA) to operate a field research station at Gazos Mountain Camp. My comments are in response to the Commission's Appeal Staff Report De Novo Review (Appeal No. A-2-SMC-04-005), dated March 24, 2006, which I shall hereinafter refer to as the Staff Report. I wish to discuss the marbled murrelet, a state-listed endangered and federally-listed threatened species that nests, or may nest, on property adjacent to the 12-acre property that is the subject of this permit appeal.

I have had an extensive relationship as a scientist and biological consultant working with the marbled murrelet in the Santa Cruz Mountains since 1974. I have worked as either the principal or associate researcher on such important murrelet ecology milestones as the description of the first murrelet tree nest (Binford, Elliott, and Singer, 1975), the discovery and description of the first nest in a redwood tree and the subsequent observation of the first fledging of a murrelet from a tree nest (Singer, Suddjian, and Singer, 1995), the first observations of murrelet nest depredation by Steller's jays (*Cyanocitta stelleri*) and common ravens (*Corvus corax*) (Singer et al. 1991), and the development of a scientific protocol for nest-finding by the use of ground observers (Singer et al. 1991). I am also a contributor to the professional protocol used by murrelet biologists to test for the presence of absence of murrelets in a forest stand (Evans et al. 2003). I am a member of the Marbled Murrelet Technical Committee of the Pacific Seabird Group and am currently conducting a long-term study of murrelet usage in the Gazos Creek Watershed.

My foremost concern is that no activities should be permitted that would adversely impact marbled murrelets. I strongly believe that management prescriptions for any

Steven W. Singer Environmental and Ecological Services

Page 1 of 10

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 15
April 6, 2006 Letter from Steve
Singer to Meg Caldwell
Page 1

property that contains or is adjacent to murrelet nesting habitat should be based on the principles of sound scientific resource management, and differences of opinion should be resolved by considering the merits of each position, and by the experience level and knowledge of the proponents and opponents.

As someone who has dedicated a significant part of his life to, as a scientist, researching the breeding ecology of this species, and as a conservationist, to working for the protection of this species, I would never support any land use activity that had even the slightest potential to jeopardize the well-being of the marbled murrelet. The PCA proposal to operate a forest research station at the existing camp facilities, as conditioned, does not pose any threat to the marbled murrelet, and has my full and unconditional support.

Location of the Proposed Forest Research Station in Relation to Murrelet Use Areas

The proposed Field Research Station will be located on a 12-acre parcel located near the center of a 120-acre property purchased by the Sempervirens Fund in 1997, and subsequently added to Butano Redwoods State Park. Camp buildings (cabins, dining hall, offices, and meeting rooms) already exist on the 12-acre parcel. PCA will use these existing buildings to operate the Field Research Station and will not construct any new buildings.

The 120-acre property also contains two areas separate from the developed camp area that provide existing or potential nesting habitat for the marbled murrelet. The first area is a 10-acre old-growth stand where behavior associated with nesting has been observed. The second area is a second-growth forest stand with some residual old-growth trees that might provide some marginal nesting habitat. The old-growth stand is in one corner of the 120-acre property and is separated from the developed camp area by a deep arroyo with a perennial stream. The second-growth area with marginal nesting habitat is located to the southeast of the developed camp area, and is separated from the camp by the other fork of Gazos Creek, which is also found in a deep arroyo.

From the beginning, it was clear to me that the murrelet nesting areas and the developed camp area were physically separated from each other. When preparing my 1999 habitat management guidelines, this allowed me to prescribe protective measures, such as a 300-foot buffer strip around the old-growth stand, that would allow a level of camp use to continue without interfering with nesting marbled murrelets. Please note that this buffer zone remains a protective measure for the Project. A memorandum from John Dixon and Vanessa Metz to Chris Kern, dated March 27, 2006, at page 16, states that the Project does not include a buffer zone. This is wrong. The 300 foot buffer zone is a condition of PCA's existing lease and is currently in place at the Camp.

The natural division of the property into separate forest stands was also evident to the Apex Houston Trustee Council which contributed funds toward the purchase of the property. They knew then that both uses could be compatible. The Department of Fish and Game and the U.S. Fish and Wildlife Service agreed then, and they still agree today,

Steven W. Singer Environmental and Ecological Services

Page 2 of 10

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 15
April 6, 2006 Letter from Steve
Singer to Meg Caldwell
Page 2

that operation of a research station on the 12-acre parcel is compatible with marbled murrelet habitat protection. As the California Department of Fish and Game has said in their February 28, 2006 letter to the Coastal Commission, "we do not expect the camp operation ... to adversely affect MAMU [marbled murrelets] using the site"(Floerke, 2006). The U.S. Fish and Wildlife Service reached similar conclusions in a separate letter.

Scope and Intensity of the Proposed Research Station Operations

The Field Research Station will provide research opportunities, environmental training, and scientific education programs for youth and community groups. It will have up to four permanent staff, overnight accommodations for 16 – 24 people, and day use accommodations for not more than 63 people, all to be housed in existing facilities. A water tank and associated fire hydrants are the only structures that need to be installed to meet County Fire Department requirements. The County Fire Department also required extending the shoulder of the Camp access road by adding some gravel in a few places to accommodate emergency vehicle access. No trees will be removed. The Station will not provide facilities for, nor will it allow, camping or picnicking. All PCA programs providing public access and recreation will limit the number of participants and be supervised by PCA staff.

The goals of the forest research station are to benefit endangered species, other native biodiversity, and the natural environment. Through an environmental education program, it will build support in both children and adults for the protection of endangered species such as the marbled murrelet. Through its restoration work program it will improve natural habitat for sensitive plant and animal species throughout the San Mateo County coast. Through its biological research program it will further our knowledge of the ecology and life history needs of native plants and animals, and thereby allow our society to better manage these species to foster their long-term conservation.

The Coastal Commission Staff Report has misrepresented the purpose, scope, and intensity of the proposed research station by repeatedly comparing the impacts of its operation to impacts associated with camping, picnicking, and other unsupervised public outdoor recreation sites. This mischaracterization is especially misleading with regard to the number of jays and ravens that the Staff Report assumes may be present on the property. In truth, the Field Research Station will not have the slightest resemblance to campgrounds, picnic areas, or other public recreation sites, nor will it provide the anthropogenic (i.e., human-created) food sources for corvids (jays and ravens) that those types of facilities provide.

Campgrounds, picnic areas, and parks allow people to come and go as they please, largely without any supervision. Meals and snacks are eaten outdoors at these sites and often there is little control over the feeding of wildlife or the inadvertent dissemination of food scraps. In addition, garbage may not be stored in such a way as to keep it away from wildlife. Consequently corvids are attracted to these sites because they are a source of free food.

Steven W. Singer Environmental and Ecological Services

Page 3 of 10

The Field Research Station will not provide camping or picnicking facilities. It will not be open to the general public on a "drop-in" basis; groups will only be allowed to visit after scheduling an appointment and the number of visitors will be subject to limits imposed by the County and, if approved, by the Commission. Once on site, all visitors will be under the constant supervision of a staff member. No outside eating will be allowed and the grounds will be checked three times a day for litter, paper wrappers, etc. The presence of an indoor kitchen and dining hall is a real benefit, as it will allow the preparation and serving of all meals to occur indoors. All garbage will be kept in animal-proof containers, and the containers will be kept indoors. This type of tightly-controlled visitor environment will make it easy to eliminate any sources of subsidized food for corvids or other wildlife. In addition, success of the protective measures will be further improved because they will be implemented by trained PCA staff – individuals with expertise in biology and dedicated to protecting the native biodiversity.

