

Appendix D

Consultant Resumes



Curtis E. Alling, AICP

PRINCIPAL

YEARS OF EXPERIENCE: 35

EDUCATION

MA, Recreation Resources Planning and Development, Texas A&M University

BS, Wildlife Science, Cornell University

CERTIFICATIONS

AICP, No. 040218 (1984)

AFFILIATIONS

American Planning Association California (APACA); Co-chair, Enhanced CEQA Action Team (ECAT, 2011 - 2012)

APACA, Chair, Climate Change Task Force (2007)

Association of Environmental Professionals; Chair, Legislative Review Committee (1995-2004).

REPRESENTATIVE PROFESSIONAL WORKSHOPS/PRESENTATIONS:

AEP Advanced CEQA Workshops (2007-2012)

CEQA Practicum Instructional Sessions, AEP State Conferences (2011 - 2013)

Continuing Legal Education, Annual CEQA Symposium, SF (2010 - 2012)

Climate Adaptation Planning, UC Davis (2012, 2010)

Infill Streamlining Under CEQA, California State Bar Environmental Law Section Conference, Yosemite (2011)

Climate Change and CEQA, UC Davis (2010, 2009)

Climate Action Planning, UC Davis (2009 - 2011)

CEQA Streamlining Toolbox, UC Davis Extension (2009, 2007)

Attorney General's CEQA and Climate Change Workshops (2009)

Senator Steinberg SB 375 GHG Reduction Workshops (2008)

First UC Davis Climate Change, Land Use, and CEQA Conference (2007)

AEP Basic CEQA Workshops (2004, 2002, 2001)

Curtis E. Alling, AICP, is a recognized expert in the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), and a specialist in complex environmental impact assessment programs. He has 35 years of experience and managed or directed more than 1,000 Environmental Impact Statements (EISs), Environmental Impact Reports (EIRs), Environmental Assessments (EAs), and other studies for federal, state, and local agencies, private industry, and land developers. His projects have involved State and Federal threatened and endangered species in agricultural, wetland, riverine, vernal pool, Delta, coastal, foothill, Lake Tahoe Basin, and other Sierra settings. He has managed numerous complex, litigious projects and large-scale joint NEPA/CEQA documents. His project specialties include water resources projects, habitat mitigation planning, endangered species compliance, flood control projects, outdoor recreation planning, community planning, and interagency environmental consultation programs. He is also an outdoor recreation planner with extensive work on river recreation issues.

Curtis is a recognized specialist in climate change adaptation and mitigation planning. He has led numerous local government climate action planning programs, most recently for the City of Sacramento. He has also been invited by the California Attorney General's office, Governor's Office of Planning and Research, and Natural Resources Agency to help determine environmental impact review approaches to greenhouse gas analysis and climate risk/adaptation. Curtis also led environmental document preparation for the California Air Resources Board's approval of greenhouse gas reduction regulations that implement California's landmark Global Warming Solutions Act (Cap-and-Trade, Renewable Energy Strategy, Advanced Clean Cars).

He has been a member of the American Institute of Certified Planners since 1984. Curtis has personally managed or directed 11 CEQA documents that were the subject of litigation. The defensibility record of these projects is outstanding. Curtis has also regularly instructed for the Association of Environmental Professionals, American Planning Association, UC Davis Extension, and UCLA Extension on CEQA and NEPA practice.

Project experience referenced herein includes Curtis' background during her tenure at other firms.

WATER SUPPLY PROJECT EXPERIENCE

Sacramento Area Water Forum Agreement EIR, Sacramento Sacramento City-County Office of Metropolitan Water Planning

Curtis directed the preparation of a program EIR that addressed the environmental effects of implementing the Sacramento Area Water Forum Agreement. The Agreement is the product of a consensus process among water agencies, business leaders, environmentalists, agricultural leaders, local governments, and public interest groups to provide a reliable water supply to Sacramento, El Dorado, and Placer counties while protecting the fisheries and other sensitive natural resources of the American River. Key issues included threatened and endangered fisheries (steelhead, winter-run chinook salmon, and splittail), flood control, recreation, vegetation and wildlife, and growth-inducement impacts. The EIR addressed integrated operations of the Central Valley Project and State Water Project in its impact analysis. The document served as program EIR providing cumulative analyses useful to second tier water facility EIRs. The Association of Environmental Professionals recognized the EIR with an Outstanding Environmental Document award.

Pyramid Lake Water Release / Groundwater Recharge EIR/EA, Ventura County United Water District

Directed the combined EIR/EA for the United Water District water release/ groundwater recharge program for water from Pyramid Lake in Ventura County. The project involved a joint CEQA/NEPA process with federal agency involvement including the U.S. Forest Service, U.S. Fish and Wildlife Service, and the Federal Energy Regulatory Commission. Key issues included the water release schedule and instream flow impacts to fisheries (salmon, and native and stocked trout), endangered species (arroyo toad), and river recreation (camping and fishing).

PUBLIC AND PRIVATE DEVELOPMENT PROJECT EXPERIENCE

Lucasfilm Grady Ranch Precise Development Plan/Lucas Valley Road Realignment - Supplement to the 1996 Grady Ranch/Big Rock Ranch Master Plan FEIR

Marin County Community Development Agency

Project Director

Ascent prepared a Supplement to the 1996 Grady Ranch/Big Rock Ranch Master Plan FEIR for the Grady Ranch Precise Development Plan (PDP). The PDP details a second phase of the implementation of the Lucasfilm Ltd. Grady Ranch/Big Rock Ranch Master Plan and Use Permit. The Grady Ranch PDP includes construction of the Main Building, Gate House Building, and Main Entry Road; realignment of Lucas Valley Road at the main entrance to the project; improvement of West Fire Road; replacement of the fire access road to the east side of Grady Creek (East Fire Road); realignment of the Upper Fire Road around the Main Building; nine bridges; and other related improvements such as construction of two water tanks and undergrounding and extension of off-site utilities. In addition, the Grady Ranch PDP details the restoration and enhancement of Miller Creek, Grady Creek, Landmark Creek and other tributaries located on the property. Restoration and enhancement plans include improving the habitat functions and values of the Stream Conservation Area (SCA) as well as the creek channels. The project incorporates Low Impact Development (LID) practices to manage stormwater through a natural system that is coordinated with SCA restoration and enhancement. The remaining parcel area of 187 acres around the 52-acre development area will be preserved as private open space. Key issues include hydrology/geomorphology of Miller Creek, greenhouse gas emissions, traffic impacts, visual impacts, and water supply.

Santa Clara Gardens Development Project EIR, Santa Clara

Department of General Services, Real Estate Services Division

Project Director

Curtis directed the preparation of the EIR for the Santa Clara Gardens Development Project, which is a proposed single-family and senior housing development located on one of the last remaining undeveloped infill parcels in the urban area of the City of Santa Clara. The State of California, Department of General Services (DGS) is the owner of the surplus State property. The State will be responsible for all site cleanup and removal of contaminated soils and then will sell the property to the City and an affordable housing developer. The senior housing owner/operator (Santa Clara Methodist Retirement Foundation) proposes to develop a senior housing facility on approximately 6 acres and the market-rate developer (Summerhill Homes) proposes to develop single-family housing and park uses on approximately 1.1 acres. The City of Santa Clara is the Lead Agency and the DGS is a Responsible Agency under CEQA. Key environmental issues associated with the project include conversion of land that qualifies for Prime Farmland classification, hazardous materials associated with past agricultural operations, transportation and circulation impacts associated with the new development including impacts on the surrounding neighborhood (i.e., cut-through traffic and parking), nighttime lighting and glare, and historic resources. After the EIR was certified, CEQA litigation was filed against the City and State by a neighborhood group. The EIR was upheld and the lawsuit was dismissed by Superior Court.

