



UltraSystems
environmental • management • planning



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COMPANY QUALIFICATIONS

UltraSystems Environmental Inc. (UltraSystems) is a full-service, interdisciplinary environmental and engineering firm located at 16431 Scientific Way in Irvine, California. Founded in 1994, UltraSystems is headquartered in Irvine, and has maintains offices in Berkeley, Carlsbad, El Centro, Grass Valley, and Sacramento, California.

CORE BUSINESS IS ENVIRONMENTAL CONSULTING/COMPLIANCE SERVICES

UltraSystems was established as a consulting practice to assist private industry and governmental agencies navigate environmental regulations. The firm specializes in the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), Clean Air Act (CAA), Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Archaeological Resource Protection Act (ARPA), and the Native American Graves Protection and Repatriation Act (NAGPRA), among others. The corporate mission is to ensure that our clients meet their goals by adding value through technical excellence, efficient organization and personal services.

UltraSystems employs a diverse, multidisciplinary team of talented and experienced engineers, architects, urban and regional planners, scientists, archaeologists, biologists, geologists, hydrologists, engineers, economists, GIS specialists and support staff to achieve our corporate mission.

Additionally, UltraSystems employs a highly qualified team of professionals who provide cultural resource compliance services to assist our clients in adhering to environmental and historic preservation laws, including NHPA, CEQA, NEPA and NAGPRA for public and private projects in California, Arizona and Nevada. Our team includes professionals with advanced degrees in Archaeology, Anthropology, History and Paleontology, as well as Licensed Historic Architects and Registered Professional Archaeologists (RPAs). Members of our team meet the U.S. Secretary of the Interior's (SOI) Professional Qualification Standards for History, Archaeology, Architectural History and Historic Architecture (36CFR61), as well as various county, municipal, and state standards and requirements necessary to conduct cultural resources studies. As a result of the quality of their work, our staff has established strong relationships with representatives of key reviewing agencies, such as the State Historic Preservation Office (SHPO).

UltraSystems has a long and successful history of providing environmental consulting and compliance services to both public and private sector clients in the western United States. The firm's reputation as a problem-solver comes from our commitment to pragmatism, technical excellence, and meticulous communication in servicing our

SERVICES AND AREAS OF EXPERTISE

Technical Studies

- ✓ Aesthetics
- ✓ Air Quality
- ✓ Greenhouse Gas Studies
- ✓ Noise Evaluations & Analysis
- ✓ Biological Resources & Compliance
- ✓ Health Risk Assessments
- ✓ Historical Resources
- ✓ Socioeconomics
- ✓ Archaeological Resources
- ✓ Geotechnical/Geologic/Hydrology
- ✓ Infrastructure Capacity Analysis
- ✓ Water Pollution Evaluation
- ✓ Utility Studies

CEQA/NEPA Compliance

- ✓ EIR and EIS Documentation
- ✓ Mitigation Monitoring
- ✓ Citizen Participation
- ✓ Permits and Entitlements
- ✓ Regulatory Compliance

Planning Services

- ✓ Zoning and Special Purpose Legislation
- ✓ Opportunities and Constraints Analysis
- ✓ Urban Land Use Studies
- ✓ Graphics/Visual Impacts and Studies
- ✓ Conditional Use Permit Drafting

Construction Environmental Management

- ✓ Stormwater Pollution Prevention Planning
- ✓ Hazardous Building Materials
- ✓ Grading/Trenching Monitoring

Hazardous Waste

- ✓ Phase I, Phase II ESAs
- ✓ Remedial Action Plans
- ✓ Brownfields Redevelopment

Geographic Information System

- ✓ Customized Mapping
- ✓ Demographic and Economic Data Analysis
- ✓ Spatial Data Analyses
- ✓ GPS Surveying
- ✓ Data Conversion
- ✓ Database Management

clients. UltraSystems is committed to successful project management, time management, and project delivery in every project that we undertake. Our firm conducts a substantial amount of work in California, including the preparation and review of CEQA/NEPA compliant documents and supporting technical studies (e.g., air quality and GHG, biological, cultural, land use, socioeconomic, hydrology, water supply and aesthetics). Significant projects have included the preparation of Environmental Impact Reports (EIRs), Environmental Impact Statements (EISs), as well as Mitigated Negative Declarations (MNDs) for lesser projects. Additionally, we have processed and delivered the necessary entitlements and project permits so that project development is not impeded.

UltraSystems believes that it is our responsibility as the environmental consultant to develop a legally-defensible environmental document, and to communicate our technical knowledge in a clear and concise manner to ensure readability for the client. UltraSystems is committed to providing well-structured documents that will serve our clients for years to come.

UltraSystems has provided environmental consulting services, regulatory permitting and environmental compliance services to various large-scale public agencies within Southern California. All of these agencies have contracts with UltraSystems that are task-order based. These clients include:

1. County of Orange, Public Works
2. City of Los Angeles, Department of Planning
3. County of Los Angeles, Department of Regional Planning
4. County of San Bernardino
5. Los Angeles Unified School District (LAUSD)
6. City, County, Port of San Diego
7. Water Replenishment District (WRD)
8. Arizona Department of Transportation (ADOT)
9. Nevada Department of Transportation (NDOT)
10. City of Riverside, Parks and Recreation
11. Los Angeles County, Department of Public Works – CEQA/NEPA Environmental Services
12. Cities of Anaheim, Riverside, Irvine and Pomona
13. NAVFAC Southwester Division, San Diego

FIRM STABILITY AND STRENGTH | CREDIBILITY | MORE THAN 30 YEARS IN BUSINESS

UltraSystems has been providing consulting services to public and private sector clients throughout California since the founding of the firm in 1994. During those years, the firm has prepared over **7,000** environmental reports, engineering studies or technical studies for clients. UltraSystems continues to specialize in providing comprehensive services, emphasizing quality and client-oriented service.

UltraSystems' team of working professionals offers the highest level of experience, knowledge and commitment in providing environmental and engineering services. Our purpose is to manage each project we undertake efficiently, with respect to the project's work scope, budget and schedule; ultimately producing and delivering **quality** work product for that project.

BUSINESS CERTIFICATIONS

UltraSystems is certified with various federal, state and local agencies. Currently the firm holds certification as a federal Disadvantaged Business Enterprise (**DBE**), Small Business Enterprise (**SBE**), Woman-owned Business Enterprise (**WBE**) and federal Woman-owned Small Business (WOSB). We also maintain certification through the Supplier Clearinghouse (CPUC) for utility clients.

MEETING CLIENT EXPECTATIONS

UltraSystems has a long history of providing technological innovation and creative approaches to solving challenging issues for clients. Public agencies and private businesses in California have relied on UltraSystems to keep them in compliance with federal, state and local environmental laws, regulations and guidelines, since 1994. The majority of our work stems from repeat customers who trust us to deliver scientific objectivity, environmental expertise, and legally-defensible technical documents, required to meet stringent agency regulations.

UltraSystems' CEQA/NEPA documents have never been challenged in a court of law. This is a direct result of our proven expertise interpreting and advising our clients on complex environmental legislation and regulations. Additionally, our respected working relationships with regulatory agencies are advantageous for our clients to swiftly obtain required permits and project approvals.

PROJECT EXPERIENCE ON UTILITY-GRADE RENEWABLE PROJECTS

UltraSystems has served as the environmental compliance consultant of record on several utility – grade (150MW) solar projects in Imperial Valley. In that role, we have managed biologists, cultural resource monitors and Native American Tribal Observers during these projects' preconstruction, construction and post-construction operational phases.

Specific to Imperial Valley, our firm has been involved with the BLM, USFWS, CDFW, USACE, Caltrans District 11 and DTSC. In addition, we have worked directly with the County of Imperial and the Imperial Irrigation District, and many other local jurisdictions on their own projects.

UltraSystems has performed technical work on approximately 7,000 acres within Imperial Valley. Studies have included a number of technical disciplines, ranging from biological surveys for burrowing owls (BUOW), flat-tailed horn lizards (FTHL), to complex air quality/greenhouse gas emission analysis work for energy plant development located within the valley.