Given the nature of the station's activities, its policies, and its facilities, I do not have any doubt that these protective measures will be successful in the control of human-subsidized food sources for wildlife.

The Santa Cruz Mountains Bioregional Council, a non-profit organization of biological professionals dedicated to the enhancement of natural biodiversity within the Santa Cruz Mountains Bioregion, had this to say about the Field Research Station project:

"Rather than having a negative impact, we believe that the activities and uses that will be implemented by PCA under the terms and conditions of the CDP and use permit will have a positive impact on the Santa Cruz Mountains murrelet population. This benefit will accrue through public education, encouragement of new research, and the fostering of a successful anthropogenic food source control regimen. We anticipate that this regimen will serve as a model that could be exported to other areas where murrelets nest in close proximity to human activity." (Renshaw, 2006).

Misconceptions about the Efficacy of Corvid Control Measures

As discussed above, PCA will be implementing food and garbage control measures in order to control corvid levels and thereby prevent increased predation of murrelet nests, by eliminating a subsidized food source for common ravens and Steller's jays. The Staff Report questions both the effectiveness of these measures and their feasibility. In my opinion, and based on my review of the scientific literature, these corvid control measures will be effective and, for the reasons discussed above, feasible for PCA to implement as part of this project.

At the bottom of the staff report on page 23, Coastal Commission Staff discuss the recommended food control measures and contend, "inherent difficulties in the enforcement of the mitigation measure would likely undermine their effectiveness and result in increased corvid populations." However, as I have pointed out above, Gazos

Mountain Camp is the most ideal situation imaginable to effectively implement these measures. All use of the area is controlled. All visitors are supervised when on site. And the station staff are environmental professionals who are well motivated to protect the best interests of the marbled murrelet. Moreover, after meeting with PCA a number of times to discuss the Project, the California Department of Fish and Game and the U.S. Fish and Wildlife Service have endorsed these protective measures as both effective and feasible.

In addition, Coastal Commission staff assert, on page 26, that even if such an effort could be implemented, "no evidence has been provided demonstrating that the proposed food and garbage control measures would be effective in preventing increased nest predation by corvids." This statement ignores the existing scientific literature and the prominent endorsement of these types of measures by corvid experts and regulatory agencies.

In reality, the control and elimination of subsidized food sources is the corvid control measure that is most frequently recommended by corvid experts. It is recommended by the two most-acclaimed corvid experts in the Western U.S. – William Boarman and John Marzluff. In a U.S.G.S. Publication Brief for Resource Managers, Boarman's very first recommendation is this: "Raven populations may be reduced by controlling access to anthropogenic resources or using means to discourage nesting activity or nesting success" (Boarman, 2004). Marzluff also recommends reducing anthropogenic food in the landscape and goes on to say, "Anthropogenic food sources, even isolated ones, contribute to population increases of some corvid species in lightly settled areas" (Marzluff and Neatherlin, 2006). The California statewide corvid management plan (Liebezeit and George, 2002) also recommends controlling human-subsidized food sources, stating that subsidized food sources are the "principle cause of increases in corvid populations", and they go on to cite one resource manager as saying:

"Reduction of food sources adjacent to areas of listed species activity may be one of the most important and cost effective means of immediately curtailing corvid activity at specific sites (C. Caffrey, pers.comm.). [Emphasis added]

The leading experts and resource agencies would not recommend food and garbage control measures if such measures were not effective in reducing nest predation by corvids.

A recent scientific article documents the effectiveness of reducing anthropogenic food supplies in reducing corvid numbers and the risk of nest predation. The study found that:

"In 1996, when flooding washed out the access road to one of the most popular visitor sites in Olympic National Park (Hoh Rainforest), visitors (and therefore food) were not allowed in the area during the breeding season. American crow and Steller's jay detections each declined by 44.6 percent. Raven detections remained unchanged. The probability of nest predation on simulated murrelet nests dropped from 95 percent (n= 22 nests in 1995, 1997-1999) to 50 percent (n= 6 nests in 1996)." (Marzluff and Neatherlin, 2006). [Emphasis added]

The broad consensus of murrelet experts agree that the control of human-subsidized food sources is a frequently-used and effective technique to address potential predation on murrelet nests.

Misconceptions About Corvid Behavior and Response to Human Activity

Coastal Commission Staff have also alleged that in the absence of food sources, mere human presence is enough to produce an elevated number of corvids in an area, and thereby increase the risk of predation on murrelet nests nearby. In fact they strongly promote this claim as a justification for denying the coastal development permit. However, there is no significant scientific support for this position and the broad consensus of murrelet experts disagree with this contention.

Coastal Commission Staff mistakenly relies heavily on the Gutzwiller et al. (2002) paper as supportive of their position. However its reliance is misplaced; the Gutzwiller et al. paper does not support the Staff's position. Without this study, the Staff Report has no reliable support for its contention that human presence alone will increase corvid presence.

First, the article's authors caution against extrapolating their findings to other areas of the Rocky Mountains (where it was conducted) even if within the same type of forest, which was an undisturbed subalpine forest. A plain reading of this paper shows that the authors would not support the Coastal Commission Staff's attempt to apply their findings to a different species in an entirely different bioregion.

Secondly, the type of human activity measured in this study was directed human intrusions in which individual researchers deliberately walked toward every Gray Jay (*Perisoreus canadensis*) that they detected, and there was a deliberate effort to confront the bird. The type of human activity that will occur at Gazos Mountain Camp will be entirely different. Individuals, trained or supervised by PCA staff, will not turn and walk toward every Steller's jay that they see. Thus the paper did not replicate the type of human activity that will occur at the forest research station.

Thirdly, Gutzwiller et al. studied Gray jays while the species of the Corvid family present at Gazos Mountain Camp are Steller's jays and common ravens, neither of which is in the same genus as is the Gray jay. Not surprisingly, they behave differently. As described in David Suddjian's letter to the Commission, dated today, Gray jays are much more curious and inquisitive than Steller's jays or ravens (Suddjian, pers. comm.) Consequently in a study which assessed their ability to respond to human presence, Gray jays would be expected to respond differently than Steller's jays. Any one of these reasons should be enough to show that the Gutzwiller et al. study is totally irrelevant to the Gazos Mountain Camp situation.

The only biologist that Coastal Commission Staff could find to support their belief that mere human presence attracts corvids for a time period sufficient to prey upon murrelet

nests was Rick Golightly. Although I have the greatest admiration for Rick and his work, he is not a corvid expert.

In contrast, corvid biology expert, Dr. John Marzluff, does not believe that mere human presence will lead to elevated levels of corvids (Marzluff, pers. comm.). John Marzluff is an ornithologist and professor in the College of Forest Resources at the University of Washington. He was the leader of a multi-year research project on the effects of forest fragmentation on nest predators of the marbled murrelet, which gave special attention to corvids as nest predators. He is a corvid specialist, having written several dozen articles on this group of birds, and has authored or co-authored several books including "Avian Conservation: Research and Management", and most recently, "In the Company of Crows and Ravens". His professional opinions on corvid ecology and behavior carry enormous weight in the scientific community.

The general consensus among murrelet experts is that they do not believe that mere human presence will attract corvids. In fact all those that I could contact in the time available (Tom Hamer, Martin Raphael, C.J. Ralph, David Suddjian) agreed with Marzluff and I that mere human presence will not attract corvids (Hamer, pers. comm.; Raphael, pers. comm.; Ralph, pers. comm.; and Suddjian, pers. comm.). Although corvids are curious and may briefly investigate human activities, they are also intelligent, and they will not stay around if they can't get a food reward. With the proposed protective measures and expert PCA staff, the Field Research Station will not provide a food source and so will not attract elevated levels of corvids.