Mountain Springs Community Specific Plan EIR, Tuolumne County

County of Tuolumne

Project Director

Directed the preparation of the EIR for the Mountain Springs Community, an 1,100-acre area targeted for growth (Lime Kiln) located in and around the Mountain Springs Golf Course, approximately 1.5 miles southeast of the City of Sonora. The project proposed 1,800 residential dwelling units and commercial development. Key issues included additional vehicle traffic on roadways within the unincorporated area of Tuolumne County and the City of Sonora, impacts to streams and other sensitive habitats, cultural resources, air quality, water supply, and wastewater treatment capacity. The EIR analyzed the environmental impacts associated with the new development, and was streamlined to focus on new specific project impacts not addressed in the recently prepared program EIR for the County's General Plan Update. Mitigation measures provided additional guidance in determining the appropriate or desirable locations for growth, thereby preventing scattered development and destruction or degradation of valuable resources.

In response to a community initiative to reduce the size of the project, the applicant submitted an amended application proposing approximately 900 units. Curtis directed the preparation of a thorough Supplement to the EIR, which included updated traffic analysis, an oak woodland management plan, and revisions to original EIR necessary to make it adequate to address the revised application. The EIR and Supplement were certified and the community plan was approved.

Bay Meadows Redevelopment Project and U.S. Highway 101/Hillsdale Interchange Project EIR, San Mateo

City of San Mateo

Project Director

Directed the EIR preparation for the Bay Meadows Redevelopment Project and U.S. Highway 101/Hillsdale Interchange Project for the City of San Mateo and Caltrans District 4. The Bay Meadows Racetrack property was one of the last remaining major infill parcels available in the city. The project is proposed to include a new campus-style headquarters for Franklin Fund in a mixed-use plan with retail, entertainment, multiple-family residential, single-family residential, and park/open space uses. The proposed mixed-use redevelopment included over one million square feet of commercial uses (office, retail, entertainment), 775 dwelling units in a mix of densities, and neighborhood parkland in the 204-acre specific plan area. The project also included substantial infrastructure improvements, including modifications to the U.S. 101/Hillsdale Boulevard interchange. Key issues included traffic, hydrology, public services, aesthetics, noise, air quality, hazardous materials, and land use compatibility. The EIR was certified and the project has been implemented.

Point Reyes Affordable Housing Project EIR, Point Reyes Station, Marin County

Marin County Community Development Agency

Project Director

Curtis directed the preparation of an EIR for the development of a 36-unit, mixed-use residential project on an 18-acre property located in Point Reyes Station, Marin County, California. The affordable units were to be restricted to low and moderate-income levels. A visitor-serving commercial parcel was included in the project, which was expected to be lodging and retail use. The project also included the construction of a 30-space public parking lot, public restrooms and dedication of approximately 2.5 acres of land for permanent open space purposes. Key issues addressed in the EIR included the effects on groundwater quality and domestic wells from on-site septic systems, effects on surface hydrology from irrigation and storm water runoff, and the effects on the architectural character of the town from new construction. Traffic impacts, public service availability, visual effects, and wetland protection were other important issues.

Madera State Center Community College Specific Plan and EIR, Madera County

County of Madera

Project Manager

Managed the EIR and specific plan preparation for the Madera State Center Community College Specific Plan area in Madera County. The 1,800-acre planned development was centered on a new community college campus and consisted of mixed commercial, residential, institutional, and industrial uses. Key issues included water supply, flood control, traffic, habitat loss, agricultural land loss, public services, school sites, air quality, and noise.

Ridgemark Country Club Estates EIR, San Benito County

County of San Benito

Project Manager

Managed EIR preparation for a proposed 2,000-unit residential development and golf course project outside Hollister in San Benito County. The project site was in a rolling hill setting with grassland and oak savannah habitat. The proposed project included single and multi-family units, wastewater treatment plant, expanded water supply, and transportation improvements. Key issues addressed in the EIR included habitat loss, water quality related to wastewater disposal approaches, traffic effects, air quality, seismic hazard, visual impacts, public services, and water supply.

Joiner Ranch Master Planned Community EIR, Placer County

City of Lincoln

Project Manager

Managed the EIR for a proposed multi-use community with substantial residential and neighborhood commercial uses, along with a public golf course. The program EIR addressed the master plan for this 2,500-acre planned development in the City of Lincoln, Placer County. The proposed development included flood control/drainage infrastructure, wastewater treatment, and open space preservation areas, along with the commercial and residential development. Key issues in the EIR included oak tree removal, biological impacts, traffic effects, public service capacity, water quality, and air quality.



Sydney B. Coatsworth, AICP

PRINCIPAL

YEARS OF EXPERIENCE: 27

EDUCATION

M.A., Geography, University of California, Los Angeles

B.A., Earth Science, California State University, Northridge

AFFILIATIONS

American Institute of Certified Planners (AICP)

American Planning Association (APA)

Association of Environmental Professionals (AEP)

REPRESENTATIVE PROFESSIONAL WORKSHOPS/PRESENTATIONS:

AEP State Conference, CEQA Practicum, Sacramento (2012)

AEP Advanced CEQA Series, Sacramento (2011)

AEP Spring Workshops—Advanced CEQA, Sacramento (2013, 2008, 2004, 2003, 2002)

Successful CEQA and NEPA Compliance, UC Davis Extension, Mono County (2010)

Climate Change and CEQA, UC Davis Extension course, Sacramento (2009)

Local Government Commission, Ahwahnee Conference on Adaptation for Climate Change (2009)

Second Climate Change Conference, CEQA Compliance Panel, UC Davis Extension (2008)

Attorney General/Local Government Commission Climate Change Workshops, CEQA Approaches, Statewide (2008)

CCAPA Planning Principles for Climate Change Response (2008)

First Climate Change, Land Use and CEQA Conference, UC Davis Extension (2007)

Special Forum for Cities and Counties on Climate Change, Northern California (2008)

Sydney Coatsworth is a Principal, Vice President, and Senior Project Manager/Director responsible for successful completion of California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and Tahoe Regional Planning Agency (TRPA) compliance projects in a wide variety of California environments. Sydney has 27 years of experience in managing large-scale and complex environmental compliance projects and has overseen the preparation of hundreds of environmental documents in accordance with state and federal statutes and regulations. Her practice is diverse, including projects related to water resources, wastewater treatment, floodplain management, public works, affordable housing, urban development, natural resources management, and environmental policy and regulation. She regularly conducts public and agency outreach meetings, workshops, community education, and other public presentations for a variety of projects. She regularly teaches CEQA courses for Association of Environmental Professionals (AEP) American Planning Association (APA), UC Davis Extension, and client agencies. Project experience referenced herein includes Sydney's background during her tenure at other firms.

WATER SUPPLY PROJECT EXPERIENCE

City of Rancho Cordova Water Supply Evaluation, Rancho Cordova

City of Rancho Cordova

Project Director/Senior Water Resources Specialist

Sydney supported the City of Rancho Cordova with respect to water supply planning for the City's General Plan. Sydney oversaw preparation of, provided strategy support and senior review for the water supply evaluation that identified total water supply demands associated with the City's proposed Land Use Plan, existing available water supplies, land uses within the City that have been planned for in relevant water supply planning documents, land uses and associated demands that do not have an identified water supply source, and potential future sources of water supplies to meet proposed demand and the associated environmental impacts with delivering these water supplies to the City.

Eastern County Replacement Water Supply Project EIR, Sacramento

Sacramento County DERA

Project Director

Sydney directed preparation of the EIR for this project that included construction of a water supply conveyance system that would transport remediated water to discharge locations along the Sacramento and American Rivers in Sacramento County. The remediated water would be used for replacement water, would serve new development areas in eastern Sacramento County, and would provide enhanced environmental benefits within Sacramento County, including providing enhanced fishery flows along the Cosumnes River. The EIR comprehensively evaluated the project-related environmental effects of constructing project facilities (i.e., pipelines, pump stations, and discharge and diversion structures) for the discharge of remediated water and diversion of surface water.

