

APPENDIX B
BIOTIC ASSESSMENT

August 11, 2008

Will Burns
Project Manager
David J. Powers & Associates
1885 The Alameda, Suite 204
San Jose, CA 95126

**Biotic Assessment
Monterey Bay Shores EIR Addendum
Sand City, California**

Dear Will:

Zander Associates has completed an assessment of the effects on biological resources for the revised Monterey Bay Shores project in Sand City, California. The assessment was conducted for the Addendum to the Environmental Impact Report being prepared by Sand City. We reviewed environmental documents prepared for the previous (1998) project, new data submitted with respect to biological resources and updated mitigation measures provided by the applicant on May 29, 2008 and July 21, 2008. We analyzed the effects of the revised project on biological resources and compared these effects with those identified for the previous project. Our task was to compare the findings for the previous project relative to significant effects on biological resources with the impacts of the revised project to identify any substantial changes in impacts or requirements for new mitigation measures. This report describes the methods and results of our assessment.

Background

The City of Sand City certified an Environmental Impact Report for the Monterey Bay Shores project in October, 1998. That EIR identified impacts on biological resources resulting from a mixed-use resort and residential development on an approximately 32-acre site. Significant and potentially significant impacts were identified for the following special status species: Monterey spineflower (*Chorizanthe pungens* var. *pungens*), Smith's blue butterfly (*Euphilotes enoptes smithi*) and western snowy plover (*Charadrius alexandrinus*). Mitigation measures were included to reduce all of these impacts to a less-than-significant level.

Since 1998, there have been some additional biological surveys conducted on the project site to update the data on existing conditions, most notably, revised vegetation mapping in 2006, and directed surveys for Monterey spineflower and seacliff and coast buckwheat – host plants for the Smith's blue butterfly- in 2008. Both these surveys were conducted by EMC Planning Group.

In addition, beginning in 2005, the City of Sand City has sponsored annual systematic breeding season surveys of the Sand City coastline for the western snowy plover. These surveys are being conducted by PRBO Conservation Science (PRBO), the consulting branch of the Point Reyes Bird Observatory, under contract to Zander Associates.

Not surprisingly, since 1998, there have been some minor changes in the nature and extent of the vegetation types on the project site and in the distribution and abundance of Monterey spineflower and the host plants for the Smith's blue butterfly. These changes are discussed in the assessment section below.

Methods

The following documents were reviewed for information regarding biological resources and potential project effects.

- Draft Environmental Impact Report, Monterey Bay Shores Resort, City of Sand City, April, 1998.
- Final Environmental Impact Report, Monterey Bay Shores Resort, City of Sand City, October, 1998.
- Monterey Bay Shores Botanical Survey Update Results. Letter from Janet Isles, EMC Planning Group to Ed Ghandour, SNG Development Company. May 12, 2008.
- Vesting Tentative Map, Monterey Bay Shores, February 1998, prepared by Bestor Engineers
- Draft Habitat Conservation Plan, Monterey Bay Shores, July 20, 2006, prepared by EMC Planning Group, Inc.
- Booklet Describing the Monterey Bay Shores Resort, received December 10, 2007, prepared by SNG Development.
- Landscape Plan for Monterey Bay Shores, received December 10, 2007, prepared by Rana Creek
- Land Use Map, dated May 2008, prepared by Rana Creek.
- Mitigation measures update. Letter from Ed Ghandour, SNG Development Company to Will Burns, David Powers and Associates. May 29, 2008;
- Vesting Tentative Map, Monterey Bay Shores, June 12, 2008, prepared by Bestor Engineers;
- Mitigation measures update. Letter from Ed Ghandour, SNG Development Company to Will Burns, David Powers and Associates. July 21, 2008.

Since our task was, in part, to determine if the revised project would result in a substantial change in the severity of significant effects on biological resources over those described for the previous project, we first tabulated the impacts for the revised project and then compared them against the previous project. Where more current biological data were available, those data were used to evaluate the effects of the revised project.¹ If significant or potentially significant impacts were similar for both projects, then the mitigation measures recommended in the FEIR

¹ We relied on available biological resource information on the site for this evaluation; we did not conduct an independent data base search or site assessment for potential special status species that may occur in the area.

for those impacts were reviewed along with the updated mitigation measures provided by the applicant to determine how they would apply to the revised project.

