



## **Statement of Qualifications**

95 Linden Street  
Suite 6  
Oakland, California 94607  
Phone: (510) 622-8110  
Fax: (510) 622-8116

# COMPANY BACKGROUND

Zentner and Zentner is a professional consulting firm specializing in wetlands, endangered species, stormwater treatment and other biological resources headquartered in Oakland, California.

Founded in 1986, we have successfully completed over 700 projects throughout the western United States. We provide support for projects ranging from aggregate mining and flood control to habitat protection and community recreation.

Our clients like what we do for them – over 70% of our work comes from repeat clients.

Zentner and Zentner is committed to providing our clients with the best service in the profession. We pride ourselves on accurate work, the development of practical plans that meet or exceed our client's project goals, and the successful conclusion of our permit and habitat construction efforts.

## Services

Our professional staff is experienced in a wide range of environmental services and specializes in the following:

- Wetland Delineations
- Protected Species Assessments
- Stormwater Treatment
- Biological Assessments
- Mitigation and Restoration Planning
- Section 404 and Other Wetland Permits
- Endangered Species: Section 7, 10 and 2081 approvals
- BCDC and California State Coastal Commission Permits
- Ecological Restoration and Monitoring



Morrison Creek in Sacramento County, used as a reference site for several projects.

# WETLAND DELINEATIONS

Zentner and Zentner has completed more than 400 wetland delineations in the past decade. Our reputation as experts is based on our work on difficult and complex projects as well as efficient and accurate mapping for less problematic sites. This experience has been recognized by the U.S. Army Corps of Engineers; two of the four individuals in California certified by the Corps as delineation trainers are Zentner and Zentner staff. We also serve as expert witnesses in litigation involving wetland delineations, complete delineations of navigable waterways for Corps Section 10 permits, and map the jurisdictional boundaries of other agencies such as BCDC.

## Streamlining the process

Completing a wetland delineation can be a relatively simple process. We use aerial photographs, topographic maps and other resources to identify the plant, soil and hydrology conditions on a site and then, through field surveys, define the actual wetland boundaries. For more complex sites, we may use global positioning systems (GPS), backhoe trenching and soil pits, hydrology modeling, and detailed vegetation sampling.

Once the delineation is completed, we work closely with our client to ensure that the mapping results are understood and portrayed in the most appropriate fashion. We then verify the delineation with the Corps or, as required, with State or local agencies.

These delineations can also be completed at a more conceptual level for rapid assessment purposes or for master planning large areas. We developed a "Pre-application Screen" analysis almost a decade ago to quickly identify wetland issues for any site and modified this technique to allow quick yet reliable mapping of large tracts of land.

## Recent projects

- A wetland delineation on almost 200 acres for Genetech in Vacaville.
- A delineation of BCDC's jurisdiction for Mare Island.
- Mapping of the Corps' Section 10 jurisdiction (historic waterways) for the Corte Madera Inn.



For the City of Fairfield, we mapped the wetland boundaries of nearly 3,000 acres in the Peabody-Walters Master Plan Area including a complex of vernal pools and streams intermixed with uplands.

# PROTECTED SPECIES ASSESSMENTS

Zentner and Zentner has completed a wide variety of assessments for protected species in almost every habitat type. And, although the list of wildlife and plants afforded some level of protection by Federal and State agencies has grown considerably, we have expanded our expertise to reflect these changes. For example, we track each species, range, or listing through a computer database that now includes more than 500 species occurrences. This database is also linked to Federal and State inventories so that we can quickly determine if agency records show the presence of protected species on or near a particular site.

We also tailor our work to fit the needs of the specific project. We can complete a general review, where we simply determine the likelihood of any particular species occurring at a site, or a detailed analysis for the presence or absence of a specific animal or plant. Our assessments are thorough and complete—and consistent with agency requirements.

## Recent projects

- We completed a full review of all special status species (Federal, State, and local) for the Eden Shores Business Park in Hayward.
- Detailed surveys for red-legged frogs were completed and approved by The US Fish and Wildlife Service for the Upper Mangels Ranch in Fairfield.



**Our senior ecologists are certified to perform special status species surveys for a variety of wildlife, including fairy shrimp and other vernal pool invertebrates.**

# STORMWATER TREATMENT

Zentner and Zentner specializes in the design and installation of landscape-based stormwater treatment systems. We have been designing landscape systems for treatment of stormwater runoff for more than 20 years and designed one of the very first landscape systems, a wetland, used for the stormwater treatment in Folsom, CA.

