



CHRIS ROGERS

Senior Ecologist / Project Manager

Mr. Rogers serves in both managerial and technical roles, specializing in complex permitting, regulatory compliance, wetland ecology and restoration, environmental impact assessment, and endangered species habitat restoration planning. Specific areas of expertise include management of large-scale and fast-track biological resource analyses and jurisdictional wetland delineations in support of multi-agency permits, construction compliance monitoring and reporting, preparation of accurate and defensible environmental documentation, habitat assessments and mapping and analysis, endangered species evaluations, restoration and mitigation planning, and public meeting presentations.

Education

B.S., Biology, emphasis in Botany, San Francisco State University

Graduate Studies, Ecology and Systematics, San Francisco State University

Certifications / Registrations

California Endangered, Threatened and Rare Plant Collecting Permit #09026

Specialized Training

Property Analysis Record, Center for Natural Lands Management, 2004

Hydrology of Constructed Wetlands, Wetland Training Institute, 2001

California Wetlands, CLE International, 2000, 2007

Federal Endangered Species Act, CLE International, 1995

Wetlands Delineation Certification Training, 1995

Wetland Impacts and Mitigation, U.C. Davis Extension, 1992

Wetlands Delineation Training, 1991

Professional Affiliations

Society of Wetland Scientists

California Invasive Plant Council

California Native Plant Society, East Bay Chapter

Relevant Experience

OCWD Santa Ana River Water Rights Application Program EIR. *Biologist and Wetland Specialist.* Evaluated potential impacts on biological resources for an environmental assessment of a proposed water rights application. The project involves describing existing operations and assessing potential impacts from existing and proposed projects to capture Santa Ana River water and recharge the Orange County Groundwater Basin. Mr. Rogers conducted field assessments of existing conditions, and reviewed historic habitat conditions within the watershed, focusing on effects of withdrawals on habitat and sensitive species.

Pajaro Valley Basin Management Plan 2000 EIR/EIS. *Biologist and Permit Specialist.* Provided technical and field support for the jurisdictional delineation and permitting for the Pajaro Valley Water Management Agency's (PVMWA's) Revised Basin Management Plan. The project proposes alternative approaches to remediating seawater intrusion and groundwater basin overdraft in the 79,000-acre Pajaro Valley service area (portions of Santa Cruz, Monterey, and San Benito Counties). The project also includes construction of a 23-mile long pipeline to import water from the Central Valley Project to PVMWA service area, which crosses numerous jurisdictional features, including habitat for several threatened/endangered species (i.e., California Red-legged frog, steelhead, California tiger salamander, and western pond turtle).

Zone 7 Arroyo Mocho Diversion Project CEQA and Permitting. *Biologist and Permit Specialist.* Prepared wetland delineation, habitat assessment and permit applications for planned installation of a structure to divert surplus South Bay Aqueduct water to the Chain of Lakes for groundwater recharge. Facilitated consultation with the Corps, CDFG, RWQCB and the National Oceanic and Atmospheric Administration (NOAA) Fisheries, and responded to local interest groups concerned about future steelhead resources.

Zone 7 Flood Control Master Plan. *Biologist and Permit Specialist.* Prepared the biological analysis, mitigation concepts and permit scenarios. Working closely with the engineering team, managed watershed level assessment of sensitive species habitat and recreational constraints and opportunities. Analysis

Relevant Experience (Continued)

included detailed biological assessment of individual capital projects, as well as development of maintenance program to provide for permit streamlining. Effort included coordination with regulatory agencies, including the Corps, US Fish and Wildlife Service (USFWS), CDFG, RWQCB, and National Marine Fisheries Service (NMFS) regarding resource issues, as well as local municipal agencies regarding local project issues.