Assessment

The revised Monterey Bay Shores project will result in essentially the same impacts on existing vegetation types as those identified for the previous project. Although the nature and extent of the vegetation has changed slightly from the time of the 1998 EIR, those changes have mostly resulted in the degradation of habitat due to the increased dominance of non-native iceplant throughout the site. The iceplant has encroached into areas of pioneer dune and bare sand and has caused a reduction in the extent of coastal scrub species. A decline in the number of buckwheat plants that serve as host plants for the endangered Smith's blue butterfly has also occurred, likely due to competition for space and nutrient resources from the iceplant.

There has been a slight increase in the extent of Monterey spineflower but the plants are mostly found in the same general area as reported in 1998 in the northwestern quarter of the site and the densities have not increased significantly. The annual variability of Monterey spineflower populations can be dramatic depending on the amount of rainfall, temperature range and other environmental factors. Also, the species readily colonizes disturbed areas. For these reasons, the increase recorded in 2008 is not considered a substantial change over conditions reported in 1998.

The 1998 EIR identified potentially suitable western snowy plover nesting and brooding habitat on the project site along the beach and flat plateau north of the sand pit along the bluff. The EIR also identified the site as historical nesting habitat for plovers, with 20 recorded nest locations between 1989 and 1997. However, plover breeding activity along the Sand City shoreline in general, including the project site, showed a continuous decline from 1998 through 2007. Only one (unsuccessful) nest was observed near the northerly property line of the project site in 2000. In 2007, the U.S. Fish and Wildlife Service removed the Sand City shoreline from the designation of critical habitat for the western snowy plover. No nesting activity was observed in the area again until recently in 2008 when at least three nests have been documented to date on the Sand City coastline. While plover nesting has declined in the Sand City shoreline area since the mid-1990s, the area continues to provide open sandy sites above the high tide line with direct access to the bay and remains a viable outlier for potential plover breeding.

The revised project will modify approximately 28 acres above the mean high tide line through grading, excavation, and recontouring, compared with approximately 31 acres for the previous project. Unlike the previous plan, the revised project will balance grading onsite and therefore there is no longer a proposal to distribute additional sand excavated from the property in the coastal strand habitat for beach replenishment. Most of the existing vegetation will be removed during construction, except in the northern portion of the site where there are elements of coastal scrub, including seacliff buckwheat plants. All of these buckwheat plants are located outside of the grading envelope and the applicant is proposing to avoid removing them because of their potential to support Smith's blue butterfly.

Habitat restoration is a major component of the revised project. Approximately 23.2 acres will be restored to foredune, secondary dune, back dune, wetland and coastal bluff habitat. This includes about 4.3 acres of living roof that will emulate coastal bluff habitat by having shallow soils and plants that are adapted to wind and salt spray. Of the 23.2 acres to be restored to native habitat, about 14 acres around the periphery of the development will be placed in conservation easements and protected in perpetuity. A public access easement will be designated on approximately six acres of the site, primarily to provide access to the beach and coastal strand areas. Three trails, one public and two private, will direct access out to the beach in a similar configuration as proposed for the previous plan.

The revised project will include on-site alternative energy generation facilities which were not part of the approved project and therefore were not analyzed by the 1998 EIR. However, these facilities will be incorporated into the structural and design elements of the buildings. Roof-mounted, low profile, horizontal wind turbines will be installed in protective enclosures to reduce potential impacts to birds and other wildlife. These facilities are not expected to result in any impacts on biological resources not already identified for the previous project.

A comparison of the effects of the revised project on biological resources with those identified for the project analyzed in the 1998 EIR is provided in Table 1.

