CALIFORNIA COASTAL COMMISSION

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APPEAL STAFF REPORT DE NOVO REVIEW

- APPEAL NO.: A-2-SMC-04-005
- APPLICANT: Pescadero Conservation Alliance

LOCAL GOVERNMENT: San Mateo County

- LOCAL DECISION: Approval with Conditions
- 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.

STAFF RECOMMENDATION: Denial

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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

EXECUTIVE SUMMARY

The Pescadero Conservation Alliance (PCA) is proposing to establish a new environmental education and research facility at the Gazos Mountain Camp an existing facility located on a 120-acre parcel five miles inland from the Pescadero area of coastal San Mateo County. The proposed project would allow day use for up to 63 people, overnight use for up to 24 people, and up to four year-round resident staff. The applicant proposes to limit the number of visitor vehicles to 20 but would allow an unspecified number of additional vehicles for staff. The applicant also proposes to install a groundwater well and water storage tank and conduct building renovations and road improvements to meet County health and fire safety standards.

The project site was transferred to the California Department of Parks and Recreation (CDPR) after being purchased by a partnership between Sempervirens Fund and the Apex Houston Trustee Council (distributing oil spill mitigation funds) for the purpose of restoring damages caused to the marbled murrelet (listed state endangered and federally threatened) by the 1986 Apex Houston oil spill. The property was purchased with the intent of protecting existing marbled murrelet nesting habitat on site. The site includes several areas that meet the San Mateo County LCP definition of sensitive habitat because it contains suitable habitat for the marbled murrelet, California red-legged frog, San Francisco garter snake, Coho salmon, and steelhead trout

The proposed development would not affect Coho salmon or steelhead trout habitat in Gazos Creek. Traffic generated by the proposed development on the camp access road would potentially impact red-legged frogs and San Francisco garter snakes. However, staff believes that these impacts could be adequately mitigated to avoid significant impacts to these species. However, the proposed development would result in significant adverse impacts and degradation to sensitive habitat areas that support the marbled murrelet. Specifically, the proposed development would include year-round activities in close proximity to known marbled murrelet nesting habitat. The proposed human activities at the site would lead to an increase in the population of ravens and Stellar's jays (corvids). Nest predation by corvids is the primary cause of marbled murrelet nest failure. Substantial scientific evidence exists demonstrating that corvids are attracted to areas with human activity even in the absence of food rewards and that nest predation by corvids is the primary cause of marbled murrelet reproductive failure.

The applicant proposes to mitigate the impacts of nest predation by corvids through: (1) strict food and garbage controls, (2) monitoring for any increase in corvid populations at the site, and (3) removal of corvids through trapping or shooting if an increase in population is detected. However, there is a lack of available evidence demonstrating that the proposed mitigation measures would be effective in preventing these impacts. Staff therefore recommends that the Commission deny the permit application on the grounds that the proposed development would result in significant adverse impacts and degradation to sensitive habitat supporting the marbled murrelet in conflict with San Mateo County LUP Policies 7.3 and 7.5. Staff also recommends the Commission deny the permit application on the grounds that the proposed development would be inconsistent with LUP Policy 1.8 which prohibits new development in rural areas of the County

that would result in significant adverse impacts to coastal resources. Finally, staff recommends that the Commission deny the permit application on the grounds that the proposed development would exceed the density and intensity of use allowable under the LCP for the project site.

1.0 STAFF RECOMMENDATION

Staff recommends that the Commission, after public hearing, <u>deny</u> the coastal development permit application for the proposed development.

MOTION

I move that the Commission approve Coastal Development Permit Application No. A-2-SMC-04-005 for the development proposed by the applicant.

STAFF RECOMMENDATION OF DENIAL

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO DENY THE PERMIT

The Commission hereby <u>denies</u> a coastal development permit for the proposed development on the ground that the development will not conform to the policies of the County of San Mateo certified Local Coastal Program. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

2.0 FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

2.1 Project Permitting History

On September 24, 2003, San Mateo County Planning Commission approved coastal development permit PLN2002-00606 to allow the 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 redlegged 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 habitat assessment, the applicant responded with two additional evaluations from murrelet biologists C.J. Ralph and David Suddjian, disputing the conclusion of the CDFG assessment (Exhibits 9 and 10).

Subsequently, CDFG and USFWS biologists, along with the applicant and CDPR staff, conducted another site visit. 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)

2.2 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).

2.3 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, the Sempervirens Fund purchased the property for future transfer to CDPR. 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 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.

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:

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.

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 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 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 (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.

2.4 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 yearround 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.

2.5 Sensitive Habitats

As discussed below, the proposed development is inconsistent with the sensitive habitat protection policies of the LCP because the development would result in significant adverse impacts on sensitive habitat areas that support the marbled murrelet and would 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 <u>Protection of Sensitive Habitats</u>

- 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.

Policy 7.4 <u>Permitted Uses in Sensitive Habitats</u>

- 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 <u>Permit Conditions</u>

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.

2.5.1 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 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.

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, CRLF using the impoundment are at risk of death and injury from vehicular access on the road. To avoid such impact, 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.

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 condition 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, 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.

2.5.2 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.

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 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 concurred.

As with the CRLF, 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 impacts.

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, 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.

2.5.3 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 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 is a known marbled murrelet nesting site (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)

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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 xx). However, in their July 14, 2005 letter, CDFG biologists consider 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 <u>outside</u> 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.

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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-are 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 ² 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 this entire continuous forested area, including the camp area, to be occupied by marbled murrelets.

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.

Ralph and Suddjian's conclusions regarding the size of potential platforms is supported to some extent by an article titled "Nesting Habitat Characteristics of the Marbled Murrelet in Central California Redwood Forests" (Baker et al. in press), 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

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

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. 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.

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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 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 suitable marbled murrelet nesting habitat is present within the 10-acre old-growth and 20-acre second-growth stands.

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)

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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).

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 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 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). 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 increase with the higher activity levels proposed. 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.

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

To mitigate potential impacts from increased corvid predation, the applicant has proposed the following measures:

- 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 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 marbled murrelet researchers (C.J. Ralph and David Suddjian) who wrote letters in support of the project believe that the proposed mitigation 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 (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).

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 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*, 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 also lists the disadvantages 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.]

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." 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. Effective enforcement of the stringent garbage control measures may not be feasible 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. 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 handouts, 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* (Rudd 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 <u>curtailing</u> 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. oldgrowth 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 <u>in areas isolated from human development</u>. 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.]

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).

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 <u>not</u> 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; 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, "intrusioninduced 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, gray jays are part of the Corvidae family that includes ravens and Steller's jays, and thus, their behavior is likely to 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 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 corvids 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).

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.

Mitigation 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, given the natural temporal and spatial variability in corvid abundance, it is questionable 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. It is also doubtful whether a lethal control program would be effective, or for that matter, even allowed.

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

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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 $(0.5-1.0 \text{ km}^2, \text{ about } 124 \text{ to } 247 \text{ acres})$. 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 km^2 (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.

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.

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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 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 xx, 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 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 overheard, 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. <u>http://ceres.ca.gov/planning/genplan/appendix_a.html</u>).

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 \pm 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 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 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.

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. 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 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 likely reduce nesting success of marbled murrelets. The Commission finds that the proposed development 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.

2.6 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 would have significant adverse impacts on coastal resources. The Commission finds that since the proposed development is located in a rural area and the development would have significant adverse impacts on coastal resources, the development is inconsistent 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

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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 is located on 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. 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 <u>that are</u> <u>exclusively available to the general public</u> 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 <u>serving primarily a</u> <u>recreation function</u> which are operated by private business for profit <u>and are</u> <u>exclusively available to the general public</u>. 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 <u>serving primarily a</u> <u>recreation function</u> 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 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 would provide programs for both students and adults and therefore serve all segments of the public. 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 visitorserving, commercial recreation, and public recreation uses, it would exceed the allowable density and intensity of development allowable for the project site. Therefore, the Commission finds that the proposed development is inconsistent with LUP Policy 1.8.

2.7 Public Access and Recreation

The applicant states that the proposed development would furthers the goals of the LCP and Coastal Act to promote public access. However, 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, the proposed development would 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 prohibited from being located at the Gazos Mountain Camp site in accordance with LUP Policies 10.10 and 11.12.

2.8 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 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. 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.

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 Purrissima 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.

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.

2.9 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.

3.0 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 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.

APPENDIX A

Substantive File Documents

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ARNOLD SCHWARZENEGGER, Governor

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

Dear Ms. Zhang:

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

July 14, 2005

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 abovestated intent.

Conserving California's Wildlife Since 1870

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 120acre 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 audiovisual 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

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

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

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 steller*), 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

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

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

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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).

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United Sta	Ites Department of the In SH AND WILDLIFE SERVICE Sacramento Fish and Wildlife Office 2800 Cottage Way, Room W-2605 Sacramento, California 95825-1846	iterior
in reply refer to: 1-1-05-TA-0597	EXHIBIT NO. 8	
Ms. YinLan Zhang Coastal Program Analyst	APPLICATION NO. A-2-SMC-04-005	APR 0 6 2005
45 Fremont, Suite 2000 San Francisco, California 94105	April 6 USFWS letter to Commission staff	

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.



Ms. YinLan Zhang

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 *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

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

Vagand Catrina Martin

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Deputy Assistant Field Supervisor

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

United States

Department of

Agriculture

EXHIBIT NO. 9 APPLICATION NO. A-2-SMC-04-005 10/31/05 letter from C.J. Ralph to John Wade Forest **Redwood Sciences Labora** Service 1700 Bayview Drive Arcata, California 95521 (707) 825-2992 FAX 707 825-2901 e-mail: cjr2@humboidt.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 <u>not</u> 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 murclet 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 Avenuc, Capitola, CA 95010 Telephone 831: 479: 9603, email dsuddjian@aol.com EXHIBIT NO. ¹⁰ APPLICATION NO.

A-2-SMC-04-005

11/17/05 letter from Dav Suddjian to John Wande

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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 stellert*) 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 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.

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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 ripatian 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. Father 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.

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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 to 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

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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

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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.

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Sincerely

David Suddjian Wildlife Biologist

Literature and other documents cited

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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,

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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

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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 MHR-UZ-ZOUD IHU UI:US PM US FISH & WILDLIFE SVC FAX NO. 707 822 8411 P. 02 United States Department of the Interio 4 EXHIBIT NO. 12 FISH AND WILDLIFE SERVICE 1655 Heindon Road APPLICATION NO. Arcata, California, 95521 In Reply Refer To: Phone: (707) 822-7201 FAX: (707) 822-8411 A-2-SMC-04-005 AFWO 2/23/06 letter from USFW O CDPR FEB 2 3 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 murriet 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.

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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 pratices", 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. MAR-UZ-2006 THU 01:09 PM US FISH & WILDLIFE SVC FAX NO. 707 822 8411

To minimize impacts to marbled murrlets, 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

Th 5b

State of California

MEMORANDUM

California Coastal Commission North Central Coast District

 TO: Commissioners and Interested Parties Date: March 30, 2006
FROM: Charles Lester, Deputy Director North Central Coast District
SUBJECT: Addendum to Commission Meeting for Thursday, April 13, 2006 North Central Coast District

AGENDA # APPLICANT

DESCRIPTION

COASTAL PERMIT APPLICATIONS

Staff Ecologist Technical Memorandum

Th 5bA-2-SMC-04-5 (PCA, San Mateo Co.)

Public correspondence against the project

10.20	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th 5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)

V. Metz and J. Dixon memo re: Marbled Murrelets at Gazos Mountain Camp

Letter (Richard T. Golightly, Ph. D.) dated 3/27/06 Letter (S. Kim Nelson) dated 3/21/06 Letter (Barbara VanderWerf dated 8/1/05 Letter (Mary C. Davey) dated 3/30/05 Letter (Mary C. Davey) dated 3/23/05 Letter (Scott Boyd) dated 4/25/05 Letter (Robert Zatkin) dated 4/25/05 Letter (Betsy Herbert, Ph.D.) dated 4/25/05 Letter (Gary L. Allen & Pamela Patek) dated 4/23/05 Letter (Joan Kirkaldie) dated 4/19/05 Letter (Gary Palmer) dated 4/19/05 Letter (Marty Demare) dated 4/18/05 Letter (Roxanne Rothafel) dated 4/16/05 Letter (Toni Danzig) dated 4/15/05 Letter (Richard A. Gomez) dated 4/14/05 Letter (April Vargas) dated 4/13/05 Letter (Ken S. Lundie) dated 4/12/05 Letter (Patricia Mayall) dated 4/10/05 Letter (Chris Thollaug) dated 4/10/05 Letter (Timothy Duff) dated 4/8/05 Letter (Patricia Carr) dated 4/8/05 Letter ((Maya T. Conrad) dated 5/14/04

Addendum to Commission Meeting for Thursday, April 13, 2006 North Central Coast District A-2-SMC-04-005 (Pescadero Conservation Alliance, San Mateo County) Page 2

Public correspondence supporting the project

Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
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Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)
Th5b	A-2-SMC-04-5 (PCA, San Mateo Co.)

Th5b A-2-SMC-04-5 (PCA, San Mateo Co.)

Letter (Bert Feuss) dated 3/23/06 Letter (Diane L. Renshaw) dated 2/17/06 Letter (Meredith Reynolds) dated 9/17/05 Letter (Bert Feuss) dated 7/18/05 Letter (Norma P. Garcia) dated 7/18/05 Letter (Debra Watkins) dated 7/15/05 Letter (Laurence Miller) dated 6/10/05 Letter (Lauryn Agnew) dated 5/23/05 Letter (Lloyd J. Olsen) dated 5/18/05 Letter (Lloyd J. Olsen) dated 5/17/05 Letter (Chris Brinegar, PhD) dated 5/17/05 Letter (Ed Watkins) dated 5/17/05 Letter (Monty Hampton) dated 5/16/05 Letter (Jean Replicon, PhD) dated 5/16/05 Letter (Robert H. Senz) dated 5/12/05 Letter (Jennifer Harden) dated 5/10/05 Letter (Dr. William Sobezak) dated 5/1/05 Letter (Lynn Robards) dated 4/28/05



CALIFORNIA COASTAL COMMISSION NORTH COAST DISTRICT OFFICE MAILING ADDRESS: THE E STREET & SUITE 200 POX 4008

710 E STREET • SUITE 200 EUREKA, CA 95501-1865 VOICE (707) 445-7833 FACSIMILE (707) 445-7877 MAILING ADDRESS: P. O. BOX 4908 EUREKA, CA 95502-4908

MEMORANDUM

FROM:	Vanessa Metz, Ph.D. Seabird Ecologist
	John Dixon, Ph.D. Ecologist
TO:	Chris Kern North Central Coast District Manager
SUBJECT:	Marbled Murrelets at Gazos Mountain Camp, San Mateo County
APPEAL #:	A-2-SMC-04-005
DATE:	March 27, 2006

Purpose of this Memo

The applicant (Pescadero Conservation Alliance) proposes to establish a year-round environmental education camp and field research station at the Gazos Mountain Camp. The proposed development is located on 12 acres of a 120-acre parcel within Butano State Park, in the central Santa Cruz Mountains in San Mateo County. There are environmentally sensitive habitats and protected species on the property in close proximity to the proposed development, including old-growth coniferous forest identified as "occupied" nesting habitat for the endangered Marbled Murrelet seabird (*Brachyramphus marmoratus*).

The primary concern associated with operation of the camp is the potential for attracting corvids (ravens, jays, and crows, in the family Corvidae), known to be major predators of murrelet eggs and chicks, and consequently increasing nest predation. We have been asked to assess whether the applicants have demonstrated that the proposed development would result in no significant adverse impacts to the Marbled Murrelet and its habitat, as is necessary for the project to be consistent with the San Mateo County LCP policies addressing protection of sensitive habitat.

Proposed Project and Site Description

The applicant proposes operation of an environmental education camp (for youth and adults) and a field research station at the existing Gazos Mountain Camp. The proposed project includes day use of the camp by up to 63 people, overnight accommodations in cabins for up to 24 people, and up to four year-round resident staff. Visitor vehicles would be limited to 20 per day, plus an unknown number of staff vehicles. Associated development would include renovation of numerous buildings, improvements to the access road, and installation of a well and water tank.

Approximately 5 acres of the property are currently developed as a camp, with 22 cabins and 7 other buildings. An access road on the property loops around the existing cabins and camp facilities. Gazos Creek flows through the site, which includes an area of non-native grassland referred to as the "lower field." In addition to the 5-acre developed camp area, trails and roads within the 12-acre lease area would also be used for environmental education and research.