Misconceptions About Corvid Monitoring and Corvid Removal Measures

Referring to the proposal to monitor corvid numbers on the property, the Staff Report, on page 26, claims that "the proposal of this specific mitigation measure indicates a lack of certainty that the mitigation measures to eliminate subsidized food would be effective in preventing increases in corvid populations at this site." This is wrong. The monitoring program was requested by the California Department of Fish and Game and the U.S. Fish and Wildlife Service, not by PCA. Although monitoring is not a necessary protection measure, at the request of CDFG and USFWS, PCA has agreed to implement a monitoring program and contribute the information to ongoing corvid studies. Given the stringent food and garbage control measures that will be implemented at the site, the monitoring effort may well serve to document the effectiveness of these measures.

Previous Concerns that are No Longer Germaine

In a previous staff report regarding this project (California Coastal Commission, 2004), Coastal Commission staff raised several concerns that were subsequently resolved. These included:

- a concern that potential nesting habitat might exist within the developed portion of the camp

- a concern that noise impacts from camp operations might adversely impact murrelets nesting nearby

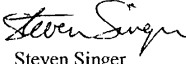
In their March 24, 2006 report, Coastal Commission Staff characterize these discussions as "inconclusive", but I disagree. A number of murrelet experts have examined these issues along with biologists from the California Department of Fish and Game and the U.S. Fish and Wildlife Service, and these murrelet professionals have found these claims to have no basis in fact (Floerke, 2006; Long, 2006; Ralph, 2005; Singer, 2005; Suddjian, 2005; and Suddjian, 2006).

To support these and other contentions, the Staff Report relies heavily on a single, outdated letter from CDFG regarding project impacts. In the seven months between the original CDFG letter and the February 2006 letter, CDFG scientists, together with scientists from California State Parks, USFWS, and independent experts, including David Suddjian and I, visited the site again, examined the property more closely and together agreed that the Camp does not include marbled murrelet habitat, and that the Project, as conditioned, does not harm marbled murrelets. Only the Commission Staff now disagrees with this position.

Conclusions

A major goal of PCA and State Parks is to support the protection and conservation of the marbled murrelet and other endangered species. To support this mission, they have willingly designed, conditioned, and limited their operation so as to insure that any murrelets nesting nearby will not be harmed. The proposed Field Research Station has been evaluated by expert murrelet biologists such as C.J. Ralph and David Suddjian, as well as by biologists from the Department of Fish and Game and the U.S. Fish and Wildlife Service. These murrelet professionals have all endorsed this proposal. In fact the U.S. Fish and Wildlife Service, in their letter of February 23, 2006 to the State Parks Department thanked PCA and the California State Parks Department for "their work to incorporate many conservation measures into this project to address the conservation needs of species listed under the Endangered Species Act..." In fact, USFWS went on to commend PCA on the project, saying, "We appreciate your efforts to protect natural resources while providing educational and recreational opportunities to the public" (Long, 2006).

As mentioned above, I have dedicated a significant part of my life to studying the marbled murrelet, both as a research scientist and as a conservationist, working for the protection of this species, I would never support any land use activity that had even the slightest potential to jeopardize the well-being of the marbled murrelet. The Pescadero Conservation Alliance proposal to operate a Field Research Station at the existing camp facilities, as conditioned, does not pose any threat to the marbled murrelet, and has my full and unconditional support.

Sincerely,

Steven Singer
Certified Wildlife Biologist

References Cited

- Binford, L.C., B.G. Elliott, and S.W. Singer. 1975. Discovery of a Nest and the Downy Young of the Marbled Murrelet. Wilson Bulletin 87(3): 303-319.
- Boarman, W. 2004. Publication Brief for Resource Managers – Managing a Subsidized Predator Population: Reducing Common Raven Predation on Young Desert Tortoises. USGS Western Ecological Research Station, San Diego, CA.
- California Coastal Commission 2004. Appeal Staff Report – Substantial Issue Determination and De Novo Review [of Application of Pescadero Conservation Alliance to Operate a Biological Field Station at Gazos Mountain Camp]. Appeal No. A-2-SMC-04-005.
- Evans, M.D., W.P. Ritchie, S.K. Nelson, E. Kuo-Harrison, P. Harrison, and T.E. Hamer. 2003. Methods for Surveying Marbled Murrelets in Forests: A Revised Protocol for Land Management and Research. Pacific Seabird Group Technical Publication Number 2.
- Floorke, R. W. 2006. Proposed use of Gazos Mountain Camp Field Research Station , Gazos Creek Watershed, San Mateo County. California Dept. of Fish and Game. Letter to California Coastal Commission dated February 28, 2006.
- Gutzwiller, K.J., S.K.I. Riffell, and S.H. Anderson. 2002. Repeated Human Intrusion and the Potential for Nest Predation by Gray Jays. Journal of Wildlife Management 66(2): 372-380.
- Liebezeit, J.R. and T. L. George. 2002. A Summary of Predation by Corvids on Threatened and Endangered Species in California and Management Recommendations to Reduce Corvid Predation. Calif. Dept. of Fish and Game, Species Conservation and Recovery Program Report # 2002-02, Sacramento, CA.
- Long, M. 2006. Proposed use of Gazos Mountain Camp (8-14-2006-2853). U. S. Fish and Wildlife Service. Letter to California Dept. of Parks and Recreation dated February 23, 2006.
- Marzluff, J. M. and E. Neatherlin. 2006. Corvid responses to human settlements and campgrounds: causes, consequences, and challenges for conservation. Biological Conservation 130: 301-314.

Steven W. Singer Environmental and Ecological Services

Page 9 of 10

2-SMC-04-005
Pescadero Conservation Alliance
Exhibit 15
April 6, 2006 Letter from Steve
Singer to Meg Caldwell
Page 9

Ralph, C. J. 2005. Letter from the Redwood Sciences Laboratory of the U.S. Forest Service to the Pescadero Conservation Alliance, dated October 31, 2005.

Renshaw, D.L. 2006. Letter from the Santa Cruz Mountains Bioregional Council to the California Coastal Commission dated February 17, 2006.

Singer, S. W. 2005. A review and analysis of Marbled Murrelet (*Brachyramphus marmoratus*) issues raised in the Coastal Commission's "Appeal staff report, substantial issue determination, and De Novo review" for the Proposed P.C.A. Biological Field Station at Gazos Mountain Camp. Unpubl. report dated January 2005.

Singer, S.W., N.L. Naslund, S.A. Singer and C.J. Ralph. 1991. Discovery and observations of two tree nests of the Marbled Murrelet. Condor 93:330-339.

Singer, S. M, D. L. Suddjian and S. A. Singer. 1995. Fledging behavior, flight patterns, and forest characteristics at Marbled Murrelet nests in California. Northwestern Naturalist 76:54-62.

Suddjian, D. L. 2005. Review of issues regarding impacts to Marbled Murrelets in the vicinity of the Gazos Mountain Camp. Letter to Pescadero Conservation Alliance dated November 17, 2005.

Suddjian, D.L. 2006. Letter to the California Coastal Commission dated April 5, 2006.

CALIFORNIA COASTAL COMMISSION

NORTH CENTRAL COAST DISTRICT
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5260
FAX (415) 904-5400

Th 11A

Prepared September 12, 2006 for the September 14, 2006 hearing

To: Coastal Commissioners and Interested Persons

From: Charles Lester, Deputy Director
Chris Kern, District Manager

**Subject: STAFF REPORT ADDENDUM for Item Th11a
REVISED FINDINGS FOR CDP No. A-2-SMC-04-005 (Pescadero Conservation Alliance)**

The purpose of this staff addendum is to amend the revised findings proposed by staff in their August 25, 2006 staff report. Additions to the original staff report recommending denial appear in double underline and deletions to the original staff report recommending denial appear in ~~strikethrough~~. Revisions to the August 25, 2006 revised findings recommended by staff have been shaded.