Table 1: Comparison of Project Effects on Vegetation Types and Special Status Species

Resource	Total Area on Site in 1997	Approximate Area Removed/Affected by Previous Project	Total Area on Site in 2006	Approximate Area Removed/Affected by Revised Project
<i>Vegetation Types</i>				
Coastal Strand	4.2	4.2 acres	3.8 acres	2 acres
Pioneer Dune	9.2	9.2 acres	8.2 acres	8.2 acres
Coastal Scrub / Iceplant Mix	2.8	2.6 acres	1.1 acres	0.6 acre
Iceplant Dominated	2.1	1.9 acres	7.8 acres	7.3 acres
Ruderal/Disturbed	2.1	1.6 acres	0.6 acre	0.6 acre
Bare Sand	11.6	11.2 acres	10.1 acres	9.1 acres
Total	32 acres	30.7 acres	31.6 acres	27.8 acres
<i>Special Status Species</i>				
Smith's blue butterfly hostplants	58 plants	58 plants	40 plants	0 plants
Monterey spineflower	2.8 acres	2.6 acres	3.4 acres	3.4 acres
Western snowy plover	not quantified	removal of historic nesting habitat	not quantified	removal of historic nesting habitat

The applicant proposes to restore approximately 1.4 acres of coastal dune scrub habitat, including the area where seacliff buckwheat plants will be avoided during construction, to provide more suitable opportunities for use by Smith's blue butterfly. Iceplant that is currently encroaching on the existing buckwheat plants will be eradicated and approximately 400 buckwheat plants, propagated from seed collected on site or nearby, would be introduced. Monterey spineflower will also be reestablished over approximately 3.4 acres of the restoration areas. Prior to grading and construction, seed will be collected from plants to be removed in the development area and introduced into appropriate restoration areas on completion of grading.

The applicant also proposes to retain an on-site biologist prior to the issuance of grading and building permits to conduct pre-construction surveys for western snowy plover, establish suitable protection measures in the event that plovers are observed, oversee grading and construction, and remain as adjunct staff to the resort during its operation to establish and manage habitat protection programs focused on the plover. An annual task for the retained biologist will be the establishment of an initial two acre "nesting protection zone" on sandy beach and strand habitat to provide an opportunity area for plovers during the breeding season. Based on prevailing conditions, the area would be designated on the ground by symbolic fencing (e.g. post and cable) and signage to alert beach users and inform them about the sensitivity of plover nesting habitat. The nesting protection zone could be relocated or expanded as determined necessary by the biologist, in response to plover nesting. The biologist will assist with preparation of an adaptive management and access plan for the natural and restored areas of the resort, including the beach and strand and the entire coastal plateau and foredune area which would be re-contoured and re-vegetated into restored habitat. Based on recommendations from the biologist, these areas can be fashioned to make them attractive to plovers with adaptive management principles applied during the nesting season. Other activities involving the on-site biologist will include, but not necessarily be limited to: assistance with preparation of a predator management plan to help insure that plovers nesting on the site are protected from predation to the extent feasible; annual resort operations review to recommend adjustments to promote plover nesting; participation in a mandatory employee education program; coordination with the City of Sand City, State Parks and adjacent landowners to devise mutually compatible plover protection measures. A proposed environmental trust fund, generated from the resort's net revenues and the City of Sand City's transient occupancy tax collected from the project (subject to final City Council approval), could be available to assist the City in covering costs of the coordination effort.

Based on the available data, the revised project will not result in any impacts on biological resources not identified for the previous project. It will restore more native vegetation and it will increase the amount of habitat available for Smith's blue butterfly, without disturbing the existing buckwheat plants. It will also reestablish Monterey spineflower at a minimum 1:1 ratio (same as the previous project), it will include adaptive management of the beach, strand and foredune areas on the property to protect nesting snowy plovers, and it will dedicate conservation easements over restored habitat outside of the developed area. These measures are comparable to those incorporated into the previous project and will help reduce effects on biological resources.

Table 2 provides a summary of the proposed restoration and mitigation measures incorporated into the descriptions for each project.

**Table 2
 Comparison of Restoration and Mitigation Measures Incorporated into the Project**

Measure	Proposal in Previous Project	Proposal in Revised Project
Restoration of native habitat	12.8 acres	23.2 acres
Creation/management of nesting habitat for snowy plover	4 acres of beach/strand & 7 acres of foredune dedicated to plover.	2 acre protection zone and adaptive management of beach, strand & foredune.
Creation of habitat for Smith's blue butterfly	3.9 acres	1.4 acres (including existing plants avoided during construction)
Reestablish Monterey spineflower	3 acres	3.4 acres
Dedication of Conservation Easement	10.2 acres	13.9 acres

Comparison of Significance Findings

The 1998 FEIR identified several impacts on biological resources that were considered less than significant and some considered significant or potentially significant if unmitigated. Significant impacts were all reduced to a less than significant level with incorporation of mitigation measures proposed by the project and/or recommended in the FEIR. Since the impacts of the revised project are essentially the same as, or less than the previous project, we compared the findings for the previous project with the revised project. We evaluated the mitigation recommendations in the FEIR for significant or potentially significant impacts to determine their applicability to the revised project. The results of this evaluation are summarized in Table 3 and discussed below.