Some of the energy projects that UltraSystems has successfully worked on include the following:

- ❖ Tenaska, Imperial Solar Energy Center South – Environmental Compliance during Construction and Operations & Maintenance
- ❖ Tenaska, Imperial Solar Energy Center West – Environmental Compliance during Construction and Operations & Maintenance
- ❖ Tenaska, Wistaria Ranch Solar Project – technical reports for EIR
- ❖ AES Solar – Well-abandonment for the old Terresa Solar Project
- ❖ San Diego Gas and Electric (SDG&E) – Transmission Interconnection Line Dismantling
- ❖ Imperial Irrigation District (IID) – Environmental Compliance during Construction of the Northern Path Transmission Interconnection Line

- ❖ IID, Bullfrog Dairy Transmission Interconnection Line – CEQA/NEPA documentation
- ❖ Octollio Wind – Biological Resource Surveys
- ❖ SDG&E Sunrise Powerlink – Environmental Compliance/Construction Monitoring of all Construction Lay-down Yards
- ❖ NextEra (Harper Lake, CA) – Environmental Compliance (quarterly) for SEGS VIII and IX project during its Operations, since 2000
- ❖ SCE Moorpark-Newbury 66KV Transmission Project – CAGN Protocol Presence/Absence Surveys
- ❖ SCE Carodean Substation Expansion Project – Biological Resources
- ❖ SCE Commerce Center Project in Castaic, California LBVI, SWFL and CAGN Protocol Presence/Absence Surveys
- ❖ Acconia, Lompoc Wind Energy Project – Environmental Compliance during Preconstruction Activities
- ❖ County of Kern, Sand Canyon Wind Project – EIR
- ❖ SCE Valley-Ivyglen Subtransmission Project – Biological Resources
- ❖ Western Area Power Administration, Sierra Nevada Region, (WAPA), Elverta Substation Expansion, 230-kV Substation – NEPA documentation
- ❖ LADWP, Pine Tree Wind Farm – Biological Resources, Phase I ESA and Sampling

HANDS-ON EXPERTISE WITH REGULATORY AGENCIES

UltraSystems staff regularly interacts with federal, state, regional and local regulatory agencies, both as part of our environmental analyses under CEQA/NEPA, and in securing permits for our clients. We keep up to date on the requirements of the U.S. Fish and Wildlife Service (USFWS), U.S. Bureau of Land Management (BLM), the California Department of Fish and Wildlife (CDFW), the U.S. Army Corps of Engineers (USACE), the California Coastal Commission (CCC), California Department of Transportation (Caltrans), the California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), South Coast Air Quality Management District (SCAQMD), California Air Resources Board (CARB), Imperial County Air Pollution Control District, the California Integrated Waste Management Board (CIWMB) and various other agencies to ensure that our regulatory knowledge is current. UltraSystems has also been responsible for compliance documents, management plans and associated permits. Our firm has also conducted interagency coordination at varying levels of detail and complexity on behalf of clients.

UNDERSTANDING OF LOCAL LAWS

Our project staff who would be assigned to your projects would be familiar with the local county, the local resource agencies, the natural resources and all environmental issues of the surrounding area. Additionally, our staff is experienced in surveying, identifying and mapping native and invasive species and critical habitats throughout Southern California. Key members who would play a major role on your project in the deserts have developed a vast understanding of desert ecosystems garnered from years of experience working on projects and residing in California. Additionally, all of UltraSystems team members have project and/or research experience in California, and have considerable experience working with the sensitive species and desert habitats of California. These successful professionals and their associated experience provide a project team very capable of responding to any biological and/or cultural support task request, and are seasoned enough to handle changing situations that your project may encounter during its construction.

COMPANY CAPABILITIES

TECHNICAL DISCIPLINES

UltraSystems' **Air Quality** experts have prepared hundreds of air quality management plans and performed onsite compliance monitoring for major construction projects. They have prepared air quality analyses for multiple industrial, transportation, infrastructure, commercial and residential development projects. UltraSystems provides baseline assessments of existing conditions; estimates construction and operational emissions; and prepares health risk assessments. UltraSystems' staff are experts in using emissions models such as CalEEMod, EMFAC2011 and CT-EMFAC; and dispersion models such as ISCST3, AERMOD, EDMS and ALOHA. We develop successful mitigation strategies, offering fresh and creative solutions, and have negotiated agency approvals to expedite projects. UltraSystems also helps clients comply with air quality regulations through obtaining permits to construct and operate, preparing annual emissions reports and quadrennial air toxics emission inventories, and responding to notices of violation.



UltraSystems' **Noise** group has prepared noise control and noise monitoring plans for complex construction projects, and has audited compliance with field sampling requirements. The Noise group supports CEQA and NEPA documentation by preparing stand-alone technical studies and report sections. It conducts ambient noise monitoring to establish background exposures. Using its extensive library of construction equipment noise data, UltraSystems calculates noise exposures during construction and recommend mitigation measures to satisfy local criteria. UltraSystems models traffic noise with TNM 2.5; it also uses the program for preliminary design of soundwalls. Train noise is another one of UltraSystems' specialties. It has in-house software to conduct train noise analyses per Federal Transit Administration (FTA) guidelines.



UltraSystems' Air Quality experts have the knowledge and experience to assist clients in meeting the **Greenhouse Gas Emission** reductions required by AB 32, the Global Warming Solutions Act of 2006. We have performed inventories for the U.S. Environmental Protection Agency, the California Air Resources board, the South Coast Air Quality Management District, the Ports of Los Angeles and Long Beach, and numerous industrial firms and residential and commercial developers. UltraSystems can estimate GHG emissions for specific projects, and for a client's day-to-day operations. Project-related emissions include those from offroad construction equipment, transportation of building materials, and construction waste, including short- and long-term traffic generated by a project. GHG emissions from day-to-day operations include direct emission from water and space heating, onsite electrical generation and co-generation; from use of fossil fuel-powered landscaping equipment and other combustion processes, from use of company motor vehicles; and from fugitive sources (such as refrigerant leaks). Indirect emission normally includes those associated with purchased electricity, but can also include such uses as employee business travel, waste disposal and subcontracted services. A GHG analysis can sometimes include the carbon footprint of building materials, appliances and other supplies purchased from others.

UltraSystems prepares **Energy Conservation** assessments for proposed projects per the most recent version of the CEQA Guidelines. The analysis will briefly summarize electricity, natural gas, and petroleum energy sources and the relevant regulatory framework. Projects will be assessed in regard to construction and operational energy consumption, which will be quantified to the extent estimation methods and project specifics are available. Project electricity (kilowatt hours) and natural gas (British thermal units) usage will be estimated based on project specifics; CalEEMod default values will be used, as appropriate, when project specifics are not available. Petroleum consumption will be estimated using CalEEMod or the EMFAC Motor Vehicle Emission Source Inventory Model and will be based on the same equipment and vehicle assumptions assumed in the air quality and GHG emissions analyses. Project elements that would reduce the project's energy demand will be identified in the analysis and quantified as available.

In the field of **Biology**, our scientists provide a wide array of biological services, including field surveys, vegetation mapping, habitat evaluations, threatened and endangered species surveys, jurisdictional delineations and permitting. We maintain valuable ongoing relationships with the reviewing agencies for large construction projects, including the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. Forest Service.



UltraSystems' biologists are experienced in major field work in Southern California using small to large teams of field crews. They offer a broad array of knowledge and are thoroughly familiar with California flora and fauna as well as special-status species' natural history and conservation issues. Biological staff field experience includes reconnaissance-level to focused-level biological field surveys of onsite resources; habitat assessments and plant

community mapping; riparian/riverine/vernal pool and fairy shrimp habitat assessments; general botanical and wildlife surveys; protocol surveys that focus on individual plant or wildlife species and conform to agency survey protocols for those species; breeding bird surveys; California Rapid Assessment Method (CRAM) analyses; jurisdictional wetland delineations; wildlife movement evaluations; habitat restoration and site qualitative/quantitative monitoring; preconstruction clearance surveys; and construction biological and permit compliance monitoring. UltraSystems biologists hold federal and state permits, and are qualified to conduct protocol surveys for a wide range of sensitive species.

Our **Cultural Resources** staff are recognized as qualified historians, archaeologists and paleontologists by the federal government, state agencies and all local jurisdictions to which applications have been made. We have experience in all facets of cultural resources projects, including surveys, site testing and evaluation, Native American consultation, historic site recordation and research, mitigation programs, construction monitoring, cultural evaluations of geophysical data, evaluations for National Register eligibility and paleontological studies.