Please replace the identified sections of the proposed revised findings with the paragraphs provided below.

1. Page 18:

Based on the 1999 report by murrelet biologist Steve Singer, *Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA*, nesting habitat within the subject property is found within the 10-acre residual stand across Gazos Creek and the 20-acre stand of older second-growth to the northeast of the camp (Exhibit 6). However, in their July 14, 2005 letter, CDFG biologists considered the entire contiguous forested area, including the camp buildings area, as potential nesting habitat and occupied by marbled murrelets.

2. Page 21 and footnote 3:

Two areas of potential MAMU occupation are present within the larger DPR property outside the PCA lease area-the old growth stand discussed above and the second growth stand to the southwest [northeast]³ of the camp along the south

side of the south fork of Gazos Creek and the county road. (CDFG February 28, 2006 and USFWS February 23, 2006)

³ The second growth stand identified by Singer is ~~northeast~~ of the camp. The south fork of Gazos Creek flows from northeast of the camp to south of the camp and joins the north fork. The statement that the second growth stand is southwest of the camp is an error by CDFG and FWS.

3. Page 22:

Because the marbled murrelet is a rare and secretive bird whose nests are difficult to find and thus not widely studied, it is common for biologists to have different opinions regarding the specific habitat needs of the species. However, the biologists who conducted on-site reviews of the habitat at the camp and have experience studying murrelet habitat in the Santa Cruz Mountains, have provided evidence that only the 10-acre old-growth and 20-acre second-growth stands contain suitable nesting habitat. ~~Therefore, the Commission finds that evidence to determine the presence of potential nesting habitat in areas within and around the camp, outside of the 10-acre old-growth and 20-acre mature second-growth forest is inconclusive~~ The Commission also finds that there is substantial evidence that suitable marbled murrelet nesting habitat is not located in the immediate camp area, but rather is located present within the 10-acre old-growth and 20-acre second-growth stands.

4. Pages 26-27:

As stated above, during the past five years, the project site has been used for day lectures and has been occupied by a resident caretaker (without the authorization of a coastal development permit). According to ~~the applicant's~~ biologist David Suddjian, "both ravens and jays already reside on and around the property, and are no doubt acclimated to human presence in the area" (Suddjian November 17, 2005). A study by Neatherlin and Marzluff (2004), though, shows that the abundance of American crows is closely associated with the size of campgrounds, and that larger campgrounds with more consistent users have a greater concentration of crows. Thus, it seems that, if ravens and jays are already occupying this area during this period of relatively low level of human activity, their numbers ~~would likely~~ might increase with the higher activity levels proposed. Given that predation of marbled murrelet eggs and chicks by jays and ravens is known to occur and has been identified as a significant cause of the recent decline of marbled murrelet nesting success, the project has a potential to result in adverse impacts to marbled murrelets in the vicinity of the project. A study by Neatherlin and Marzluff (2004)

~~shows that the abundance of American crows is closely associated with the size of campgrounds, and that larger campgrounds with more consistent users have a greater concentration of crows.~~ However, in light of the sensitivity of the marbled murrelet generally to corvid predation, the applicant has proposed various protective measures to decrease the likelihood that corvid levels will increase in the general vicinity as a result of the project; these measures are discussed in detail below. The Commission has reviewed and revised the measures, and finds that the project, with the proposed protective measures, will not result in significant adverse impacts on sensitive habitat areas that support the marbled murrelet, would prevent impacts that could significantly degrade the sensitive habitats, and would be compatible with the maintenance of the biological productivity of this habitat.

5. Page 43:

While the proposed development ~~would~~ create noise greater than ambient levels in marbled murrelet nesting habitat, based on evidence provided in Hebert and Golightly's study and other observations, it would be fair to assume that noise associated with the proposed development would not cause marbled murrelets to flush from their nests. Noise disturbance may have other physiological impacts to marbled murrelets that could affect nesting success, however, the extent of those impacts are unknown. Thus, ~~the Commission finds that~~ because there is no evidence documenting adverse impacts to marbled murrelets as a result of noise disturbance from the proposed project is inconclusive, the Commission finds that there is substantial evidence that the proposed project with the proposed measures to control noise and other disturbances would not result in significant adverse impacts on sensitive habitat areas that support the marbled murrelet, would prevent impacts that could significantly degrade the sensitive habitats, and would be compatible with the maintenance of the biological productivity of this habitat.

6. Page 52:

In addition, according to the applicant, none of the above options indicated in Mr. Rourke's letter meet the core objectives of the project. All but one of the nine outdoor education locations are currently or seasonally occupied by other groups. These locations are not feasible because the Field Research Station requires a long-term home for meaningful, sustained environmental research. The one camp location which is not occupied, Sheriffs Honor Camp, is located in an even more remote site than Gazos Mountain Camp with comparable ecological sensitivity. The Field Research Station must be located in an area with sufficient ecological resources so that visitors may experience hands-on environmental learning, research, and restoration. None of the nine indoor "meeting places," which include

church and fire halls and a high school gym, are suitable locations for the project because they provide neither the requisite connection to nature, nor the capacity for overnight use by youth groups or researchers. (Latham and Watkins, April 7, 2006). The Commission finds that there are no feasible alternatives because the alternative locations proposed by Mr. Rourke do not provide a project site that would allow the applicant to meet its stated objectives.

7. Pages 54-57:

Appendix A: Substantive File Documents

Apex Houston Natural Resources Trustee Council. April 24, 1998. Resolution Supporting Acquisition of Marbled Murrelet Nesting Habitat in the Gazos Creek Watershed.

Baker, L.M., M.Z. Peery, S.R. Beissinger, E. Burkett, S.W. Singer, and D. L. Suddjian. In press. Nesting Habitat Characteristics and Associations of the Marbled Murrelet in Central California. Journal of Wildlife Management.

Beissinger, S. B. 1995. Population trends of the Marbled Murrelet projected from demographic analysis. Pages 385-393 in C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). Ecology and conservation of the Marbled Murrelet. USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.

Boarman, William I. 2003. Managing a subsidized predator population: reducing common raven predation on desert tortoises. Environmental Management 32: 205-217

California Department of Fish and Game, 2005. Comments on Marbled Murrelets and the Gazos Mountain Camp Field Research Station, Gazos Creek Watershed, San Mateo County. Letter to Y. Zhang, dated July 14, 2005.

California Department of Fish and Game. 2005. Comments on California red-legged frogs and San Francisco garter snakes and the Gazos Mountain Camp Field Research Station. Gazos Creek Watershed, San Mateo County. Letter to Y. Zhang, dated July 20, 2005.

California Department of Fish and Game. 2006. Proposed Use of Gazos Mountain Camp Field Research Station, Gazos Creek Watershed, San Mateo County. Letter to Y. Zhang, dated February 28, 2006.

Coleman, Ruth. California Department of Parks and Recreation, 2006. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to California Coastal Commission. dated April 10, 2006.

Command Trustee Council. 2004. Command Oil Spill Final Restoration Plan and Environmental Assessment. Unpublished report dated June 2004.

County of San Mateo. 2003. Staff Report on Use Permit and Coastal Development Permit for Gazos Mountain Camp (Pescadero Conservation Alliance). Unpublished report dated September 10, 2003.

Evans Mack, D., W. P. Ritchie, S. K. Nelson, E. Kuo-Harrison, P. Harrison, and T. E. Hamer. 2003. Methods for surveying Marbled Murrelets in forests: a revised protocol for land management and research. Pacific Seabird Group Technical Publication Number 2.