Table 3: Comparison of Findings and Mitigation

Impacts Identified in 1998 FEIR		Comparison to Revised Project		Mitigation Measures for Revised Project
Impact	Finding	Impact	Finding	
Removal of 30.7 acres of plant communities	Less than significant	Similar	Same	None recommended
Removal of 2.6 acres Monterey Spineflower	Significant if unmitigated	Similar	Same	3.4 acres restored* No additional mitigation recommended.
Removal of 13 acres of wildlife habitat	Less than significant	Similar	Same	None recommended

Table 3 (cont.): Comparison of Findings and Mitigation

Impacts Identified in 1998 FEIR		Comparison to Revised Project		Mitigation Measures for Revised Project
Impact	Finding	Impact	Finding	
Disturbance of +30 acres of site for 2-3 yrs during construction	Less than significant	Similar	Same	None recommended
Potential displacement or harm to migratory birds/nests during construction.	Potentially Significant if Unmitigated	Similar	Same	Same as required in FEIR for previous project
Loss of 58 buckwheat plants = habitat for Smith's blue butterfly	Potentially Significant if Unmitigated	Avoidance of all buckwheat plants	No Impact	None recommended
Removal of historic western snowy plover nesting habitat	Potentially Significant if Unmitigated	Similar	Same	Annual establishment of +2 acre protection zone; adaptive management & monitoring on beach, strand and foredune area.* No additional mitigation recommended.
Project construction activities over 2-3 yrs will disturb areas where snowy plover has nested in the past	Potentially Significant Impact if Unmitigated	Similar	Same	Biologist to conduct pre-construction surveys and direct activities away from active nests.* Provide additional details as per FEIR.
Deposition of sand on beach & strand would cover historic plover nesting sites and could reduce nesting.	Potentially Significant Impact if Unmitigated	No beach replenishment proposed	No Impact	None required
Increased human activity on project site could cause loss of plover nests on beach and strand	Potentially Significant Impact if Unmitigated	Similar	Same	On-site biologist to implement adaptive management & education program* Provide additional details as per FEIR.

Table 3 (cont.): Comparison of Findings and Mitigation

Impacts Identified in 1998 FEIR		Comparison to Revised Project		Mitigation Measures for Revised Project
Impact	Finding	Impact	Finding	
Increased use of beach areas adjacent to site would add cumulatively to expected increases in beach use that would result from other proposed developments	Potentially Significant Impact if Unmitigated	Similar	Same	On site biologist to implement adaptive management & education program, coordinate with adjacent landowners and City* Provide additional details as per FEIR.
Lighting provided for the development could spill over into the plover nesting areas and may disturb the plovers and facilitate increased predation of the species	Potentially Significant Impact if Unmitigated	Similar	Same	Same as required in FEIR for previous project.

* Mitigation proposed by project

In concept, most of the mitigation measures proposed by the revised project are functionally equivalent to those proposed by or required of the previous project. Assuming the adaptive management program will apply to all natural and restored areas of the site (including even the living roofs), on-site habitat values and wildlife use (notably snowy plover nesting) should be maintained at or above the levels required by the 1998 FEIR. Certain elements of the mitigation measures for snowy plovers should be described in more detail in conformance with language in the FEIR. For example, the pre-construction surveys, construction monitoring, adaptive management and access plans proposed by the project should incorporate specific requirements directly from the relevant measures in the FEIR (pp. 161-162). The adaptive management and access plan and Habitat Protection Plan (HPP) should be prepared for review prior to City Council approval of the revised project. The commitment to and contractual arrangements with the on-site biologist should be more clearly specified as they were for the biological steward in the FEIR (p. 162).