North Vineyard Wellfield Project EIR, Sacramento County

County of Sacramento/Department of Water Resources

Project Director

The County of Sacramento proposed implementation of a water supply plan for replacement water supplies for the Mather Field/Sunrise Corridor area of Sacramento County. Sydney directed preparation and distribution of the EIR for this project. The proposed water supply plan relied on a groundwater supply to provide replacement water for wells lost in the Mather Field/Sunrise Corridor service area as a result of groundwater contamination. Key environmental issues include noise, air quality, biology, and water supply.

El Dorado County General Plan Update EIR, El Dorado County

El Dorado County Planning Department

Senior Water Resources Specialist

Sydney directed the EIR's assessment of potential water supply, water quality and wastewater-related impacts. She also provided strategy recommendations and senior review of population and water demand estimates and integrated regional water supply, wastewater and land use planning in the study area for the general plan EIR. Key issues for this project included defining the water demand and supply ramifications of the county adopting one of the four growth scenarios/alternatives under consideration in the general plan update process. Potential impacts

to existing and potential water supply sources and the quality of affected surface waters and groundwater were also addressed.

Sacramento Area Water Forum Agreement EIR, Sacramento

Sacramento City-County Office of Metropolitan Water Planning

Project Director

Directed the EIR preparation for the Sacramento Area Water Forum's Regional Water Agreement. The Agreement is the product of a consensus process among water agencies, business leaders, environmentalists, agricultural leaders, local governments, and public interest groups to provide a reliable water supply to Sacramento, El Dorado, and Placer counties while protecting the fisheries and other sensitive natural resources of the American River. Key issues included threatened and endangered fisheries (steelhead, winter-run chinook salmon, and splittail), flood control, recreation, vegetation and wildlife, and growth- inducement impacts. The EIR addressed integrated operations of the Central Valley Project and State Water Project in its impact analysis. The document served as program EIR providing cumulative analyses useful to second tier water facility EIRs. The Association of Environmental Professionals recognized the EIR with an Outstanding Environmental Document award.

Sunrise Douglas Community Plan/Sun Ridge Specific Plan Project Alternative Water Supply Plan Revised EIR, Sacramento County

Sacramento County Department of Environmental Review and Assessment (DERA)

Project Director

The Revised EIR evaluated the environmental impacts of implementing a near-term alternative water supply program to supply potable water to the Sunrise Douglas Community Plan/Sun Ridge Specific Plan areas in Sacramento County. Elements of the project included construction of an off-site well field, and water treatment plant in the Laguna/Vineyard area of Sacramento County. The off-site well-field would accommodate the near-term water demands of projected development at Mather Field, the Sunrise Corridor WMD, and the Citizen Water Resources Security Park franchise area. Key environmental issues included water quality, water supply, air quality, noise, land use, and traffic impacts.

Zone 40 Water Supply Master Plan Update Draft EIR, Sacramento

Sacramento County Department of Environmental Review and Assessment (DERA)

Project Director

The EIR evaluated the environmental impacts of implementing a conjunctive use water supply program for Zone 40 located in the unincorporated portion of Sacramento County. Elements of the project included diversion of surface water from the Sacramento River in amounts consistent with those identified in the Water Forum Proposal, construction of a network of conveyance pipelines, and construction of groundwater extraction and treatment facilities throughout the Zone 40 area. Key environmental issues included water quality, water supply, fisheries, vegetation and wildlife, and growth inducing impacts.

PUBLIC AND PRIVATE DEVELOPMENT PROJECT EXPERIENCE

Raley's Landing EIR, West Sacramento

City of West Sacramento

Principal-in-Charge

Sydney managed the preparation of an EIR for the Raley's Landing mixed-use development. The project consisted of multifamily residential units, a hotel with a large conference center, surface and multilevel parking, and commercial, office, and open space features oriented toward the Sacramento River waterfront. Under the proposed project, residences would be located near a large number of workplaces, as well as near present and future public transit systems. The EIR evaluated a full range of environmental issues, with emphasis on traffic and visual resources. EIR was certified February 8, 2006.

Rio Del Oro Specific Plan EIR/EIS, Rancho Cordova

City of Rancho Cordova

Water Resources Specialist

Sydney provided strategy and quality assurance/senior review for the Water Supply Assessment, pursuant to Senate Bill 610 (SB610) for the project. She also supported the preparation of the EIR/EIS (for the City of Rancho Cordova and the USACE) for the Rio del Oro Specific Plan for a mixed-use development project on just over 3,800 acres in eastern Sacramento County. The project site is located within the Aerojet/Gencorp property, formerly used for solid rocket fuel testing. The project would include construction of over 11,000 residential units, commercial mixed-use areas, a large community park as well as neighborhood parks and open spaces, and a proposed 507-acre wetland preserve. Surrounding land uses include Aerojet, Security Industrial Park, Mather Field Airport, Sacramento County Landfill, and other industrial lands and agricultural land uses. Key issues included biological issues, cultural resources, water availability and supply, water quality, air quality and noise, traffic and circulation, hazards and hazardous materials.

Mariposa Lakes Specific Plan EIR, San Joaquin County

PCCP Mariposa Lakes, LLC

Principal-in-Charge

Sydney managed the efforts in substantially revising an administrative draft EIR prepared by another firm and reviewed by the City of Stockton. Proposal includes a general plan amendment and annexation to the City of Stockton. Sydney's team transformed the EIR from a programmatic analysis of development of a specific plan on an over 3,800-acre site into both a project-level evaluation of approximately 1,000 acres proposed for tentative subdivision map approval, and a program-level evaluation of the remaining 2,180 acres proposed for future development. The Mariposa Lakes community would include approximately 10,500 homes, 1 million square feet of commercial uses, and 10 million square feet of industrial uses. The project also includes a system of artificial lakes

and drainage canals to collect stormwater that would be integrated as part of a site-specific groundwater recharge program operated by the City under its NPDES permit. Project tasks included preparation of a conceptual level restoration plan for one of the three creeks that cross the project site. Environmental issues of concern include agricultural, biological, cultural, and paleontological resources, as well as traffic, air quality, noise, hydrology, and public utilities (provision of water and wastewater services).

Villages of Laguna San Luis EIR, Merced County

River West Investments

Principal-in-Charge

Sydney directed preparation of an EIR for a proposed mixed-use development project on 6,214 acres in the lower foothills of the San Joaquin Valley. The site is characterized by rolling hills and rural agricultural and open space lands bordered by similar land uses on all sides. The proposed land plan includes more than 15,000 residential units expecting to house approximately 44,773 people, more than 1.4 million square feet of commercial space, and offering employment to more than 10,000. A primary goal of the project is to plan for an economically viable, self-sustaining community where employment opportunities are provided in proportion to the population generated within the community. Key issues analyzed in the EIR included water supply, traffic impacts, loss of agricultural land, air quality, and biological resources.

Central Larkspur Specific Plan EIR, Larkspur

City of Larkspur

Principal-in-Charge

Sydney directed the preparation of the EIR for a 22-acre infill site in the downtown area of the City of Larkspur. The Specific Plan would permit a mix of land uses, including a variety of residential types, retail commercial uses, a hotel, and a park. Key issues include effects on sensitive marsh habitats in an adjacent creek, potential disturbance to prehistoric artifacts and historic buildings, structural damage caused by settlement of Bay Mud, removal of existing hazardous materials, and deterioration of traffic conditions.

College Park at Mountain House Specific Plan 3 EIR, San Joaquin County

San Joaquin County

Principal-in-Charge

Directed the preparation of an environmental opportunities/constraints analysis and CEQA documentation for an 812-acre mixed use specific plan. The project is proposed as the third of three specific plans under the greater Mountain House Master Plan approved by the County in 1994. The project will include three residential neighborhoods, each with school and park facilities, a commercial component, and the planned Delta Community College. The environmental opportunities/constraints analysis was used as an input to Specific Plan and concept plan development. The EIR evaluated the full range of environmental issues and consistency of the proposal with the Mountain House Master Plan. A preliminary endangerment assessment was prepared to evaluate site suitability for the proposed schools. Challenges included designing around environmental constraints at the project site, interacting with multiple property owners and interest groups, and addressing community concerns in the conceptual plan and EIR to the degree appropriate. The EIR was certified in May, 2005.