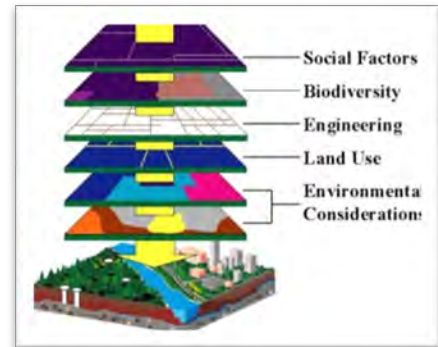
In the fields of **Geology** and **Seismicity**, our experts have a successful track record in obtaining approvals from the Division of Safety of Dams and the California Department of Water Resources, and have experience in researching and interpreting local seismic ordinances, incorporating existing

background information contained in reports, memorandums of understanding (MOU) and other publicly-held documents from cities, counties and regional agencies, and combining this information to craft legally-defensible environmental documents and technical studies.

UltraSystems provides consulting services relating to the identification of **Hazardous Materials**, including Phase I Environmental Due-Diligence, Phase II Site Characterization Studies and Phase III Remediation Plans. Some of these assessments are included as part of the CEQA process and many are performed for on-going businesses or property ownership transfers.

UltraSystems develops general construction **Stormwater Pollution Prevention Plans (SWPPP)** to assist clients in complying with Section 402 of the Federal Clean Water Act NPDES regulations. Every construction site that disturbs one acre or more, or is less than one acre but part of a larger common plan that would disturb one acre or more, must comply with the State of California's General Permit for Stormwater Discharges Associated with Construction Activities. The SWPPP must outline the Best Management Practices (BMP) planned for use on the site to prevent pollutants from leaving the project site. The submission of a SWPPP is required prior to the issuance of an Improvement Plan, Grading Permit or Encroachment Permit.

UltraSystems' **Geographic Information Systems (GIS)** staff is critical to our success, interpreting and presenting complex information in visually appealing presentations. UltraSystems utilizes spatial analysis and mapping techniques to record significant features of a project study area, such as biological resources, land use coverage, topography and hydrology, geology and artifact densities. Our GIS capabilities enable us to locate, record, analyze and present significant amounts of project data and perform sophisticated modeling and spatial analysis to guide decision-making in site development. High quality cartographic materials and well-defined analyses are standard products for our GIS services. Accurate and clear mapping, visual simulations, shade/shadow analyses and photography are essential components of our presentation of environmental analyses and planning projects.



The UltraSystems **Planning** group has recognized experts in the fields of federal and state environmental laws (NEPA/CEQA), planning and zoning laws, social sciences, environmental justice and demographic analysis. Our staff has managed the environmental review for general plan updates and amendments, specific plans and zone changes. We also work with clients to conduct pre-project constraints analysis, feasibility studies and land use compatibility analysis. Our planning group is well versed in coordinating with affected state, federal and local agencies, and we have developed successful working relationships with a number of responsible agencies in Southern California.

EXPERIENCE WITH REGULATORY AGENCIES

UltraSystems' staff regularly interacts with federal, state, regional and local regulatory agencies, both as part of our environmental analyses under CEQA and NEPA, and in securing permits for our clients. We keep up to date on the requirements of agencies including: the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), the U.S. Army Corps of Engineers (Corps), the California Coastal Commission (CCC), Caltrans, the California Environmental Protection

Agency (Cal/EPA), Department of Toxic Substances Control (DTSC), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), South Coast Air Quality Management District (SCAQMD), California Air Resources Board (CARB) and the California Integrated Waste Management Board (CIWMB).

PLAN OF DEVELOPMENT

UltraSystems can prepare and implement Plans of Development (PODs) to help its clients meet Bureau of Land Management (BLM) requirements. Preparation and submittal of a POD to the BLM is a prerequisite for initiation of the NEPA documentation and approval process for solar development projects that encroach on BLM land. The POD includes a detailed project description, such as purpose and need, facility descriptions, design and operation, permit requirements, schedules, and financial and technical capabilities of the applicant; detailed description of facility construction, related facilities and systems, operations and maintenance of the system; environmental considerations, maps and drawings. UltraSystems works in close coordination with the client's engineering staff to prepare and submit the POD for BLM approval.

APPLICATION FOR CERTIFICATION

UltraSystems prepares Plans of Development (PODs) to help its UltraSystems prepares Application for Certification (AFC) documents in accordance with the California Energy Commission's (CEC) Power Plant Site Certification Regulations to construct and operate a thermal power plants greater than 50 megawatts (MW) in California. In this case, the CEC is the lead agency under CEQA and works closely with other agencies. Affected agencies outside the CEC are asked to review, and if appropriate, comment on the applicant's proposal. The AFC provides a detailed description of the project; an assessment of the project's anticipated impacts on the environment; proposed measures to mitigate those impacts on ensure that environmental issues are properly and responsibly addressed; and a discussion of compliance with applicable laws, ordinances, regulations, and standards (LORS). If the project encroaches on federal land managed by the BLM, then it is expected that CEC and BLM will coordinate their environmental review and issue a joint environmental document to comply with CEQA and NEPA law and guidelines, with separate decisions. UltraSystems leads its clients through the CEC siting process to achieve approval to construct a power facility.

KEY PERSONNEL

Betsy A. Lindsay, MURP - President/CEO

Ms. Lindsay is the founder of UltraSystems Environmental. She has led the firm's growth by focusing on quality and a service-driven approach for its clients. Ms. Lindsay brings over **35 years** of experience managing or providing principal oversight of environmental documents for various types of projects. Her primary responsibilities in-house include business and project management, contract administration, resource allocation and quality control. She also manages all corporate endeavors and assists with the QA/QC process of many environmental documents. Ms. Lindsay has managed and prepared more than 400 environmental documents, and provided entitlement obligations for large-scale public and private infrastructure projects.

Hina Gupta, MURP, LEED AP B+C – Senior Project Manager

Ms. Gupta is an urban planner with over **16 years** of experience in environmental planning and regulatory permitting for a variety of projects including infrastructure, transportation, renewable energy, commercial, residential, mixed use and master planned development, and educational facilities. Her areas of expertise include: Sustainable Land use, Aesthetics and Visual Analysis, Socioeconomics and Community Impact Assessment, and Green Building Design. Ms. Gupta is a LEED Accredited Professional and has experience working with public agency staff at various city and county departments within southern California.

Michael Milroy, MS – Project Manager

Mr. Milroy is a planner with over **17 years** of experience in community and environmental planning. Mr. Milroy is trained in a variety of project types including residential, commercial, industrial, mixed-use, and specific plan projects. Mr. Milroy's expertise includes California Environmental Quality Act (CEQA) document preparation, project management, and review of supporting technical studies; including, but not limited to, Environmental Impact Reports (EIRs), Initial Studies, Mitigated Negative Declarations, and federally funded National Environmental Policy Act (NEPA) documents.

Billye J. Breckenridge, MA, ENV SP – Project Manager

Ms. Breckenridge is a Senior Environmental Professional with over **25 years** of comprehensive and diverse experience in environmental consulting. She specializes in regulatory permitting and compliance, CEQA/NEPA document management, preparation, and process, project management, public involvement, jurisdictional and biological resources, and business development. She has managed large NEPA and CEQA projects, 404 permitting projects, and multi-disciplinary teams of technical staff and subconsultants. She is proficient at identifying project permitting needs and negotiating and working with federal, state, and local resource agencies to obtain permits and approvals. She has coordinated and led large biological field surveys and analysis for federal and state protected species, and jurisdictional determinations/ wetlands delineations. She has directed and prepared numerous environmental analysis reports and permitting packages required pursuant CEQA, NEPA, Clean Water Act, Threatened and Endangered Species Act, MSHCPs, and others. She has planned, participated in, and conducted public scoping and other public meetings required under NEPA and CEQA, 404 permitting, and transmission line routing. Her extensive project experience consists of public and private projects including residential/commercial development, transportation, renewable energy/power plants, flood control, gas pipeline, transmission lines, mining, large utility/water lines, wastewater treatment, schools, and ports. She has managed groups of up to ten environmental and planning professionals. As a project manager and group manager, her responsibilities included staff hiring, training, and mentoring; business development and client relations; contract negotiations and project acquisition; project planning, scheduling, and budgeting; supervision of staff and work production; and financial management to ensure backlog and profitability. Her extensive project experience consists of public and private projects including residential/commercial development, transportation, renewable energy, flood control, pipelines (gas and water), power transmission lines, mining, wastewater treatment, and schools.