On the other hand, some of the mitigation measures in the 1998 FEIR may no longer apply. The City cannot require the applicant to obtain a federal incidental take (§10(a)(1)(B)) permit for western snowy plover if the USFWS is unclear on the question of incidental take. Especially if the project's proposed mitigation measures and the HPP can assure USFWS that any potential harm to the species has been adequately addressed, there may be no need for a §10(a) permit.

Additionally, Sand City is no longer pursuing a city-wide (coastal zone) Habitat Conservation Plan (HCP)/management strategy, so requiring the project to participate in it is irrelevant. Instead, the applicant has offered to create an environmental trust fund, ten percent of which is designated for western snowy plover recovery. This commitment coupled with an on-site biologist implementing an adaptive management program in coordination with the City and shoreline landowners is a very reasonable substitute.

In summary, we believe that the revised project will not result in a substantial increase in the severity of significant effects on biological resources over those described for the previous project. The mitigation measures proposed by the project and identified in Table 3, with the incorporation of additional details as described above, will provide a basis for equivalent findings to those of the 1998 FEIR.

Should you have any questions regarding our assessment or conclusions, please don't hesitate to call me.

Sincerely,

A handwritten signature in cursive script that reads "Leslie Zander".

Leslie Zander
Principal Biologist

LESLIE J. ZANDER

Principal Biologist



Ms. Zander has over 20 years of experience providing environmental consulting services to private sector and public sector clients. A biologist by training, Ms. Zander specializes in the characterization of plant communities and habitat types and integration of the natural community into project design. As a project manager, Ms. Zander has directed numerous planning and technical studies, environmental impact assessments and mitigation/restoration plans for projects throughout the San Francisco Bay Area, the Monterey Bay Area, San Joaquin and Sacramento Valleys, Southern California and the Sierra Nevada. She has also participated in project planning and review with project applicants, design teams, resource agencies and local jurisdictions and specializes in regional planning for biological resources. She has worked extensively with wetland and endangered species permitting

processes and environmental review pursuant to NEPA and CEQA. Ms. Zander's technical experience includes:

- design and implementation of rare and endangered species population studies
- quantitative vegetation analysis and habitat evaluation procedures
- multiparameter wetlands assessments
- mitigation plan development, implementation and monitoring
- opportunities and constraints analyses
- construction monitoring
- endangered species consultation and permitting processes
- wetlands permitting process
- development of policies and programs addressing regional planning for biological resources

EDUCATION

B.A., Biology, California State University, Fresno, California 1980
One year graduate course work in biology, 1980-81

TRAINING

Jurisdictional Delineation of Wetlands, American Fisheries Society, May 1988
24-hour safety training course in accordance with 29 CFR part 1910.120
CEQA: Implementation and Cutting Edge Issues, Association of Environmental Professionals, January 1992, February 1993.

EMPLOYMENT HISTORY

1992 - present: Zander Associates, Principal Biologist
1987 - 1992: Harding Lawson Associates, Associate Biologist
1985 - 1987: Environmental consultant, Self-employed
1983 - 1985: Independent Learning Schools, Inc., Campus Director and Director of Biological Sciences
1981 - 1983: Ecological Analysts Inc., Associate Scientist – Biological Consultant
1980 - 1981: California State University, Fresno, Teaching Assistant, Biology Department
1979 - 1981: Environmental Consultant, Self-employed
1979: National Wildlife Federation, Instructor, Sequoia Conservation Summit

REPRESENTATIVE PROJECTS

North of Playa Habitat Conservation Plan: Prepared Habitat Conservation Plan, Implementing Agreement, and Environmental Assessment in support of an application for a Section 10 (a)(1)(B) permit. The permit was issued pursuant to the Endangered Species Act of 1973, as amended, for the incidental take of the Smith's blue butterfly. Other species included in the HCP included: California black legless lizard, sand gilia, Monterey spineflower, sandmat manzanita, and Monterey ceanothus. Client: DBO Development

North of Playa Habitat Conservation Plan Implementation: Coordinated implementation of the Habitat Conservation Plan requiring 3.4 acres of coastal dune scrub habitat restoration and 1.2 acres of dune habitat creation. Implementation involved construction monitoring, iceplant eradication, propagation of planting materials, plant installation and reintroduction of black legless lizards removed from the development area. Overseeing ongoing maintenance and monitoring of the restoration areas. Client: City of Sand City