DWR South Bay Aqueduct Improvement and Enlargement Project EIR. *Biologist and Permit Specialist.* Prepared assessment of riparian, wetland and sensitive species habitat along 44-mile South Bay Aqueduct for EIR and environmental permitting. Reviewed preliminary designs and identified environmental constraints. Worked in parallel with Department of Water Resources (DWR) design engineers to refine plans to avoid or minimize environmental issues, in particular to reduce regulatory requirements. Identified land available for mitigation and developed conservation easement strategies in coordination with DWR Land and Right of Way Division. Coordinated preparation of permit applications and negotiated permit conditions with U.S. Army Corps of Engineers (Sacramento and San Francisco Districts), U.S. Fish and Wildlife Service, California Department of Fish and Game (CDFG), and the San Francisco Bay Regional Water Quality Control Board (RWQCB). Provided detailed review of Plans and Specifications to ensure CEQA and permit conditions are incorporated into final bid package.

DWR South Bay Aqueduct Maintenance and Improvements EIR. *Biologist and Permit Specialist.* Supervised assessment of riparian, wetland and sensitive species habitat for rehabilitation and improvement of the 44-mile South Bay Aqueduct, a project co-sponsored by Zone 7 Water Agency. Working closely with DWR engineers, assisted in refinement of design to facilitate permit acquisition in time for maintenance activities to be scheduled during planned outage of this key conveyance facility that delivers water to Zone 7 and other water providers. Prepared applications and negotiated conditions with U.S. Fish and Wildlife Service (Biological Opinion), U.S. Army Corps of Engineers (Section 404 permits), California Department of Fish and Game (Streambed Alteration Permits), and San Francisco Bay Regional Water Quality Control Board Conditional Water Quality Certification).

Fairfield-Suisun Sewer District Treatment Plant Expansion & Outfall Project EIR. *Lead Wetlands Biologist.* Provided technical support for Feasibility Analyses, an Environmental Impact Report, and multiple regulatory permits for a Master Plan for improvements and expansion of the FSSD collection system, treatment plant, and discharge facility improvements to meet ultimate demand. Conducted botanical and wetland field studies, prepared a comprehensive wetland delineation report and obtained jurisdictional determination and permits from the U.S. Army Corps of Engineers, California Department of Fish & Game, and Regional Water Quality Control Board. Facilitated consultation process with U.S. Fish and Wildlife Service and National Marine Fisheries Service under Section 7 of the Endangered Species

Relevant Experience (Continued)

Act. Provided technical review and input into development of Plans and Specifications in support of FSSD's bid advertisement.

Las Lomas Specific Plan EIR. *Biologist and Wetland Specialist.* Performed field biological surveys and wetland delineation in support of an EIR for a large scale development project in the Santa Clarita Valley, Los Angeles County. Evaluated plant communities, special-status plant species, and wetlands and aquatic habitat. Responded to agency and public concerns about this controversial project by revising and incorporating comments regarding biological resources into the DEIR.

Lancaster Water Reclamation Plant Storage Reservoir Biological Consulting Services. *Wetland Specialist.* Assisted the development of a remote sensing based classification model to help define wetland areas in an extremely complex and fine-grained mosaic of desert scrub and alluvial wash habitat covering approximately four square miles in the Antelope Valley. This model used ground-truthing and spectral analysis of aerial imagery to resolve vegetated scrub habitat and interstitial panes with potential jurisdictional status as seasonal wetlands. The method reduced the cost of a typical wetland delineation by over 50%, and resulted in the determination that no jurisdictional wetlands occurred on the site.

Livermore-Amador Valley Water Management Agency (LAVWMA) Export Pipeline Facilities EIR. *Biologist and Permit Specialist.* Prepared assessments of riparian and wetland habitats along a 16-mile wastewater export pipeline for LAVWMA in Alameda County. Prepared applications and negotiated wetland permits for multiple federal, state and local regulatory agencies, and developed the construction monitoring compliance program, wetland mitigation plans and bid specifications for mitigation of impacts to biological resources. Included significant consultation with Corps/USFWS regarding federal jurisdiction and Habitat Conservation Plan requirements.