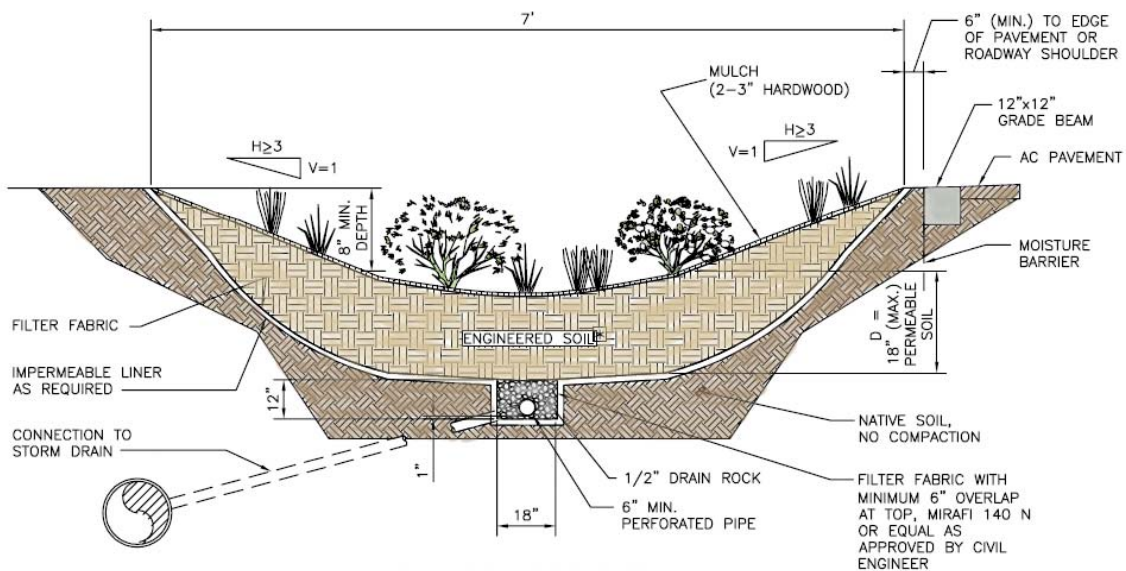
Our expertise in this area stems from the work we have done in wetland restoration and construction; in very many way, the landscape systems used to treat stormwater are typically wetland systems adapted for this specific use. Accordingly, we have significant expertise in channel and basin design, plant selection, and construction. As well, we have been building these systems for almost two decade and know what works and does not work.

Stormwater treatment has become a significantly more important issue in the past few years as Federal regulations have mandated that State adopt new NPDES requirements. In turn, the States have required new development to treat stormwater runoff to a degree rarely contemplated previously. Typical stormwater treatment programs, such as bioswales, biofilter planter boxes, and similar mechanisms are important elements in a

good stormwater treatment program; Zentner and Zentner has experience in including these within a site design without significantly jeopardizing development goals using innovative planning and site design. Additionally, we can quickly assess a project's stormwater design program and determine whether it will meet regulatory requirements.

## Recent projects

- For Citation Central, we designed a comprehensive stormwater treatment program for a dense, urban re-use project at the old Hayward cannery site. The Cannery project uses biofiltration strips adjacent to sidewalks to treat street runoff, planter boxes along buildings to address roof water and a variety of other mechanisms.
- For the City of Vallejo, we designed a biofiltration system to treat runoff from an expanded highway and local street intersection to ensure adjacent wetlands would not be damaged.
- For Regency Centers, we designed a stormwater treatment system for an almost 500,000 sq ft retail center in the City of Fremont. We used biofilter strips in the parking lots, bioswales in adjacent open space, and biofilter planter beds to treat runoff from this intensely developed site.



**Bioswale Cross-Section**

NOT TO SCALE

# BIOLOGICAL ASSESSMENTS

Zentner and Zentner completes a variety of biotic analyses, including landscape stormwater treatment programs, plant and wildlife surveys, vegetation mapping, habitat evaluations, and the biologic portions of EIRs and EISs. We produce thorough assessments that review all aspects of the issues in question to ensure that each report is accurate and appropriate for its purpose.