The 12-acre project area is known to be used as a nesting area for the Marbled Murrelet, as evidenced by regular occurrences of "occupied" behaviors indicative of murrelet nesting (e.g., flying silently below the canopy) detected from the lower field since surveys began in 1996 (Singer 1999). In California, Marbled Murrelets nest in coastal old-growth and mature coniferous trees, in particular Douglas-fir (*Pseudotsuga menziesii*) and Coast Redwood (*Sequoia sempervirens*). The 12-acre project site is predominately vegetated with second-growth forest, but there are two areas of older forest near the camp.

First, there is a 10-acre stand of old-growth forest west of the developed camp area, across Gazos Creek from the lower field. The applicant's biological consultant, Mr. Steve Singer, refers to this as the "Inhabited Old-Growth Grove," due to repeated detections of murrelet "occupied" nesting behavior. The nearest cabin (Cabin 22) is approximately 350 feet from this stand, and the access road passes within 150 feet of the stand. Second, northeast of the developed camp area there is a 20-acre stand of mature second-growth forest with some residual old-growth trees that may be potential murrelet nest trees (Singer 1999). Singer refers to this as the "Mature Second-Growth Stand," and stated this stand is "marginal nesting habitat at best," with a small likelihood it supports 1 or 2 pairs of nesting Marbled Murrelets (Singer 1999). This stand is approximately 400 feet from the closest developed area of the camp.

In addition, the 5-acre developed camp area itself is located within a young second-growth stand composed mostly of Coast Redwoods, with several large Douglas-fir trees that the California Department of Fish and Game (CDFG) initially identified as potential murrelet nest trees (Floerke 2005), but later determined to be "marginally suitable" nesting habitat (Floerke 2006). Some of these trees are located less than 300 feet from the existing camp buildings (Floerke 2005).

Marbled Murrelet Population Status

Marbled Murrelets nest from Alaska south to Santa Cruz, California (Nelson 1997). The species is listed by the State of California as endangered, and is federally listed as threatened. Populations of the murrelet in California, Oregon, and Washington are thought to be declining at a rate of at least 4-7% per year (Beissinger 1995). The Santa Cruz Mountains contain the southernmost breeding population in North America. This small population, estimated at 619 birds in 2002 (McShane et al. 2004), nests primarily on state park lands, including Big Basin Redwoods, Butano, and Portola State Parks. There are probably fewer than 200 nests total in the Santa Cruz Mountains each year, and "this fecundity rate implies that the Santa Cruz Mountain population, without immigration from other populations, will be extirpated within 25 years" (Command Trustee Council 2004). The Marbled Murrelet Recovery Plan (U.S. Fish and Wildlife Service 1997) states that because this population is small and isolated from other Marbled Murrelet populations, it is considered to be especially vulnerable.

A recent study by Peery et al. (2004) to diagnose the causes of population decline of Marbled Murrelets in central California suggested that reproduction is limited by food availability in some years and by nest predation in others. Murrelets face threats from the declining availability of their prey (small schooling marine fishes), and increases in populations of avian nest predators, especially corvids. Logging of old-growth forests has likely greatly reduced Marbled Murrelet populations historically, and the species has been adversely impacted by habitat fragmentation and other human disturbance. The Recovery Plan states that the central California population is also threatened with a high probability of large oil spills, and significant chronic oil and other marine pollution (U.S. Fish and Wildlife Service 1997).

The central California Marbled Murrelet population is important to maintaining a welldistributed population in the lower states (California, Oregon, and Washington) area (U.S. Fish and Wildlife Service 1997). There are two small, discrete sub-populations at the extreme ends of the Marbled Murrelet range, in the Santa Cruz Mountains of central California, and on Attu Island in the western Aleutians, both of which are particularly vulnerable to extirpation (Ralph et al. 1995). "Murrelets range along 4,000 km of coastline and it is possible that some populations have distinct genetic characteristics... The loss of these peripheral populations would likely reduce diversity in the population as a whole, and might reduce the capacity of the species to adapt to long-term environmental change" (Ralph et al. 1995).

Marbled Murrelet Nesting Ecology

In California, murrelets nest in large old-growth and mature Coast Redwood and Douglas-fir trees, 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 may not nest every year: Peery et al. (2004) found that only 31% of 32 radio-marked adults in central California nested during a 2-year study. The murrelet nesting 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 in the upper canopy of trees, and are difficult to find and study; the first verified nests in North America were not discovered until 1974. A total of only 18 nests have been found in the Santa Cruz Mountains as of 2005 (Baker et al. in press). Few nests have been monitored, particularly during the 30-day incubation period (Golightly et al. 2002). Thus, it is difficult to determine the number of nests in a given forest, and the success of these nests. The Pacific Seabird Group's accepted protocol for conducting Marbled 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 8 trips per day (mean = 3.2 trips/day); although feedings peak at both dawn and dusk, feedings have also been observed between the hours of 11:00 and 17:00 (Nelson and Hamer 1995a).

Corvid Predation on Murrelet Nests

Murrelets are known to have high nest predation rates, and corvids (primarily Common Ravens (*Corvus corax*) and Steller's Jays (*Cyanocitta stelleri*)) are suspected to have caused the majority of known nest failures (Luginbuhl et al. 2001). 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.

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 monitored 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). 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). The importance 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). 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."

Nelson and Hamer (1995b) "hypothesize that because this seabird has a low reproductive rate (one egg clutch), <u>small increases in predation will have deleterious effects on population</u> <u>viability</u>" [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).

The 2001 annual report on the Gazos Creek Marbled Murrelet Monitoring Program (Singer and Hamer 2002) pointed out the importance to the population of preserving sites such as Gazos Creek with a low density of corvid predators. They reported that the murrelets using the nearby Purisima Creek Open Space Preserve in the Santa Cruz Mountains were in jeopardy, because since 1996 a large roost of Common Ravens has occupied the lower canyon:

"Because ravens are a known predator of murrelets, the future viability of this subpopulation remains very uncertain. 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" [emphasis added] (Singer and Hamer 2002).

Corvids in Campgrounds

Populations of corvids have increased dramatically throughout the Western United States over the last century, especially in response to increases in habitat fragmentation and other human disturbance (Nelson and Hamer 1995b). In central California, corvid populations have increased greatly in the region since 1996 (Liebezeit and George 2002). In the Santa Cruz Mountains, Steller's Jays are common, and Common Ravens are very numerous and widespread (Command Trustee Council 2004). Surveys have shown that corvid density in the region is especially elevated in campgrounds. Corvids are generalist foragers, readily eating human-produced wastes (Liebezeit and George 2002). "The availability of subsidized food and water may be the most important underlying cause for the increase in corvid populations throughout the west" (Liebezeit and George 2002). In addition to attracting corvids to an area, subsidized food may improve corvid nesting success, thus increasing corvid population size.

Common Ravens and Steller's Jays are attracted to campgrounds and other outdoor areas with high human usage (Singer et al. 1991; Hébert and Golightly 2003; Suddjian 2005a). John Marzluff, a corvid and murrelet researcher at the University of Washington, stated that density and productivity of corvids increases within 1 km (0.6 mile) of campgrounds and settlements (personal communication to V. Metz on February 5, 2006). A study by Neatherlin and Marzluff (2004) found that the abundance of American Crows is closely associated with the size of campgrounds, and that larger campgrounds with more consistent usage have a greater concentration of crows. In central California, murrelet nesting habitat is largely restricted to state parks near campgrounds, where corvid populations are elevated and predation rates are high (Peery et al. 2004). In Big Basin Redwoods State Park in central California, the number of Steller's Jays was positively correlated with the number of occupied campsites (Suddjian 2005a).

Murrelets have been known to nest successfully near campgrounds and recreation areas where there is significant human activity (e.g., Golightly et al. 2002, in Redwood National and State Parks). However, the nesting success rate of murrelets is very low in these areas: Golightly documented an annual nesting success rate of about 6% on average in Redwood National and State Parks, and calculated that more than 60% of nests failed due to predation (Golightly 2006). Murrelet nest predation rates are even higher in the Santa Cruz Mountains (84-100%; Nelson 2006). It is likely that nesting murrelets would have a higher success rate without the nearby human activity and associated increases in disturbance and corvid predation. Young murrelets looking for a potential nesting site might also tend to avoid areas with significant human activity.

It would be risky to assume that nesting murrelets could simply move to another location if the level of predation or disturbance is too great at their current nesting area. The oldgrowth forest nesting habitat of this species has been greatly reduced in California, and unoccupied nesting habitat is probably very limited. Evidence suggests that adult seabirds in this family (Alcidae) rarely move to other locations or colonize new areas because of very strong site fidelity. Marbled Murrelets exhibit site tenacity by returning to nesting stands year after year and sometimes re-nesting in the same tree (Nelson 1997). If adults were to move to another location, they could potentially miss several breeding seasons while locating an available nest site.

Nesting Habitat at Project Site

A Marbled Murrelet monitoring program conducted from 1999 to the present has documented repeatedly that Marbled Murrelets use the Gazos Mountain Camp property (Singer and Hamer, 2002 and 2004 reports). Ground observer surveys were used to detect murrelet activities near the 10-acre old-growth stand, and ornithological radar was used to study murrelet abundance in the watershed. Although no direct evidence of nesting was observed, numerous radar detections of murrelets were recorded on each monitoring day, and "occupied behavior" suggestive of local nesting was observed regularly. The behavior most strongly indicative of nesting in the vicinity is "single silent birds seen flying below canopy" (Singer and Hamer, 2004), which was observed at the camp during surveys over several years. These data demonstrate the use of the site by Marbled Murrelets for at least seven years, and hence probable continued use in the future, if conditions do not degrade.

The 1999 report by the applicant's consulting biologist (Mr. Steve Singer), *Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property, San Mateo County, CA*, identified the site's 10-acre old-growth stand across Gazos Creek from the camp as "inhabited" murrelet nesting habitat, and the site's 20-acre mature second-growth stand to the northeast of the camp as "marginal" nesting habitat (Singer 1999). This has significance in identifying which areas of the project site are sensitive habitats under the San Mateo County LCP.

The definition of sensitive habitats in the San Mateo County LCP includes the criterion of "habitats containing or supporting 'rare and endangered' species as defined by the State Fish and Game Commission." Thus, nesting habitat of the Marbled Murrelet, an endangered species, is defined as a sensitive habitat. The 10-acre old-growth "occupied" stand and 20-acre mature second-growth stand clearly meet the definition of "sensitive habitat" in the San Mateo County LCP, because suitable nesting trees are a prerequisite for successful reproduction of this sensitive species on the site. In other similar cases, the Commission has designated as sensitive habitat specific trees that provide important habitat to individual birds of sensitive species.

Correspondence about the project also raised the issue of whether residual large trees in the young second-growth stand within which the camp buildings are located may also constitute potential murrelet nesting habitat. CDFG initially made a determination (Floerke 2005) that "DFG considers this entire continuous forested area, including the camp area, to be occupied by marbled murrelets," and concluded that the camp would result in significant adverse impacts to nesting Marbled Murrelets by "increasing chances of nest failure or preventing this area from serving as suitable nesting habitat." During site inspections of the camp area in 2005, CDFG

biologists noted the presence of Redwood and Douglas-fir trees with "potential marbled murrelet nest platforms" located <u>inside</u> the developed camp area, as well as immediately adjacent to the developed camp area along Gazos Creek, and also in the 20-acre mature second-growth stand (Floerke 2005). Floerke stated that some potential nest trees are located less than 300 feet from the existing camp buildings, and that some potential nest trees near Gazos Creek have platforms that are visible from the uphill cabin decks.

The applicant obtained the opinions of two murrelet researchers (Mr. David Suddjian and Dr. C.J. Ralph), who wrote letters in opposition to CDFG's determination (Floerke 2005) that the second-growth stands offer suitable murrelet habitat, and that the camp would have adverse impacts on Marbled Murrelets. Both researchers agreed that the 10-acre old-growth stand is considered nesting habitat, but they stated their professional opinions that "most" of the second-growth habitat is unsuitable as nesting habitat. Suddjian (2005b) participated in a site visit, and concluded that "most" trees in the 20-acre mature second-growth stand are unsuitable for nesting murrelets, due to poor canopy cover over the few potential nest platforms. In regard to the developed camp area, Suddjian (2005b) stated that only a "few" Douglas-firs near the northwest end of the developed camp were structurally suitable for murrelets. However, Suddjian rejected CDFG's use of the accepted Marbled Murrelet survey protocol, which specifies a 4-inch limb diameter as the minimum size for identifying a potential nesting platform (Evans Mack et al. 2003). Instead, Suddjian based his assessment on an 8-11 inch minimum limb diameter. (We will discuss the limb-diameter issue in more detail later in this memo).

Ralph (2005) also concluded that "most" of the second-growth habitat appears to be unsuitable as nesting habitat. However, he based his opinion on a site visit several years ago, and his review of aerial photos. Ralph stated that the stand in which the camp buildings are located has "few" residual large trees, and has a history of disturbance from human activities, and thus would be very unlikely to be adequate for murrelet habitat. He also stated that the mature second-growth stand has "more residuals present," but did not explain the basis of his conclusion that it would be very unlikely for murrelets to nest in these residual old-growth trees.

Singer described the 20-acre mature second-growth stand as "marginal nesting habitat at best," with a small likelihood that one or two pairs of Marbled Murrelets currently nest there (Singer 1999). He stated the 20-acre stand has "occasional" residual potential nest trees, but that these trees "often" have "minimally-sized" platforms in open or exposed locations. However, in his assessment of potential nest trees on the project site, Singer used an 8-inch minimum criterion for identifying potential nesting platforms, rather than the 4-inch criterion specified in the current Marbled Murrelet forest survey protocol (Evans Mack et al. 2003).

The U.S. Fish and Wildlife Service (USFWS) also participated in a site visit and submitted a letter of opinion on the project (Long 2006), stating that although "some" of the trees in the second-growth forest in and adjacent to the developed camp area have limbs at the lower end of size for potential murrelet nesting platforms, "many" of the platforms had little cover, and thus "generally appeared to be marginally suitable" as marbled murrelet nesting habitat [emphasis added].

CDFG recently issued a follow-up letter (Floerke 2006) that reversed its previous determination (Floerke 2005). The reversal was based on a "clarification of the project proposal and an additional field site evaluation." CDFG's follow-up letter stated that the second-growth habitat in and adjacent to the developed camp area is "marginally suitable" murrelet nesting habitat, rather than "potential nesting habitat" as it had previously determined. In the follow-up letter, CDFG described the several large Douglas-fir trees in and adjacent to the camp as "generally exposed," with limbs at the lower end of size for marbled murrelet use, and thus they "generally appear to be marginally suitable" as nesting habitat [emphasis added].

In our opinion, the biological assessments in the two CDFG letters provide a distinction with relatively little difference. The trees did not change between 2005 and 2006 and if "marginally suitable" nesting habitat exists, then it remains "potential" nesting habitat, especially in view of the overall scarcity of suitable nesting habitat of any description. The main change appears to be that, upon further consideration, CDFG has decided that the likelihood of nesting taking place in that habitat is lower than it first thought. CDFG still identifies suitable nesting habitat elsewhere on the site, including the 10-acre old-growth stand, and a 20-acre second-growth stand to the southwest of the camp, but now characterize that habitat as "well removed" (300 feet) from the camp activity, and thus, contrary to its initial determination, concludes that camp operations are not expected to adversely impact murrelets. Nonetheless, the evidence supports the determination that potential nesting habitat is present in the 10-acre old-growth stand and in the 20-acre mature second-growth stand, although the evidence of potential nesting habitat in areas within the developed camp area is inconclusive.

In summary, CDFG, USFWS, and two murrelet researchers (Suddjian and Ralph) concur with Singer that the 10-acre old-growth stand provides nesting habitat, and that the second-growth stands in and adjacent to the developed camp provide "marginal" nesting habitat with few potential nesting trees. CDFG and USFWS concluded that potential nesting trees are not likely to be present within the developed camp area (outside of the 10-acre old-growth stand and 20-acre mature second-growth stand) due to the lack of sizable platforms, the wide spacing between the trees in the camp area, and the characteristics of the understory (Floerke 2006; Long 2006).

This conclusion is supported to some extent by a recent study by Baker et al. (in press), which described the characteristics of 17 of the 18 known murrelet nests in the Santa Cruz Mountains up to 2005. All nests found were located in either unharvested (82%) or lightly harvested (18%) old-growth Coast Redwood/Douglas-fir stands; thus, the authors concluded that in this region, marbled murrelets "primarily nest in old-growth stands." However, the authors stated that their ability to infer habitat characteristics important for murrelet nesting was limited by the small sample size (17 nests), and that 7 of the nests were located during searches concentrated in old-growth habitat, and thus may not constitute a random representation of murrelet nesting habitat. Murrelets are known to nest in second-growth stands elsewhere in the species' range.