Sarah J.B. Henningsen

ENVIRONMENTAL PLANNER

YEARS OF EXPERIENCE: 9

EDUCATION

BS, Community and Regional Development, University of California, Davis

AFFILIATIONS

Association of Environmental Professionals

RELEVANT EXPERIENCE

CEQA/NEPA Compliance

Environmental Planning

Water Resources

Sarah Henningsen is an environmental planner with 9 years of experience with CEQA and NEPA environmental planning and policy, with an emphasis in water resources. She has experience working with a broad range of environmental issues, participating in community outreach, conducting legal research, and preparing environmental analyses for NEPA- and CEQA-related documents. Sarah routinely prepares technical analyses for agricultural resources, land use policy, environmental justice, public services, recreation, and alternatives analysis. Additionally, Sarah is skilled in project coordination, client relations, and regulatory environmental policy interpretation. She is relied upon to assist with the preparation of initial studies, environmental assessments, EIRs, EISs, and mitigation monitoring plans, along with other project-specific plans and decision/approval documents. Sarah served as project coordinator and assistant project manager for the series of EIS/EIR documents prepared for the Natomas Levee Improvement Project (Project Phases 2-4b) in Sacramento and Sutter Counties (SAFCA and US Army Corps of Engineers). Most recently, for Ascent, Sarah managed the Middle Green Valley Specific Plan Project EIR and the Napa County Jail Project EIR. Project experience referenced herein includes Sarah's background during her tenure at other firms.

PROJECT EXPERIENCE

City of Galt Wastewater Treatment Plant (WWTP) Facilities Master Plan and Phase I Immediate Improvements Project EIR, Galt

City of Galt

Assistant Project Manager

Preparation of an EIR to evaluate the effects of a Facilities Master Plan for the City's WWTP. In addition, the EIR will analyze the first phase of work identified in the Facilities Master Plan, the Phase I Immediate Improvements. Because construction of the WWTP Facilities Master Plan may be partially funded with a loan from the State Water Resources Control Board (SWRCB) State Revolving Fund (SRF) Loan Program, which is funded by federal Clean Water Act funds administered by the U.S. Environmental Protection Agency (EPA), it is subject to certain federal environmental regulations, as specified through an agreement between the SWRCB and EPA. Therefore, the EIR will comply with the requirements of the *Environmental Review Process Guidelines for State Revolving Fund Applicants*, which requires consideration of certain federal laws intended to protect federally designated endangered species, cultural resources, air quality, and other resources. Sarah assisted the project manager with overall EIR preparation, and prepared various environmental analyses, including agricultural resources and environmental justice. [3/2012 - 10/2012]

Edgewood Lodge and Golf Course Realignment Project EIS, Lake Tahoe, NV

Tahoe Regional Planning Agency

Environmental Planner

A project that includes expanding the existing Edgewood Gold Course in Stateline, Nevada. The entire golf course encompasses approximately 237 acres of land located within the Edgewood Plan Area Statement (PAS) 070A in California and Nevada. The project concentrates on approximately 10 acres of land located entirely within the PAS 070A Special Area #1 (Tourist Area). Access to the project site is provided by Lake Parkway from U.S. Highway 50. The project includes a new 194-unit hotel complex with a full-service spa and wellness center, restaurant and bar, and banquet and meeting space as well as accessory uses on undeveloped higher capability lands at the Edgewood Golf Course. Key issues for the EIS included land coverage, scenic quality, water quality, traffic, air quality, and noise. Sarah prepared the public utilities and services analysis and assisted the project manager with overall EIS preparation. The EIS was certified in August 2012. [10/2011 - 7/2012]

Village at Squaw Valley Specific Plan and Phase I Project EIR, Squaw Valley

Placer County

Assistant Project Manager

Preparation of an EIR for the proposed Village at Squaw Valley Specific Plan Project, which includes development of an all-season, world class resort. The project site is located on approximately 100 acres within the 4,500-acre-plus Squaw Valley. The proposed project is a mixed-use development that includes residential, commercial, and recreation uses as well as parking and other visitor amenities. Key issues include aesthetic impacts from key vantage points, including Squaw Valley Road, which is designated as a scenic roadway; hydrology and water quality, including site drainage effects on the stream flow in Squaw Creek, stream sedimentation and water quality, and water

demands; and traffic impacts on the local access road and State Route 89, which serves the greater region. The EIR will be programmatic but will also include project-specific details and analyses for a first phase of the proposed project. Sarah is preparing the land use analysis and assisting the project manager with overall EIR preparation. [2/2012 - present]

Central Valley Flood Protection Plan (CVFPP) Program EIR

California Department of Water Resources

Assistant Project Manager and Environmental Planner

A program EIR that evaluated the potential environmental effects of the 2012 CVFPP, which is legislatively mandated, and is intended to be a sustainable, integrated flood management plan that describes the existing flood risk in the Sacramento-San Joaquin Valley and recommends actions to reduce the probability and consequences of flooding. Sarah assisted the project manager with overall EIR preparation and staff coordination, and prepared the public services analysis. Additionally, Sarah prepared the Mitigation Monitoring and Reporting Plan and helped respond to comments on the Draft EIR. [6/2010 - 12/2010 and 5/2012 - 7/2012]

American River Watershed Common Features Project/Natomas Post-Authorization Change Report/Natomas Levee Improvement Program (NLIP), Phase 4b Landside Improvements Project (Phase 4b Project) EIS/EIR, Sacramento and Sutter Counties

U.S. Army Corps of Engineers and Sacramento Area Flood Control Agency

Assistant Project Manager

Preparation of an EIS/EIR to evaluate the final subphase (Phase 4b) of the NLIP Landside Improvements Project. The Phase 4b Project consisted of improvements to the remaining portions of the Natomas Basin's perimeter levee system (including to the American River north levee Reaches 1-4) and associated landscape and irrigation/drainage infrastructure modifications to help achieve the NLIP's overall purpose of bringing the entire 42-mile Natomas Basin perimeter levee system into compliance with applicable federal and state standards for levees protecting urban areas. Sarah assisted the project manager in overseeing all aspects of project scoping, EIS/EIR preparation, NEPA/CEQA document noticing, administrative record preparation, and client and internal staff coordination. [10/2009 - 12/2010]

Natomas Levee Improvement Program (NLIP), Phase 4a Landside Improvements Project (Phase 4a Project) EIS/EIR, Sacramento and Sutter Counties

Sacramento Area Flood Control Agency

Assistant Project Manager

Preparation of an EIS/EIR to evaluate Phase 4a of the NLIP Landside Improvements Project. The Phase 4a Project primarily consisted of levee raising and seepage remediation along the Sacramento River east levee (Reaches 10-15) and in 2 locations of the Natomas Cross Canal south levee to help achieve the NLIP's overall purpose of bringing the entire 42-mile Natomas Basin perimeter levee system into compliance with applicable federal and state standards for levees protecting urban areas. Sarah assisted the project manager in overseeing all aspects of project scoping, EIS/EIR preparation, NEPA/CEQA document noticing, administrative record preparation, and client and internal staff coordination. A record of decision (ROD) was issued by the U.S. Army Corps of Engineers for the Phase 4a Project in November 2010. Construction of the Phase 4a Project began in 2011. [2/2009 - 6/2010]

Natomas Levee Improvement Program (NLIP), Phase 3 Landside Improvements Project (Phase 3 Project) EIS/EIR, Sacramento and Sutter Counties