Michael Lindsay, BS – Operations Director

In this role, Mike Lindsay will be responsible for the QA-QC program for this contract. Mr. Lindsay has over **28 years** of relevant experience providing these services. As part of the delivery process, he will participate in key brainstorming and trouble-shooting meetings, and provide ongoing consultation to the project team. The core concept of UltraSystems' QA/QC plan is that independent peer review will also be conducted for all reports, work products and deliverables prior to their submittal to the City. Our goals are to ensure: (1) a high level of accuracy of the evidence that supports our findings; (2) quality of work products; (3) comparability; and (4) completeness of the work product so that the pre-defined goals of each project are met. Mr. Lindsay will ensure that all UltraSystems procedures are adhered to prior to any submittals being delivered to the City. Mr. Lindsay also provides technical assistance to Dr. Rogozen for air quality, GHG and noise studies, when needed.

Michael Rogozen D.Env – Senior Principal Engineer

Dr. Rogozen heads UltraSystems' air and noise practice. He has over **48 years** of experience in project management, health risk assessment, air and industrial wastewater permitting in California, greenhouse gas emission inventories and carbon footprint studies, ambient air and noise monitoring, dispersion modeling, pollution control technology assessment, economic analysis of air pollution control alternatives, air toxics emission inventory development, offsite consequence analysis, environmental database design, survey design and management, source test design and analysis, subsurface methane investigations, regulatory analysis, and technical writing and editing.

Dr. Rogozen is responsible for consulting, technical project management and business development. He has assisted industrial and governmental clients in complying with federal and local air quality regulations. His work has included managing air compliance audits, preparing applications for permits to construct and operate (including Title V permits), annual emissions reports and responses to notices to comply and notices of violation. He has also conducted many health risk assessments under AB2588, Proposition 65, and SCAQMD Rule 1401. Dr. Rogozen serves as a quality assurance officer for UltraSystems' technical documents and proposals.

Michelle Tollett, BA, ISA – Senior Biologist

Ms. Tollett has over **24 years** of experience as a field and consulting biologist working with private companies and public agencies throughout California and the Rocky Mountains. She is the chief Sr. Biologist and Project Manager at UltraSystems Environmental in Irvine, California. Her responsibilities include managing the Biological Resources Team; supervising and mentoring staff biologists; delegating work assignments; approving timesheets, expense reports, and overtime requests; overseeing projects from start to finish or managing aspects of projects, managing budgets and project schedules; interacting with client and resource agency representatives; coordinating biological studies and assisting in managing biologists on project sites; coordinating with resource agencies and clients to develop mitigation site design; coordinating with landscape design and maintenance contractors on mitigation sites; preparing and conducting environmental awareness training.

Allison Carver, BS, BA – Senior Biologist, Regulatory Specialist

Ms. Carver has over **23 years** of experience as a field and consulting biologist working with private companies and public agencies in California. Her project experience includes working on general and challenging high-profile hydroelectric, solar energy, wind energy, tunnel, transmission line, and construction, improvement, maintenance, housing, and restoration projects in California. She specializes in jurisdictional determination of waters of the U.S. and State, including regulatory framework and permitting; and project impact analyses for projects ranging in size from small school upgrade projects to major infrastructure projects. As a Senior Biologist for UltraSystems, she has conducted jurisdictional delineations and authored jurisdictional delineation reports, prepared Preconstruction Notifications required by Section 404 Clean Water Act, Water Quality Certification applications required by Section 401 Clean Water Act, and Lake or Streambed Alteration Notifications as required by Section 1602 of the California Fish & Game Code. She has also authored biology, hydrology and water quality, geology and soils, and Hazardous Materials impact analyses for a variety of technical documents, including CEQA and NEPA environmental documents. Ms. Carver has also analyzed project impacts and authored technical and environmental documents required by California state agencies such as Caltrans, the California Energy Commission, and the California Public Utilities Commission.

Matthew Sutton, MS – Habitat Restoration Biologist

Mr. Sutton specializes in habitat restoration management projects for various clientele, including municipal, private, and non-profit sectors. He has worked in the ecological restoration field for over **18 years**. He is currently a Staff Biologist at UltraSystems Environmental in Irvine, California. He oversees all phases of habitat restoration implementation including site preparation, plant and seed augmentation, weed abatement, maintenance, monitoring, report-writing and all other deliverables necessary to satisfy the client's success criteria. During the restoration project he supervises and trains contractors and restoration workers to ensure a high standard of performance. During both the planning and monitoring phases, he conducts field investigation and analysis of field data such as biological surveys, vegetation monitoring and rare plant surveys. Mr. Sutton directs the various phases of habitat restoration so that all elements including regulatory compliance, costs, deadlines and worker safety meet the project's contractual obligations. He manages the scope, schedule and budget of projects.

Stephen O'Neil, MA, RPA – Archaeologist/ Anthropologist – Cultural Resource Manager

Mr. O'Neil is a Cultural Resource Manager with over **45 years** of experience. Mr. O'Neil's responsibilities include management of cultural resources tasks for multiple projects, writing and QA/QC of technical documents, coordinating field surveys and construction monitoring, and leading field efforts for historic and prehistoric site excavations and analysis. Mr. O'Neil has a broad scope of environmental consulting responsibilities and experiences ranging from general project management and technical writing to prehistoric site excavation and construction monitoring. He has worked on projects with clients in both the public and private sectors—including alternative energy, energy transmission, U.S. Forest Service, parks, public works and water resources. He has authored and coauthored numerous technical reports and conducted surveys and monitoring in compliance with NEPA, CEQA, and other federal, state, regional and local laws and regulations. Mr. O'Neil is an active member in the field of cultural resources—he is a board member of the Pacific

Coast Archaeological Society and the Orange County Natural History Museum Foundation. He is also a member of the Society for California Archaeology.

Megan Black Doukakis, MA – Archaeological Technician

Mrs. Doukakis has over **14 years** of experience as an archaeologist in California. She has a M.A. in Public Archaeology from California State University, Northridge. She has conducted pedestrian archaeological survey, test and full-scale excavations, archaeological monitoring, laboratory curation of archaeological materials to comply with state and federal historic preservation laws in Southern California and abroad. Megan has gleaned experience on City, County, and Federal projects throughout southern and central California, including Central Valley, Orange, Los Angeles, San Diego, Riverside, Imperial, Inyo, Kern, Kings, Santa Clara, and Merced counties, including projects on BLM land, FCC projects, road projects, wheelchair access, cultural field surveys, and solar energy projects. Mrs. Doukakis has authored a number of Phase I, II, and III, ISMND, ICRMP, FCC form, EIR documents and project proposals. She has extensive experience with the California Historical Resources Information System as well as conducting paleontology record searches and the Native American Heritage Commission in conducting record searches and consulting with Native American groups. Mrs. Doukakis is proficient at project management and project scheduling for large and small scale projects.

Stephen Chesterman, BEng – Principal GIS Consultant

Mr. Chesterman has over **33 years** of international experience in United States of America (CA, FL, LA, OH, OK, PA, TX), United Kingdom, Northern Ireland, Thailand, Hong Kong and Oman. His extensive GIS experience includes Management of large city-wide data conversions (Raster and Vector) including the development of procedures, design and administration of GIS systems including server, desktop and database along with GIS software design and application development at the personal desktop through to the enterprise level. He has used GIS throughout his career and from a firm foundation of hands-on use has often pioneered and developed company usage in a wide variety of applications. He has provided guidance in the use of GIS and GPS within large cities/utilities and the integration of GIS and GPS data. He was a member of the ESRI Water/Wastewater group as a representative of MWH as part of the ESRI Business Partner program, and has attended ESRI training courses and conferences. His Information Technology (IT) experience includes management and development of IT Master Plans, software application development including technical specification writing and coding, development of Geographical Information Systems (GIS) and analysis and development of database systems. His experience in wastewater and storm water collection and treatment includes hydraulic modeling (expert), Asset Management Plans (AMP), design, preparation of contracts and bills of quantities, contract management, construction supervision, temporary traffic management, rehabilitation and Design/Build through Build Own Operate Transfer (BOOT) and Private Finance Initiative (PFI) schemes.

Gulben Kaplan, MS, BS – GIS Analyst

Ms. Kaplan possesses in-depth education, training, and practicum to GIS Analysis techniques and tools with a Master's degree in Geographic Information Science in addition to several years of practical internship and over **8 years** of GIS analyst experience. She excels at continuously improving GIS processes, applications, and systems leveraging cutting-edge technologies. She is adept at cartographic design and map-making in printed and electronic formats, evaluation of

hydrologic/soil/geologic/ecologic conditions, data interpretation, and topographic/demographic planning.