Golightly, R.T., P.N. Hébert, and D.L. Orthner. 2002. Evaluation of Human-Caused Disturbance on the Breeding Success of Marbled Murrelets (*Brachyramphus marmoratus*) in Redwood National and State Parks, California. Progress Report. Humboldt State University, Department of Wildlife, Arcata, CA, and U.S. Geological Survey, Western Ecological Research Center. 61 pp.

Gutzwiller, K.J., S.K. Riffell, and S.H. Anderson. 2002. Repeated Human Intrusion and the Potential for Nest Predation by Gray Jays. *Journal of Wildlife Management* 66(2):372-380.

Hamer, T.E., and S.K. Nelson. 1995. Characteristics of Marbled Murrelet nest trees and nesting stands. Pp. 69-82 in Ralph, C.J., G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, tech. eds. *Ecology and conservation of the Marbled Murrelet*. USDA Forest Service General Technical Report PSW-GTR-152, Albany, CA

Hébert, P.N., and R.T. Golightly. 2003. Breeding Biology, and Human-Caused Disturbance to Nesting of Marbled Murrelets (*Brachyramphus marmoratus*) in Northern California. Progress Report 2002. Humboldt State University,

Department of Wildlife, Arcata, CA, and U.S. Geological Survey, Western Ecological Research Center.

Liebezeit, J.R. and T.L. George. 2002. A Summary of Predation by Corvids on Threatened and Endangered Species in California and Management Recommendations to Reduce Corvid Predation. Calif. Dept. Fish and Game, Species Conservation and Recovery Program Report 2002-02, Sacramento, CA. 103 pp.

Long, L.L., and C.J. Ralph. 1998. Regulation and Observations of Human Disturbance near Nesting Marbled Murrelets. Unpublished report. U.S. Forest Service, Redwood Sciences Laboratory, Arcata, CA.

Luginbuhl, J.M., J.M. Marzluff, J.E. Bradley, M.G. Raphael, and D.E. Varland. 2001. Corvid survey techniques and the relationship between corvid relative abundance and nest predation. *Journal of Field Ornithology* 72: 556-572.

Houston, David. March 2000. Noise Report, Gazos Creek Field Research Station and Gazos Mt. Camp.

Houston, David. November 2004 Noise Report, Gazos Creek Field Research Station and Gazos Mt. Camp.

Latham & Watkins. 2005. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to Y.L. Zhang (CCC) dated January 18, 2005.

Latham & Watkins. 2005. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to Y.L. Zhang (CCC) dated January October 28, 2005.

Latham & Watkins. 2006. Pescadero Conservation Alliance. Alleged Coastal Act Violation No. V-2-05-013. Letter to Jo Ginsberg (CCC) dated February 17, 2006.

Latham & Watkins. 2006. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to Chairwoman Meg Caldwell (CCC) dated April 7, 2006.

Latham & Watkins. 2006. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Briefing Materials dated April 13, 2006.

Latham & Watkins. 2006. Pescadero Conservation Alliance. Coastal Commission Appeal A-2-SMC-04-005. PowerPoint Presentation dated April 13, 2006.

LeValley, R. (Mad River Biologists). 2005. Marbled Murrelet Issues at Gazos Mountain Camp/Field Research Station. Letter to J. Wade (Pescadero Conservation Alliance) dated January 17, 2005.

Marzluff, J.M., and Neatherlin, E. (In press). Corvid Response to Human settlement and Campgrounds: Causes, Consequences, and Challenges for Conservation. *Biological Conservation*.

McShane, C., T. Hamer, H. Carter, G. Swartzman, V. Friesen, D. Ainley, R. Tressler, K. Nelson, A. Burger, L. Spear, T. Mohagen, R. Martin, L. Henkel, K. Prindle, C. Strong, and J. Keany. 2004. Evaluation report for the 5-year status review of the marbled murrelet in Washington, Oregon, and California. Unpublished report. EDAW, Inc. Seattle, Washington. Prepared for the U.S. Fish and Wildlife Service, Region 1. Portland, Oregon.

Neatherlin, E.A., and J. M. Marzluff. 2004. Responses of American Crow to Campgrounds in Remote Native Forest Landscapes. *Journal of Wildlife Management* 68(3):708-718.

Nelson, S.K. 1997. Marbled Murrelet (*Brachyramphus marmoratus*). In *The Birds of North America*, No. 276 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and the American Ornithologists' Union, Washington, D.C.

Nelson, S. K. and T. E. Hamer. 1995a. Nesting Biology and Behavior of the Marbled Murrelet. Pp. 57-67 in *Ecology and Conservation of the Marbled Murrelet*. C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.

Nelson, S.K., and T.E. Hamer. 1995b. Nest Success and the Effects of Predation on Marbled Murrelets. Pp. 89- 97 in *Ecology and Conservation of the Marbled Murrelet*. C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.

Peery, M.Z., S.R. Beissinger, S.H. Newman, E.B. Burkett, and T.D. Williams. 2004. Applying the Declining Population Paradigm: Diagnosing the Causes of Poor Reproduction in the Marbled Murrelet. *Conservation Biology* 18(4): 1088-1098.

Ralph, C.J., et al. 1995. Ecology and Conservation of the Marbled Murrelet in North America: An overview. Pp. 3-22 *In Ecology and Conservation of the Marbled Murrelet*. C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.

Ralph, C.J. 2005. California Department of Fish and Game Letter Regarding Impacts To Marbled Murrelets In The Vicinity of Gazos Mountain Camp. Letter to J. Wade (Pescadero Conservation Alliance), dated October 31, 2005.

Raphael, M.G., D. Evans Mack, J.M. Marzluff, J. M. Luginbuhl. 2002. Effects of Forest Fragmentation on Populations of the Marbled Murrelet. *Studies in Avian Biology* 25(1): 221-235.

~~Rudd, Marina Ruth.~~ Ruth, Maria Mudd. 2005. *Rare Bird: Pursuing the Mystery of the Marbled Murrelet*. Rodale.

Ruth, Maria Mudd. 2006. California Coastal Commission Agenda Item 5b. Comments by Maria Mudd Ruth. Letter to California Coastal Commission, dated April 6, 2006.

Sempervirens Fund, Incorporated and the Apex Houston Trustee Council. June 3, 1998. Habitat Acquisition Agreement.

Sempervirens Fund, Incorporated, 2006. Appeal of Pescadero Conservation Alliance's County Use Permit for Gazos Mountain Camp in San Mateo County. Letter to Meg Caldwell, dated April 10, 2006.

Singer, S.W., N.L. Naslund, S.A. Singer, and C.J. Ralph. 1991. Discovery and Observation of Two Tree Nests of the Marbled Murrelet. *Condor*: 93:330-339.

Singer, S. 1999. Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA. Unpublished report prepared for the Sempervirens Fund and The Apex Houston Trustee Council.

Singer, S. W. 2005. A review and analysis of Marbled Murrelet (*Brachyramphus marmoratus*) issues raised in the Coastal Commission's "Appeal staff report, substantial issue determination, and De Novo review" for the Proposed P.C.A. Biological Field Station at Gazos Mountain Camp. Unpublished report dated January 2005.

Singer, S. 2005. Gazos Mountain Camp Project, Pescadero Conservation Alliance. Appeal No. A-2-SMC-04-005. Letter to YinLan Zhanq, dated June 17, 2005.

Singer, S. 2006. Appeal of San Mateo County Coastal Development Permit PLN 2002-00606. issued to Pescadero Conservation Alliance and California Dept. of Parks and Recreation. Letter to Meg Caldwell, dated April 6, 2006.