Sacramento Area Flood Control Agency

Assistant Project Manager

Preparation of an EIS/EIR to evaluate Phase 3 of the NLIP Landside Improvements Project. The Phase 3 Project primarily consisted of levee improvements along the Sacramento River east levee (Reaches 5A-9B), the Pleasant Grove Creek Canal west levee, and a portion of the Natomas East Main Drainage Canal west levee to help achieve the NLIP's overall purpose of bringing the entire 42-mile Natomas Basin perimeter levee system into compliance with applicable federal and state standards for levees protecting urban areas. Sarah assisted the project manager in overseeing all aspects of project scoping, EIS/EIR preparation, NEPA/CEQA document noticing, administrative record preparation, and client and internal staff coordination. A record of decision (ROD) was issued by the U.S. Army Corps of Engineers for the Phase 3 Project in April 2010. Construction of the Phase 3 Project began in 2009 and was largely completed as of January 2012. [1/2009 - 11/2009]

Natomas Levee Improvement Program (NLIP), Phase 2 Landside Improvements Project (Phase 2 Project) EIR and EIS, Sacramento and Sutter Counties

Sacramento Area Flood Control Agency

Project Coordinator

Preparation of an EIR to evaluate Phase 2 of the NLIP Landside Improvements Project. The Phase 2 Project primarily consisted of improvements to the Natomas Cross Canal and Reaches 1-4B of the Sacramento River east levee to help achieve the NLIP's overall purpose of bringing the entire 42-mile Natomas Basin perimeter levee system into compliance with applicable federal and state standards for levees protecting urban areas. Sarah assisted with all aspects of preparation of the EIR, after which USACE determined that an EIS was required for compliance with NEPA. Sarah assisted with all aspects of EIS preparation. A record of decision (ROD) was issued by the U.S. Army Corps of Engineers for the Phase 2 Project in January 2009. Construction of the Phase 2 Project was largely completed in 2010. [9/2007 - 12/2008]

Local Funding Mechanisms for Comprehensive Flood Control Improvements for the Sacramento Area EIR, Sacramento and Sutter Counties

Sacramento Area Flood Control Agency

Project Coordinator

Preparation of a program EIR to evaluate the environmental effects of a project that would create a local funding mechanism to finance future flood control improvements and related mitigation and habitat enhancements in the Sacramento Area; the program EIR also evaluated the first phase of the project (Phase 1 Project) at a project level. Sarah assisted in managing the preparation of a program EIR that documented the potential environmental impacts of a wide range of proposed regional flood control improvements and related activities. Construction of the Phase 1 Project began in 2007 and is complete. [4/2006 - 4/2007]

Natomas Levee Evaluation Project, Sutter and Sacramento Counties

Sacramento Area Flood Control Agency

Project Coordinator

A study to identify improvements necessary to provide 200-year flood protection to the Natomas Basin; the study area included approximately 25 miles of levees on the Sacramento and American Rivers and the Natomas Cross Canal. Sarah assisted with problem identification and alternatives analysis. Sarah coordinated team efforts and contributed to the preparation of a series of technical memoranda documenting related projects and overlapping resource management concerns to assist SAFCA in its decision making. [12/2004 - 12/2005]

Alternative Intake Project, San Joaquin and Contra Costa Counties

Contra Costa Water District (CCWD)

Project Coordinator/Environmental Analyst

A water quality improvement project that included the construction of a new intake and fish screen in the Central Delta, a pumping plant, and an associated conveyance facility from the new intake to CCWD's Old River Pumping Plant on Old River. Sarah coordinated all aspects of the environmental compliance effort, which included the preparation of environmental feasibility studies, an alternatives analysis report, a joint EIR/EIS, and an Action-Specific Implementation Plan to meet federal and state endangered species requirements. Sarah also assisted CCWD with all environmental permitting and supporting documentation, and contributed to agency and public outreach. Construction was completed in summer 2010. [7/2004 - 12/2006]

Shasta Lake Enlargement Plan Formulation Report Environmental Assistance

U.S. Bureau of Reclamation

Project Coordinator/Environmental Analyst

Sarah assisted in the preparation of the Plan Formulation Report (PFR) for the Shasta Lake Water Resources Investigation (SLWRI) – a major product in the feasibility study phase – with the purpose of confirming the potential for a federal interest in a project to enlarge Shasta Reservoir. Sarah coordinated environmental planning efforts and prepared various environmental analyses. [1/2006 - 8/2006]

Oleander, Sundance, and Sundance 2 Developments Project Initial Study and EIR, Manteca

City of Manteca

Assistant Project Manager/Environmental Analyst

Three separate, but geographically related, residential subdivision development projects that would add approximately 1,074 new single-family residences to the City of Manteca, as well as over 17 acres of new parkland, a Boys and Girls Club, and 2.29 acres of new commercial space. Sarah assisted the project manager in coordinating the preparation of an Initial Study and a Focused EIR to further evaluate the identified potentially significant environmental impacts in seven resource areas: agricultural resources, air quality, cultural resources, hydrology/water quality, noise, transportation and circulation, and utilities and service systems. She also prepared various environmental analyses, including agricultural resources. [6/2005 - 3/2007]

Deuel Vocational Institute (DVI) Reverse Osmosis Water Treatment System, Tracy

California Department of Corrections and Rehabilitation

Environmental Planner

A project to construct and operate a groundwater treatment plant and non-potable water distribution system at DVI to meet the state drinking water quality requirements and improve the facility's treated wastewater quality. Sarah contributed to the preparation of an Initial Study and Mitigated Negative Declaration; prepared the hazards and hazardous materials, utilities and service systems, and public services analyses; and assisted with the hydrology and water quality analyses. [1/2005 - 2/2005]



TAMMIE BEYERL

SENIOR BOTANIST AND WETLAND ECOLOGIST

YEARS OF EXPERIENCE: 11

EDUCATION

M.S., Plant Biology (Ecology), Southern Illinois University, Carbondale, 2001

B.S., Plant Biology, Southern Illinois University, Carbondale, 1999

SPECIALIZED TRAINING

NRCS California Tiger Salamander Workshop, Livermore, CA 2010

California Rapid Assessment Method Training, Sacramento, CA 2008

Basic Wetland Delineation Training, Houston, TX, 2004

AEP CEQA Basics, Sacramento, CA 2004

Assessing Proper Functioning Condition of Lotic Riparian-Wetland Areas, Santa Rosa, CA, 2003

Introduction to CEQA/NEPA for Botanists, Chico, CA, 2002

Tammie Beyerl is a senior botanist and wetland ecologist specializing in CEQA/NEPA compliance. She is particularly skilled at preparing environmental compliance documents for large-scale projects with complex biological resource issues including specific plans, general plans, and management plans. She collaborates with ecologists, engineers, landscape designers, land use planners and resource agencies to develop appropriate mitigation and design solutions. Tammie has 11 years of field experience in plant ecology and taxonomy in the Sacramento and San Joaquin Valleys, the Sierra Nevada, the Central and Southern Coast Ranges, and the Great Basin, and also has experience working in the Mojave and Sonora Deserts. She is experienced in leading and coordinating, as well as conducting biological resources investigations including special-status plant surveys, noxious weed risk assessments, wetland delineations, California Rapid Assessment Method for wetlands; and plant community mapping and classification. Tammie has designed and conducted ecological studies of invasive plant species, old-field succession, and wetland restoration; participated in assessment of riparian communities along flow augmented and bypass stream reaches in the Sierra Nevada, developed detailed mitigation and monitoring plans for federally listed plant species, and developed adaptive management plans for noxious weeds. Project experience referenced herein includes Tammie's background during her tenure at other firms.