Robert Verlaan, MA, MSW – Consulting Senior Project Manager

Mr. Verlaan is a highly experienced and versatile urban and environmental planning consulting professional with over **46 years** of experience and a verifiable track record of successfully achieving the goals and objectives of each assignment while employing methods reflecting the highest standards of professional care. He holds two advanced degrees from accredited major CA universities, one in the humanities and the second in Environmental Planning. Mr. Verlaan was accorded the status of qualified expert witness as a CEQA Practitioner by the Superior Court of the State of California in 1988. This has given him opportunities to develop extensive independent third-party review consultation and peer-review experience in association with various public agencies, private sector development interests, citizen stakeholders, and the legal community. Mr. Verlaan can point to the successful hands-on management, preparation and processing of CEQA, NEPA and TEPA (Tribal) compliance documents for more than 500 projects varying greatly in type, scale, complexity, public sensitivity, environmental setting and geographic location. This broad experience has encompassed his preparation of CEQA compliance documents for more than 40 jurisdictions and districts within the State of California and NEPA compliance documents for numerous federal agencies.

REPRESENTATIVE PROJECT EXPERIENCE

Imperial Solar Energy Center South and Imperial Solar Energy Center West - Imperial County

Client: Tenaska



UltraSystems Environmental was under contract to Tenaska, Inc. (one of the largest US independent power producers) and prepared, and implemented CSolar Environmental Compliance Program and Permitting Compliance conditions. As part of this project, UltraSystems is conducting biological and cultural field monitoring services during pre-construction and construction activities planned for CSolar projects, which are located near the Mexican border in the unincorporated Mt. Signal area, in Imperial County, California.

The Imperial Solar Energy Center (ISEC) South project is a 200 MW solar facility using photovoltaic technology, on approximately 1,640 acres of land. The ISEC West project is an approximately 150-MW solar facility on 1,714 acres of land. In addition, the ISEC South project will require construction of a transmission line that would interconnect to the existing Imperial Valley electrical substation, which is located on lands administered by the Bureau of Land Management (BLM).

The solar energy facilities interconnect to the utility grid at the 230 kV side of the Imperial Valley Substation. The use of an existing dirt road is proposed for construction and maintenance access to the western portion of the solar energy facility. A portion (1,258 feet) of the 1.1-mile-long access road

is located within BLM-managed lands. Therefore, the project requires Right-of-Way (ROW) approval from the BLM. The project plans to use a 120-foot-wide ROW from the project site along BLM land to the Imperial Valley Substation in order to accommodate the transmission corridor. The transmission line ROW corridor within BLM lands comprises of approximately 82.7 acres. As part of our monitoring work for C-Solar, a Research Design Plan was prepared and authorized for approval to work within the BLM right-of-way. The plan detailed the conditions necessary for paleontological work within existing transmission line corridors.

UltraSystems is managing field monitoring personnel and assumes responsibility for all required mitigation measures for Tenaska, LLC and CSolar, including: biological, archaeological and paleontological monitoring over the duration of project construction, estimated to last approximately 24-30 months. To implement the project condition of the required Mitigation Monitoring, Compliance, and Reporting Program (MMCRP), UltraSystems has developed project tools, including: field monitoring protocols and training requirements; daily call-in procedures to ensure monitor safety; project resource and tracking tools; and GIS resource mapping for in-house database use.

The ISEC South project required an approval of a Conditional Use Permit (CUP) from the County of Imperial, and a project variance to allow the transmission towers to exceed the 120-foot height limit on the private land portion of this project. The proposed transmission towers would be a maximum of 140 feet in height.

The County of Imperial has served as the Lead Agency for the project. All monitoring activities will be performed under provisions of the California Environmental Quality Act, the National Environmental Policy Act, the State Historic Preservation Act and the California Endangered Species Act. Additionally, the biological monitoring will also comply with all standards, guidelines and regulations of the BLM in the Flat Tailed Horned Lizard (FTHL) Management Area.

UltraSystems is managing field monitoring personnel (up to four biologists, and two cultural resource monitoring, including one tribal observer) and assumes responsibility for all required mitigation measures for CSolar, including: biological, archaeological and paleontological monitoring over the duration of project construction, estimated to last approximately 24-30 months.

To implement the project condition of the required Mitigation Monitoring and Reporting Program (MMRP), UltraSystems has developed project tools, including: field monitoring protocols and training requirements; daily call-in procedures to ensure monitor safety; project resource and tracking tools; and GIS resource mapping for in-house database use.

The ISEC South project required an approval of a Conditional Use Permit (CUP) from the County of Imperial, and a project variance to allow the transmission towers to exceed the 120-foot height limit on the private land portion of the project. The proposed transmission towers would be a maximum of 140 feet in height.

The County of Imperial has served as the Lead Agency for the project. All monitoring activities will be performed under provisions of the California Environmental Quality Act, the National Environmental Policy Act, the State Historic Preservation Act and the California Endangered Species Act. Additionally, the biological monitoring will also comply with all standards, guidelines and regulations of the BLM in the Flat Tailed Horned Lizard (FTHL) Management Area. Listed below are some of the key highlights of this project.

Project Highlights

- ❖ Prepared Paleontological Resources Assessment Report
- ❖ Prepared Pesticide Use Plan (PUP)
- ❖ Prepared Archeological Monitoring Program
- ❖ Prepared Paleontological Monitoring Report during Geotechnical Investigation
- ❖ Prepared Biological Monitoring Report during Geotechnical Investigations
- ❖ Prepared Invasive Weed Survey Report
- ❖ Prepared Tribal Participation Plan (TPP)
- ❖ Prepared Waste Management Plan (WMP)
- ❖ Prepared Stormwater Pollution and Prevention Plan
- ❖ Prepared Fire Management Plan
- ❖ Prepared Hazardous Materials and Management Plan
- ❖ Prepared Health and Safety Plan
- ❖ Prepared Facility Business Emergency Plan
- ❖ Prepared Worker Education and Awareness Plan
- ❖ Prepared Burrowing Owl Preconstruction Survey
- ❖ Prepared Mortality Reporting Plan
- ❖ Prepared BUOW Relocation Plan
- ❖ Prepared Inadvertent Discoveries Treatment Plan
- ❖ For Monitoring – prepared daily log sheets, weekly, monthly and quarterly reports
- ❖ Coordinated Level 2 Variance Requests with the BLM
- ❖ Coordinated Weed Management issues with BLM pertaining to Sahara Mustard



Biological and Cultural Monitoring Services for ISEC South Transmission Interconnection Line Dismantling Project

Client: SDG&E

Work Scope: UltraSystems is provided biological and cultural monitoring services to SDG&E for the dismantling of a 230 kV Transmission Interconnection Line for the ISEC South Project, located within Imperial County. The project included the dismantling of ten tower structures located along a BLM Utility Corridor. Biological, cultural and Native American Monitoring were performed for this project. Our firm also prepared the Addendum to the Reclamation Plan for this project, as required by the BLM.

Project Highlights

- ❖ UltraSystems will provide all necessary monitoring preconstruction notifications and reporting will be reviewed by SDG&E and provided to the BLM by UltraSystems (e.g., 14-day notification to agencies prior to construction/ ground disturbing activities)

- ❖ As required prior to ground-disturbing activities, UltraSystems will provide all necessary preconstruction surveys (e.g., weed survey, BUOW and FTHL) to be provided
- ❖ All required post-construction reporting (i.e., daily logs sheets and final letter report) will be provided to SDG&E for review, and then sent to the BLM

Biological Monitoring Services for IID's Northern Path 230 kV Project into the Drew Substation - Imperial County

Client: Imperial Irrigation District (IID)
Contact: Kevan Hutchinson | T: 760/482-3613
Duration: Dec. 2012 - April 2013

Work Scope: UltraSystems provided biological and cultural (cross-trained) monitoring services to IID for the construction of a 230 kV Transmission Line (Northern Path) near the ISEC South Switchyard to the Drew Substation, located in Imperial County. This project by IID included the construction of a new transmission line to interconnect the Centinela Solar project at the Drew Substation. This line also provided interconnection to the ISEC South Solar project by way of a new IID 230 kV transmission line so that energy from ISEC South could go to Drew Substation, then combine the energy generated by both projects would then connect into the SDG&E IV Substation. The 230 kV line will be located in the County of Imperial, connecting to the Drew Substation at the intersection of State Route 98 and Drew Road, then running just east of the Wormwood Canal on the LS Power Development, LLC tract then crossing the Wormwood Canal before reaching the southern boundary line of said LS Power Development, LLC tract, then running just west of the Wormwood canal, and turning in a southeasterly direction before reaching the northern boundary of the CSolar project site, then running southeast over the Wormwood Canal to the northern boundary line of ISEC South switchyard located near the intersection of Anza Road and Wormwood Canal. The project spanned an estimated 1.3 miles of new double circuit 230 kV transmission line.