Murrelets may potentially nest in a second-growth forest stand that contains a few suitable large trees, despite the stand being labeled as "marginal" habitat overall. The Marbled Murrelet forest survey protocol states that "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" (Evans Mack et al. 2003). The protocol states:

"It is important to note that murrelets have occupied small patches of habitat within larger areas of unsuitable habitat...Some occupied sites also have included large, residual trees in low densities, sometimes less than one tree per acre."

"Occupied" behavior strongly indicative of murrelet nesting has been repeatedly observed on the Gazos Camp property, but because murrelet nests are difficult to find, it is unknown whether murrelets nest in the site's second-growth stands, as well as in the old-growth stand. Singer stated that there is a small likelihood that one or two pairs of murrelets currently nest in the 20-acre mature second-growth stand at the site (Singer 1999). One or two pairs can be a significant number for this small population, which has a high nest failure rate, and it is important to maintain the reproductive output of all nesting pairs.

As the amount of suitable old-growth and mature forest habitat in the region continues to decline, and the level of predation increases, it is possible that these "marginal" habitat areas will become of increasing importance to the species. The Command Trustee Council (2004 report) stated:

"Historic logging of old-growth redwoods has severely reduced available nesting habitat in the Santa Cruz Mountains. This habitat loss has severely restricted the number of Marbled Murrelets that this region can support. Moreover, the <u>habitat loss has caused the</u> <u>remaining Marbled Murrelets to nest in smaller and more marginal parcels, possibly</u> <u>subjecting them to greater nest predation and lower fecundity</u>" [emphasis added].

Minimum Diameter of Limb for Potential Nesting Platform

Marbled Murrelets nest in large old-growth and mature Douglas-fir and Coast Redwood, which provide suitable nesting platforms. In the correspondence regarding this project, the use of the accepted Marbled Murrelet forest survey protocol (Evans Mack et al. 2003) in determining the minimum limb diameter to be used as an indicator of suitable nesting habitat was challenged. This has ramifications in identifying which of the second-growth forest stands at the project site may provide potential nesting habitat.

The Pacific Seabird Group's accepted protocol for conducting Marbled Murrelet surveys at inland forest sites (Evans Mack et al. 2003) defines a potential nest platform as a relatively flat surface at least 4 inches in diameter and 33 feet high in a tree. This criterion is based on the characteristics of most nests found to date. The Marbled Murrelet Recovery Plan (U.S. Fish and Wildlife Service 1997) agreed that moss-covered branches with a diameter greater than 4 inches are suitable nesting platforms. CDFG (Floerke 2005) concurred with the 4-inch criterion.

However, Singer and the two murrelet researchers who wrote letters in dispute of Floerke's (2005) letter, Ralph (2005) and Suddjian (2005b) disagreed with this criterion. Ralph stated that although a 4-inch diameter limb is the minimum size recorded for a murrelet nesting platform, a limb diameter of 8 to 10 inches would more accurately represent the modal size of nest limbs in the Santa Cruz Mountains region. Suddjian stated that 8-11 inches would be a suitable minimum criterion, because small limbs (4 to 7 inches) rarely provide flat surfaces or depressions for secure egg placement, and trees in this region do not typically have substantial epiphytic growth (such as moss and lichen) that enhances the effective platform size.

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 a recent study that measured nesting platforms of 15 nests in the Santa Cruz Mountains (Baker et al. in press). Twelve of the nests were on limbs, and 3 were on the broken top of redwood trees. The mean diameter of the nest limb at the nest cup (including the moss and lichen epiphyte cover) for the 12 nests was 18 inches, and ranged from 11 to 28 inches. Nonetheless, 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. In addition, 7 of the nests were located during searches concentrated in old-growth habitat, thus this study may not be a fair representation of murrelet nesting habitat. Given the fact that murrelet nests have been found elsewhere on 4-inch diameter limbs, we support taking a conservative approach and using the Pacific Seabird Group's accepted survey protocol criterion of a 4-inch diameter limb. Thus, the method for assessing potential marbled murrelet nesting habitat initially used by CDFG remains valid. We also question whether adequate surveys of potential marbled murrelet habitat have been conducted on the site, as Singer used an 8-inch criterion in his surveys, rather than the currently accepted protocol's 4-inch criterion.

Proposed Mitigation Measures

To mitigate the impact of the camp operations on endangered and threatened species, the applicant accepted their biological consultant's recommended management measures presented in the "Marbled Murrelet Habitat Management Guidelines for the Gazos Mountain Camp Property" (Singer 1999). Coastal Commission staff questioned these management guidelines, as they appeared to offer suggestions (e.g., animal-proof cans should be used; indoor service and eating areas are to be preferred) rather than requirements. The applicant has agreed to accept additional protective measures as well as the management measures listed in the referenced guidelines. The current list of proposed mitigation measures as stated by the applicant are listed below, and discussed in the following sections:

Proposed Corvid Control:

To mitigate potential impacts from increased corvid predation, the applicant has proposed the following measures:

- 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 California State Parks.
- 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 California State Parks 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.

Proposed Disturbance Control:

- 1. No entry into the 10-acre old-growth stand located on the west side of the Camp will be permitted.
- 2. The applicant will fence off lower meadow and pond area.
- 3. No use of any kind of the lower meadow two hours after sunrise or two hours before sunset during murrelet season will be permitted.
- 4. Minimum use of lower meadow will be permitted at other times (limited to walking through the area), during murrelet season.
- 5. The applicant will limit larger day use groups on site to the hours of 9:30-2:30 during murrelet season.
- 6. Staff will conduct enforcement of compliance.
- 7. Staff will educate and enlist all visitors in murrelet protection program.
- 8. Staff will work with California State Parks to ensure no picnicking near 20-acre second-growth stand.
- 9. Visitors will be prohibited from leaving the developed camp area without a trained staff member.
- 10. Use of the cabin closest to the occupied stand will be limited during murrelet nesting season.

11. Tree removal in the developed camp area will be limited except as required to address safety.

Proposed Noise Control:

- 1. No amplified sound will be permitted anywhere on the site.
- No loud noises will be permitted during murrelet nesting season (March 23 to Sept. 15).
- 3. Visitor cars will be limited to 20 per day (additional cars would be allowed for staff).

Garbage Control Mitigation Measures

The applicant has proposed garbage control measures to minimize the attraction of corvids into the camp area. The applicant would restrict food consumption to indoor areas, provide animalproof garbage cans in enclosed indoor animal-proof areas, regularly remove garbage, and patrol the site for food debris three times daily. However, we have concerns about how effective these garbage control measures would be in eliminating the anthropogenic food supply. It may be difficult to prevent visitors, particularly youth, from taking snacks along on long hikes in the forest, and it is doubtful that the daily patrols for food debris would pick up small food particles.

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) states that reduction of food sources adjacent to areas of listed species activity (such as using a corvid-proof garbage can) is an important means of immediately curtailing corvid activity at a specific site. However, as of yet, "<u>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</u>" [emphasis added]. This report states that no empirical data indicates the effectiveness of controlling subsidized food sources, and that the technique is

largely untested. Other disadvantages cited in the report include that it is very labor intensive, may be impractical in some areas, and may be difficult to ensure strict compliance. Therefore, there does not appear to be evidence demonstrating that the proposed measures to control subsidized food would be effective in preventing an increase in local corvid populations, and thus an increase in the risk of predation.

Corvid management programs to control anthropogenic food sources, as proposed by the applicant, have been implemented in parks such as Big Basin Redwoods State Park, Redwood National Park, and Prairie Creek Redwoods State Park. However, these are existing campgrounds and day use areas with established high levels of human use, rather than a proposed new use such as this project. The applicant contends that the only recommended means to limit corvid populations at Gazos Mountain Camp is through control of subsidized food sources, and not by control of human presence at the site. To the contrary, one of the recommended management actions in the CDFG corvid management recommendations report (Liebezeit and George 2002) is to locate campgrounds and recreation areas away from sensitive habitat areas:

Recommendation: 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. <u>Because corvids are often</u> <u>attracted to areas of human use, maintaining campgrounds in these locations may</u> 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].

Attraction of Corvids to Human Activity

Even if garbage and food control measures were rigorously enforced, an important question remains as to whether corvids would still be attracted to the congregation of people and vehicles at the camp in the absence of food rewards. "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). CDFG stated (Floerke 2005) that "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)."

Humboldt State University murrelet researcher Dr. Rick Golightly has conducted research on human-caused disturbance on nesting Marbled Murrelets in Redwood National and State Parks (e.g., Golightly et al. 2002; Hébert and Golightly 2003). Based on his research, Golightly (2006) concludes that:

"Corvids that have learned off-site that food is associated with people will not need food rewards on-site to be attracted to people. Nearby campgrounds and private lands must be considered in the evaluation of corvid behavior at the site and the consequences of adding additional human disturbance at the site. Consequently, the regular use of the parcel by the numbers of people identified in the plan will substantially elevate the risk of predation relative to a stand where people are excluded or less numerous, or are not engaged in food consumptive behaviors" [emphasis added].

Oregon State University murrelet researcher Dr. Kim Nelson (2006) concurs with Golightly, and states that:

"It is my opinion that the <u>Gazos Mountain Camp and its various outdoor activities will</u> <u>likely attract predators to the camp area and adjacent old-growth forest, despite the</u> <u>proposed and experimental mitigations (including predator proof trash cans)</u>. The attraction of predators to this area in turn has the potential to increase predation rates on murrelet nests in the nearby forest. Given the potential for increased predation on murrelet nests and the endangered status of this unique seabird, eliminating the possibility of impact to this species would be prudent" [emphasis added].

A study on the effect of repeated human intrusion into forests on Gray Jay numbers supports Golightly's and Nelson's conclusions, and indicated that gray jays were attracted by experimental human intrusions, even though the jays were <u>not</u> rewarded by food during the intrusions (Gutzwiller et al. 2002). This 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; 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, "intrusioninduced attraction of avian nest predators can seriously exacerbate predation on eggs and nestlings" (Gutzwiller et al. 2002).

In assessing predation risk at a nest, it is important to recognize that corvids have relatively large home range sizes (Golightly 2006). Common Ravens have home ranges of 1,470-2,050 acres, and can travel up to ten miles a day to exploit anthropogenic food sources (Liebezeit and George 2002; Luginbuhl et al. 2001). Steller's Jays have home ranges of 72-162 acres (Liebezeit and George 2002). Consequently, corvids attracted to the camp area "will also increase the potential predation risk within all nesting habitat included within the 120-acre parcel," as all raven and many jay home ranges exceed the size of the parcel (Golightly 2006).

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 2005). These ravens have thus learned to associate human congregations and settlements with food sources, and therefore it is likely they would be attracted by the activity at Gazos Mountain Camp as well. 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.

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 also 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).

We thus conclude that even with strict garbage and food control measures in place, ravens and jays will be attracted to the Gazos Mountain Camp by the human activity, and this may lead to an increase in murrelet nest predation. Increased nest predation would be a significant adverse impact on sensitive habitats, and would be in conflict with the LCP policies protecting sensitive habitat.

Singer (the applicant's biological consultant) and two marbled murrelet researchers who wrote letters in support of the project (Ralph and Suddjian) disagree with our conclusions. Ralph (2005) stated that there is no convincing evidence that corvids would be attracted, except perhaps briefly, to human presence itself. Suddjian (2005b) stated 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." Singer (2005) went even further, and stated 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."

Another biological consultant who wrote in support of the project (LeValley 2005) also compared the project's impacts to historic impacts, and concluded that the 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." However, whether or not the proposed use of the camp would have a lower impact to murrelets than previous uses of the site that have been discontinued is not relevant to the Commission's evaluation of whether the proposed use would result in significant adverse impacts.

Singer, Ralph, and Suddjian did not cite evidence in support of their contention that the proposed use of the camp would not cause an increase in corvid numbers and nest predation. To the

contrary, murrelet researchers Golightly and Nelson, supported by the literature cited above, provide evidence that such impacts are likely. Furthermore, the question before us is whether there is a reasonable expectation that the proposed project will result in a significant adverse impact to sensitive habitat (i.e., Marbled Murrelet nesting), not whether the proposed project would have fewer impacts than previous uses of the site. The question we are considering is whether the proposed use of the camp is likely to have a significant adverse impact on murrelets (by increasing corvid abundance and murrelet nest predation) in comparison to <u>not</u> operating a camp at this site.

Corvid Abundance Effect on Nest Predation Rate

If corvids are attracted to the camp, predation on murrelet nests in the nearby forest is likely to increase. Many studies have shown a positive correlation between corvid abundance and predation rates on nearby bird nests (e.g., Raphael et al. 2002; McShane et al. 2004). 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 will also increase. Peery et al. (2004) suggested that relocating campgrounds away from murrelet nesting habitat could help reduce nest predation.

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 are often associated with forest edges, thus fragmentation might lead to higher rates of predation on murrelet nests. Golightly (2006) stated that the 10-acre old-growth stand at Gazos Mountain Camp should be viewed as entirely edge (see Brand and George 2001), and all 10 acres potentially vulnerable to jays. 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.

Proposed Corvid Monitoring and Removal

The applicant has proposed a study to monitor corvid use of the area so that the effects of the proposed camp area can be evaluated. The details of the study, and the duration it will continue, 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, given the natural temporal and spatial variability in corvid abundance, we question 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. We also doubt whether a lethal control program would be effective, or for that matter, even allowed.

It would also 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 very unlikely that a corvid monitoring study will 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. Also, once an increase in corvids is detected and a lethal control program is implemented, 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 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 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.

Mitigation of Collision Risk

Nelson (1997) stated that murrelets approach the nest below the tree canopy at heights as low as 2 meters (6.6 feet), before steeply ascending to the nest. Cars or trucks on logging roads and highways have hit Murrelets in other locations; thus, Nelson (1997) concluded that traffic is a threat where nests are located near roads. However, Singer stated that murrelet flyways in the Santa Cruz Mountains are always above tree level, and numerous observations at the Gazos

Mountain Camp have shown murrelets to fly at least 45 feet above ground level (Singer 2005). Bus traffic on the access road would be limited to the hours of between 9:30 a.m.-2:30 p.m. during the murrelet nesting season, to avoid the dawn and dusk peaks in murrelet trips to the nest. Therefore, we agree with the applicant that there is very little risk of collisions between murrelets and vehicles at this location.

Mitigation of Sight and Sound Disturbance

The applicant proposes year-round use of the site, which would result in sounds from vehicular traffic on the access road and from activities at the facility during the Marbled Murrelet nesting season, which extends from March 24 through September 15. This activity includes operation of a generator, which may be a locally loud, long-term sound. The proposed noise control measures include prohibiting amplified sound anywhere on the site, prohibiting loud noises during the murrelet nesting season, and limiting the number of vehicle trips to 20 trips per day (plus staff trips). However, it may be difficult to enforce the prohibition on loud noises during the nesting season, particularly with groups of children.

Although entry into the occupied old-growth forest stand would be prohibited, the applicant does not propose a protective buffer to limit human activities around the old-growth stand or the mature second-growth stand. The applicant states staff would "limit" use of the cabin closest to the occupied stand (350 feet away) during murrelet nesting season, but has not detailed what the proposed limitation would be.

Human disturbance (sight or sound) may impact murrelet nesting success by flushing an adult from a nest (potentially damaging the egg), or by decreasing attentiveness at a nest, which may lead to a decrease in hatching rates and increased risk of predation. Disturbance may also cause adults to feed a chick less frequently, abort a feeding trip, or to abandon the nest. Disturbance can also have an impact by influencing the choice of nest site (Long and Ralph 1998). Hamer and Nelson (1998) have documented adult murrelets flushing off a nest, and aborting feeding visits in response to human and vehicle presence near nest trees, and concluded that visual human presence near nest trees is the main cause of disturbances to nesting murrelets.

To analyze potential disturbance to nesting murrelets due to noise generated by the proposed development, the applicant conducted two noise studies (Houston 2000 and 2004). The 2000 study measured human-generated noise emitted approximately 1,600 feet away from the occupied old-growth stand. However, this study is of little value, as the proposed development would create noise sources much closer to murrelet nesting areas: the access road is within 150 feet of the 10-acre old-growth stand; Cabin 22 (proposed housing for up to four year-round staff) is approximately 350 feet from this stand; and the main camp compound is approximately 400 feet from both the 10-acre old-growth stand and the 20-acre mature second-growth stand.