Nacimiento Water Project Design-Phase Environmental Services. *Lead Biologist and Wetland Specialist.* Coordinated and supervised biological and wetland field surveys on the 45-mile proposed pipeline route in northern San Luis Obispo County, including Camp Roberts. Developed methodology for rapid acquisition of jurisdictional wetland data using GPS coupled with portable tablet computers running ARC View to display aerial photos, USGS maps, sensitive species locations, and other data layers. Coordinated with the project design engineering and geotechnical team to provide up-to-date input on environmental constraints to assist in preliminary design decision-making as a parallel process with biological resource data gathering. Produced several work products, including *Constraints Analysis, Wetland Delineation, and Rare Plant Survey Report.*

Scottsdale Marsh Enhancement Plan, Permits and Construction Monitoring. *Biologist and Permit Specialist.* Supervised the preparation of

Relevant Experience (Continued)

detailed plans and specifications and bid package, for restoration and enhancement of Scottsdale Marsh, a 40-acre freshwater wetland and flood control detention system in Novato, California. Plans included excavation of channels to improve circulation and flow-through, extensive planting, landscaping and recreational amenities, and monitoring.

SFPUC Sunol Dam and Niles Dam Removal Project. *Biologist and Permit Specialist.* Providing technical assistance and field support for the jurisdictional wetland delineation and permit applications for removal of two dams on Alameda Creek. Will provide analysis of impacts to mature riparian habitat from dam removal, streambed lowering, and localized water table changes, and strategies for mitigation of these effects. The Niles and Sunol dams are no longer in use as water diversions, and present impassable barriers to steelhead migration, and are an attractive nuisance liability.

South County Regional Wastewater Management Agency (SCRWA) Wetlands Facility Project. *Wetlands Biologist.* Prepared a wetland delineation, permitting strategy, and feasibility assessment for development of a 30-acre wastewater treatment wetland. The facility would provide effluent polishing prior to discharge to Llagas Creek during winter months. Facility design will incorporate habitat and recreational opportunities to provide a project with complimentary water quality and habitat benefits. Key issues included effluent quality, including thermal effects on steelhead fishery, regulatory considerations of exchanging existing low-quality agricultural wetlands for enhanced functions and values of a managed perennial wetland system, and determination of point-of-compliance issues for the discharge permit.

Town of Hillsborough Trunk Sewer Improvement Project. *Biologist and Permit Specialist.* Supervised environmental compliance monitoring for replacement a failing and undersized sewer line for the Town of Hillsborough, located in a highly constrained utility corridor owned by the San Francisco Public Utilities Commission (SFPUC) and parallel with San Mateo Creek. The project relied on an innovative pipe-bursting method to minimize construction impacts to high quality riparian habitat, but experienced substantial difficulties with implementation. Coordinated with SFPUC on the preparation of a restoration plan to replace high quality riparian habitat and provide erosion control.

Union Sanitary District Force Main Facility Plan Environmental Constraints & Feasibility Studies. *Lead Wetlands Biologist.* Conducted field studies to identify biological and wetlands permitting constraints associated with proposed improvements to access vaults, roads and other Force Main pipeline facilities. Provided emergency response coordination during accidental pipe rupture and discharge into vernal pool conservation area, including water quality sampling, observations of special status invertebrates, and strategies for remediation.

Relevant Experience (Continued)

Coyote Lake-Harvey Bear Ranch County Park Master Plan EIR. *Project Manager.* As part of a five-year master on-call services contract with the Santa Clara County Department of Parks and Recreation, ESA is conducting environmental analyses for the Coyote Lake-Harvey Bear Ranch County Park Master Plan. ESA is working closely with Department of Parks and Recreation staff to determine the most cost-effective methods of baseline data collection, as well as efficient yet technically sound methods of conducting environmental analyses. Special-status species (including the California condor), hydrologic resources, recreation, transportation, and land use are among the environmental issues being addressed in the EIR.