PROJECT EXPERIENCE

LEVEL II INFILL CORRECTIONAL FACILITIES PROJECT EIR, AMADOR, SACRAMENTO, SAN BERNARDINO, SAN DIEGO, AND SOLANO COUNTIES

California Department of Corrections and Rehabilitation

Technical Lead

Preparation of four EIRs concurrently to evaluate the development of three, stand-alone, correctional facilities at four different locations throughout the state (including San Diego County and the Cities of Chino, Lone, Folsom, and Vacaville). In total, the proposed project involves the construction of a total of 2,376 infill housing units (beds) and associated accessory uses. Tammie prepared the biological resources sections of the EIRs for five potential infill sites. Tammie also conducted biological reconnaissance surveys at each of the potential infill sites.

RIO DEL ORO SPECIFIC PLAN EIR/EIS, SACRAMENTO COUNTY

City of Rancho Cordova and US Army Corps of Engineers, Sacramento District

Botanist

Biological resources technical lead who prepared the biological resource sections and responses to over 200 biological resources comments on the EIR/EIS for this mixed-use development project within the Aerojet/GenCorp property, formerly used for solid rocket fuel testing. Tammie collaborated with USACE in developing a project alternative to minimize biological resources impacts, helping develop a methodology identifying the most biologically valuable habitats on the site to preserve. The project would include construction of 11,614 dwelling units on just over 3,800 acres in three residential land use classifications. Biological resources issues were extremely complex because of the number and quantity of sensitive habitats (e.g., riparian habitats, oak woodland, vernal pools) and known and potential special-status species on the project site (e.g., vernal pool branchiopods, valley elderberry longhorn beetle, Swainson's hawk). [Prior to Ascent, 5/2005-8/2010]

FOLSOM SOUTH OF US 50 ANNEXATION EIR/EIS, SACRAMENTO COUNTY

City of Folsom

Lead Biologist

Led preparation of biological resource sections of the program-level EIR/EIS for a specific plan project requiring annexation of 3,585 acres south of US Highway 50 to the City of Folsom. Tammie collaborated with stakeholders to develop mitigation for impacts on protected oaks and oak woodland habitat. The mixed-use community would include a 1,000-acre on-site preserve protecting oak woodlands, vernal pool fairy shrimp, cultural resources, and Alder Creek. The EIR/EIS addressed impacts on special-status plants, waters of the United States, blue oak woodland and trees protected by City ordinance, vernal pool fairy shrimp, nesting raptors, valley elderberry longhorn beetle, and burrowing owls. The site contains over 80 acres of waters of the United States and 600 acres of blue oak woodland. A complex issue was developing criteria for quantifying impacts on oak woodland habitat. [Prior to Ascent, 2007-2012]

FAIRFIELD TRAIN STATION SPECIFIC PLAN EIR, SOLANO COUNTY

City of Fairfield

Lead Biologist

Prepared biological resource sections of the programmatic EIR. The project site consists of over 3,500 acres of mostly undeveloped vernal pool grasslands used primarily for livestock grazing. This area supports numerous sensitive biological resources, including nearly 200 acres of potential waters of the United States, mostly vernal pools; federally listed plant and wildlife species (Contra Costa goldfields, vernal pool fairy shrimp, and California tiger salamander); nesting Swainson's hawks; several species of special concern; and sensitive plants. Critical habitat has been designated by USFWS on the project site and the Draft Solano Multispecies Habitat Conservation Plan identifies portions of the project site as high-value conservation areas. The larger project involved preparation of the specific plan, which includes nearly 1,500 acres of open space designed for habitat conservation, mitigation banking, public open space, and agriculture. [Prior to Ascent, 4/2010-4/2012]

PRESERVE AT SUNRIDGE SPECIFIC PLAN EIS, SACRAMENTO COUNTY

US Army Corps of Engineers

Lead Biologist

Preparation of an EIS for this highly controversial mixed-use development project on 500 acres of vernal pool grassland habitat that supports the federally listed vernal pool tadpole shrimp and is within a core area identified in the U.S. Fish and Wildlife Service's vernal pool recovery plan as vital to species recovery. Tammie developed a new project alternative, in collaboration with the resource agencies, to preserve a greater percentage of sensitive on-site biological resources than the project proposed in the certified EIR. She trained and led a team of biologists and wetland scientists in conducting wetlands functional assessments using the California Rapid Assessment Method to identify the site's highest quality wetlands. The new alternative was adopted as the new preferred alternative. [Prior to Ascent, 12/2008-4/2012]

YUBA COUNTY GENERAL PLAN UPDATE AND EIR, YUBA COUNTY

Yuba County

Lead Botanist

Led the biological resources chapter of the programmatic EIR analyzing a comprehensive update for the County's General Plan. Tammie analyzed potential impacts of implementing the general plan update on sensitive plant species; waters of the United States, including vernal pools and other wetlands; oak woodlands; and riparian habitats. She assessed the level to which proposed general plan policies could reduce potentially significant impacts and proposed additional mitigation where necessary. Full buildout of the general plan land uses could result in the loss of over 25,000 acres of oak woodland habitats, 450 acres of vernal pool complexes, and over 1,700 acres of riparian habitats and adversely affect numerous listed and sensitive plant and wildlife species. This analysis resulted in an effort to develop additional general plan policy measures to encourage protection of these resources. [Prior to Ascent, 8/2010-5/2011]

MAGNOLIA RANCH SPECIFIC PLAN REVIEW AND EIR, YUBA COUNTY

Yuba County

Senior Biologist

Preparation of the biological resources section of the EIR for the Magnolia Ranch Specific Plan. The specific plan area was the most substantial new growth area added to Yuba County's general plan in 2010 and represents a highly visible and important project for the county. Key biological issues include potential impacts to giant garter snake and waters of the United States, including substantial acreage of rice fields. [Prior to Ascent, 10/2011-4/2012]

SUISUN CITY GENERAL PLAN UPDATE, SOLANO COUNTY

City of Suisun City

Botanist

Conducted biological reconnaissance surveys, prepared a background biological resources report, and helped develop general plan policies and diagrams to protect high-value biological resources. Work supported preparation of the general plan update and general plan EIR. Tammie prepared the biological resources impact and mitigation section of the EIR. Important resources to consider in the planning process include wildlife movement corridors, freshwater and brackish marsh habitats, vernal pool grasslands, and special-status species known to occur in the planning area including Contra Costa goldfields, vernal pool fairy shrimp, and salt marsh harvest mouse. [Prior to Ascent, 7/2010-4/2012]

SUN CREEK SPECIFIC PLAN EIR/EIS, SACRAMENTO COUNTY

City of Rancho Cordova

Lead Biologist

Led the biological resource sections of the joint EIR/EIS for a mixed-use project on 1,253 acres of vernal pool grasslands currently used for livestock grazing. Tammie addressed direct, indirect, and cumulative impacts on and mitigation for plants, waters of the United States (vernal pools), burrowing owl, Swainson's hawk, and vernal pool branchiopods at a project level. She helped develop a project alternative to minimize biological resources impacts. She contributed to the EIR/EIS's hazards section by analyzing the potential impact of increasing bird strike hazards at the nearby Mather Airport with creation of detention basins for the project. The project site supports burrowing owl, western spadefoot, vernal pool fairy and tadpole shrimp, Cooper's hawk, and northern harrier. [Prior to Ascent, 11/2005-4/2012]

ARBORETUM COMMUNITY SPECIFIC PLAN AND ENVIRONMENTAL SERVICES, SACRAMENTO COUNTY

Lewis Investment Company

Technical Lead

Conducted wetlands functional assessments using the California Rapid Assessment Methodology (CRAM) for vernal pools, seasonal wetlands, and creeks; prepared a detailed CRAM report; and was lead author for the biological resources technical report (the basis for CEQA and NEPA analyses). Work supported specific plan development for this sustainable new community on 1,400 acres. The specific plan would include site-specific sustainability policies and design guidelines; about half the site would be set aside as wetland and riparian preserves. The team of biologists conducted surveys for branchiopods, western spadefoot, burrowing owl, and Swainson's hawk; microwatershed assessments for vernal pool preserve planning; and plant community/habitat mapping and assessments. Several new special-status species population occurrences were recorded and submitted to the California Natural Diversity Database: fairy shrimp, tadpole shrimp, and Swainson's hawk nest sites. [Prior to Ascent, 2007-2008]