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 level, which is the normal background level of environmental noise (USFWS 1997). The 2000 noise study concluded that the ambient noise level in the 10-acre old-growth stand ranges from 51-79 decibels, based on four measurements taken for one

minute each. However, during one measurement, a plane flew overheard, which measured 79 decibels; therefore, Houston concluded that the ambient noise level within the occupied stand is as high as 79 decibels. This is an erroneous conclusion, as ambient noise levels should not include occasional and transient intrusive noise sources, such as an airplane in this location.

Gazos Mountain Camp is located in a remote forested area, far from any major roads or other significant sources of human generated noise. Ambient noise levels averaged 40.8 ± 0.9 decibels in Redwood National and State Parks (Hébert and Golightly 2003), and averaged 40 decibels in Olympic National Forest (USFWS 2004). In the 2004 noise study, the applicant recorded an ambient noise level of 62 decibels at the creek, and less than 50 decibels at a point 30 feet away from the creek. As most of the occupied 10-acre old-growth stand is located away from the creek, it is fair to assume that ambient noise level in the old-growth stand is less than 50 decibels.

The 2004 noise study measured human-generated noise, including loud shouting and car horns, between 100 to 1,000 feet from the noise source at 100-foot intervals. Shouting measured 60 decibels at 100 feet and 56 decibels at 200 feet from the noise source. Car horn noise measured 68 decibels at 100 feet and 63 decibels at 200 feet from the noise source. Therefore, the proposed development would likely result in human-generated noise levels in excess of ambient noise in marbled murrelet nesting habitat.

Nonetheless, research has shown that the anticipated noise level from the proposed project is not likely to flush nesting murrelets, and evidence suggesting other adverse impacts to marbled murrelet as a result of noise disturbance is inconclusive. Researchers have found that Marbled Murrelets "are not easily disrupted from nesting attempts by human disturbance except when confronted at or very near the nest itself" (Long and Ralph 1998). Singer et al. (1991) stated "incubating birds only rarely showed behavior suggesting agitation from human presence or noise." Individual birds may become habituated to the type and volume of noise in an area. At Big Basin State Park, three nests were found on branches overhanging a major hiking rail with approximately 25,000 visitors/year, and yet the nesting murrelets showed no visible reaction to loud talking or yelling near the nesting tree, and no visible response to vehicles, including an occasional large truck, driving past 70 meters (230 feet) away (Singer report 1995).

Although murrelets nest in state parks and other recreation areas with high human activity, the success of these nests is very poor (6% success rate in Redwood National and State Parks; Golightly 2006) or else is not well known (Golightly et al. 2002). Unsuccessful nests in these forest areas probably result from predators attracted to human refuse, not because of noise or direct disturbance, as nests are usually >12 m (30 feet) high in trees (Nelson 1997). However, human-caused noise may also attract predators to the vicinity (Golightly et al. 2002).

Experimental studies of the effect of noise disturbance on murrelets have been conducted on a few chicks and nesting adults. In Redwood National and State Parks, Hébert and Golightly (2003) found that short-term noise of 75 db did not cause adults to flush from the nest, and did not reduce reproductive success. However, the 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 (USFWS 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."

Summary of Expected Impacts on Murrelets

We conclude that the distance between camp activities and potential marbled murrelet nesting habitat is not large enough to avoid adverse impacts on murrelets from corvids attracted to camp operations. Nest predation by corvids is the major cause of marbled murrelet nest failure, and corvids are known to be attracted to areas with human activity. Corvids are opportunistic visual predators, with relatively large home ranges. We conclude that corvids would be attracted to human activity at the camp even with strict garbage and food controls in place, and this would likely lead to an increase in corvid predation on murrelet nests. There is no conclusive evidence, however, that nesting murrelets would be adversely impacted by noise and visual disturbance at the site.

Potential marbled murrelet nesting habitat is defined as a sensitive habitat under the LCP, which requires the Commission to "prohibit any land use or development that would have significant adverse impact on sensitive habitat areas." An increase in nest predation would clearly have a significant adverse impact on this habitat. We therefore conclude that the proposed project would result in significant adverse impacts to sensitive habitat, and that no mitigation measures have been identified that would reliably reduce adverse impacts on sensitive habitats to less than significant levels.

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HUMBOLDT STATE UNIVERSITY

Department of Wildlife

Vanessa Metz, Ph.D. California Coastal Commission 710 E Street, Suite 200 Eureka, CA 95501 RECEIVED

MAR 2 7 2006

CALIFORNIA COASTAL COMMISSION

RE: Implications of human disturbance and nest predation on Marbled Murrelets

Dear Dr. Metz

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I am responding in writing to your recent request for information on Marbled Murrelet predation, corvids, and human disturbance, especially as it may relate to the proposed camp on the Gozos Mountain Camp Property. Although I have not been to the proposed site, I have made several visits to nearby Butano State Park and to a specific Marbled Murrelet nest in the vicinity. I have a copy of the Habitat Management Guidelines prepared by Steve Singer in 1999 (hereafter "plan"), and the letters of comment from California Department of Fish and Game. I attempted to use the plan maps to assess the distances for buffers and influences of management activities, but had difficulty rectifying the distances on the map with descriptions in the plan and in other documents. However, uncertainties in reading the map were probably not consequential to the scale of the topics I address below. I have attempted to limit my comments herein to discussion of subjects for which my research team have specific data that may be important in your assessment. Please do not consider my failure to address all elements of the plan as either an endorsement of the correctness nor as a critique of the conclusions; rather I focus where I have substantial data that helps with the assessment of the future use of this stand for Marbled Murrelets.

For the past six years, I and my colleagues have conducted a study of human disturbance on nesting Marbled Murrelets in Redwood National and State Parks in Humboldt County, California (for which I am the principal investigator). We used radio telemetry to identify nests and conducted short-term noise experiments on both chicks and incubating adults. We also used video to monitor nests and identify nest fates. In total we attached radio transmitters to 102 birds, assessed their reproductive success over three breeding seasons, and examined nest use and predation over five seasons. I should note that Redwood National and State Parks encompass some of the largest stands of old-growth redwood forest left in California. The final report for this effort is expected to be released within a few months.

Short-term noise of approximately 75 dB did not cause either adults or chicks to flush from the nest, nor could we detect differences in reproductive performance between tested nests and controls.

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However, we did detect significant changes in posture and alert behaviors throughout the period of disturbance. The conflict within these results can by explained by considerations of spatial scale (see below) and the source of reproductive failures. Noise by itself may not be a direct effect on reproductive success, but rather it may indirectly influence reproductive success via the characteristics of the source of the noise and the correlates of the noise generation (eg: predators that associate with or are attracted to the source of noise).

For the overall population of Marbled Murrelets in Redwood National and State Parks, reproductive success was very poor (about 6% for an annual average), and was similar to reports from central California. We calculated that more than 60% of nests probably failed due to predation. We observed egg predation by corvids (Stellars Jays and Common Ravens). In assessing predation risk at a nest, it is important to recognize that Jays have home ranges of 72-162 acres and Ravens have home ranges of 1470-2050 acres (see Liebezeit and George 2002). Consequently, any attraction of corvids to the camp area (as identified in the plan), especially if concentrated by food, will also increase the potential predation risk within all nesting habitat included within the 120 acre parcel (all Raven and many Jay home ranges exceed the size of the entire parcel). Although they are often associated with forest edges, we regularly observed corvids in the forest interior and near murrelet nest sites. It is important to note that a 10 acre patch should be viewed as entirely edge (see Brand and George 2001) and all of the 10 acres potentially influenced by jays. Corvids that have learned off-site that food is associated with people will not need food rewards on-site to be attracted to people. Nearby campgrounds and private lands must be considered in the evaluation of corvid behavior at the site and the consequence of adding additional human disturbance at the site.

Consequently, the regular use of the parcel by the numbers of people identified in the plan will substantially elevate the risk of predation relative to a stand where people are excluded or less numerous, or are not engaged in food consumptive behaviors. Predation is a large part of the present-day reproductive difficulty experienced by Marbled Murrelets in California and this increased predation risk could cause even higher nest failure than in our study, which would render the parcel of little value to the recovery or retention of Marbled Murrelets in this area. It is important to note that although corvids have long been recognized as potential egg predators, the extent of corvid predation and the details of corvid predation on Marbled Murrelets had not been intensively investigated prior to 1999 when the plan was written.

I hope this helps in your evaluation of potential uses of the Gozos Mountain Camp parcel.

Sincerely, Ful (Paul

Richard T. Golightly, Ph.D. Professor

21 March 2006

Vanessa Metz California Coastal Commission 45 Fremont Street, Suite 2000 San Francisco, California 94105

RE: Gazos Mountain Camp, Marbled Murrelets, and Predation

Dear Vanessa:

I am writing to you about the potential effects of the proposed Gazos Mountain Camp on the Gazos Creek population of Marbled Murrelets (*Brachyramphus marmoratus*).

I am a Research Wildlife Biologist and Senior Faculty Research Assistant with the Oregon Cooperative Fish and Wildlife Research Unit at Oregon State University. I have been conducting research specific to the Marbled Murrelet since 1988 in western Oregon, Washington, California, and SE Alaska. My research on murrelets has focused on their ecology, behavior, distribution, nest-site characteristics, breeding biology, nest success, landscape and stand-level habitat associations, and foraging ranges. I have visited the Santa Cruz Mountains on numerous occasions, visiting known murrelet nest and occupied sites, and making on-the-ground evaluations of the suitability of habitat for murrelets.

Most Marbled Murrelet nests are known to fail each year (43-85%) and most of these failures are attributable to predation (78%; Nelson and Hamer 1995, McShane et al. 2004). The primarily predators are corvids, including Common Ravens (*Corvus corax*) and Steller's Jays (*Cyanocitta stelleri*; Nelson 1997). Predation rates are highest in the Santa Cruz mountains (84-100%; Peery et al. 2004; S. Singer, pers. comm.), where corvid densities are also high (E. Burkett, pers. comm.). The nest success rates of murrelets in the Santa Cruz mountains are three times lower than in British Columbia and 40% lower than estimated for murrelets range-wide (Peery et al. 2004).

Predation on murrelet nests is known to increase near forest edges (within 50-200 m; e.g., Manley and Nelson 1999), in close proximity (within 1 km) to human activities (Raphael et al. 2002), and is likely to increase in areas with increased abundance of corvids (Raphael et al. 2002). Corivd abundance is known to be higher in fragmented landscapes and along edges (Brand and George 2001, Raphael et al. 2002, Marzluff et al. 2004). While additional research specific to the murrelet is needed to determine the foraging efficiency of predators in various habitat types, higher predation on bird nests has been documented in a variety of habitats with higher abundance of predators, especially in fragmented landscapes and areas close to human activity (e.g., DeSanto and Willson 2001, Raphael et al. 2002; summary in McShane et al. 2004).

Based on what is known about corvid abundance and habitat associations, and increased predation in close proximity to human activities, it is my opinion that the Gazos Mountain Camp and its various outdoor activities will likely attract of predators to the camp area and adjacent occupied old-growth forest, despite the proposed and experimental mitigations (including predator proof trash cans). The attraction of predators to this area in turn has the potential to increase predation rates on murrelet nests in the nearby forest. Given the potential for increased predation on murrelet nests and the endangered status of this unique seabird, eliminating the possibility of impact to this species would be prudent.

Thank you for the opportunity to comment. Please contact me if you have any questions or need additional information.

Sincerely,

S. Kim Nelson 1865 SW Roth Street Corvallis, OR 97333

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....

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RECEIVED

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

AUG () 5 2005 CALIFORNIA COASTAL COMMISSION

August 1, 2005

Dear Ms. Zhang,

I have read most of the documents pertaining to the proposed Gazos Creek Mountain Camp (applicant Pescadero Conservation Alliance).

Given the terms of the Apex Houston settlement and the research testimony contained in Appendix C of the July 14, 2005, California Department of Fish and Game letter addressed to you, I can see no justification for the approval of the project.

The Gazos Creek Mountain Camp project is inconsistent with marbled murrelet protection. Human-produced noise appears to be a significant factor in species destruction. No amount of mitigation will be able to preserve the low ambient noise level necessary to nesting marbled murrelets.

As a citizen scientist, I monitored the habitat of the Gazos Creek watershed for many years. Tasks included dead/live bird surveys at Gazos Creek Beach for the Beach Watch program, Gulf of Farallones National Marine Sanctuary, and water quality testing for Coastal Watershed Alliance.

I have joyfully observed live marbled murrelets and sorrowfully collected specimens of marbled murrelets who died from stress.

How many more marbled murrelets can the State of California afford to lose?

Please deny the Gazos Creek Mountain Camp project.

Barbara Vanderherf Barbara VanderWerf

Barbara VanderWerf 82 Seaward Dr. Sequim, WA 98382 (360) 683-2206 bnb@olypen.com

APP 0 1 2005 MARY DAVEY 12645 LA CRESTA DRIVE LOS ALTOS HILLS, CA 94022-2512 CALIFORNIA COASTAL COMMISSION March 30, 2005

Honorable Chris Kern and members of The California Coastal Commission

Please let me clarify my March 23, 2005 letter to yon Concerning The Pescalero Conservation Alliance 's request for a permit. I should not have asked you to deny Their "appeae" but to deny Their request for a permit. Additionally, I understand That your staff has recommended denial of The proposed prejist. Respectfuely. Mary Dawy

Enclosure March 23, 2005 letter

P.02 Mage and Jack Baues 550 941 3022 MARY DAVEY 12645 LA CRESTA DRIVE LOS ALTOS HILLS, CA 04022-2512 RECEIVED March 23, 2005 APR 6 1 2005 Honorable Chris Kern and Menhoustal COMMISSION of the California Coastal Commission I respectfully request that you deny The appeal of The Pescadero Conservation alliance for a Coastal Development Permit to operate a year-round Field Research Station and an environmental education program for At Rick youth. les past president of Semper-virens Fund, Committee for Green Foothie's and an elected Board Member of Midpeninsula Regional open Space District, my belief is the land in This proposal would best he restored to its original state for which it was purchased - to preserve The habitat of The marbled murrelet. Respectfully. Mary Daney

MARY DAVEY 12645 LA CRESTA DRIVE LOS ALTOS HILLS, CA 94022-2512

March 23, 2005

Honosable Chris Kern and Members of The California Coastal Commission

I respectfully request that you deny The appeal of The Pescadero Conservation alliance for a Coastal Development Permit to operate a year-round Field Research Station and an environmental education program for At Risk youth. la past president of Semper-virens Fund, Committee for Green Foothies and an elected Board Member of Midgeninsula Regional open Space District, my belief is the land in This proposal would best he restored to its original state for which it was purchased - to preserve The habitat of The marbled murrelet. Respectfully. Mary Davey

YinLan Zhang

From: Sent: To: Cc: Subject: Scott Boyd [scott@hax.com] Tuesday, April 26, 2005 12:09 AM YinLan Zhang ckern@coastal.ca.gov A-2-SMC-04-005

[This is a resend with a key correction, inserting "cannot" in the 6th paragraph.]

April 25, 2005

Chris Kern YinLan Zhang California Coastal Commission North Central Coast District 45 Fremont, Suite 2000 San Francisco, CA 94105-2219

Re: A-2-SMC-04-005 Pescadero Conservation Alliance

Dear Honorable Commissioners and staff,

The proposed project would substantially increase human activity in and around an area of extremely sensitive Marbled Murrelet habitat.

Anyone who has picnicked among the redwoods knows about Steller Jays. Those birds know no shame nor fear. They invite themselves to every picnic. If humans are present, it's only minutes before the jays join in.

Here on the coastside, I watch the ravens sweep in and overrun other bird communities. When the ravens are in town, the raptors flee or hide. These pictures of a battle royale show why even hawks take cover: http://sanmateo.org/corvidbattle/corvidbattle.html Ravens are masters of harassment.

In a regular ritual, ravens swarm to the Ox Mountain landfill (one of the more obvious signs of human presence), then take off en masse for other parts of the range. Birders up and down the peninsula use email to pass along word of their movements with concern.

Where humans go, ravens follow. And ravens clearly take Murrelet eggs and chicks.

The proposed project would be hard-pressed to clearly demonstrate that the increased human activity adjacent to the Murrelet habitat would be "compatible with the maintenance of biologic productivity" of that habitat (SMC LCP Policy 7.3) when the very human activity inevitably leads to the downfall of the Murrelet population.

Because of the nature of the corvid predation, the proposed project cannot demonstrate "no significant impact" to the Murrelets (nor the other species of concern).

We can't always know that our good intentions will lead to harm for that which we would protect. But, in this case, we can.

It would be a sad irony indeed to see the restorative intent of the acquisition of the land change into what ultimately destroys the very species the acquisition was intended to save.

Sincerely, Scott Boyd PO Box 370553 Montara, CA 94037

PS: It's not for no reason that the name for a collection of ravens is an "unkindness of ravens", nor that Steller Jays are known as "camp robbers" (http://montesanoenterprises.com/stellers.htm#*Camp%20Robbers).