## An experienced team

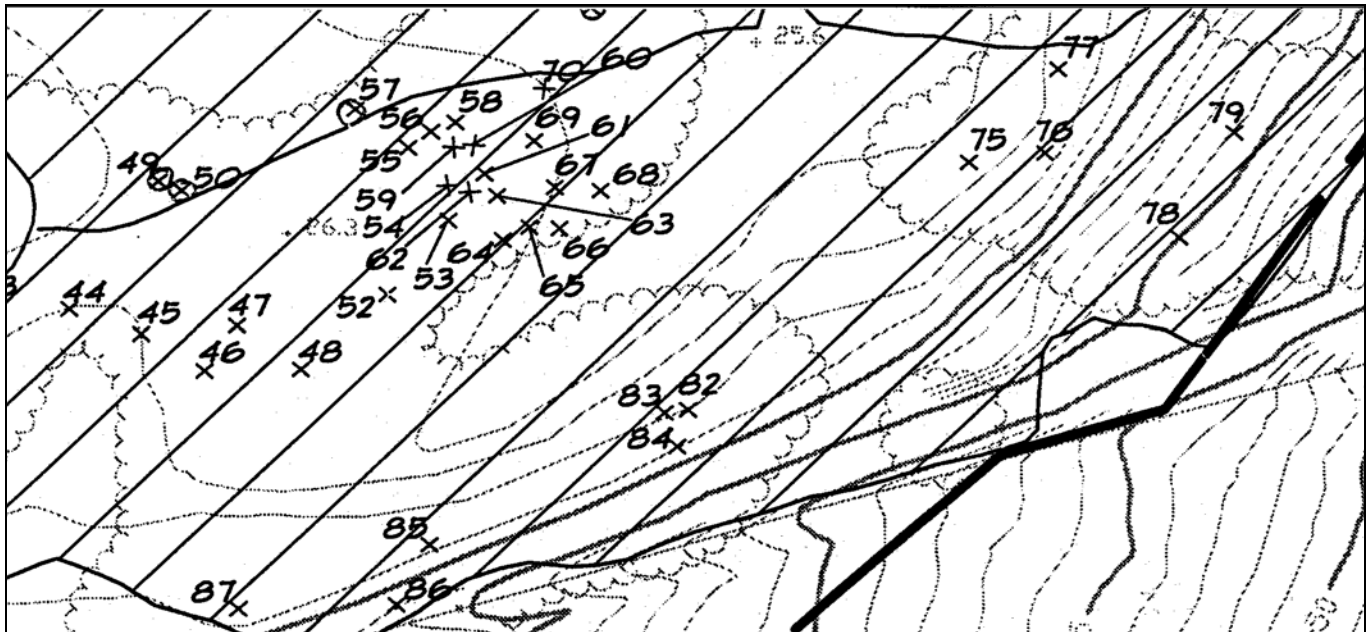
Our senior ecology team has spent more than a decade working together, allowing us to efficiently assess a wide variety of sites. We have also developed specific methodologies that have enhanced our reputation for a high level of quality and thoroughness.

Our teams are well versed in all aspects of ecology and supported by our substantial resource library, including color infared and black and white aerial photographs, topographic and other maps, related assessments and a computer database on more than 500 species.

Biological assessments must be clear and concise. Each assessment is reviewed prior to its release by our principals, who have over two decades of experience in biotic assessments.

## Recent projects

- For the City of Fremont, we prepared the biotic portions of the 500-acre Pacific Commons (Catellus Corporation) EIR, analyzing the distribution and value of wetlands and special status species habitats.
- We completed a detailed environmental assessment for DUC Housing Partners in Watsonville which was incorporated directly into the EIR.



In addition to wetland delineation, much of our work involves biological assessments such as the tree survey shown above.

# MITIGATION PLANNING

Zentner and Zentner has completed mitigation plans for almost every habitat type in the West, from vernal pools (we prepared the first ever large-scale vernal pool mitigation plan) to riparian systems (our multi-objective flood channel/riparian mitigation designs have been showcased in *Public Works*).

Our mitigation plans assess the existing conditions on the development and mitigation sites; propose planting, grading and water delivery programs; and identify monitoring protocols, including performance standards. Our client's participation in the development of these plans ensures that our mitigation proposals enhance the complete project.

## The benefits of design and construction experience

There are no standards and specifications for mitigation planning and a significant gap often exists between those who write plans and those who construct wetlands. Our experience in designing and constructing successful mitigation

sites over the past decade is incorporated into each of our plans. This experience also allows us to incorporate innovative and cost-effective features into mitigation plans which are drawn from successful past projects.