Singer, S.W., and T.E. Hamer. 2002. Gazos Creek Marbled Murrelet Monitoring Program: 2001 Annual Report. Unpublished report submitted to Apex Houston Trustee Council, and Sempervirens Fund, prepared by Steven W. Singer Environmental and Ecological Services, Santa Cruz, CA.

Singer, S.W., and T.E. Hamer. 2004. Gazos Creek Marbled Murrelet Monitoring Program: 2004 Biannual Report. Unpublished report submitted to Apex Houston Trustee Council, and Sempervirens Fund, prepared by Steven W. Singer Environmental and Ecological Services, Santa Cruz, CA.

Suddjian, D. 2005a. Summary of 2004 Corvid Monitoring Surveys in the Santa Cruz Mountains. Unpublished report, prepared for Command Oil Spill Trustee Council.

Suddjian, D. L. 2005b. Review of issues regarding impacts to Marbled Murrelets in the vicinity of Gazos Mountain Camp. Letter to Pescadero Conservation Alliance, dated November 17, 2005.

Suddjian, D. L., 2006. Appeal of San Mateo County Coastal Development Permit PLN 2002-00606, issued to Pescadero Conservation Alliance and California Dept. of Parks and Recreation. Letter to Meg Caldwell, dated April 6, 2006.

U.S. Fish and Wildlife Service. September 1997. The Recovery Plan for the Marbled Murrelet in Washington, Oregon and California.

U.S. Fish and Wildlife Service. July 2003. Biological Opinion for the Proposed 14-Mile Border Infrastructure System, San Diego County, California.

U.S. Fish and Wildlife Service. September 2004. Biological Opinion and Letter of Concurrence for Effects to Bald Eagles, Marbled Murrelets, Northern Spotted Owls, Bull Trout, and Designated Critical Habitat for Marbled Murrelets and Northern Spotted Owls from Olympic Forest Program of Activities for August 5, 2003 to December 31, 2008.

U.S. Fish and Wildlife Service, 2005. Technical Assistance on the Gazos Mountain Camp Project, Butano Redwoods State Park, San Mateo County, California. Letter to Y. Zhang, dated April 6, 2005.

U.S. Fish and Wildlife Service, 2006. Proposed use of Gazos Mountain Camp (8-14-2006-2853). Letter to D. Schaub. California Department of Parks and Recreation, dated February 23, 2006.

U.S. Fish and Wildlife Service, 2006. Appeal Number A-02-04-5 (Pescadero Conservation Alliance, San Mateo County). Letter to Charles Lester. Deputy Director, California Coastal Commission, dated April 10, 2006.

Weber, Wendy. A Habitat Assessment of the Pescadero Conservation Alliance Field Research Station at Gazos Creek for San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*) and California Red-legged Frog (*Rana aurora draytonii*). Unpublished report dated January 17, 2005.

Public Comments

Packet of 88 letters in support of Pescadero Conservation Alliance's Proposed Field Research Station. Submitted to the Commission on April 13, 2006.

FIRM / AFFILIATE OFFICES

Brussels	New York
Chicago	Northern Virginia
Frankfurt	Orange County
Hamburg	Paris
Hong Kong	San Diego
London	San Francisco
Los Angeles	Shanghai
Milan	Silicon Valley
Moscow	Singapore
Munich	Tokyo
New Jersey	Washington, D.C.

RECEIVED

September 6, 2006

SEP 06 2006

CALIFORNIA
COASTAL COMMISSION

YinLan Zhang
Coastal Staff
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Th 11a

Re: Pescadero Conservation Alliance
Coastal Commission Appeal A-2-SMC-04-005

Dear Ms. Zhang:

We are writing on behalf of our *pro bono* client, the Pescadero Conservation Alliance ("PCA"). We have reviewed Coastal Staff's Revised Findings For Coastal Development Permit Application ("Revised Findings"), dated August 25, 2006. We request that the following few changes be made to the Revised Findings so that the Findings reflect the action taken by the Commission in approving PCA's coastal development permit application. Attached in redline are PCA's proposed changes. Please let me know if you have any questions.

Very truly yours,



Randi L. Wallach
of LATHAM & WATKINS LLP

Attachment

cc: Alice Reynolds, Esq., Office of the Attorney General, State of California
John Davidson, Esq., Office of the Attorney General, State of California
Bradley Torgan, Esq., California Department of Parks and Recreation
John Wade, Pescadero Conservation Alliance
Susan McCabe, McCabe and Company
Rick Zbur, Esq., Latham & Watkins LLP
Gene Lucero, Esq., Latham & Watkins LLP
Courtney Vaudreuil, Esq., Latham & Watkins LLP

1. **Page 18:**

Based on the 1999 report by murrelet biologist Steve Singer, *Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA*, nesting habitat within the subject property is found within the 10-acre residual stand across Gazos Creek and the 20-acre stand of older second-growth to the ~~northeast~~ southeast of the camp (Exhibit 6). However, in their July 14, 2005 letter, CDFG biologists considered the entire contiguous forested area, including the camp buildings area, as potential nesting habitat and occupied by marbled murrelets.

2. **Page 21 and footnote 3:**

Two areas of potential MAMU occupation are present within the larger DPR property outside the PCA lease area—the old growth stand discussed above and the second growth stand to the southwest [~~northeast~~southeast]³ of the camp along the south side of the south fork of Gazos Creek and the county road. (CDFG February 28, 2006 and USFWS February 23, 2006)

³ The second growth stand identified by Singer is ~~northeast~~southeast of the camp. The south fork of Gazos Creek flows from northeast of the camp to south of the camp and joins the north fork. The statement that the second growth stand is southwest of the camp is an error by CDFG and FWS.

3. **Page 22:**

Because the marbled murrelet is a rare and secretive bird whose nests are difficult to find and thus not widely studied, it is common for biologists to have different opinions regarding the specific habitat needs of the species. However, all of the biologists who conducted on-site reviews of the habitat at the camp, including biologists with experience studying murrelet habitat in the Santa Cruz Mountains and biologists at the wildlife agencies, agree that only the 10-acre old-growth and 20-acre second-growth stands contain suitable nesting habitat. Therefore, the Commission finds that the weight of the ~~there is insufficient evidence to conclude that there is potential nesting habitat in areas within the immediate camp area.~~ However, the Commission also finds shows that suitable marbled murrelet nesting habitat is not located in the immediate camp area, but rather is located ~~present~~ within the 10-acre old-growth and 20-acre second-growth stands.

4. **Pages 26-27:**

As stated above, during the past five years, the project site has been used for day lectures and has been occupied by a resident caretaker (without the authorization of a coastal development permit). According to biologist David Suddjian, “both ravens and jays already reside on and around the property, and are no doubt acclimated to human presence in the area” (Suddjian November 17, 2005). A study by Neatherlin and Marzluff (2004), though, shows that the abundance of American crows is closely associated with the size of campgrounds, and that larger campgrounds with more consistent users have a greater concentration of crows. Thus, it seems that, if ravens and jays are already

occupying this area during this period of relatively low level of human activity, their numbers might increase with the higher activity levels proposed. Given that predation of marbled murrelet eggs and chicks by jays and ravens is known to occur and has been identified as a significant cause of the recent decline of marbled murrelet nesting success, the project has a potential to result in adverse impacts to marbled murrelets in the vicinity of the project. However, in light of the sensitivity of the marbled murrelet generally to corvid predation, the applicant has proposed various protective measures to decrease the likelihood that corvid levels will increase in the general vicinity as a result of the project; these measures are discussed in detail below. The Commission has reviewed and revised the measures, and finds that the project, with the proposed protective measures, will not result in significant adverse impacts on sensitive habitat areas that support the marbled murrelet, would prevent impacts that could significantly degrade the sensitive habitats, and would be compatible with the maintenance of the biological productivity of this habitat.