Robert Zatkin

PO Box 620657 • Woodside, CA 94062 Tel. (650) 704-7133 • rszatkin@sbcglobal.net

April 25, 2005

Chris Kern California Coastal Commission North Central Coast District 45 Fremont Street, Suite 2000 San Francisco, CA 94105-2219

Re: A-2-SMC-04-005 Pescadero Conservation Alliance (Gazos Mountain Camp)

Dear Mr. Kern:

I am writing to recommend denial of the above referenced permit for operation of a "Field Research Station at Gazos Creek" in the Gazos Creek watershed of the Santa Cruz Mountains of south coastal San Mateo County.

The proposed location of the "Field Research Station at Gazos Creek" is currently the Gazos Mountain Camp (Mountain Camp); a 111-acre parcel purchased for the public domain with settlement funds from the offshore San Mateo County Apex Houston oil tanker spill. The acreage, now part of Butano State Park, was purchased specifically and solely to protect the nesting habitat of marbled murrelets – a species listed as threatened under the federal Endangered Species Act (ESA). Marbled murrelet utilize old-growth redwood trees located within 200 feet of the Mountain Camp. Expert state-of-knowledge scientific literature states that this close proximity of the proposed human activity to nesting marbled murrelet will diminish the reproductive success of the marbled murrelet through predation by corvids – crows, ravens, and jays – which exist in great abundance in the Santa Cruz Mountains. The relevant literature includes the following statements.

"...sustained intrusions (like hiking trails or campgrounds) by humans even in an unfragmented landscape may elevate corvid activity levels (Gutzwiller et al. 2002) that increase risk from enhanced potential local predation pressure on nesting marbled murrelets."

"Artificial nest depredation rates were found to be highest in western conifer forests where stand edges were close to human development (DeSanto and Wilson 2001 and Luginbuhl et al. 2001 and Bradley 200) found increased corvid activities within 3 miles of urban interface."

White Paper on Marbled Murrelet Nest Predation By Brian T. Cox Marbled Murrelet Recovery Coordinator U.S. Fish and Wildlife Service

"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. Common ravens (corvus corax) and Stellar's jays (Cyanocitta stelleri) are known to take both eggs and chicks at the nest... "

"The highest risk of predation was documented in areas close to humans (within 1 km), including along suburban edges and in campgrounds, dumps and other areas of development, where food sources attract predators, especially corvids."

Evaluation Report for the 5-Year Status Review of the Marbled Murrelet in Washington, Oregon, and California By McShane, C., T., et all. March 2004

Clearly, permitting the "Field Research Station at Gazos Creek" will, with scientific certainty, increase the population density of corvids at the Mountain Camp, which, in turn, will result in marbled murrelet predation. There is irony in this relationship as the very reason for purchasing the Mountain Camp property was to protect nesting habitat of the marbled murrelet in order to increase population density of the marbled murrelet in the southern Santa Cruz Mountains.

The marbled murrelet is not the only species of concern that exists on the Mountain Camp property. Two perennial streams - the main stem, and a tributary of Gazos Creek, bound the Mountain Camp. These streams contain native populations of steelhead trout and coho salmon; species listed under the federal ESA as Threatened. The coho salmon is also listed under the California ESA as Endangered. The Mountain Camp property contains a pond, which has been determined to be habitat for the California red-legged frog - federally listed as Threatened; and the San Francisco garter snake - federally listed as Endangered. These species of concern will also be impacted by the intended use throughout the year of up to 63 people during the day, 28 people over-night, and their vehicles, wanderings and species-impacting behavior about the Mountain Camp property. Further impacts may be obtained from the existing infrastructure of the Mountain Camp, which includes an on-site septic disposal system with a septic drain field that is likely hydrologically connected to the aforementioned streams. In addition to the toilet needs of 63 day-use, and 28 over-night use people throughout the year, a wetchemistry laboratory is to be constructed at the "Field Research Station at Gazos Creek" that may discharge hazardous waste through the septic drain field to the live stream of Gazos Creek.

The San Mateo County Local Coastal Program, Policy 7.5 requires the applicant for the "Field Research Station at Gazos Creek" to demonstrate that there will be no significant impacts to sensitive habitat and the supported species. The applicant did not meet the requirement to comply with Policy 7.5, and in fact, the San Mateo County Planning and Building Division conspired in this non-compliance by issuing a negative declaration for the proposed project. A negative declaration was wholly inappropriate for the proposed project given the presence of state and federal listed species, and a failure to address other potentially significant issues such as impacts to water quality from operation of a wet-chemistry laboratory on the Mountain Camp property.

In conclusion the application for the "Field Research Station at Gazos Creek" should be denied as the proposed use will violate the intent and language of the San Mateo County Local Coastal Program, the State of California and federal Endangered Species Acts, and the California Coastal Act. The Coastal Act is of special relevance as the Act contains a declaration of ecological balance, which is to afford "...permanent protection of the state's natural and scenic resources is a paramount concern to present and future residents of the state and nation." Clearly permitting the "Field Research Station at Gazos Creek" will violate this balance through impoverishment of the existing biological diversity on the Mountain Camp property.

Thank you for your consideration of my recommendation.

Sincerely,

Robert Zetkin

Robert Zatkin Watershed Scientist

Betsy Herbert, Ph.D. 150 Thayer Rd. Santa Cruz, CA 95060

April 25, 2005

Chris Kern California Coastal Commission North Central Coast District 45 Fremont Street, Suite 2000 San Francisco, CA 94105

Re: A-2-SMC-04-005 Pescadero Conservation Alliance

Dear Chris Kern:

I am writing to support the staff recommendation for denial of the coastal development permit for the operation of a year-round field research station at the former Gazos Mountain Camp. I applaud the work of the Pescadero Conservation Alliance in removing exotic plants species, restoring gullies, and providing environmental education. However, this important work could be based at other locations on the coast, which are not already home to the federally listed marbled murrelet.

The Local Coastal Plan and the California Coastal Act place the burden of proof upon the applicant to demonstrate that a project will incur no significant impact on sensitive habitats. Yet, the staff report clearly shows that the applicant has not met this burden of proof. To the contrary, recent evidence cited in the report indicates that local marbled murrelet populations are increasingly threatened by corvids, which are attracted to conditions resulting from increased human presence in the wild. Thus, by increasing day use, traffic, overnight accommodations, and staff presence in this critical habitat, this project would create conditions unfavorable to the recovery of existing marbled murrelet populations residing there. As your staff report points out, the marbled murrelet population at this particular site is most vulnerable, since it is located at the southern end of the Santa Cruz Mountains Zone, and it is already a small and isolated population.

I have long worked in the forest management policy arena to better protect habitats of threatened and endangered species, including the marbled murrelet, in the Santa Cruz Mountains (See Herbert, Betsy. 1995. "Save the Marbled Murrelet and Last Remaining Old-Growth in the Santa Cruz Mountains," The Ventana, Santa Cruz Regional Group of the Sierra Club, 34(7):18.) I am equally concerned about the significant threat to these habitats posed by development.

Again. I urge the commission to deny this permit application.

Sincerely,

Betsy Hubert, Ph. D. 1 Attach ment



April 23, 2005

Chris Kern, District Manager California Coastal Commission North Central Coast District 4 Fremont Street, Suite 2000 San Francisco, California 94105-2219

APP 2 5 310 APP 2 6 310 COASTRAL COMMERCIAN

Dear Chris Kern,

We are writing to ask you to please deny the proposal by the Pescadero Conservation Alliance (PCA), A-2-SMC-04-005.

The proposed development and use of the Gazos Mountain Camp will jeopardize the recovery of several endangered and threatened species. Most notably, the PCA proposes development and increased human activity in close proximity to Marbled Murrelet habitat, which unquestionably threatens murrelet survival. The proposal does not comply with the San Mateo County LCP policy, which requires maintenance of biologic productivity with no significant negative impact on species of concern.

The mission and goals of the Pescadero Conservation Alliance are laudable, but the proposed site for their program is unsuitable and ironically inappropriate to teach about habitat preservation. There are alternative locations for environmental education and conservation programs, but there are no other options for the species that are to be conserved and protected under the Local Coastal Program.

As local residents who strongly support environmental education, we urge you to deny support for this project.

Thank you for your time and consideration.

Sincerely, - and Pamela Patik

Gary L. Allen and Pamela Patek

Pgredwoods@earthlink.net 14655 Pescadero Road La Honda, California 94020 (650) 747-0915

cc: Jim Rourke

April 19, 2005

Chris Kern California Coastal Commission North Central Coast District 45 Fremont Street, Suite 2000 San Francisco, CA 94105-2219 APR 2 3 2005 CALFORNIA COASTAL COMMISSION

RE: A-2-SMC-04-005

Dear Mr. Kern and the California Coastal Commissioners:

I am writing as a concerned citizen to ask you to uphold the Appeal made by the Center for Biological Diversity, Coastside Habitat Coalition, and the Committee for Green Foothills and Jim Rourke regarding the Gazos Mountain Camp.

It is clear from all the literature I have read that the permit should never have been permitted in the first place. It violates the stated use of the funds from Apex Houston Oil Spill. The evidence of the impact on the Marbled Murrelet from nearby humans and the resulting invasion of Corvids cannot be ignored, not to mention the adverse impact on all the other endangered species residing in the area.

Please protect these endangered species and deny this project, thereby stopping the damage before it gets worse.

Thank you for your consideration.

Sincerely,

Jan Kukaldie

Joan Kirkaldie 461 Dearborn Park Road Pescadero, CA 94060 April 19, 2005

RECEIVED APR 2 1 2005 CAUFORNIA COASTAL CONVERSION

Chris Kern California Coastal Commission North Central Coast District 45 Fremont St., Ste 2000 San Francisco, CA 94105-2219

RE: Gazos Mountain Camp Appeal Appeal Number A-2-SMC-04-005

Dear Mr. Kern Dear Coastal Commissioners:

Please do not let this project progress any further. I have been a resident of the Coast for 20 years and have enjoyed all it has to offer in the way of natural habitat, open space and wildlife.

It is important that endangered species found in the Gazos Creek area be allowed to live there undisturbed by predators attracted by humans when it is so unnecessary. There are plenty of camps in this area and to create another one in such a sensitive habitat would be very short sighted.

From what I understand, your staff is recommending this project not go forward, please support them as I do and stop this project now.

Thank you,

Harry Falmen

Gary Palmer P.O. Box 486 Pescadero, CA 94060

Marty Demare 5430 Coast Rd. Santa Cruz,CA

Chris Kern California Coastal Commission 45 Fremont Street San Francisco, CA

Re: Appeal #A-2-SMC 04-005

Dear Ms/Mr. Kern

I visited the Mountain Camp and other nearby sites in the Gazos Creek watershed regularly over a three-year period as a volunteer water tester for the Coastal Watershed Council. During that time I developed an appreciation for the tremendous value of this property as habitat for endangered species. Sempervirens' acquisition of the property was an appropriate use of money intended to mitigate oil spill impact on murrelets in the area. Since that mitigation fund money was meant for habitat enhancement I cannot support the Pescadero Conservation Alliance's proposal for the Mountain Camp property. While the Board of Supervisors may have found it politically expedient to approve such a use, their priorities are not those of the Coastal Commission on whom we, the people, depend to protect coastal natural resources.

If this property had been purchased with money from social services or outdoor recreation enthusiasts, it would only be inappropriate choice of location. Since this purchase was made with conservation funds, is unjustifiable for the property to be used in the ways the applicant proposes. To do so would corrupt the intent of the laws that require mitigation fees and have a dampening effect on conservation purchases. A conservation criterion should be applied to this application. While certain low-impact research projects can be said to further that end, the use of the area as a day camp will clearly be detrimental to the habitat value that mitigation is intended to enhance. The Commission should honor the intent of the mitigation fund trustees and recognize that increased traffic through the canyon, noisy group activities and campfire smoke cannot be consistent with the purpose of this mitigation fund allocation.

Sincerely Yours,

Murty Demarce

Marty Demare

April 18, 2005

FARTER DE LA SECON APPEILS 2000 CLAMACINA AUSION

Roxanne Rothafel 5430 Coast Road Santa Cruz, CA 95060

April 16, 2005

Chris Kern California Coastal Commission North Central Coast District 45 Fremont Street, Suite 2000 San Francisco, CA 94105-2219 Re: Appeal Number A-2-SMC-04-005

Dear Chris Kern:

I am writing to request that your staff report to the Coastal Commission will support the Appeals for denial of the Pescadero Conservation Alliance project proposed for Gazos Mountain Camp. As a volunteer with the Coastal Watershed Council for their Gazos Creek stream monitoring and biotic assessment project I grew to love and deeply respect the area for its wild remote nature.

I am a thirty year resident of the Sand Hill Bluff neighborhood in Santa Cruz County adjacent to Laguna Beach and the brackish marsh area. This area has been identified as a critical habitat for Snowy Plover. Over the last 20 years I have noticed how increasing public use has resulted in the area becoming a focal point for ravens and crows, as well as coyotes, bob cats, domestic dogs and feral cats. I think it is an unavoidable result of human activity.

As many people know, if you want to see raccoons, ravens, crows and jays all you have to do is go to an established campground and spend the night. What many may not know is that in areas untrammeled by humans these wild life sightings are much less frequent. The predators are attracted by the food smells and waste and noise that accompany human uses.

Please leave this area's wonderful wild nature free from the impacts of the intensive activities proposed by the Pescadero Conservation Alliance for the Mountain Camp Project. I speak for the Marbled Murrelets and frogs in requesting your thoughtful consideration of the Appeals before you and please recommend for denial of this project.

Thank you,

Roxanne Rothafel

April 15, 2005

Chris Kern California Coastal Commission North Central Coast District 45 Fremont, Suite 2000 San Francisco, CA 94105-2219

Re: A-2-SMC-04-005 Pescadero Conservation Alliance

Dear Mr. Kern:

I am writing to request that you deny the Pescadero Conservation Alliance Coastal Development Permit for the former Gazos Mountain Camp.

As a restoration ecologist I have been actively engaged in restoration and biological surveys of Gazos Creek since 1997. I am fully aware of the fragility of this particular watershed and have frequently requested that this site not be used for any activity that would have the potential of impacting endangered species, of which there are several, but particularly the nesting areas and habitat of the marbled murrelet.

Current scientific literature strongly indicates that human activity at the proposed scale is totally incompatible with the preservation of marbled murrelet critical biological requirements including: protection from predators, i.e., crows, ravens, Stellar jays which are attracted by any human activity.

The initial funding for the watershed surveys and restoration, as well as partial funding for the purchase of the Mountain Camp resulted from the Apex Houston oil spill fund. The written intent for the utilization of those resources appears quite clear, that it should be used to promote the long-term reproduction success of the Marbled Murrelet.

This project does not meet those requirements nor does it demonstrate a compliance with the implicit and explicit intent of conservation practices.

Thank you for your consideration.

Sincerely,

Toni Danzig Restoration Ecologist P.O. Box 100 Pescadero, Ca 94060

453 Dearborn Park Road Pescadero, California 94060 April 14, 2005

RECEIVED

APR 1 5 2005

CALIFORNIA COASTAL.COMMISSION

California Coastal Commission North Central Coast District 45 Fremont Street, Suite 2000 San Francisco, California 94105-2219 Attention: Chris Kern

> Re: Appeal No. A-2-SMC-04-005; Support for Denial of CDP Sought by Pescadero Conservation Alliance for Development of Gazos Creek Mountain Camp.

To the Honorable Members of the Commission:

I am requesting that you follow the Staff Recommendation recommending the denial of the issuance of a Coastal Development Permit ("CDP") sought by the Pescadero Conservation Alliance ("PCA") for the establishment and use of the Gazos Creek Mountain Camp ("GCMC").

In reviewing the reports, proposal and various commentary, I am of the opinion that the establishment and continual use of the GCMC with a day use of 63 people, overnight accommodations for 24 people, establishment of four permanent residences, establishment of a wet laboratory and all the attendant facilities of a development would have a significant effect on a 12-acre portion of a 120-acre parcel within a state park. By reflection upon my own position as a resident and landowner of a 13-acre parcel in the Pescadero area, the development of the GCMC would be a pure and simple in-road to a concentrated development. Suffice it to say that the development fund for the purpose of preserving a sensitive habitat to now be considered for development runs afoul of the preservation of such a unique watershed area.

Numerous state and county parks exist in the immediate surrounding area and throughout the greater Bay Area which are accessible to youth groups and provide tours conducted by docents. These parks are within commuting distance from various locations within the greater Bay Area. These parks do not require the scope of development requested by PCA. The proposed GCMC should not require the establishment of camp grounds and residences.