There were 12 monopole towers placed along the IID right-of-way; Structures 1 through 12. The towers were 120 feet in height. The holes excavated for the tower foundations ranged in depth and diameter depending on whether or not the structure will be a dead-end angle pole, intended to be at a pivot location, taking the wire at a 90 degree angle when the line is going around a property edge, and requiring more solid footings (Structures 1, 9, 10 and 11), or a light angle pole, part of a continuous straight line and so supporting less tension (Structures 2 through 8, and 12). The larger foundations were drilled approximately 32 feet deep, while the smaller foundations were drilled approximately 24 feet deep, 10 feet in diameter.

Monopole construction occurred in disturbed areas, along the eastern portion of the Wormwood Canal, which runs north-south between State Route 98 on the north and the international border with Mexico on the south, and parallel to the Westside Main Canal. The northern portion of the transmission line, with Structure 5 through 12, is located along the edge of agricultural fields and this land was previously disturbed by plowing and other agricultural activities. The southern portion of the transmission line, with Structures 1 through 4, was considered unutilized land, located between two canals that had been disturbed previously by canal construction and continued maintenance. This area was also filled with brush when the transmission line work commenced. This entire region is considered open desert, and is situated below sea level.

Project Highlights

- ❖ UltraSystems provide necessary monitoring, preconstruction notifications and reporting, on behalf of the IID (e.g., 14-day notification to agencies prior to construction/ ground disturbing activities).
- ❖ As required prior to ground disturbing activities, UltraSystems provided all necessary preconstruction surveys (e.g., BUOW and FTHL).
- ❖ All required post-construction reporting (i.e., daily logs sheets and final letter report) was provided to the IID.

Biological Monitoring, SDG&E Sunrise Powerlink, Imperial and San Diego, CA

Client: Total Transportation Services

Work Scope: UltraSystems provided biological mitigation monitoring services on behalf of Total Transportation Services Inc. (TTSI) for the SDG&E Sunrise Powerlink project. The project involves the construction of new electric transmission lines between the Imperial Valley Substation near El Centro in Imperial County to SDG&E's Sycamore Canyon Substation in coastal San Diego County. The entire project will extend about 118 miles on 23 project sites, and traverse private and public lands. Specifically, UltraSystems was contracted to provide biological monitoring for six construction lay-down yards, as well as providing full-time monitoring during fencing installation on all 23 sites.



UltraSystems' biologists provided monitoring to ensure that construction activities conformed to the measures of the Mitigation Monitoring, Compliance, and Reporting Program, and other requirements of the project's environmental documents. This included the monitoring sensitive floral and faunal species, as well as sensitive habitats on or in the vicinity of the project yards. Monitors were present during grading, clearing and fencing activities, to ensure that sensitive species were not disturbed.

As a subcontractor to TTSI, UltraSystems personnel activities included being present on the project site during construction, including pre and post construction activities. Monitors are to provide daily reports to TTSI and UltraSystems of their observations. The standard schedule is for 10 hours a day in a six-day work week. The work began in May 2010 with the placement of two biological monitors to observe work on two project sites (Yards 8 and 19). Additional monitors will be placed on site as the project expands to additional construction yards. UltraSystems personnel will successfully achieve delivery of the project within the constraints and requirements of safety, quality, budget, schedule and environmental regulations.

Acciona Wind Energy Project - Santa Barbara County, CA

Client: Acciona

UltraSystems provided a variety of environmental compliance services in support of the Lompoc Wind Energy Project south of Lompoc in Santa Barbara County, California.



The work was required in response to an application filed in February 2006 by the client, Acciona Wind Energy USA, a major developer, builder and operator of wind farms nationwide. The application for a Major Conditional Use Permit sought to allow a large-scale wind energy project on windswept ridges south of Lompoc, a rural area adjacent to Vandenberg AFB. It would be the first major wind energy project in Santa Barbara County, and provide a significant source of alternative energy. Plans called for up to 65 wind turbines each standing 389-397 feet high. The project area covered approximately 3,000 acres within the Santa Ynez Mountain Range. Most of the land was under private ownership, primarily used for cattle grazing.

An UltraSystems biologist, permitting specialist and environmental scientist started work in the fall of 2009 and continued throughout 2010. The team conducted sensitive-species surveys, prepared environmental documents, and handled permitting and coordination with public agencies. Specific task orders included the following:

- ❖ Project initiation and coordination
- ❖ Worker education and awareness programs focusing on sensitive species and habitats
- ❖ Ground disturbance, site restoration and revegetation plan
- ❖ Tree protection and replacement plan
- ❖ Adaptive management plan
- ❖ Preconstruction plant and wildlife surveys
- ❖ 2081 California Permit for incidental take, including gaviota tarplant disturbance
- ❖ Native grasslands mitigation plan
- ❖ Protection and permitting for impacts on aquatic resources
- ❖ Preparation of a wetlands and riparian habitat restoration plan
- ❖ Rare plant surveys and restoration plans
- ❖ El Segundo Blue Butterfly habitat assessment restoration plan
- ❖ Sensitive Species Surveys (including bats)
- ❖ Nesting bird surveys
- ❖ Assessment of pavement conditions
- ❖ Adaptive management plan
- ❖ Fencing plan
- ❖ Minimization and avoidance measures (mitigation)
- ❖ Site decommissioning plan

Sand Canyon Wind EIR - Kern, CA

Client: Kern County

Work Scope: UltraSystems prepared an EIR for a wind energy project being proposed on 305 acres of vacant land within the Tehachapi Wind Resource Area of Kern County. The applicant proposed to construct up to 17 wind turbines for a total generation capacity of 40 megawatts (MW) of energy. The turbines were up to three-blade, up-wind design, placed strategically on the sloping topography in rows to maximize output. Due to military air traffic restrictions, the turbines were designed in conformance with Section 19.08.160 (Height of Structures) of the Kern County Zoning Ordinance (max height of 500 feet). The project involved construction of three meteorological towers; on and off-site access roads; control cables and subsurface feeder line corridors; a project substation; and collector system lines.



The CEQA scoping process identified a number of concerns raised by the public, trustee and responsible agencies that are considered as part of the EIR process. Two issues of particular concern involved impacts on biological and visual resources amenities. UltraSystems biologists evaluated the project design against guidance provided by the USFWS in the *Draft Eagle Conservation Plan* (USFWS, 2011c), and *Recommendations on Developing Effective Measures to Mitigate Impacts to Wildlife and their Habitats related to Land-based Wind Facilities* (Recommendations) (USFWS, 2010a). A variety of mitigation techniques were considered, including limiting construction activity to certain months of the year, to avoid nesting breeding season. Preconstruction surveys also identified special status species, calling for replacement of sensitive plant species lost to grading through reseeded or preservation of similar habitat at a negotiated ratio, and required a daily monitor to remove animal carcasses that attracted the California condor.

In order to address potential impacts on scenic resources, viewsheds and corridors, geo-referenced photo-simulations were prepared to document post-development conditions. The analysis considered views from several public vantage points, including the Pacific Coast Trail, which is designated as a State scenic trail. The analysis also considered the potential for turbine shadow flicker to disturb nearby sensitive receptors, such as recreational shooters practicing on the adjacent target range. The EIR included a consistency analysis that evaluated the project against the design standards identified in the Kern County Wind Energy (WE) Combining District, which apply to all construction and siting of wind turbines and accessory facilities.