Our mitigation plans also consider the role of communities in the design and implementation of the plan. We have developed native habitats within residential subdivisions and other areas of intensive use; these habitats have become important features for neighboring homes, businesses and others.

## Recent projects

- For the City of Sacramento, we prepared a mitigation plan for the Laguna Creek Assessment District, covering 850 acres of vernal pools, seasonal wetlands, creeks, and uplands. The plan resolved three years of conflict over development in the region and was later identified as one of the most successful wetland mitigation projects in the region by the FWS.



Zentner and Zentner wetland restoration project at Lexington Hills, Folsom; constructed in 1992.

# SECTION 404 AND OTHER WETLAND PERMITS

The Corps of Engineers issues Section 404 permits for all fills into "waters of the U.S.", a term which includes wetlands. Zentner and Zentner has more than a decade of experience in all phases of 404 work, from defining Corps jurisdiction, to preparing permit applications (the Corps has over 30 different permits depending on the type of project), to obtaining the final approval. We also complete Section 401 water quality certifications, State Fish and Game Section 1600 streambed alteration agreements, and other wetland-related permits. This experience allows us to anticipate both the permit requirements and likelihood of success.

## Changing regulatory requirements

Like many other regulatory procedures, the 404 and other wetland permit programs have expanded tremendously since their beginnings and change often each year. These changes are often difficult to define or interpret as they may be described only in informal letters or within project decision documents. Zentner and Zentner tracks these modifications and, because we process so many wetland permits, are able to alert our clients to recent or likely modifications and the effects these may have on their projects.

Agency policies and permit procedures also vary by region and district. Zentner and Zentner is familiar with each of the resource agency regions and districts in the western U.S. and their individual policies and procedures. As a result of our work with these agencies, we have secured some of the largest and most complex 404 permits approved in both the San Francisco and Sacramento Districts of the Corps.

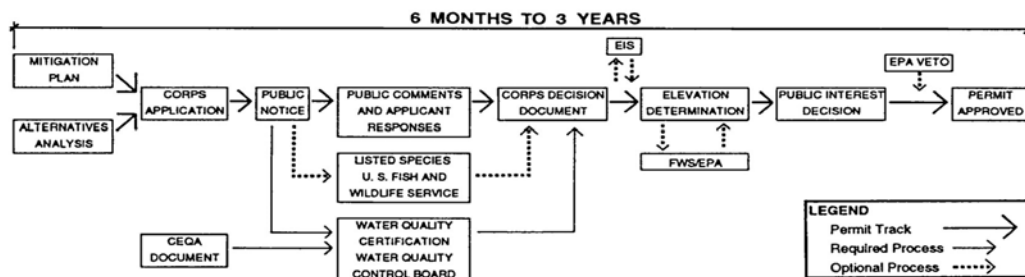
## Recent projects

- For the City of Vallejo, we secured a Section 404 permit for the widening of Wilson Avenue, and Mare Island, the City's primary waterfront thoroughfare and a major link to Mare Island. The project also required obtaining permits from BCDC and the USFWS.
- For Sacramento County, we secured a Section 404 permit for the Lower Laguna Flood Control Project, involving 1200 acres of wetlands and uplands.
- For DUC Housing Partners, we secured a Section 404 permit and Section 401 certification for the Mt. Eden Shores Business Park. This included the first approval by the RWQCB of an industrial park BMP program under their new rules.



Construction of mitigation wetlands at Laguna Creek, Sacramento.

### 404 Individual Permit Process



# ENDANGERED SPECIES: SECTIONS 7 AND 2081 APPROVALS

The number of species that have been listed or are subject to some form of protection by Federal, State, or local agencies has grown tremendously in the past two decades. Zentner and Zentner completes assessments for a wide range of protected species and we also work with these agencies to obtain their approval for projects that may affect these species.

Coordination is key to successful permit application

The approval process varies depending on the species and agency but the most common is the Section 7 consultation with the FWS. Section 7 consultations often occur when another Federal agency, such as the Corps, is considering a permit application that may affect Federally listed species. In these cases, we prepare an assessment of the potential effects, work with the Federal agency to define the project, and coordinate the consultation with the FWS.

Section 7 consultations, or their California counterpart, the section 2081 approval, can be extremely complex. One of the most exacting elements of any consultation is the crafting of mitigation measures. Very often, little is known about the species in question and even less about its habitat requirements. Our experience with successful habitat construction allows us to develop appropriate mitigation measures that also reflect project economics. Our research and publications on the results of our work also enhances our access to agency staff which, in turn, allows us to keep our clients up-to-date on the latest regulatory and permitting issues.