In light of the budgetary constraints facing the state park system and the County of San Mateo, some governmental agencies may view favorably private entities' proposals to take over the management of public and private lands. Yet, this view should not allow usurpation of the requirements of the LCP. While conditions and qualifications may be imposed upon a permitted use, those agencies permitting the use disfavor continual entanglement with enforcement of the terms of the use and are hesitant to withdraw a permitted use which may be viewed as an entitlement by the private party.

It is my hope that the Members of the Commission accept their staff's recommendation and deny the CDP.

Very truly yours,

Richard A. Gomez

April 13, 2005

Chris Kern YinLan Zhang California Coastal Commission North Central Coast District 45 Fremont St, Suite 2000 San Francisco, CA 94105-2219

APR 1 4 2005 CALEOPINA COASTAL COMMISSION

Re: A-2-SM-04-005 Pescadero Conservation Alliance

Dear Chris and YinlLan,

I am writing to oppose the proposed Pescadero Conservation Alliance facility on the former Mountain Camp site. This project threatens to negatively impact the pairs of Marbled Murrets that nest on this property. Two of the Preferred Alternatives for the use of settlement funds from the Command Oil Spill involve improvement of the nesting success of this species. Permitting a use that so directly conflicts with this rehabilitative goal is not only environmentally irresponsible but it would also be tantamount to the deliberate squandering of public funds.

San Mateo County Local Coastal Program Policies 7.3 and 7.5 require the protection of sensitive habitats and species of concern. This project is not in compliance with either of these policies and must be denied.

Thank you for your careful consideration of the important issues at stake.

than Vargas PQ Box_370265

Montara, CA 94037

April 12, 2005

Chris Kern Calif. Coastal Commission North Central Coast Dist. 45 Fremont Street, Suite 2000 San Francisco, CA 94105-2219

Re: Appeal #: A-2-SMC-04-005

Dear Mr. Kern,

My name is Ken Lundie and I have resided in the coastal community of Moss Beach for 18 years. I am the former President of Coastside Preservation & Recreation, Inc., a non-profit Land Trust and currently serve as a San Mateo County Harbor Commissioner. I am writing the Coastal Commission as an **individual** and not on behalf of any organization.

It has come to my attention that the Pescadero Conservation Alliance is seeking approval to operate a year round Field Research Station at the site of the former Gazos Mountain Camp. I am not personally familiar with this organization, but its stated goal of helping to educate At-Risk Youth about the natural environment is an admirable one.

There is no intent, on the part of the author of this letter, to question or impugn the motivations of the founders of this Organization for they, no doubt, mean well, but I am reminded of that old cliché "The road to Hell (or in this case, extinction) is paved with good intentions."

The scientific community generally agrees that introducing even relatively small numbers of humans on a regular basis to an old growth redwood forest habitat, inevitably results in a proliferation of opportunistic predatory birds, like common Ravens and Steller Jays. The last thing the nesting pairs of endangered Marbled Murrelets of that locale need, is an increase in predatory activity by Corvids, unintentionally brought about by well meaning groups or individuals. There must be other suitable, less environmentally sensitive locations, where organizations like the Pescadero Conservation Alliance can carry out their educational programs without adversely affecting State and Federally listed wildlife.

It is interesting to note that the funds originally used to purchase the subject property came from a settlement of the oil spill from the tanker Apex

Houston, which is estimated to have killed many Marbled Murrelets as well as other seabirds. To use mitigation funds to buy lands for the restoration of Murrelet populations and then act in ways detrimental to their recovery by introducing scores of humans into their natural habitat seems counterproductive and not in keeping with the wishes of the Trustees of the Mitigation Fund.

There is always the chance that operating a year-round educational facility in close proximity to a host of threatened and endangered species may not result in increased Corvid predation and a decline in their numbers, but is it really worth taking this risk when other viable alternatives are available?

In conclusion, it is my opinion that the operation of a year-round Field Research Station in such an environmentally sensitive area would be an unwise "gamble". I am requesting that the Coastal Development Permit for this project be denied.

Respectfully,

Her S. Lundie

Ken S. Lundie PO Box 571 858 Etheldore Street Moss Beach, CA 94038-0571 (650)728-5656 seaharvesters@netscape.com

To: Chris Kern Calif. Coastal Commission N. Central Coast District 45 Fremont, Suite 2000 San Francisco, Ca. 94105

and the second sec

April 10, 2005

t sa shekara Danisha curanatan r

From: Patricia Mayall Star Route 151 Woodside, CA. 94062

RE: A-2-SMC-04-005 Pescadero Conservation Alliance

As a resident of unincorporated San Mateo County for 15 years and as a local activist on coastal issues, I urge you to deny this project. The San Mateo County Local Coastal Program (Policy 7.5) requires an applicant to demonstrate that there will be no significant impact on sensitive habitats which include coastal area habitats that contain or support rare and endangered species. The Gazos Mountain Camp property is a designated sensitive habitat. I believe that the applicant cannot prove that this project will not impact nor disturb the endangered and threatened species and their habitats of this area.

In the past, I have supported the educational and habitat restoration work of the PCA. However, I do not support their unwise and disturbing decision to develop an area that they know must be protected from disruptive human activities. They can continue their important work in other locations which would also be more convenient for large numbers of people. They can choose where to have their project, yet the threatened and endangered wildlife do not have a choice as to their needs for survival. Please protect their needs and habitat by denying this harmful project.

Thank you for your attention,

Fat Mayall

Patricia Mayall

4/10/2005 1:04 PM FROM: Clairvoyante TO: ,14159045400 PAGE: 001 OF 001

Chris Thollaug PO Box 371018, Montara CA 94037 (650) 728-7107 400-0482 (cell) christhollaug@yahoo.com $k \in \mathbb{C}_{\mathbb{Z}}$

AD:

COMMENDER COMMENDER

No. No.

April 10th 2005

Chris Kern YinLan Zhang California Coastal Commission North Central Coast District 45 Fremont Street, Suite 2000 San Francisco, CA 94105

Re: A-2-SMC-04-005 Pescadero Conservation Alliance

Dear Chris and YinLan,

I am writing in support of the appeal of the Coastal Development Permit granted by San Mateo County for the operation of a year-round Field Research Station at the former Gazos Mountain Camp, and encourage the Commission to DENY the project.

While the objectives of the environmental education programs proposed by the Pescadero Conservation Alliance for the site are highly commendable, the over-riding issue is the protection of the nearby Marbled Murrelet habitat in the immediate vicinity. Please consider:

- There are other suitable sites for environmental education programs, but precious little suitable
 habitat for this endangered species. It is short-sighted to ignore the danger of attracting
 predatory ravens and jays to the area by increasing human use and habitation as proposed by
 this project.
- The Mountain Camp property was acquired with settlement funds from the Apex Houston oil spill, precisely for the reason that the property includes suitable old-growth nesting habitat for the Marbled Murrelet. The proposed project is inconsistent with the purpose and intent of the purchase.
- The proposed project is inconsistent with the SMC LCP; Policy 7.3 requires all uses in areas
 adjacent to sensitive habitats be compatible with the maintenance of biologic productivity of those
 habitats. SMC LCP Policy 7.5 requires an applicant demonstrate that there will be no significant
 impact to the Marbled Murrelets. Given the predatory behavior of ravens and jays, it is
 unreasonable to assert that the project will not have a significant impact to this endanger
 species.

For these reasons I urge the Commission to DENY the project, and preserve this critical habitat.

Best regards,

Chris Thollaug

April 8, 2005

Chris Kern State Coastal Commission North Central Coast District 45 Fremont St., Suite 2000 San Francisco, CA 94105-2219

CALIFORNIA ASTAL OCIANI OMMISSION

Re: A-2-SMC-04-005 Pescadero Conservation Alliance Permit Application

Dear Chris:

I am writing to express my opposition to the Pescadero Conservation Alliance (PCA) permit application to locate and operate an environmental education and natural resource restoration program at the Gazos Mountain Camp. While I do support the mission of PAC, I believe this particular site is inappropriate for such an operation for the reasons outlined below.

The San Mateo County LCP Policy 7.3 requires that all uses in areas adjacent to sensitive habitats be compatible with the maintenance and biological productivity of those habitats. LCP Policy 7.5 requires that an applicant demonstrate that there will be no significant impact to the Marbeled Murrelets and other species of concern from a proposed project.

The Gazos Mountain Camp property and adjacent areas are known to provide nesting habitat for the Marbeled Murrelets. Increased human activity associated with the uses proposed by the PAC will attract corvids (i.e. ravens, jays) that have been proven to adversely affect Marbeled Murrelet nesting activity. Specifically, according to the a report titled, "Command Oil Spill Final Restoration Plan and Environmental Assessment" (June, 2004), nest predation is one of the primary causes of the lack of production of Marbeled Murrelets in the Santa Cruz Mountains. This document states that the increased numbers of ravens around areas of human activity in State Parks in the Santa Cruz Mountains is likely to be a significant cause in the recent decline of Marbeled Murrelet nest success.

Clearly, the proposed year-round operations of the PAC will increase the numbers of ravens in the area and, in turn, adversely affect Marbeled Murrelet nesting activity. I urge you to recommend support for the appeal to local permit approval of PAC's permit application and urge the Commission to reject PAC's permit application on the grounds outlined above.

Thank you for your consideration.

Sincerely, Timothy Duff 407 Roberts Road Pacifica, CA 94044

Cc Jim Rourke, Pescadero

Patricia Carr 640 Cabrillo Highway Pescadero, CA 94060 650-8791549

RECEIVED APR 1 1 2005 CALIFORNIA COASTAL COMMISSION April 8, 2005

Chris Kera California Coastal Commission North Central Coast District 45 Fremont Street, Suite 2000 San Francisco, CA 94105-2219

RE: Appeal Number A-2-SMC-04-005

Dear Chris Kera:

I am writing to urge the California Coastal Commission to uphold the Coastal Commission's staff recommendation and deny the Pescadero Conservation Alliance's (PCA) Coastal Development Permit.

PCA's goal of environmental education is one I would ordinarily support, but I cannot support it at this pristine site in the Gazos Creek Watershed. The site was purchased by the Sempervirens Fund with a specific intent to protect the endangered marbled murelets, and PCA's project does just the opposite by threatening them. These seabirds need old growth nesting habitat near the coast in order to survive as a species. While very few old growth trees remain on the California coast, they do remain on this site, the most pristine watershed property in San Mateo County.

The proposed project calls for day use of up to 63 people, plus staff, who will be driving cars, eating meals and doing all the things that people do—within shouting distance of the marbled murelets' nesting habitat. This human activity is bound to have an effect on this shy seabird, and I have not seen any data to show that it will not. Furthermore, where humans go, opportunistic birds like ravens and jays follow. I have seen a significant increase in just the number of ravens during my twenty-two-year-residence on the coast of Pescadero (old-timers tell me they did not start seeing ravens until the 80's), and once I witnessed ravens raiding an oystercatcher's nest on the beach where I walk. Studies back up anecdotal observations like mine: It is a fact that ravens rob the nests of less aggressive species, of which the marbled murclet is one. Marbled murelets lay only one egg per pair, and their numbers are already perilously low. Successful reproduction is critical to their survival.

Pescadero already supports environmental education at three existing youth camps with full facilities on Pescadero Road. PCA's project would fit nicely into any one of these attractive alternatives. The marbled murelets, on the other hand, have no alternative.

A California State Preserve (as part of Butano State Park) that keeps human access at its current limits, is a better use of this property, and not only a better use but a rare opportunity to invest the Sempervirens Fund's money and good will as originally intended, in the future of the marbled murelet, as well as other endangered species found here: the San Francisco garter snake, coho salmon, steelhead trout, and California red-legged frog. The successful survival of endangered species is far more likely in a large, unfragmented property like this one than in a small, mitigated area, surrounded by human activity. How many sites on the California Coast still offer significant acreage of uncompromised habitat value? The answer inspires regret at what has been irrevocably lost. Yet here is a chance to do it right the first time, which I urge the commissioners to do by denying this project.

Thank you for your consideration.

Sincerely yours,

Patricia Carr

Patricia Carr

MAYA T. CONRAD 1707 VINE AVENUE MCKINLEYVILLE, CA 95519 mayaconrad@hotmail.com

Mr. Abe Doherty California Coastal Commission 45 Fremont Street, Suite 2000 San Francisco, CA 94105

May 14, 2004

Case # W-9b

RE: Gazos Environmental Camp, Pescadero Conservation Alliance

Dear Mr. Doherty,

I am writing in support of the appeal staff report regarding the Pescadero Conservation Alliance's application for the Gazos Environmental Camp and agree that the impacts of the proposed camp facility will negatively impact several listed species' habitat. Prior to my current position on the North Coast as the executive director of the Northcoast Regional Land Trust, I served as a watershed manager for the Coastal Watershed Council based in Santa Cruz, California. From 1997 until 2002, my work was focused in the Gazos Creek watershed.

The Coastal Watershed Council was contracted by Sempervirens Fund in 1997 to begin a volunteer-based watershed monitoring program throughout the watershed. As the program manager, I worked closely with Mr. Verl Clausen, former Sempervirens Fund executive director. When Sempervirens Fund purchased the Gazos Mountain Camp in the late 1990s, I discussed the management opportunities with Mr. Clausen at length. It was clear that to me that Mr. Clausen's intent was to preserve this unique property that contains the confluence of the North Fork and Middle Fork and is an important staging area for marbled murrelets¹.

The original intent of the 120-acre Gazos Mountain Camp acquisition was preservation of redwood forest and Gazos Creek habitat. This acquisition served as a key opportunity to protect additional habitat within the watershed for steelhead, coho salmon, marbled murrelets and red-legged frogs. Due to lack of budget, California State Parks was reluctant to accept the property and its dilapidated structures from Sempervirens Fund, and by this time, Mr. Clausen had retired. An organization formed, the Pescadero Conservation Alliance, with the intent of leasing the camp as an environmental educational facility. I expressed my concern on behalf of the Coastal Watershed Council.

¹ I also worked as a marbled murrelet biological consultant for Mr. Steve Singer, marbled murrelet biologist, and conducted several murrelet surveys in 1998 and 1999.

-2-

among others,² to State Parks District Superintendent Ron Schaeffer. Although an environmental camp is a meritorious activity, I felt that the impacts of such a camp at this location were incompatible with the sensitive species habitat within the 120 acres and the six miles of crucial coho habitat downstream from the camp. Unfortunately, because State Parks had no funds to contend with removing dilapidated camp structures, the Pescadero Conservation Alliance proposed that, in exchange for leasing the property, they would remove the dilapidated structures and upgrade others.

From 2001 through 2003, I prepared the Gazos Creek watershed assessment and enhancement plan (www.coastal-watershed.org), funded by the State Coastal Conservancy and the Department of Fish and Game, to develop restoration and enhancement plans. From my work with scientists on this project, I learned how unique this undeveloped watershed is despite its adjacency to the densely populated South Bay. Gazos Creek is one of the southernmost streams left in North America that still supports coho salmon. The presence of so many afore-mentioned listed species within or adjacent to the Gazos Camp and the adjacency of large tracts of protected State Parks lands and undeveloped timber lands make this property invaluable to protect from human impact.

The Gazos Camp property represents a habitat enhancement opportunity by limiting human activity from previous uses. There are several other excellent existing camp facilities within the Santa Cruz Mountains where daily overnight human activity would create less of a negative impact than at the Gazos Camp.

I hope you will continue to recommend a NO vote on this application. Thank you for your attention to this matter.

Sincerely,

Maya T. Conrad

Ce: Lennie Roberts, Committee for Green Foothills Jim Rourke

² Mr. Steve Singer, Santa Cruz Mountains Bioregional Council; Ms. Lennie Roberts, Committee for Green Foothills; Ms. Toni Danzig and Mr. Jim Rourke, former Coastal Watershed Council volunteers; and Mr. Don Alley, fisheries biologist.

March 23, 2006

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

RECEIVED

MAR 2 7 2006

Re: Appeal No. A-2-04-5 (Pescadero Conservation Alliance, San Mateo Co.)

Dear Ms. Caldwell:

As a land owner in Pescadero, I'm writing in support of Pescadero Conservation Alliance's request to operate a year-round field research station at the existing Gazos Mountain Camp on Gazos Creek Road, in Pescadero, San Mateo County.

PCA has shown years of commitment to caring for the environment and educating kids and adults how to be good stewards of the land. They have demonstrated careful management of the site and surrounding area to protect habitat and prevent litter and disturbance of Murrelets and other species.

We need more organizations that educate and inspiring young people to care for the environment. The cleanup and improvements they've made to the camp on State owned land has been remarkable, and at their expense, not the tax payer's.