Fort Ord Biological Resources Planning: Provided biological resource planning guidance to assist with the development of the local community reuse plan for the 28,000-acre Fort Ord military base. Currently assisting with preparation of Biological Resources Management Plan to provide local communities with the framework for implementing Habitat Management Plan requirements and managing biologically diverse open space. Assisted in the preparation of the Habitat Conservation Plan Supplement to the Installation-wide Multispecies Habitat Management Plan for Former Fort Ord. Client: Fort Ord Reuse Authority

Alameda Naval Air Station Community Reuse Plan: Working with the local Reuse Authority to resolve reuse planning issues associated with the nesting colony of the endangered California least tern. Developed a Conceptual Management Plan for the California Least Tern for ANAS and presented concepts to the Assistant Secretary of the Navy and Assistant Secretary of the Department of the Interior. Client: Alameda Reuse and Redevelopment Authority.

Marina General Plan Amendment, Marina, California: Prepared Biological Resources section of EIR/EA which addresses Fritzsche Airfield and surrounding areas. Characterized existing vegetation and wildlife within the plan area, and evaluated potential impacts to these resources resulting from the proposed project.

East County Area Plan and EIR, Alameda County, California: Prepared Biological Resources Background Report and developed policies and programs focusing on regional planning of biological resources for the 418 square mile Plan area. Prepared biological resources and hydrology and water quality sections of the Draft EIR on the Plan. Client: Alameda County Planning Department

Rancho Palomares Project, Alameda County, California: Developed an integrated program for addressing a variety of biological resource and land use management issues associated with development on a 300-acre site. Prepared Resource Protection and Management Plan to address the wetland, sensitive species, wildlife and wildfire protection issues. Client: William Lyon Homes

Levin Residential Project: Currently providing assistance with biological resource, wetland and storm water pollution prevention design issues for a 300-acre site to be annexed to the City of San Jose. Working with the project engineers and staff from the RWQCB to develop the system design and storm water management program. Designing wetland mitigation areas to replace, in-kind, approximately 0.8 acre of intermittent stream course that will be filled for construction of the project.

Client: Shea Homes

Silver Creek Valley Country Club, San Jose, California: Conducted site studies and prepared environmental and permitting documents for a 1500-acre residential development and Country Club. Overseeing construction activities, mitigation implementation and monitoring of biological resources.

Client: Shea Homes.

Sunshine Canyon Landfill Extension, Sylmar, California: Designed and implemented quantitative streamzone assessment for a 759-acre landfill extension project in the Santa Susana Mountains. Client: Browning Ferris Industries.

Centex/Intowne Residential Development Project, Alameda County, California: Prepared biological resources impact analysis for the project EIR. Assisted with identification of offsite mitigation properties and prepared documents required for a Section 2081 permit for the State threatened Alameda whipsnake (*Masticophis lateralis euryxanthus*). Client: Centex Homes.

Polo Ranch Specific Plan EIR, Scotts Valley, California: Prepared Supplemental EIR addressing additional botanical issues for residential subdivision covering approximately 116 acres at the Santa's Village site in Scotts Valley. Client: City of Scotts Valley.

Shea Homes Environmental Monitor, Alameda, Contra Costa and Santa Clara Counties, California: Coordinated duties of the full time Environmental Monitor assigned to oversee construction activities and monitor biological resources at five different sites. Client: Shea Homes.

Mare Island Final Reuse Plan: Acted as biological consultant on the team assembled to develop a Final Reuse Plan for Mare Island Naval Shipyard in Vallejo, California. Conducted an analysis of reuse considerations relating to the base's biological resources, contacted resource agencies to solicit concerns regarding reuse planning and analyzed the regulatory/jurisdictional issues surrounding Mare Island. Client: EDAW, Inc.

Point Pinole Business Park, Richmond, California: Served as member of the project design team assisting with review of environmental documents and wetlands assessment. Provided design recommendations to minimize impacts to identified sensitive resources and incorporate native habitats.