## Recent projects

- For the Centennial Group, Inc., we completed the first Section 7 consultation for the giant garter snake, a large aquatic snake inhabiting small waterways and ditches in the Central Valley.
- For the City of Vallejo, we completed Section 7 (Federal) and 2081 (State) consultations for the California clapper rail.



Restored red-legged frog ponds, Alamo, CA.

# BCDC AND COASTAL COMMISSION PERMITS

Zentner and Zentner has experience throughout the coastal zone of California, including San Francisco Bay, in securing development permits and other approvals. We have worked with the San Francisco Bay Conservation and Development Commission (BCDC) and the Coastal Commission and their staffs in most policy areas, including wetlands, endangered species, access, water-related industry, park priority lands, and fills. While the processing of these permits can be complex, our experience provides us with the ability to develop the strategies needed for attaining the required approvals.

Typically, securing permits from BCDC or the Coastal Commission requires close work with the staff to identify the relevant issues (and eliminate the extraneous concerns), preparation of thorough project documentation to demonstrate compliance with agency policies, and responding appropriately to staff, other agency, and public comments. With our experience and a history of positive efforts, we

can quickly identify significant issues, define the policy and precedent implications, and develop the information necessary to support project approval by the agencies.

## Recent projects

- For the City of Eureka and a consortium of landowners, we processed a coastal development permit approval for one of the first wetland mitigation banks on the coast.
- For Prologis, Inc. and King and Lyons, we secured BCDC and State Lands Commission approvals for development of the second phase of the Bayside Business Park.



Sea Ranch Village, Inc. 2<sup>nd</sup> nine and grassland restoration plan. Course plan by Robert Muir Graves, wetland and buffer design by Zentner and Zentner.

# CONSTRUCTION AND POST-CONSTRUCTION MONITORING

Ecological monitoring covers both construction and post-construction monitoring of habitat creation or restoration work. Zentner and Zentner has completed monitoring and annual monitoring reports for a wide variety of habitats; vernal pools, native grasslands, and riparian woodlands are some examples, and analyzed their progress with variety of tools. Monitoring requirements have also varied by project, but we have completed analyses of geomorphology, hydrology, plants and wildlife, endangered species, and many more elements. Each year over the past decade, we have produced at least 5 to 6 monitoring reports for sites ranging from 2 to 200 acres. Our monitoring reports have also consistently been praised by our clients and the reviewing agencies for their thoroughness and accuracy.

## Importance of construction monitoring

Ecological construction monitoring is a more recent phenomenon. Several studies have noted that unsuccessful mitigation projects can be anticipated in the construction phase, often because a plan was misinterpreted or field conditions did not match the plan assumptions. Because of our extensive habitat construction experience, we have helped clients produce successful projects, even where the plans are conceptual in nature. We also produce construction logs demonstrate that the project was built in accordance with the relevant permits; this provides protection to our clients from future confusion over the conformance of the project with these permits.

## Recent projects

- For the City of Palo Alto, we have monitored the Stanford University expansion including restoration of the San Francisquito Creek riparian corridor.
- We monitor the results of the Lower Laguna Creek drainage and wetland construction project for Sacramento County.



Zentner and Zentner tidal marsh restoration project in American Canyon, 1997.

# REPRESENTATIVE CLIENTS

A.G. Spanos

Castle Companies

Cattellus Development Corporation

Central Contra Costa Sanitary District

Chevron Land Co.

Citation Homes

City of Fairfield

City of Palo Alto

City of Sacramento

City of Vallejo

Contra Costa County

Davidon Homes

DR Horton

DUC Housing Partners

The Dutra Group

Genentech

Granite Construction

King and Lyons / ProLogis

Lockheed Missiles and Space

Pacific Gas and Electric

Sacramento County

Sea Ranch Village Inc.

Solano Concrete

Standard Pacific Homes, Inc.

Stanford University

Spieker Partners

Trimark Communities



## **Resumes of Key Personnel**

Ecologists, landscape designers, planners, and regulatory specialists form a close-knit team at Zentner and Zentner. Knowledge and experience are the hallmarks of a good environmental consulting firm. We are continuously expanding our experience and capabilities; we expend more than 10% of our net revenue on continuing education for our staff.

A diversified and knowledgeable staff provide the necessary skills to complete every phase of the task at hand. In addition, every project is managed or reviewed in detail by one of the firm's Principals.