There is great need for a dedicated restoration and research center on our San Mateo coast. This facility will increase our knowledge of surrounding habitats, restoration methods, and will inspire generations of kids from around the Bay Area, many of whom have never see the ocean or redwoods, or have an opportunity to be inspired by science.

I feel the Coastal Commission would be upholding its mission by approving operation of the camp

Sincerely,

Bert Feuss 47 Kyne Road Pescadero, CA 94060

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YinLan Zhang, California Coastal Commission

VC.A


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,

The Santa Cruz Mountains Bioregional Council is a non-profit organization comprised of local biologists, resource management professionals, and naturalists. We encourage preservation and enhancement of natural biodiversity within the Bioregion through education and the dissemination of accurate scientific information. The Santa Cruz Mountains Bioregion extends from San Francisco in the north to the Pajaro River in the south, and from the Pacific Ocean on the west to the San Francisco Bay on the east. Gazos Mountain Camp is located within this area.

We would like to protest the appeal of the San Mateo County Coastal Development Permit issued to Pescadero Conservation Alliance/California Department of Parks and Recreation. The appeal contains inaccurate and incomplete information that is not scientifically valid. Rather than address all the points raised in the appeal, our comments below focus specifically on issues that relate to the marbled murrelet. We feel these assertions made by the appellant are particularly misleading and ignore the accepted findings of recognized experts and researchers currently working with this listed species.

The Gazos Mountain Camp property, 110 acres of both disturbed and undisturbed landscapes, was acquired by the Sempervirens Fund and has recently been added to Butano Redwoods State Park. In the approximate center of the property is an existing outdoor camp facility with buildings and other improvements. Separated from this area, and located in one corner of the property, is a 10-acre virgin stand of redwood and Douglas-fir. The marbled murrelet (*Brachyramphus marmoratus*), a seabird that is federally listed as Threatened and state listed as Endangered, is believed to use this stand for nesting, since the stand contains potentially suitable nest sites and murrelets have been observed flying into the stand. The developed part of the property does not contain potentially suitable nest platforms, so nesting would not be expected there. The camp and the old-growth stand are 300 feet or more apart from each other and separated from each other by a perennial stream and riparian corridor.

To avoid any conflicts between use of one part of the property by murrelets and use of another part of the property by PCA, a number of property use restrictions have been formulated and included as requirements of the lease between the State Parks Department and PCA. These use restrictions, which allowed camp operations to continue while protecting marbled murrelets, were originally prepared in 1999, and were approved and accepted by the Sempervirens Fund, the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and other government agencies. Recently PCA has adopted additional use restrictions that were suggested in a recent review of the property by the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

SCMBC - COMMENT LETTER TO CALIFORNIA COASTAL COMMISSION + GAZOS MOUNTAIN CAMP + PAGE 1 OF 2

The appellant is disputing the sufficiency of these use restrictions. The appellant's position is that murrelet nest predators, specifically ravens and jays, will be attracted to the property by mere human presence at the Gazos Mountain Camp, even if that human presence does not provide a new food source for jays or ravens. That conclusion is not supported by any scientific evidence and we strongly disagree with that conclusion.

The camp use restrictions that have been accepted by the PCA eliminate the generation of food scraps and food waste that can attract jays and ravens, and thereby forestall that potential threat to marbled murrelets. Other potential concerns, such as excessive noise, or humans approaching too close to individual nest trees, have also been considered and addressed by suitable land use restrictions based on the best available scientific information. These measures result in a nesting environment that is actually subject to less risk of human disturbance than many of the known successful murrelet nesting sites in the Santa Cruz Mountains.

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.

We believe that the issues raised by the appellant regarding marbled murrelets are neither accurate nor scientifically defensible. Consequently, we urge you to reject the appeal, and support the findings and actions of San Mateo County in issuing a use permit and a Coastal Development Permit for Gazos Mountain Camp to the Pescadero Conservation Alliance.

Thank you for the opportunity to comment on this matter.

Sincerely yours,

Diane L. Renshaw Certified Scnior Ecologist, Ecological Society of America

President, Santa Cruz Mountains Bioregional Council

SCMBC - COMMENT LETTER TO CALIFORNIA COASTAL COMMISSION · GAZOS MOUNTAIN CAMP · PAGE 2 OF 2

LEVEL LEA FARM

September 17, 2005

California Coastal Commission and Staff 45 Fremont Street Suite 2000 San Francisco, CA 94105

ATTN: Yinlan Zhang

Dear Commissioners:

This letter is submitted in support of the Pescadero Conservation Alliance's application for a use permit to operate the Gazos Creek field research station.

This is not just another camp. PCA's objective is to conduct research, provide environmental training and carry out hands-on restoration projects on the San Mateo County Coast. The individuals who will oversee training and projects and conduct research are professionals from San Jose State, San Francisco State and the USGS. Ongoing projects and research require year-round monitoring under diverse weather conditions.

This program has benefited and will continue to benefit the Gazos watershed. PCA reduced human impact by removing asphalt courts, a number of structures and tons of debris from the entire camp and especially from those areas which might affect marbled murrelet resting sites. The aim of PCA is to instruct adults and youth in the identification, protection and restoration of sensitive habitats so that they in turn will instruct others.

Restoration of the coastal landscape requires the cooperation of medium and small property owners as well as large entities such as State Parks, POST or MROSD. Through in-school environmental programs, erosion workshops and invasive species eradication projects, locally-based PCA has inspired normally skeptical landowners to participate in workshops, collaborate on projects and adopt practices beneficial to the environment.

Sincerely,

J. Baxa ablar Kar

Meredith Reynolds

POST OFFICE BOX 156 • PESCADERO, CA 94060 • PH/FAX (650) 879-0795

July 18, 2005

California Coastal Commission and Staff 45 Fremont St. Suite 2000 San Francisco, CA 94105

ATTN: Yinlan Zhang

Dear Coastal Commission and Staff,

As a property owner in Pescadero I am in favor granting permits for Pescadero Conservation Alliance to complete site restoration and renovation of the former "Mountain Camp" on Gazos Creek as a field research station for habitat restoration, environmental education and research.

As a volunteer for a Bay Area youth group, I serve disadvantaged and low-income youth from the Bay Area. It's shocking to know how many kids have never seen the ocean or the redwoods, and yet they live only miles away. However, it's gratifying and motivating for me and others who serve this growing population to see these kids relax, drop their attitude and take in the wonder that only nature can provide, especially when it's brought to life by the folks at Pescadero Conservation Alliance.

Over the past five years, this hardworking nonprofit organization has demonstrated a commitment to their mission of educating our children about land stewardship, educating us landowners about invasive plant eradication and low cost erosion control methods, and collaborating with local universities and state agencies to provide facilities, resources and expertise towards ongoing research and education about these issues and this unique region of the state.

For the benefit of our youth and the health of the land – for that is our future – I urge the Commission to grant use permits to Pescadero Conservation Alliance.

Thank you.

Sincerely

Bert Feuss 47 Kyne Road Pescadero, CA 94060

July 18, 2005

California Coastal Commission and Staff 45 Fremont St. Suite 2000 San Francisco, CA 94105

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ATTN: Yinlan Zhang

Re: Use Permits for Pescadero Conservation Alliance

Dear Coastal Commission and Staff,

I am a Pescadero property owner and I urge you to grant permits for the Mountain Camp Field Research Station on Gazos Creek.

Pescadero Conservation Alliance is a non-profit created by the local community to fulfill community needs. I support permits for PCA because they serve the community in three important ways: 1) they teach our children to know and care for the land, 2) they work with State Parks and local land owners to remove invasive plants that destroy rare and pristine habitats for endangered species, and 3) once permits have been granted, they will provide opportunities for scientists, students and the community to discover new ways of being in harmony with the land and in community.

Permitted use of the field research station is vital to meeting our community's needs. Please don't let anything stand in the way of our community helping itself on a local level and helping our society on a larger level.

I also support permitted use of the camp for personal reasons. As a parent of two young sons, ages 6 and 10, it is my hope that in their lifetime they may see a return of the abundance and diversity of native life that PCA will foster. I want my kids, and all future generations, to be able to stand on the banks of Gazos Creek to watch migrating salmon. I want them to see numerous wildflowers covering the coastal prairies along highway one, once blanketed by non-native Pampas Grass that PCA has removed. I want them to experience the amazing variety of colors, shapes and sizes of moths and butterflies that thrive on the native plants, and that I remember as a child.

We (society) need the research station proposed by PCA to engage our youth in hands-on outdoor experiences in an inspiring setting that instills environmental awareness and a love for the land. For what they love, they will protect, and those who care for the land also care for one another.

In summary, please approve use permits for Pescadero Conservation Alliance.

Sincerely,

Norma P. Garcia 329 Montcalm Street

San Francisco, CA 94110

cc John Wade, Pescadero Conservation Alliance



CALIFORNIA ALLIANCE OF AFRICAN AMERICAN EDUCATORS

An IRS 501(c)(3) Public Charity. Federal Tax ID Number: 94-3413477 PO Box 3134, San Jose, CA 95156-3134 1 (408) 977-4188 ● 1 (408) 453-0997 [Fax] countitalljoy@ earthlink.net

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Bobbie J. Brooks Regional Co-coordinator, Bay Area bjj2937@aol.com

Dr. Lynyonne Cotton Regional Co-coordinator, Bay Area Icotton@stmarys-ca.edu

Natasha Crawford Regional Co-coordinator, San Diego Region natashacrawford@yahoo.com

Barbara Evans Regional Co-coordinator, Sacramento/Stockton Area bcvans@edcenter.egusd.k12.ca.us

Mary Flenoy-Kelley Regional Co-coordinator, Sacramento/Stockton Area Namaste@Inreach.com

Edwin L. Javius Regional Co-coordinator, Vallcy Region Javius@EDEquity.com

Jeanette Perry Regional Co-coordinator, Los Angeles Basin jperry4@lausd.k12.ca.us

Barbara Shannon Regional Co-coordinator, Los Angeles Basin bshannon@westridge.org

Rhonda Siggers Regional Co-coordinator, San Diego Region rhondasiggers@aol.com California Coastal Commission and Staff 45 Fremont St. Suite 2000 San Francisco, CA 94105

ATTN: Yinlan Zhang

July 15, 2005

Dear Coastal Commission and Staff:

Thank you for the opportunity to write in strong support of the Pescadero Conservation Alliance and the PCA's mission of fostering the ecological health of the San Mateo coast through environmental restoration, research, and education.

Kaldal (Level 1995

One of the projects of the California Alliance of African American Educators (CAAAE) is a K-12 math, science and technology initiative for children of African descent. Named after an African American scientist who made his fortune in Silicon Valley, the Dr. Frank Greene Scholars Program (GSP) was first introduced to PCA through our MESA (Mathematics, Engineering, Science Achievement) chapter four years ago. I coordinate the GSP for the CAAAE. As you might know, MESA has spent over three decades encouraging primarily poor, underserved, minority students to pursue fields in math, science and tecnology. It has won many awards for its efforts and has an illustrious list of graduates now working in these fields.

As part of its outreach to MESA, a representative from PCA offered to organize a field trip free of charge to their field station at Gazos Creek. Four years go, I took a bus load of Greene Scholars to the field station for the first time. They loved it! Three PCA volunteers conducted rotations related to why banana slugs are so important to the ecology of the area, how to measure the height of a redwood tree and what role tiny organisms play in keeping the creek healthy. Many of those students had never been in a redwood forest and it was awe-inspiring for them. Even though I grew up in California and vacationed at our state parks almost every summer for years, I was also struck by the beauty of the Gazos Creek area.

Because the GSP is a long-term mentoring project, I have the same students year after year until they graduate from high school. When I asked the students in our MESA chapter if they wanted to return to Gazos Creek the next year, they were unanimously in favor of going back. Although they voted to go to Monterey Bay Aquarium last year (they said it was too cold at the Pescadero beach where we ate lunch!) and this year we had no funds to pay for a trip, I do plan to take a new group of Greene Scholars to the field station in 2006. We will not eat lunch on the beach this time!

I am thrilled that PCA is fighting so hard to protect the Gazos Creek area. If this permit is granted, it will ensure that my students (and countless others) who have not experienced the beauty of nature intimately will have that wonderful privilege someday. It is with great enthusiasm that I endorse PCA's efforts and urge you to approve its Use Permit. If you would like to speak to me or any of my students about our experiences at Gazos Creek, please feel free to call me at 408.829.0590 at your earliest convenience.

Sincerely. -Otty Watkins___

Debra Watkins, CAAAE President and GSP Coordinator

Xc: PCA

Laurence G. Miller P.O. Box 791 El Granada, CA 94018 (650) 712-1155

June 10, 2005

California Coastal Commission and Staff 45 Fremont Street Suit3 2000 San Francisco, CA 94015 ATTN: Yinlan Zhang

Dear Commission and Staff:

I am writing in support of the Pescadero Conservation Alliance (PCA) application to operate a field research station (FRS) at the former Mountain Camp on Gazos Creek in San Mateo County. I want to first state that, although I am employed as an environmental scientist with the Federal Government, I am writing as a private citizen. My position is not unbiased, however, as I am a founding member of PCA. I presently serve on the Board of Directors and I am one of several science advisors to the Alliance.

Environmental issues are nearly always complex and land-use decisions based on environmental criteria can be difficult, as you're well aware. The decision you make on this matter affects more than just the people involved. The health of the human community and possibly the entire ecosystem may be strengthened by your choice. This sounds grandiose, but I believe that it is society's responsibility to support environmental education on local and regional scales. The reason is that we can't possibly foresee what the environmental issues of the future will be. How will we prepare for the unknown? I think we prepare by providing students with the tools to learn and the commitment to use that knowledge as good environmental citizens.

Good stewardship of the natural resources of the San Mateo County Coast does not happen by itself. It takes a lot of work by committed, concerned activists and by the environmental citizens mentioned above. Some of the appellants in this case are themselves committed, concerned activists. However, concern and activism are barely enough to address the environmental issues of today, much less those of tomorrow. We must expand our grasp of the disciplines that make up environmental science (including ecology, geology, oceanography, etc.) in order to inform those future decisions.

There is no existing model for PCA's proposed use of the Field Research Station to combine active research, practical soil and plant conservation, and the

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teaching of field ecology classes. These activities fit together naturally, however this approach hasn't been tried before. Hence, there may be some risks to the participants in this project because the outcome is uncertain. Proposals need to be written and grants secured for programs. However, there is minimal risk to the local environment associated with attempting this project because the impact on the site will be constantly scrutinized.

Please give your full consideration to the PCA proposal to operate the Field Research Station. The Station is a fundamental component of PCA's programs and is vital to the future of our community. The real risk is in not trying.

Very Truly Yours,

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Lauryn Agnew 901 Ocean Blvd. Moss Beach, CA 94038 Lauryn@coastside.net



California Coastal Commission and Staff 45 Fremont St., Suite 2000 San Francisco, CA 94105 ATTN: Yinlan Zhang

Re: Pescadero Conservation Alliance Gazos Creek Mountain Camp and Field Research Station

To the members and staff of the Coastal Commission:

This letter is to encourage you to approve a use permit for the Gazos Creek Field Research Station, located near Pescadero, California in San Mateo County.

This unique setting has been the home to many camps since 1965, and has existing camper cabins and kitchen buildings, roads, and water facilities. These facilities have been leased by the Pescadero Conservation Alliance since 2000, who has invested many dollars and man-hours upgrading them for current, modern and eco-friendly use. I have personally attended some of these workshops. The people who currently contribute their 'elbow grease' to rebuilding the camps are dedicated to the mission of the PCA: to protect and restore the habitat of this sensitive coastal area against erosion, invasive plants, and flooding. The PCA works with respected university biologists to monitor and protect endangered species in the area, such as the Marbled Murrelet, Coho Salmon, Red-Legged frog and Steelhead Trout. Scientists can use the Mountain Camp as a research station to investigate, document and protect animal and plant species, including the coastal redwoods, and teach students and volunteers how to do habitat restoration projects.

Prior owners of the property were allowed between 120 to 400 people/day while PCA already limits day use to 63 people, and less than 25 people overnight. Paved roads already exist into the camp. Logging continues in nearby acreage. PCA needs approval for a use permit to continue to build on its admirable efforts to provide education for students and volunteers to restore and protect the land, animals, plants of this unique area.

I urge you to approve a use permit for PCA and the Gazos Creek Field Research Station.