Granite Hydroelectric Project EIS, Sierra National Forest, California: Conducted general floristic and rare plant surveys, wildlife surveys and instream flow data collection, covering over 12,000 acres of national forest. Prepared vegetation and wildlife impact analyses for EIS. Client: Upper San Joaquin Water and Power Authority.

Big Creek No. 3 Transmission Line Facilities EIS, Central Sierra Nevada, California: - Surveyed proposed transmission line corridors to characterize existing habitat. Wrote vegetation and sensitive species sections of EIS submitted to FERC. Client: Southern California Edison.

***Carex whitneyi* Recovery and Research Project, Central Sierra Nevada, California-** Directed three-month field studies to determine extent of *Carex whitneyi*, a designated rare species, outside of its type locale. Area of survey covered from Kings Canyon National Park to Yosemite National Park at 5000- to 8000-foot elevation on west slope of the Sierra. Client: Kings River Conservation District.

AWARDS

Botanical Society of America, Young Botanist Award, 1980
Fresno Community Council, Community Service Award, 1973

MEMBERSHIPS

Association of Environmental Professionals
California Native Plant Society
National Wildlife Federation

MICHAEL J. ZANDER

Principal Environmental Scientist



Mr. Zander is a biologist with more than 25 years of professional experience in the environmental consulting field. He specializes in natural resource analysis and biological evaluation but is also well-versed in the planning and legal aspects of land use development. As a project manager, Mr. Zander has directed numerous planning and technical studies, environmental impact assessments and mitigation/restoration plans. As a seasoned biologist, he has conducted sensitive species surveys, habitat evaluations, wetlands assessments and

mitigation/monitoring programs. He regularly serves as a principal liaison between clients and regulatory agencies to resolve issues and avoid conflicts between land use and environmental objectives. Mr. Zander can provide:

- strong negotiation skills relative to natural resource issues
- project management expertise for technical studies and CEQA/NEPA compliance
- sensitive species evaluation, consultation, management planning and permitting
- habitat management/conservation planning
- wetlands assessment and permitting
- mitigation/restoration/monitoring program development and implementation

EDUCATION

M.A., Applied Plant Taxonomy, Royal Botanic Gardens, Kew, London, England, 1980
Fulbright Graduate Research Program, Royal Botanic Gardens, Kew, London, England, 1975-1976

B.A. (Honors), Biological Sciences, University of California, Santa Cruz, 1975

TRAINING

24-hour safety training in accordance with 29 CFR part 1910.120

EMPLOYMENT HISTORY

1992 - present:	Zander Associates
1984 - 1992:	Harding Lawson Associates, Principal Environmental Scientist
1980 - 1984:	Environmental Science Associates/Madrone Associates, Senior Associate
1976 - 1980:	The National Trust, London, England, Program Coordinator
1975 - 1976:	Royal Botanic Gardens, Kew, London, England, Fulbright Fellow
1973 - 1975:	University of California, Santa Cruz, Arboretum, Instructor/Manager

REPRESENTATIVE PROJECTS

Fort Ord Biological Resource Management Planning: Currently serves as Principal Biological Consultant to the Fort Ord Reuse Authority, providing natural resource guidance for development of a Habitat Conservation Plan and Implementing Agreement for Fort Ord. Chairs the Coordinated Resource Management and Planning program, which provides a base-wide forum for dialogue and information sharing among resource agencies, habitat managers and stakeholders. Client: Fort Ord Reuse Authority.

Pebble Beach Company Del Monte Forest Plan: Provides biological and regulatory expertise in support of Pebble Beach Company's ongoing conservation and development planning in the Del Monte Forest of the Monterey Peninsula. Assists with planning for preservation and management of Monterey pine forest, coastal dune, wetland and other habitat types and special-status species that occur in the forest. Regularly coordinates with resource managers and regulatory agencies. Client: Pebble Beach Company.