5. Page 43:

While the proposed development ~~would~~ create noise greater than ambient levels in marbled murrelet nesting habitat if loud noises are made on the camp's access road, PCA's noise control measure of limiting the number of cars permitted on site will reduce use of the camp's access road and thus reduce the potential occurrence of noise greater than ambient levels in murrelet habitat. In addition, based on evidence provided in Hébert and Golightly-'s study and other observations, it would be fair to assume that any noise associated with the proposed development would not cause marbled murrelets to flush from their nests. Noise disturbance may have other physiological impacts to marbled murrelets that could affect nesting success, however, the extent of those impacts are unknown. Thus, ~~the Commission finds that because there is no evidence documenting adverse impacts to marbled murrelets as result of noise disturbance from the proposed project is insufficient, and PCA's proposed noise control measures will likely keep noise from the site at ambient levels, the Commission finds and that the proposed project with the proposed measures to control noise and other disturbances would not result in significant adverse impacts on sensitive habitat areas that support the marbled murrelet, would prevent impacts that could significantly degrade the sensitive habitats, and would be compatible with the maintenance of the biological productivity of this habitat.~~

6. Page 52:

In addition, according to the applicant, none of the above options indicated in Mr. Rourke's letter meet the core objectives of the project. All but one of the nine outdoor education locations are currently or seasonally occupied by other groups. These locations are not feasible because the Field Research Station requires a long-term home for meaningful, sustained environmental research. The one camp location which is not occupied, Sheriff's Honor Camp, is located in an even more remote site than Gazos Mountain Camp with comparable ecological sensitivity. The Field Research Station must be located in an area with sufficient ecological resources so that visitors may experience hands-on environmental learning, research, and restoration. None of the nine indoor

“meeting places,” which include church and fire halls and a high school gym, are suitable locations for the project because they provide neither the requisite connection to nature, nor the capacity for overnight use by youth groups or researchers. (Latham and Watkins, April 7, 2006). The Commission concurs with the applicant that the alternative locations proposed by Mr. Rourke do not provide a project site that would allow the applicant to meet its stated objectives.

7. Pages 54-57:

Apex Houston Natural Resources Trustee Council. April 24, 1998. Resolution Supporting Acquisition of Marbled Murrelet Nesting Habitat in the Gazos Creek Watershed.

Baker, L.M., M.Z. Peery, S.R. Beissinger, E. Burkett, S.W. Singer, and D. L. Suddjian. In press. Nesting Habitat Characteristics and Associations of the Marbled Murrelet in Central California. Journal of Wildlife Management.

Beissinger, S. B. 1995. Population trends of the Marbled Murrelet projected from demographic analysis. Pages 385-393 in C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). Ecology and conservation of the Marbled Murrelet. USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.

Boarman, William I. 2003. Managing a subsidized predator population: reducing common raven predation on desert tortoises. Environmental Management 32: 205-217

California Department of Fish and Game, 2005. Comments on Marbled Murrelets and the Gazos Mountain Camp Field Research Station, Gazos Creek Watershed, San Mateo County. Letter to Y. Zhang, dated July 14, 2005.

California Department of Fish and Game, 2005. Comments on California red-legged frogs and San Francisco garter snakes and the Gazos Mountain Camp Field Research Station, Gazos Creek Watershed, San Mateo County. Letter to Y. Zhang, dated July 20, 2005.

California Department of Fish and Game, 2006. Proposed Use of Gazos Mountain Camp Field Research Station, Gazos Creek Watershed, San Mateo County. Letter to Y. Zhang, dated February 28, 2006.

Coleman, Ruth. California Department of Parks and Recreation, 2006. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to California Coastal Commission, dated April 10, 2006.

Command Trustee Council. 2004. Command Oil Spill Final Restoration Plan and Environmental Assessment. Unpublished report dated June 2004.

County of San Mateo. 2003. Staff Report on Use Permit and Coastal Development Permit for Gazos Mountain Camp (Pescadero Conservation Alliance). Unpublished report dated September 10, 2003.

- Evans Mack, D., W. P. Ritchie, S. K. Nelson, E. Kuo-Harrison, P. Harrison, and T. E. Hamer. 2003. Methods for surveying Marbled Murrelets in forests: a revised protocol for land management and research. Pacific Seabird Group Technical Publication Number 2.
- Golightly, R.T., P.N. Hébert, and D.L. Orthmeyer. 2002. Evaluation of Human-Caused Disturbance on the Breeding Success of Marbled Murrelets (*Brachyramphus marmoratus*) in Redwood National and State Parks, California. Progress Report. Humboldt State University, Department of Wildlife, Arcata, CA, and U.S. Geological Survey, Western Ecological Research Center. 61 pp.
- Gutzwiller, K.J., S.K. Riffell, and S.H. Anderson. 2002. Repeated Human Intrusion and the Potential for Nest Predation by Gray Jays. *Journal of Wildlife Management* 66(2):372-380.
- Hamer, T.E., and S.K. Nelson. 1995. Characteristics of Marbled Murrelet nest trees and nesting stands. Pp. 69-82 in Ralph, C.J., G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, tech. eds. Ecology and conservation of the Marbled Murrelet. USDA Forest Service General Technical Report PSW-GTR-152, Albany, CA
- Hébert, P.N., and R.T. Golightly. 2003. Breeding Biology, and Human-Caused Disturbance to Nesting of Marbled Murrelets (*Brachyramphus marmoratus*) in Northern California. Progress Report 2002. Humboldt State University, Department of Wildlife, Arcata, CA, and U.S. Geological Survey, Western Ecological Research Center.
- Liebezeit, J.R. and T.L. George. 2002. A Summary of Predation by Corvids on Threatened and Endangered Species in California and Management Recommendations to Reduce Corvid Predation. Calif. Dept. Fish and Game, Species Conservation and Recovery Program Report 2002-02, Sacramento, CA. 103 pp.
- Long, L.L., and C.J. Ralph. 1998. Regulation and Observations of Human Disturbance near Nesting Marbled Murrelets. Unpublished report. U.S. Forest Service, Redwood Sciences Laboratory, Arcata, CA.
- Luginbuhl, J.M., J.M. Marzluff, J.E. Bradley, M.G. Raphael, and D.E. Varland. 2001. Corvid survey techniques and the relationship between corvid relative abundance and nest predation. *Journal of Field Ornithology* 72: 556-572.
- Houston, David. March 2000. Noise Report, Gazos Creek Field Research Station and Gazos Mt. Camp.
- Houston, David. November 2004 Noise Report, Gazos Creek Field Research Station and Gazos Mt. Camp.
- Latham & Watkins. 2005. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to Y.L. Zhang (CCC) dated January 18, 2005.
- Latham & Watkins. 2005. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to Y.L. Zhang (CCC) dated January October 28, 2005.
- Latham & Watkins. 2006. Pescadero Conservation Alliance, Alleged Coastal Act Violation No. V-2-05-013. Letter to Jo Ginsberg (CCC) dated February 17, 2006.