CEQA Compliance for the Proposed SCE Wildomar Service Center – Wildomar, CA

Work Scope: UltraSystems prepared the environmental documents and notices for Southern California Edison’s (SCE) Wildomar Service Center that is part of the San Jacinto District, the fastest growing SCE district. The Wildomar Service Center provides service to cities such as Temecula, Murrieta and Wildomar. The original project site was 19.1 acres of undeveloped property. The project was constructed as a minimum LEED (Leadership in Energy and Environmental Design) project. The Mitigated Negative Declaration (MND) prepared by UltraSystems described and analyzed the following facilities: a three-story, 60,000 square foot, concrete tilt-up office building; a two-story, 17,000 square foot, concrete tilt-up garage building; a single-story, 22,500 square foot, concrete tilt-up warehouse building; a single-story, 22,500 square foot parking structure; an 85-foot by 85-foot Heliport; an Outdoor On-The-Job Training Area, and Underground Equipment training

areas; a 7-foot (minimum) high masonry perimeter screen wall; a 6-acre area for vehicle parking and equipment and material storage; a 75-foot high Microwave Tower; and on-grade parking for 20 customer and visitor stalls, 330 Edison personal vehicles, and 131 Edison company light vehicles.

UltraSystems analyzed the following environmental issues for this project: aesthetics, air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology/water quality, land use/planning, noise, public services, transportation/traffic, and utilities/service systems. Mitigation measures were provided for biological resources, cultural resources, and noise.

LA-SafetyNet Program Environmental Services – County of Los Angeles

LA-SafetyNet will deliver instant mission-critical information to over 34,000 first responders who protect the lives and property of 10 million residents throughout Los Angeles County. It provides a single, shared voice and data communication system for all public safety agencies within the Los Angeles Region. LA-RICS operates under a Joint Powers Agreement including the City of Los Angeles, County of Los Angeles, Los Angeles Unified School District and 82 other municipalities and public sector entities in the area.



Work Scope: For the proposed LA-SafetyNet program, LA-RICS selected UltraSystems to prepare a Master Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) for the entire system, as well as work leading to an Initial Study/Mitigated Negative Declaration (IS/MND) under provisions of the California Environmental Quality Act (CEQA). The LA SafetyNet program is a 700 MHz public safety mobile broadband network covering all of Los Angeles County. The project will install broadband communications at **approximately 300 sites** using new and existing infrastructure, fixed microwave backhaul rings, and 100 miles of high-capacity fiber backbone. The network will enable computer-aided dispatch, rapid law-enforcement queries, real-time video streaming, medical telemetry and patient tracking, geographic information systems (GIS) services for first responders, and many other broadband-specific applications. The system will be implemented and become operational over a 36-month period.

The Draft EA prepared for this project analyzed all NEPA topical areas of concern that could be impacted by the construction of communication facilities on LA-RICS project sites, including: noise; air quality; geology and soils; water resources; biological resources; historic and cultural resources; aesthetic and visual resources; land use; infrastructure; socioeconomics and environmental justice resources; and human health and safety. A technical report for each of these topic areas was prepared by UltraSystems staff to support the analysis that was included in the project EA. Most of these reports were very lengthy and detailed, as a site information form was prepared for all project sites that provided pertinent environmental information on each site, with the form included in each of the reports.

A table was also included in the EA that summarized the environmental impacts that would be created by construction of project improvements on each LA-RICS project site. This table proved to be very important for LA-RICS, U.S. Department of Commerce staff and other interested parties

reviewing the project EA so that they could easily determine at a glance whether the project would create potential, demonstrated or no issues on the environment.

Appropriate mitigation measures were also prepared and included in the EA to reduce project impacts on the environment to an acceptable level, thus qualifying the project for an EA/FONSI. All mitigation measures were vetted by LA-RICS and U.S. Department of Commerce staff to determine that they would reduce project impacts on an acceptable level.

NEPA and CEQA Documentation for Justice Assistance Grant (JAG) Projects – City of Los Angeles

Work Scope: For the City of Los Angeles’ Department of Public Works, Bureau of Engineering, UltraSystems prepared five stand-alone Mitigated Negative Declarations in accordance with the California Environmental Quality Act (CEQA), and five Environmental Assessments in accordance with the National Environmental Policy Act (NEPA) for five communications sites located throughout Los Angeles County.

The City of Los Angeles used the Recovery Act: Edward Byrne Memorial Justice Assistance Grant (JAG) funding to provide much needed upgrades to five existing communications sites vital to police, fire, health and other emergency personnel in the City, as well as regional first responders. Although these sites funded by JAG were stand-alone, it was anticipated that these sites could support and be incorporated into the Los Angeles Regional Interoperable Communications Systems (LA-RICS), a modern integrated wireless voice and data communications system that would support over 34,000 first responders throughout the Los Angeles County.

Because federal funding is involved, the JAG project requires separate NEPA and CEQA documentation be prepared for the project. The City, as lead agency, determined that separate documents be prepared for each project site, rather than comprehensive CEQA and NEPA documents. UltraSystems, in addition to preparing the environmental documentation, has also conducted site visits in support of biological resource studies, cultural analysis, and visual impacts analysis to determine the likelihood of impacts on these resource areas.

UltraSystems is also developing a public outreach program to engage public stakeholders on the project, particularly for project sites located proximate to private residences or historical structures.

Owens Lake Dust Mitigation Project – Owens Valley, CA



Work Scope: UltraSystems Environmental provided construction management services for Phase 7 of the Owens Lake Dust Abatement Project, a long-term program conducted by the Los Angeles Department of Water and Power (LADWP) to mitigate the effects of extreme dust pollution blowing across the Owens Lake bed and the surrounding region, through the use of Dust Control Measures (DCMs).

Phase 7 construction was located around the southwestern and southern edges of the lake; 20 sites were constructed with a combination of shallow ponds and moat-and-row involving 15.1 square miles (9,664 acres). The entire lake area covers approximately 110 square miles, or 70,000 acres. The area is home to prehistoric cultural resource sites along the edges of the lake and several historic mining-related sites along the edges and out into the old lake bed that required mitigation. A cultural resources survey prior to the start of Phase 7 recorded 15 sites and 223 isolated artifacts within its scope.

Results:

UltraSystems archaeological monitoring included:

- ❖ Being present on Owens Lake in support of grading and trenching construction work to ensure compliance
- ❖ Conducting surveys of areas prior to ground-disturbing activities
- ❖ Monitoring of subsurface grading and trenching of native soil; observing evidence of prehistoric activities as possible sites to be recorded, tested and evaluated prior to possible disturbance
- ❖ Recording and collecting historic and prehistoric artifacts likely to be destroyed by the construction activities
- ❖ Providing daily reports to KDG and to UltraSystems of their observations



The primary role of UltraSystems’ monitors was to document that cultural resource monitoring was taking place and to consult on the disposition of any prehistoric findings. UltraSystems was on-call to provide:

- ❖ Project coordination
- ❖ Project scheduling
- ❖ Training on safety, budgeting, environmental protection
- ❖ Recording project progress and preparing progress reports for LADPW
- ❖ Describing the work and percentage

Valley-Ivyglen Subtransmission Project – Riverside, CA

Work Scope: UltraSystems conducted biological surveys in Western Riverside County for Southern California Edison’s (SCE’s) proposed Valley-Ivyglen Subtransmission Project (Ivyglen Project).

The survey area included approximately 70 miles of electrical transmission line corridors located between the Valley and Ivyglen substations, and includes six proposed substation sites. The proposed transmission lines are located between the 91 Freeway (Riverside Freeway), Interstate 215 (Escondido Freeway) and Interstate 15 (Escondido Freeway); Highway 74 (Ortega Highway) bisects the project site from the southwest to the northeast.

The Ivyglen transmission line project is located in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP involves the assembly and management of a

Conservation Area of core habitat areas and habitat linkages for the conservation of natural habitats and their wildlife populations. The MSHCP has been adopted by the County of Riverside, which is presently implementing the plan. The U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) approved the MSHCP, and issued incidental take permits to the County and 14 local cities.

UltraSystems biologists reviewed the MSHCP for requirements specific to the Ivyglen Project. UltraSystems biologists mapped vegetation communities, assessed riparian, riverine and vernal pool resources on approximately 1,000 acres. UltraSystems biologists also surveyed for the following special status species: little mousetail (*Myosurus minimus*), many-stemmed dudleya (*Dudleya multicaulis*), Munz's onion (*Allium munzii*), round-leaved filaree (*Erodium macrophyllum*), San Diego ambrosia (*Ambrosia pumila*), slender-horned spineflower (*Dodecahema leptoceras*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), and the burrowing owl (*Athene cunicularia*). The survey area encompassed very rugged remote terrain, which was surrounded by areas of agricultural, residential and commercial development.