Lower Arroyo Seco Restoration Project: Principal-in-charge of program to restore channelized portion of Arroyo Seco in Pasadena to diverse riparian community. Managed all phases of planning and permitting for the project, including agency coordination, CEQA review and condition compliance. Organized and conducted five-year monitoring program to demonstrate success according to pre-established performance criteria. Obtained final approval from regulatory agencies for project's conformance with all criteria. Client: Browning Ferris Industries and City of Pasadena

Monterey Peninsula Country Club Shoreline Restoration: Serves as Principal-in-Charge for restoration of coastal scrub and terrace prairie habitat along a mile section of the 17-Mile Drive adjacent to Monterey Bay. Project involves eradication of non-native invasive species, minor grading and recontouring, introduction of appropriate native materials propagated from local stock, protection and management of a state-listed rare and a federally-listed endangered plant species, and long-term monitoring. Obtained permits for project and maintains ongoing dialogue with California Department of Fish and Game. Client: Monterey Peninsula Country Club

East Garrison Land Use Assessment: Principal Investigator for a project to evaluate modifications to the land use plan for former Fort Ord. Project involved redesignation of over 200 acres of open space preserve for development in exchange for over 400 acres of new habitat lands. Required active coordination with representatives from U.S. Army, U. S. Fish and Wildlife Service, state and local elected officials and others. Assessment demonstrated benefits of proposed exchange and resulted in Army and U.S. Fish and Wildlife Service approval. Client: County of Monterey

Sunshine Canyon Landfill: Assisted with baseline biological and wetlands assessment, planning, environmental (CEQA) review and permitting for expansion and closure of major regional solid waste landfill facility in northern Los Angeles County. Coordinated with resource agencies on impact assessment and mitigation requirements for project. Working with client, engineers, City of Los Angeles and resources agencies to implement and monitor comprehensive wetland and riparian mitigation program on 1,200-acre natural reserve. Client: Browning Ferris Industries

Coastal Habitat Conservation Plan: Project manager for development of a coastwide Habitat Conservation Plan for the City of Sand City in Monterey County, California. A reasonable development footprint was proposed as part of the study and protection measures were developed for several federally-listed species known to occur in the area. The HCP is being prepared in consultation with the U.S. Fish and Wildlife Service,

Big Sulphur Creek Dam: Served as Principal-in-charge of project to evaluate geotechnical, hydrologic, and environmental constraints and opportunities associated with construction of dam and reservoir on Big Sulphur Creek at The Geysers in Sonoma County. Client: Northern California Power Authority

Cogswell Sediment Placement Site EA: Prepared Environmental Assessment (EA) to evaluate sediment removal and disposal alternatives for approximately 5.6 million cubic yards of sediment stored behind Cogswell Dam in the Angeles National Forest. Client: County of Los Angeles Department of Public Works

Silver Creek Valley Country Club: Served as Principal-in-charge for baseline biological assessment, agency negotiation and permitting for a 1500-acre residential community in San Jose. Client: Shea Homes

Harwood Biomass Power Plant EIR: Principal-in-charge of preparation of Final Environmental Impact Report evaluating impacts of siting and operating 12.5 MW wood waste power plant in City of Willits. Client: City of Willits.

Geothermal Resource Management Plan and Program EIR: Managed comprehensive planning and environmental study of geothermal resource development in portion of world's largest vapor-dominated geothermal resource area in Sonoma County. Client: Sonoma County Planning Department

Spanish Mine Constraints Analysis: Conducted biological assessment/constraints analysis of several-thousand-acre tract of land in Sierra Nevada Mountains proposed for development of mining and milling operation. Client: Homestake Mining Company

La Rosita Transmission Line: Conducted study of proposed 5-mile power transmission line from major substation in southwest portion of Imperial County to Mexican border. Client: California Public Utilities Commission

Fallen Leaf Lake Lodge Rehabilitation Plan: Managed study of proposed removal of old buildings and campsites, construction of new cabins, renovation of lodge and recreation hall, and road relocation for lodge in Lake Tahoe Basin. Client: California Tahoe Regional Planning Agency

Low level Radioactive Waste Facility Siting Study: Managed environmental siting and site characterization study for location of suitable sites to develop California's low-level radioactive waste facility. Client: U.S. Ecology, Inc.

Maritime Facilities Permit Assistance: Worked to identify and resolve major permit compliance issues related to large-scale development in the Port of San Francisco. Client: Port of San Francisco

MEMBERSHIPS

Association of Environmental Professionals
California Native Plant Society
Linnean Society of London
Bay Planning Coalition