MOUNTAIN SPRINGS COMMUNITY PLAN SEIR, TUOLUMNE COUNTY

Tuolumne County

Botanist

Prepared biological resource sections of the EIR; conducted biological reconnaissance surveys; assisted with oak woodland sampling in support of the oak woodland impact analysis/mitigation plan; and identified and mapped biological constraints, including potential waters of the United States and trees protected under county ordinance, for off-site improvement areas. The project site supports several California species of special concern: western pond turtle, southwestern river otter, and yellow-breasted chat. In addition, many sensitive habitats are present: creeks and wetlands that qualify as waters of the United States, oak woodlands, riparian habitats, and elderberry shrubs. The community plan provides for the phased development of the 1,063-acre community and contains a variety of land uses that include open space, parks and recreation, a variety of housing options, a village center with residential office, commercial, hotel lodging, and related amenities and services. [Prior to Ascent, 4/2006-5/2007]

UNION RANCH SPECIFIC PLAN EIR, SAN JOAQUIN COUNTY

City of Manteca

Botanist

Prepared the biological resources section of the EIR for development of a residential and commercial planned community on a 553-acre site located adjacent to the northern city limits of the City of Manteca. The section included a description of the existing biological resources, applicable regulatory issues, and assessment of potential biological impacts. Because the project site was outside the City's sphere of influence, the project required annexation of the site to the City of Manteca. [Prior to Ascent, 8/2004-3/2005]

GARIBALDI RANCH RESIDENTIAL SUBDIVISION PROJECT, SOLANO COUNTY

Discovery Builders Inc.

Botanist

Conducted special-status plant surveys and a wetland delineation and mapped *Viola pedunculata*, host plant for the federally listed Callippe silverspot butterfly. The project proposed development of approximately 207 acres in the city of Fairfield. The project purpose was to provide a residential development encompassing single-family homes, public park uses, and open space on the project site in conformance with the City of Fairfield General Plan (July 1992, as amended in December 2000) and the Cordelia Area Specific Plan (1986). The development of the proposed Garibaldi Ranch subdivision would constitute the buildout of the last remaining property proposed for residential use in the Cordelia area under the Cordelia Area Specific Plan. [Prior to Ascent, 4/2004-8/2004]

BANCROFT GARDENS I AND II PROJECTS, SOLANO COUNTY

Discovery Builders Inc.

Botanist

Conducted wetland delineations and prepared the wetland delineation reports for these two projects. The Bancroft Gardens I Project included 22 single-family residential units on lots averaging 6,600 square feet; Bancroft Gardens II included 28 single-family homes on lots averaging 6,600 square feet. The project sites covered approximately 9.5 acres and were located adjacent to each other in the City of Fairfield. [Prior to Ascent, 7/2004-9/2004]

VICKI KRETSINGER GRABERT

Principal Hydrologist

LSCE President

More than 29 years experience in groundwater quality monitoring and resource management, including design of monitoring networks and programs, soil and groundwater remediation, application of environmental regulations, long-term water quality monitoring and protection programs, and groundwater resource assessments. She has an M.S. in water science (with an emphasis on groundwater hydrology and water quality) from the University of California, Davis. She specializes in the understanding of contaminant transport and fate in hydrologic systems and the potential implication of the presence of natural or man-made contaminants. She also specializes in geochemical relationships and their correlation with groundwater flow, including mass transfer processes and migration and accumulation mechanisms occurring along groundwater flow paths and the occurrence of natural constituents such as arsenic and chromium. She has designed, managed, and administered installation and operation of monitoring programs for groundwater resource characterizations and contaminated sites. She has managed county and basin-wide groundwater monitoring programs (and accompanying data management systems, data QA/QC procedures and analysis of groundwater conditions) developed for numerous areas, including all of Napa County, all of Yolo County, northern Solano County, Soquel-Aptos, Pajaro Valley, Rancho San Carlos, Cache Creek, Placer County, Eastern Sacramento County, Mendota, and the Glenn-Colusa Irrigation District. She has managed groundwater management plans and/or water supply assessments for cities and/or water purveyors in Sonoma, Solano, Yuba, and Sutter Counties that comprehensively evaluate subsurface hydrogeologic conditions to fulfill requirements of Senate Bill 610 (and related bill SB 221). She has also managed preparation of groundwater source assessments prepared in support of urban water management plans. She managed technical groundwater work as part of the LWA/LSCE/Systech/Newfields consulting team that designed and implemented the Salt and Nitrate Sources Pilot Implementation Study, which has been a key initial step in the effort by the Central Valley Salinity Coalition toward the development of a Basin Plan amendment to address the issue of salt and nutrient management in California's Central Valley. She is the groundwater leader for a six-firm team effort in the preparation of the Phase 1 Initial Conceptual Model for the Central Valley Salt and Nitrate Management Plan.

She is the Founding President of the Groundwater Resources Association of California (GRA) and a member of the Board of Directors since 1992; member of the University of California Center for Water Resources Center Advisory Council (14 years); Board Member and Past Chair of the Association of Ground Water Scientists and Engineers (Division of the National Ground Water Association (NGWA); 1998-2007). She served as NGWA's Vice President (2004-2005) and National Ground Water Research and Educational Foundation (NGWREF) board member (2004-2005). She is a co-editor of a semi-annual themed column in NGWA's *Ground Water Journal*. She has been a member of the International Association of Hydrogeologists (IAH) since 1992, and she now serves as a Director on the IAH US National Chapter Executive Committee. In 2010, she planned and organized the launch of a new Contemporary Groundwater Issues Council on behalf of GRA. The Council consists of nearly three dozen local, state, national, and international distinguished executives and leaders who are providing their input on the most pressing information, education and programming needs to address California's groundwater challenges. She is a co-leader of the California Water Plan Update 2013 Groundwater Caucus.

BARBARA DALGISH, P.G.

Project Hydrogeologist

LSCE

More than 10 years of professional experience including seven years in groundwater consulting with Luhdorff and Scalmanini Consulting Engineers and three years as a hydrologist for the U.S. Geological Survey. Experience includes development and construction of site specific and regional groundwater flow models; investigation and assessment of regional geologic and hydrologic conditions for groundwater resource management programs; collection and evaluation of soil, surface water, and groundwater quality; aquifer parameter estimation.

She has an M.S. degree in Hydrologic Sciences from the University of California, Davis and a B.A. degree in Geology from Hamilton College, Clinton, New York. She is registered in the State of California as a Professional Geologist (P.G.). Her experience in water supply involves conducting geologic and hydrogeologic investigations for ground water development; delineation of the spatial extent of aquifers; lithologic correlation of well logs, preparation of geologic cross-sections, and mapping of subsurface features; oversight over well/testhole drilling and abandonment operations; geologic logging of drill cuttings; creation of water level contour maps. Her experience with monitoring and analysis include the design, implementation, and administration of ground water and surface water monitoring programs in the context of waste discharge requirements and groundwater protection. In terms of groundwater modeling, she has experience with the development and utilization of numerical and analytic element models on various platforms for water supply, contamination, and groundwater protection projects. Her expertise extends to hydrogeologic aquifer parameter estimations, including performing and interpreting various aquifer tests, slug tests, diffusivity analyses (passive monitoring), falling head tests, seepage meter tests, and horizontal flowmeter tests. She also has experience working on Drinking Water Source Assessment Protection Programs, in which her duties include the preparation of drinking water source assessment program documents for several public water systems in California. This work includes the assessment of potential hazards within calculated wellhead protection zones and the reporting of these hazards in program documents for agency and client use in compliance with the Department of Public Health. She also has expertise in database and GIS management, including the creation and maintenance of several water quality and water level databases including well information, lithology information, precipitation, streamflow, and geophysical information. For GIS management, her expertise includes spatial interpretations, geostatistical analyses, and map production using GIS technology. She also has experience surveying, which has involved performing wellhead surveys for latitude, longitude, and elevation data acquisition. She also has extensive experience in the area of research, including research methodology, model conceptualization, has been a speaker and presenter at several conferences in the United States of America, and also has published professional papers.