Following survey completion, UltraSystems assessed potential impacts, and worked with SCE to develop conservation measures to comply with the MSHCP. UltraSystems prepared a Biological Assessment Report for the project, which served as a technical report for the EIR prepared for the project.

Elverta Construction Project Environmental Documentation

Work Scope: UltraSystems worked with Miller Brooks, who was retained by the Western Area Power Administration (WAPA), Sierra Nevada Region to prepare the project environmental documentation to cover the expansion of the existing Elverta 230-kV Substation, which was configured as a main-and-transfer power station. It was determined by WAPA, that the existing power station configuration would not be adequate to reliably serve an increase in electrical demand created by electrical users in the future. The proposed project required the construction of nine new 230-kV breakers; disconnect switches, controls, protection and communication equipment, and a new control room. Once completed, this upgrade reduced the risk of a single mode failure and loss of up to six critical 230-kV transmission lines that potentially may have led to loss of electrical load in the greater Sacramento, CA area. This conversion project enhanced the substation's operational flexibility and maintenance, and increase service reliability. Improvements to the substation included the following:

Facility Requirements

- ❖ Build a new control room at the southwest corner of the existing substation
- ❖ Install nine new 230kV circuit breakers; disconnect switches, controls, protection and communication equipment
- ❖ Build a new cable trench for the cabling of the new circuit breakers and associated equipment
- ❖ Build a new direct buried conduit and pull box for communications cabling on the new south portion of the project site
- ❖ Build a new station service transformer to provide primary station service to the substation

Substation Modifications

- ❖ Construction work was to occur inside the substation
- ❖ The fence line was to be moved 100 feet to the south of the substation

UltraSystems staff worked with WPA staff on the preparation of project environmental documentation that included the preparation of an Environmental Assessment (EA) leading to a Finding of No Significant Impacts. Technical studies prepared to support the analysis in the EA/FONSI included biological resources and cultural resources studies. UltraSystems put together a template for the project EA and finalized the technical studies in preparation of the EA.

WAPA staff decided to cancel this project. The reason for cancelling the project was that they thought that the energy conservation measures being instituted by the local electrical power companies negated the need for the expansion of the Elverta Substation. Additionally, the downturn in power consumption due to the poor economic climate was another determining factor for project cancellation.

Environmental Assessment for New Electrical Distribution Line from Superstition Substation to Bullfrog Dairy - Imperial County, CA

Work Scope: UltraSystems prepared an Environmental Assessment (EA) on behalf of the Imperial Irrigation District, who was proposing to install a new electrical distribution line from the Superstition Substation in the County of Imperial to the Bullfrog Dairy site. The Dairy was currently entitled, permitted for development, and currently under construction. Bullfrog Dairy lies approximately 0.65 miles south of Superstition Substation. The installation of this approximately 4,880 linear-foot distribution line, was the focus of this EA, it would occur on



public land in the California Desert Conservation Area (CDCA), administered by the California Desert District (CCD) of the Bureau of Land Management (BLM). Since the proposed installation of this distribution line would potentially affect federal lands under the administration of the BLM, the project was the subject to disclosure requirements of the National Environmental Policy Act (NEPA) and its implementing guidelines.

The primary purpose of the project was to expand power transmission and distribution systems to accommodate growth in Imperial County, the leading agricultural center in the lower southeastern corner of Southern California.

Hayward Ranch Water Extraction and Delivery System - Inyo County, CA

The Coso Operating Company LLC (COC) submitted a plan of operations for the Hayward Ranch Water Extraction and Delivery System project, which would construct a groundwater extraction and pipeline delivery system from the Coso Hayward Ranch to the water distribution station and injection system located at the Coso Geothermal Field in Inyo County. NEPA requires that the Bureau of Land Management (BLM) consider and document environmental impacts prior to making certain decisions. BLM must review the application and decide whether to grant approval to the applicant, which was subject to stringent NEPA review. The Environmental Assessment ("EA") satisfied the review requirements. The Coso geothermal resource was identified as a viable and sustainable energy resource. This project was deemed necessary to provide the Coso Geothermal Facilities with a supplemental water supply to replace geothermal fluids lost through evaporation. The project proponent proposes to replace the lost geothermal fluids using make-up water extracted from injection systems at the Coso Hayward Ranch. A project feasibility study was completed and concluded the following:



The project was deemed necessary to provide the Coso Geothermal Facilities with a supplemental water supply to replace geothermal fluids lost through evaporation. The project proponent proposes to replace the lost geothermal fluids using make-up water extracted from injection systems at the Coso Hayward Ranch. A project feasibility study was completed and concluded the following:

- ❖ The Hay Ranch injection systems can yield sufficient and sustained volumes of make-up water to meet the project requirements:
 - Water quality is acceptable for the proposed use;
 - Make-up water from the Hay Ranch is expected to have negligible to no impact on current ground water users in Rose Valley; and
 - The project will provide additional water for injection into the geothermal reservoir, thus extending its life.

The proposed project was located within BLM's no action area map zone of the *West Mojave Plan* area. Both this and the *Environmental Impact Statement/Environmental Impact Report (EIS/EIR)* prepared for the *West Mojave Plan* were utilized as the guiding documents for the conformance review. UltraSystems prepared the EIR/EIS, which documented and analyzed the environmental impacts and mitigation measures associated with the proposed project. It also determined whether significant impacts would result if the proposed action or alternatives were implemented. Environmental review of each phase of the development for the Coso project was very extensive. The NEPA/CEQA documents prepared by UltraSystems for the project focused on cumulative impacts throughout the Coso KGRA, as well as project-specific impacts. The mitigation measures required under existing documents were implemented by the Coso Operator facility-wide. The incorporation of the Hay Ranch Water Extraction and Delivery System into the existing May Plan of Operation amendment to the Plan of Utilization, Development and Disposal will allow greater latitude in development of the geothermal resource, while resulting in no additional impacts other than those addressed in previous environmental documents.

Environmental Compliance Plans for Gerald Desmond Bridge Replacement Project - Port of Long Beach, CA

Client: Shimmick Construction Company, Inc./FCC Construction, Inc./Impregilo, S.p.A (SFI)

The Port of Long Beach (Port), in cooperation with the California Department of Transportation (Caltrans), is replacing the existing Gerald Desmond Bridge, which connects downtown Long Beach and State Route 710 (SR 710) to Terminal Island. The dilapidated and seismically deficient conditions of the existing bridge not only pose safety issues but may undermine its role as a vital link in the nation's trade system and a major commuter corridor. Originally built in the 1960s, the existing bridge was not designed to handle today's traffic volumes. The Gerald Desmond Bridge Replacement Project is needed to improve existing traffic flows traveling across the bridge, replace the physically deteriorated existing structure, and increase the vertical clearance beneath the bridge for the shipping traffic that passes below.

UltraSystems, as a subcontractor to SFI, was responsible for preparing detailed plans for implementing the Final Environmental Impact Report/Environmental Assessment's mitigation measures, Port of Long Beach contract requirements, and federal, state, and local environmental regulations. The first task was to prepare the Environmental Concept Plan, which summarized the environmental and health and safety requirements and assigned responsibilities to different parties. UltraSystems then prepared the Environmental Management Plan, which detailed SFI's responsibilities, and several subsidiary plans, including a Site-Specific Health and Safety Plan, a Storm Water Pollution Prevention Plan (SWPPP), a Spill Prevention Control and Countermeasures (SPCC) Plan, a Contaminated Materials Management Plan (CMMP), a Construction Noise Control and Monitoring Plan, an Air Quality Management Plan, and a Lead Compliance Plan. UltraSystems also assisted SFI in proposing an alternative technical concept for ramps at the western end of the bridge. First, we prepared a screening analysis of all CEQA impact categories, comparing the original and alternative designs. Next, we calculated changes in criteria pollutant, greenhouse gas, and mobile source air toxics emissions for the two concepts. Finally, adapting Caltrans methods, UltraSystems quantified the net present values of future streams of costs and benefits of changing to the alternative concept.

Los Angeles Department of Water and Power (LADWP) - Kern, Los Angeles, and San Bernardino Counties, CA

UltraSystems prepared an EA and biological survey for the BLM on a 25-mile segment of the Tehachapi Transmission Line project.

Southern California Edison (SCE) - Kern, Los Angeles, and San Bernardino Counties, CA

UltraSystems performed two biological surveys, including focused surveys for special-status flora and fauna, and a wetland delineation along a 20-mile segment of the Tehachapi Transmission Line project.



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