- Latham & Watkins. 2006. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Letter to Chairwoman Meg Caldwell (CCC) dated April 7, 2006.
- Latham & Watkins. 2006. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. Briefing Materials dated April 13, 2006.
- Latham & Watkins. 2006. Pescadero Conservation Alliance, Coastal Commission Appeal A-2-SMC-04-005. PowerPoint Presentation dated April 13, 2006.
- LeValley, R. (Mad River Biologists). 2005. Marbled Murrelet Issues at Gazos Mountain Camp/Field Research Station. Letter to J. Wade (Pescadero Conservation Alliance) dated January 17, 2005.
- Marzluff, J.M., and Neatherlin, E. (In press). Corvid Response to Human settlement and Campgrounds: Causes, Consequences, and Challenges for Conservation. *Biological Conservation*.
- McShane, C., T. Hamer, H. Carter, G. Swartzman, V. Friesen, D. Ainley, R. Tressler, K. Nelson, A. Burger, L. Spear, T. Mohagen, R. Martin, L. Henkel, K. Prindle, C. Strong, and J. Keany. 2004. Evaluation report for the 5-year status review of the marbled murrelet in Washington, Oregon, and California. Unpublished report. EDAW, Inc. Seattle, Washington. Prepared for the U.S. Fish and Wildlife Service, Region 1. Portland, Oregon.
- Neatherlin, E.A., and J. M. Marzluff. 2004. Responses of American Crow to Campgrounds in Remote Native Forest Landscapes. *Journal of Wildlife Management* 68(3):708–718.
- Nelson, S.K. 1997. Marbled Murrelet (*Brachyramphus marmoratus*). In *The Birds of North America*, No. 276 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and the American Ornithologists' Union, Washington, D.C.
- Nelson, S. K. and T. E. Hamer. 1995a. Nesting Biology and Behavior of the Marbled Murrelet. Pp. 57-67 in *Ecology and Conservation of the Marbled Murrelet*. C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.
- Nelson, S.K., and T.E. Hamer. 1995b. Nest Success and the Effects of Predation on Marbled Murrelets. Pp. 89- 97 in *Ecology and Conservation of the Marbled Murrelet*. C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.
- Peery, M.Z., S.R. Beissinger, S.H. Newman, E.B. Burkett, and T.D. Williams. 2004. Applying the Declining Population Paradigm: Diagnosing the Causes of Poor Reproduction in the Marbled Murrelet. *Conservation Biology* 18(4): 1088-1098.
- Ralph, C.J., et al. 1995. Ecology and Conservation of the Marbled Murrelet in North America: An overview. Pp. 3-22 In *Ecology and Conservation of the Marbled Murrelet*. C. J. Ralph, G. L. Hunt, Jr., M. Raphael, and J. F. Piatt (eds.). USDA, Forest Service, General Technical Report PSW-GTR-152, Albany, CA.

- Ralph, C.J. 2005. California Department of Fish and Game Letter Regarding Impacts To Marbled Murrelets In The Vicinity of Gazos Mountain Camp. Letter to J. Wade (Pescadero Conservation Alliance), dated October 31, 2005.
- Raphael, M.G., D. Evans Mack, J.M. Marzluff, J. M. Luginbuhl. 2002. Effects of Forest Fragmentation on Populations of the Marbled Murrelet. *Studies in Avian Biology* 25(1): 221-235.
- Rudd, Marina-Ruth. Ruth, Maria Mudd. 2005. Rare Bird: Pursuing the Mystery of the Marbled Murrelet. Rodale.
- Ruth, Maria Mudd, 2006. California Coastal Commission Agenda Item 5b. Comments by Maria Mudd Ruth. Letter to California Coastal Commission, dated April 6, 2006.
- Sempervirens Fund, Incorporated and the Apex Houston Trustee Council. June 3, 1998. Habitat Acquisition Agreement.
- Sempervirens Fund, Incorporated, 2006. Appeal of Pescadero Conservation Alliance's County Use Permit for Gazos Mountain Camp in San Mateo County. Letter to Meg Caldwell, dated April 10, 2006.
- Singer, S.W., N.L. Naslund, S.A. Singer, and C.J. Ralph. 1991. Discovery and Observation of Two Tree Nests of the Marbled Murrelet. *Condor*: 93:330-339.
- Singer, S. 1999. Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA. Unpublished report prepared for the Sempervirens Fund and The Apex Houston Trustee Council.
- Singer, S. W. 2005. A review and analysis of Marbled Murrelet (*Brachyramphus marmoratus*) issues raised in the Coastal Commission's "Appeal staff report, substantial issue determination, and De Novo review" for the Proposed P.C.A. Biological Field Station at Gazos Mountain Camp. Unpublished report dated January 2005.
- Singer, S. 2005. Gazos Mountain Camp Project, Pescadero Conservation Alliance, Appeal No. A-2-SMC-04-005. Letter to YinLan Zhang, dated June 17, 2005.
- Singer, S. 2006. Appeal of San Mateo County Coastal Development Permit PLN 2002-00606, issued to Pescadero Conservation Alliance and California Dept. of Parks and Recreation. Letter to Meg Caldwell, dated April 6, 2006.
- Singer, S.W., and T.E. Hamer. 2002. Gazos Creek Marbled Murrelet Monitoring Program: 2001 Annual Report. Unpublished report submitted to Apex Houston Trustee Council, and Sempervirens Fund, prepared by Steven W. Singer Environmental and Ecological Services, Santa Cruz, CA.
- Singer, S.W., and T.E. Hamer. 2004. Gazos Creek Marbled Murrelet Monitoring Program: 2004 Biannual Report. Unpublished report submitted to Apex Houston Trustee Council, and Sempervirens Fund, prepared by Steven W. Singer Environmental and Ecological Services, Santa Cruz, CA.
- Suddjian, D. 2005a. Summary of 2004 Corvid Monitoring Surveys in the Santa Cruz Mountains. Unpublished report, prepared for Command Oil Spill Trustee Council.

- Suddjian, D. L. 2005b. Review of issues regarding impacts to Marbled Murrelets in the vicinity of Gazos Mountain Camp. Letter to Pescadero Conservation Alliance, dated November 17, 2005.
- Suddjian, D. L., 2006. Appeal of San Mateo County Coastal Development Permit PLN 2002-00606, issued to Pescadero Conservation Alliance and California Dept. of Parks and Recreation. Letter to Meg Caldwell, dated April 6, 2006.
- U.S. Fish and Wildlife Service. September 1997. The Recovery Plan for the Marbled Murrelet in Washington, Oregon and California.
- U.S. Fish and Wildlife Service. July 2003. Biological Opinion for the Proposed 14-Mile Border Infrastructure System, San Diego County, California.
- U.S. Fish and Wildlife Service. September 2004. Biological Opinion and Letter of Concurrence for Effects to Bald Eagles, Marbled Murrelets, Northern Spotted Owls, Bull Trout, and Designated Critical Habitat for Marbled Murrelets and Northern Spotted Owls from Olympic Forest Program of Activities for August 5, 2003 to December 31, 2008.
- U.S. Fish and Wildlife Service, 2005. Technical Assistance on the Gazos Mountain Camp Project, Butano Redwoods State Park, San Mateo County, California. Letter to Y. Zhang, dated April 6, 2005.
- U.S. Fish and Wildlife Service, 2006. Proposed use of Gazos Mountain Camp (8-14-2006-2853). Letter to D. Schaub, California Department of Parks and Recreation, dated February 23, 2006.
- U.S. Fish and Wildlife Service, 2006. Appeal Number A-02-04-5 (Pescadero Conservation Alliance, San Mateo County). Letter to Charles Lester, Deputy Director, California Coastal Commission, dated April 10, 2006.
- Weber, Wendy. A Habitat Assessment of the Pescadero Conservation Alliance Field Research Station at Gazos Creek for San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*) and California Red-legged Frog (*Rana aurora draytonii*). Unpublished report dated January 17, 2005.

Public Comments

- Packet of 88 letters in support of Pescadero Conservation Alliance's Proposed Field Research Station. Submitted to the Commission on April 13, 2006.