Thank you,

Lauryn agnew Lauryn Agnew

5-18-05 Attn; Tinun Zhang tessouty I already wrate you bey's a tetter but I forgat to tellyon how many local business people have contributed thansands of hellors of and vestore the camp to make it into an educational location the yogrades on utilities and educational and lab equipment is amazing. Even the USES, came over and gave demos and displayed the latest equipments Accin for happiness on your birthday for must be the for the for happiness on your birthday With warmest thoughts and best wishes

Mr. Lloyd J. Olsen P.O. Box 203 Pescadero, CA 94050-0203





UNIVERSITY

College of Science Department of Biological Sciences

One Washington Square San José, CA 95192-0100 Voice: 408-924-4900 Fax: 408 924-4840 http://www.sjsu.edu

California Coastal Commission and Staff 45 Fremont Street, Suite 200 San Francisco, CA 94105

To the Commissioners and Staff,

Clear-cutting, a sawmill, erosion, stream diversion, logging trucks, a pond stocked with predatory fish, tons of cement and asphalt, thousands of screaming kids, loud music, gunfire, disregard for listed (and unlisted) species, inebriated adults, illegal gambling, structures built, structures burned, and finally, abandonment. This summarizes most of the 125-year history (1875-2000) of the current site of the Mountain Camp at Gazos Creek prior to management by the Pescadero Conservation Alliance (PCA).

Removal of nearly 1 million pounds of asphalt, hauling off enough junk to fill a 2000 sq. ft. house to the ceilings, monthly public lectures on natural history and ecology, outdoor biology education of hundreds of local and inner city children, organization of volunteers to restore cabins and remove nearby invasive plants, consultation with expert scientists on habitat and wildlife management, upgrading of camp infrastructure to county code, training of secondary teachers, and recruitment of Bay Area college and university faculty and students to conduct environmental research and teaching. This summarizes the site's past 5-year history under the stewardship of the PCA since it leased the camp from California State Parks in 2000.

As a redwood forest ecologist, I will be the first to insist on the need to tread lightly in the sensitive ecosystem of the Gazos Creek watershed. But as a 4-year member of the PCA Board of Directors and their Science/Education Advisory Committee, I have seen how much effort and care have gone into the "rehabilitation" of the Mountain Camp in an attempt to reverse over 100 years of environmental degradation and benign (and not so benign) neglect. As a teacher, I have seen the impact of our hands-on outdoor curriculum on elementary and high school children who live less than 20 miles from the redwood forest but have never actually been in one. I have seen the sense of wonder and pride on the face of a 5 foot tall African-American kid from East San Jose who has just applied the basic principals of geometry to estimate the height of a 200 foot tall redwood tree. I have seen the benefits that future K-12 teachers have derived from creating novel lesson plans and teaching in such a varied and inspiring setting. There can be no doubt that the PCA has accomplished many good things at the Mountain Camp or that it has the capability and desire to develop the camp into an exceptional environmental education and research facility unique to the Central Coast.

However, we know that our good deeds and intentions are not the main focus of the upcoming hearing on the Mountain Camp. We share the concerns of those who feel that using the Mountain Camp on a full-time basis might have deleterious effects on sensitive species. The PCA has gone to great lengths to solicit the input of experts to assess this issue - experts who have conducted studies for years in the Gazos Creek watershed and are familiar with the specifics of the facility's location, history, and ecology. Steve Singer is the region's authority on marbled murrelets and has surveyed them in the Gazos Creek canyon. Jerry Smith is a noted ecologist who has spent years studying steelhead trout, coho salmon, red-legged frogs, and

The California State University

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CALIFORNIA COASTAL COMMISSION

May 17, 2005

western pond turtles along the Santa Cruz/San Mateo coasts and often in Gazos Creek itself. Both are passionate about conserving listed species and both have concluded that operation of the facility under their suggested mitigations will have no significant effect on the local listed species. I also conduct research on listed animals and plants, including spotted owls and spineflowers, and would never be part of an organization that directly or indirectly harms sensitive species.

As you know, we are also caught in a Catch-22 situation concerning the old mill pond on the property. It is potential habitat for red-legged frogs and the San Francisco garter snake, although only a few of the former and none of the latter have ever been detected there. The predatory fish in the pond preclude the establishment of either of these species, so we want to drain it, get rid of the fish, and make it more suitable habitat for these animals. But, because it is close to the camp's driveway, some are concerned that a fraction of any newly recruited frogs or snakes might be killed or injured by increased traffic near the pond. I admit that this is possible although the PCA is willing to mitigate against it to a large degree. To argue that the current number of frogs and snakes on site (i.e., zero) is better than a potentially larger number doesn't make sense! This type of pond rehabilitation is done routinely on private property to increase listed species populations (with the blessing and encouragement of government agencies).

Both the original Staff Report and a more recent letter from USFW (4/6/05) concerning these listed species at the camp indicate good intentions from the scientists who wrote them, but little or no knowledge of the site's actual situation. In fact, it is my understanding that none of these biologists had ever seen the site prior to writing opinions about it. Finding time to make site visits is hard, I know, but to determine the fate of a project based only according to where it happens to fall on a map is neither fair nor acceptable.

This is a tough choice for the Commission. There is no bad guy. Both we and our opponents want what's best for the local ecology. However, we feel that our approach – proactive, long-term, educationally and scientifically based – is the more prudent course of action.

Best regards,

Chris Brinegar, PhD Professor of Biological Sciences and Director, Conservation Genetics Laboratory San Jose State University

cc: Pescadero Conservation Alliance





BOYS & GIRLS CLUB OF THE COASTSIDE

P.O. Box 545 Half Moon Bay, CA 94019 (650) 712-9710

May 17, 2005

California Coastal Commission & Staff Attn: Yinian Zhang 45 Fremont Street, Suite 2000 San Francisco, CA 94015

Re: Pescadero Conservation Alliance

Dear Commission,

As president and member of the Board of Directors of the Boys & Girls Club of the Coastside for the last eight years and an employee of Cabrillo Unified School District for the last fifteen years, it has been my pleasure to take many trips to Gazo's Creek Camp. My first trip was with a group of science teachers and administrators from Cabrillo Unified School District in 2001 to give the district personnel an opportunity to see the many possibilities for scientific research and teaching opportunities that the camp could provide for all students from elementary to high school age students. The staff was very impressed and have asked me numerous times over the past four years when they would be able to take students to the camp.

Other trips to the camp have been with students. We usually take two trips a year to the camp. The purpose for these trips were two reasons. First was to give support to the facility with labor to do everything from construction cleanup, build stone planters and to provide storm cleanup to help keep the facility in top appearance. The students who went received community service which is a requirement for graduation. The second reason and the more important one was to give many students an opportunity to experience a site to see some animals and plant life they have never seen before. I never had a problem filling the vehicles. I always had more students sign up than we had room. Transportation was provided by the San Mateo County Sheriff's Department who collaborates with the Boys and Girls Club. Every boy and girl who went to the camp came away so impressed and asking when can we go back and next time can we spend the night.

In conclusion I find it very hard to believe that a facility like this cannot be given a use permit for all the wonderful educational experiences it can provide to our community.

Thank you for your consideration.

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Ed Watkins, President Boys & Girls Club of the Coastside

16 May 2005

RECEIVED MAY 1. 7 2005 CALIFORNIA COASTA: COMMISSION

Members of the California Coastal Commission:

This letter is in support of the Pescadero Conservation Alliance's application for a use permit to operate the former "Mountain Camp" on Gazos Creek as a field research center. The members of PCA have proven themselves to be dedicated environmental stewards through their programs in environmental education and restoration. Their monthly lecture series, grade-school environmental workshops, and invasive plant removal projects are examples. Furthermore, the "Mountain Camp" has high potential as a productive center of environmental research, as outlined in PCA organizational documents.

I am aware of objections to the permit, made on the basis of possible environmental degradation to the Camp and nearby locations; for example, the possible disruption of or danger to the local Marbled Murrelet, redlegged frog, and San Francisco garter snake populations. These arguments seem spurious because of PCA's in-depth awareness of the issues and dedication to dealing with them from a protective, positive viewpoint. Furthermore, the objections are ill-documented for the Mountain Camp location. For the Marbled Murrelet issue, research conducted at the Camp could add to the now-scanty knowledge base regarding the behavior of and threats to this species.

We have attended several PCA events at Mountain Camp and appreciate the elucidation of many current environmental issues, many of which can be observed or demonstrated on the site. Please use your authority to enable a truly fine organization to continue their valuable programs.

Sincerely,

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Monty Hampton Retired coastal geologist Karen Hampton Retired early childhood educator



Dr. Jean Replicon Biological Sciences Dept. Mission College 3000 Mission College Blvd. Santa Clara, CA 95054 RECEIVED (408) 855-5267

MAY 1 8 2005

CALIFORNIA COASTAL COMMISSION

May 16, 2005

California Coastal Commission and Staff 45 Fremont St. Suite 2000 San Francisco, CA 94105 ATTN: Yinlan Zhang

Dear Coastal Commission and staff

I am writing in favor of the Pescadero Conservation Alliance's proposal to to operate the former "Mountain Camp" on Gazos Creek as an education and research facility. I feel such a facility is sorely needed on the San Mateo Coast. As an instructor of field ecology classes, I often have had difficulty in finding sites where students can have an immersive field experience; to study, explore and carry out field exercises.

I have been aware of the Pescadero Conservation Alliance for 3 years now and have attended numerous PCA sponsored events, naturalist walks and presentations. All were of the highest caliber, often given by exceptionally informative experts and welcoming to all members of the community. In my dealings with the PCA, I have found the members to be well educated and iinformed, exceptionally dedicated to their goals of environmental education/restoration, and very committed to awareness and minimizing environmental impact. In fact, in the establishment of the proposed field station, no new buildings will be erected. Instead, the PCA will refurbish and make use of the facilities already in place.

If the use permit is granted, the San Mateo coast would greatly benefit. The PCA plans for education and outreach are admirable. Area college students, such as those in my Field ecology class, would work to collect data to catalog and monitor local flora and fauna. Students would participate in restoration projects being carried out by the Pescadero Conservation Alliance.

In summary, I feel that the use permit would have a beneficial effect upon the San Mateo Coast. raising awareness about its value and educating students on how best to conserve it for generations to come

I thank you for your consideration of this request.

Sincerely,

Jer Replice Jean Replicon, Ph. D.

May 12, 2005

California Coastal Commission and Staff 45 Fremont St. Suite 2000 San Francisco, CA 94105

To: Yinlan Zhang

It has been a wonderful privilege to serve as a director and advisor to the Pescadero Conservation Alliance. Since 2000 we have accomplished a great deal. I wish you could have seen the decayed and abandoned state of the camp when we began our project. I am certain that others will tell you about the thousands of volunteer labor hours invested in this renovation. Many materials were donated to prepare the camp for our proposed use.

I was attracted to hclp the PCA when I heard about their plans and dreams to utilize the camp as a research station for environmental education projects. Think of it – environmental issues introduced in the classroom by school teachers and then supported "in the field," as the students work with scientists at our site. I cannot imagine a more appropriate coastal site that encompasses ocean to dunes to redwoods; all within a ten mile area.

Please approve our request and allow us to continue our outreach projects and to expand our field education programs.

Sincerely,

Robert H. Senz

Jennifer Harden 210 Royal Palm Ave Half Moon Bay, CA 94019

California Coastal Commission and Staff 45 Fremont St. Suite 2000 San Francisco, CA 94105 ATTN: Yinlan Zhang

RECEVED MAY 1 2 2005 CALIFORNIA COASTAL COMMISSION

Dear Board members and staff:

I am a research soil scientist with the U.S. Geological Survey, but would like to clarify that I am expressing my opinions and perspectives as a private citizen of coastal San Matco County. I have lived in coastal El Granada for 22 years. I am old enough to remember the landmark proposition that resulted in coastal protection. Although I am not old enough to have voted for the proposition at the time, I am a strong proponent of its mission. I also am a horse owner and play some small part in the movement to preserve both ranch culture and land resources.

It occurs to me that the greatest threat to coastal land is ignorance. The public has become fragmented and preoccupied with the cluttered calendar. It is probably fair to say that the coastside is perceived as an important recreation area and quasi-wilderness, but is probably also fair to say that some exceedingly small fraction of the population have any clue what lies beyond the highway shoulder, the open beaches, and the public trails. The complexity of decisions regarding land use is even less appreciated, and public comments seem more disparate than ever.

Education is the foremost, perhaps sole, solution available to the coastal commission to protect our coastal lands from inappropriate or ignorant abuses of development, pollution, and fragmentation. What better opportunity exists than the Pescadero Alliance to facilitate this education? PCA's partnerships with landowners, its scientific lectureships, and its facility in the redwoods present our coast with a rare and affordable land resource education.

I would also like to address the PCA as a potential research base for studies of watershed hydrology, biology, geology, soils, and climatology (to name a few). Societal and landuse issues intersect in that particular area in a way that seems unique for research camps - active geologic faults, endangered species, a climatic gradient, a suite of land uses are all topics that beg for scientific input to address societal choices. Once again, understanding the workings of species and environment can only serve to protect them.

In summary, the Pescadero Alliance presents to us a commitment and a vision of informed decision-making for our coastal resources. The hard work has been done – the land has been protected, environmental cleanups have been accomplished, buildings restored, and most importantly, a community is listening....

....What will the coastal commission say to education, outreach and community alliances? Yes, the answer must be, "of course we need PCA to meet the next decades of resource decisions".

Sincerel

May 10, 2005

1 May 05

California Coastal Commission and Staff 45 Fremont St. Suite 2000 San Francisco, CA 94105 ATTN: Yinlan Zhang

Dear California Coastal Commission and Staff,

This letter is written in strong support for the Pescadero Conservation Alliance's permit to operate the former "Mountain Camp" on Gazos Creek as a field research station (or as a small center) for habitat restoration, environmental education and research.

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The San Mateo County coastal mountains encompass a rich diversity of forest, stream, wetland, coastal, and inter-tidal habitats. These habitats are intimately connected with each other and modification of any one habitat can effect adjacent and downstream habitats. The Pescadero Conservation Alliance (PCA) recognizes the need for effective community-based learning about the ecology and effective management of these diverse habitats. The PCA mission reflects this modern vision of restoration and includes research and educational components. Scientific research is a critical component of effective restoration programs and helps managers to document and quantify the ecological impacts of restoration actions. Education enables the need for sound science and restoration actions to be embraced and valued by the entire coastal community. The PCA has clearly demonstrated major accomplishments in the restoration, research, and educational components of their mission.

I spent over a year working with the PCA as a science advisor and Board of Trustees Member prior to a professorship at Holy Cross in Worcester, MA. The PCA is led by a diversity of talented and dedicated scientists, educators, and landowners and truly seeks to enhance the environmental and societal welfare of the San Mateo Coast. The proposed Mountain Camp provides an ideal focal point for the group's activities and it's constituents and members a special gathering place. I continue to interact with PCA Board members and have volunteered to offer an annual stream ecology or environmental biology course each August. In addition, I have offered to provide funding for several student internships to help bring additional expertise to existing and planned restoration efforts. Such activities are highly valued at Holy Cross, and I envision a long-term interaction with the PCA will be maintained.

The PCA is a vibrant organization with an important mission. The Mountain Camp use is central to their plans and ultimate success. The PCA has a proven track-record and excellent lcadership and are poised to greatly improve the environmental health of the San Mateo Coast. The PCA desires to capitalize on their remarkable progress over the past three years and; thus, are eager to open the Mountain Camp this fall. Further delay

jeopardizes the organization's abilities to continue to promote and perform much needed restoration, research, and educational programs. San Mateo County should take tremendous civic pride in non-profit organizations such as the Pescadero Conservation Alliance.

Please feel free to contact me for additional information.

Sincerely,

Mur v Sert

Dr. William Sobczak Assistant Professor Biology Department College of the Holy Cross Worcester, MA 01610 Ph: 508.793.3752 Email: wsobczak@holycross.edu



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JIM AND LYNN ROBARDS One Adohi Court Brevard, North Carolina 2871 telephone and fax 828-884-9474

Cell phone 352-978-9474 e-mail JimAndLynnR@aol.com

April 28, 2005

California Coastal Commission and Staff 45 Fremont Street - Suite 2000 San Francisco, CA 94105

Attn: Yinlan Zhang

Gentlepeople:

We are hoping that you will give your approval to allow the Pescadero Conservation Alliance to operate a field research station on Gazos Creek. This small center would be for habitat restoration and education and research on the local environment.

This research station would be very beneficial to the local and surrounding communities, in that it would offer environmental training and education programs and do hands-on coastal restoration projects.

We understand that the County of San Mateo Planning Commission has already approved of the project, along with the Environmental Services Agency and California State Parks. We ask that you approve this Use Permit, so that the PCA can begin their work towards caring for your beautiful coast.

Most sincerely, Yen Rollovda Lynn Robards