She is a member of the following professional groups: National Ground Water Association – Association of Ground Water Scientists and Engineers; Groundwater Resources Association of California; and the Geological Society of America.

REID J. BRYSON
Staff Hydrologist
LSCE

More than 7 years of professional experience in surface water and groundwater investigations in Northern California. His relevant experience includes simulated rainfall-runoff modeling, solute transport modeling, statistical analyses of hydrologic data, land use analysis and mapping, spatial analysis of groundwater monitoring, and database development.

He has an M.S. degree in Hydrologic Sciences from the University of California, Davis, and a B.S. degree in Environmental Science and Geographic Information Systems from Samford University, Birmingham, Alabama. His experience includes assisting in the development of an updated hydrogeologic characterization of Napa Valley through the interpretation of borehole lithology and well yield data from drillers' logs. Deliverables for that project included eight geologic cross sections, an alluvium isopach map, and a map of pre-alluvium subcrop geology. He has reviewed current and historic groundwater monitoring networks in Napa County to assess spatial and temporal data coverage relative to monitoring program objectives. He has also created database queries to determine the availability of groundwater level data and well construction information, evaluated groundwater level data and well construction information in order to locate wells relative to aquifer units. He has processed monitoring data and mapped monthly groundwater levels at 18 San Joaquin Valley dairies for Phase 1 of the Central Valley Dairy Representative Monitoring Program. He has also experience updating spatial land use data for an evaluation of groundwater demands in Northern California, which involved consulting prior land use maps produced by the CA Department of Water Resources, normalized difference vegetation index data, and aerial photographs to identify parcel-scale land use changes. He has led the implementation of 64 simulated rainfall trials in beef cattle feedlot pens to test the transport potential of steroid hormones in runoff. For this project he has performed mass balance analyses for water, chloride, and steroid hormones, and used MATLAB to model 1-D solute transport with a modified advection-diffusion equation. He has performed statistical analyses on commercial beef feedlot wastewater data to assess the performance of a Vegetated Treatment System with respect to the attenuation of chloride, dissolved organic carbon, and steroid hormone concentrations in runoff. He has evaluated surface water quality in an estuarine setting through monitoring network design, data collection, and development of a relational database to assess spatial and temporal variations in temperature, salinity, total dissolved solids, and dissolved oxygen. He has performed a spatial analysis of field-scale land uses over 50 years across a 300 square mile watershed to assess the impact of land management practices on plant community succession, which involved georectified digital orthophoto quadrangles, ground-truthed LANDSAT data, and interpreted land use from both datasets. He has also performed geomorphology surveys including channel cross sections, longitudinal thalweg profiles, and streambed particle size classifications as part of an evaluation of logging road decommissioning on sediment transport to adjacent stream channels.

He is affiliated with the following professional groups: California Water and Environmental Modeling Forum; and the Groundwater Resources Association of California.

LISA A. LAVAGNINO

Staff Hydrologist

LSCE

More than 9 years of professional experience in geology, groundwater, and geographic information systems (GIS). Her experience includes several aspects of hydrogeologic investigation and characterization including: organizing, maintaining, and reporting spatial and temporal data using databases and specialized groundwater software; performing well and aquifer testing and interpreting results; conducting field surveys; and assisting in the formulation and reporting of a groundwater budget through the accounting of metered water use and determination of unmetered water use.

She has a B.S. degree in Geology from the University of California, Davis, and is registered in the State of California as a Geologist-In-Training. Her experience in database and GIS management includes designing, building, and maintaining relational and GIS databases containing well information and associated observational data, including those data related to distribution systems, surface water, landuse, geology, and corresponding physical and political entities. She also manages the development of vector and raster datasets with attribute information and necessary topological relationships. Database applications that she is fluent in include storing, analysis and reporting of data to supervisory boards, water purveyors, private industries, agricultural entities, and jurisdictional proceedings of the investigation and monitoring of groundwater resources. Her experience includes the creation of customized tools to automate the preparation of graphs and reports and facilitate the analysis of trends in well efficiency, water levels and water quality; the coordination of data input from in-house monitoring equipment and aquifer testing, public agencies, private entities, and water quality laboratories; and the creation of maps for reports and posters to visually demonstrate results and findings of analysis. Her experience in monitoring and analysis involve participating in the design, implementation, and administration of groundwater and surface water monitoring programs including installation and maintenance of monitoring equipment and collection of the data. She conducts hydrogeologic investigations through creation of water level contour maps, the interpretation of well log descriptions, and construction of geologic cross-sections. She calculates aquifer properties from construction and aquifer testing results, and characterizes groundwater wells based on construction properties and aquifer conditions. She has experience with surveying and field reconnaissance including conducting field surveys of groundwater wells, streambed geometries and spring configurations, and water system distribution components for geographic position and elevation relative to standard datum. She also has experience with remote sensing applications in which she processes and visually interprets multi-band satellite imagery and color-infrared aerial photographs through the calculation of vegetation indices for the determination of quantity and spatial extent of agricultural landuse types as a component of the groundwater budget. She has experience with well construction and pump test analysis, providing onsite supervision of drilling, construction, and pump testing activities. Conduct geologic logging of drill cuttings in sedimentary and hard rock settings. Assist in multiple-well pump test for determination of well and aquifer properties.

She is affiliated with the professional group Groundwater Resources Association of California.

A. SCOTT LEWIS, P.G.

Senior Geologist

LSCE

More than 16 years of professional experience in water resources and groundwater development projects including site evaluation and exploration, hydrogeologic assessments, monitoring well and production well design, well construction and testing oversight, water well rehabilitation, design and implementation of groundwater monitoring networks, and overall project management. Mr. Lewis specializes in the design, construction, testing, and evaluation of monitoring and municipal water well projects and over one-hundred exploration programs throughout California. Representative projects include municipal wells for San Jose Water Company, City of Merced, City of Winters, Sacramento County, City of Roseville, Sacramento Suburban Water District, Sacramento Area Flood Control Agency, California Water Service Company, and the Marina Coast Water District.

He has a B.S. degree in Geology from California State University, Sacramento. He is registered in the State of California as a Professional Geologist (P.G.). His experience in hydrogeologic investigations includes performing and supervising hydrogeologic investigations for water supply projects and recommending locations and depths for exploratory drilling to collect zone specific geologic, water quality, and water level data. He has supervised test hole drilling to characterize hydrogeologic conditions used to design and construct new monitoring wells and new municipal water supply wells. His experience in well design includes designing wells based on analysis of formation samples, electric log interpretation, water quality analysis, aquifer properties, anticipated well yield, and anticipated pumping regime. He has selected materials to construct hydraulically efficient and sand free wells, determined seal placements to maximize protection from possible sources of contamination and/or zones of poor water quality. He has been involved in the procurement of permits related to well construction, discharge permitting, SWPPP, and well use permitting. His experience in well construction oversight involves: performing and supervising inspections to ensure the project is managed and constructed according to project specifications and accepted industry practice; inspection of materials, drilling fluid properties, drilling and well construction; direction and oversight of well development and testing; and interpretation of pumping tests to determine well yield and aquifer properties. His experience in water well rehabilitation includes evaluating well and pumping plant performance and making recommendations for well rehabilitation and/or repair, and equipment replacement. He has performed oversight and retesting of wells after recommended programs were completed. His experience in monitoring programs involves the establishment and administration of water level and water quality groundwater monitoring programs, and the installation and supervision of dedicated groundwater monitoring equipment, retrieval of data, and data analysis.

He is affiliated with the professional group Groundwater Resources Association of California.