DOCKETED	
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Project Title:	Gem Energy Storage Center
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Trainings & Permits:

- o USFWS Permit TE-039640-5.1 -2001- present
 - California Gnatcatcher
 - Southwestern Willow Flycatcher
 - Fairy Shrimp
 - Quino Checkerspot Butterfly
- Arroyo Toad Handler -USFWS Approved 2010 present
- Least Bell's Vireo and California Gnatcatcher Nest Monitor -USFWS Approved 2001 – present
- CEQA Consultants Rotation List -County of San Diego, 2013 -present
- CDFW Memoranda of Understanding
- CDFW Scientific Collecting Permit #SC-192940005 -2007-present
- Brown-Headed Cowbird Trapping
- BLM Flat-tailed Horned Lizard Handler -2011 to present
- Desert Tortoise Council Survey Techniques Workshop - Certified 2007
- Wetland Training Institute USACE Wetland Delineator Training -Certified, 2007
- Belk Vernal Pool Branchiopods Natural History and Identification Training –2018
- o 40-Hour HAZWOPER -2020 present
- Strategic Growth Planning for Entrepreneurs -SDSU Lavin Entrepreneurship Center, 2013

Skills and Proficiencies

- Environmental compliance monitoring
- Nesting bird and raptor surveys
- Threatened and endangered species surveys
- Rare plant surveys
- o Habitat assessments and mapping
- Biological assessment reporting
- Impacts analysis and mitigation

Education

BS, Natural Resources and Environmental Sciences, May 1996 University of Illinois at Urbana/Champaign

BACKGROUND

KRIS ALBERTS is the Principal Biologist and Vice President of Blackhawk Environmental. He is a well-rounded biologist, environmental consultant, project manager, botanist, water resources and compliance specialist with over 23 years of experience and numerous state and federal permits. His comprehensive background includes many endangered and sensitive species surveys, flora and fauna surveys, large and small project management, excellent writing capabilities, wetland and native habitat restoration, jurisdictional delineations, SWPPP/BMP implementation, environmental compliance, regulatory agency consultations, CEQA/NEPA documentation and creative mitigation approaches. His people skills, adaptability, intuition, resourcefulness and leadership through positive reinforcement invariably lead to project success. He has been directly responsible for saving millions of dollars of mitigation on several projects and is well respected for his sensibilities toward simultaneously satisfying project goals, regulatory agency requirements and species conservation.

PROJECT EXPERIENCE

Energy

SDG&E Sunrise Powerlink Project, San Diego & Imperial Counties, CA -Project Manager / Lead Biologist/ Lead Avian Biologist / Botanist / Restoration Ecologist. Sunrise Powerlink was a new transmission line project that extended over 117 miles from near El Centro to the Scripps-Poway area of San Diego. The Project included several existing substation upgrades and reconductoring work along several existing distribution lines. Responsible for project management, monitor scheduling, nesting raptor/bird lead & surveys, lead author of draft habitat restoration & management plan (HRMP), USFS Biological Assessment (BA) and Management Indicator Species (MIS) report preparation, construction monitoring, California gnatcatcher habitat reassessments, MMCRP compliance, helicopter coordination, agency coordination, reporting, California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, burrowing owl & golden eagle nest surveys, arroyo toad & Quino checkerspot butterfly surveys, flat-tailed horned lizard handling & monitoring, peninsular bighorn sheep monitoring, Safe Worker & Environmental Awareness Program (SWEAP) training, QA/QC, and technical lead.

SDG&E Environmental Compliance Master Services Agreement, subs to AECOM and Chambers Group, San Diego & Imperial Counties, CA - Principal Biologist / Senior Scientist / Aquatic Resources Specialist. Numerous SDG&E projects include capital, wood to steel, pole set, new installations and renewable energy projects. Responsibilities include environmental compliance, construction monitoring, constraints analyses, mapping, Pre-activity Survey Report (PSR), Verification Report, Post-construction Report (PCR) Biotechnical Report (BTR), Biological Assessment/Biological Evaluation (BA/BE) & Request for Environmental Impact Review (REIR) report production, sensitive species flagging, water & cultural support for NCCP-related projects, biological components of Proponents Environmental Assessment/Permits to Construct (PTC), agency coordination, reporting, permitting, jurisdictional assessments/delineations, nesting raptor/bird surveys, threatened & endangered species surveys, flat-tailed horned lizard handling

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& monitoring, peninsular bighorn sheep monitoring, and other as-needed on-call services.

SDG&E South Bay Substation Relocation Project, sub to Black & Veatch, Chula Vista, San Diego County, CA - Environmental Inspector. Responsible for multidisciplinary personnel understanding & coordination, California Public Utilities Commission (CPUC) compliance, agency & project proponent coordination, meeting attendance, technical guidance & leadership, creative mitigation approaches and as-needed services for this substation in 2014.

SDG&E Artesian Substation Project, sub to Chambers Group, San Diego, San Diego County, CA - Principal Biologist. In 2016, this Project included significant substation upgrades, as well as wood to steel pole replacement and reconductoring activities. Conducted a full suite of 12 weekly protocol Quino checkerspot butterfly (QCB) surveys before, during and after the coastal QCB flight season. Served in a QA/QC capacity as the principal biologist overseeing the quality of the 45-Day Report submitted to the US Fish & Wildlife Service.

SDG&E Wood to Steel Pole Replacement Projects: Tie Lines 637, 682, 685, 6910, 6914, 6923, 6926 and Circuits 442, subs to RECON, LSA Associates, Chambers Group & Busby Biological Services, San Diego County, CA - Principal Biologist / Senior Biologist / Botanist/ Avian Biologist / Aquitic Resources Monitor / Technical Lead. Since 2008, responsibilities have included Pre-activity Survey Reports (PSR), existing conditions & sensitive species analyses, photographic documentation, impact area calculations, construction, biological & aquatic resources monitoring, daily reporting, nesting raptor/bird surveys, focused rare plant surveys, California gnatcatcher & least Bell's vireo presence/absence & nesting surveys, USFWS report production, cacti salvage & transplanting, project variance plan preparation, environmental awareness trainings, and served as a technical lead. Successfully identified numerous biological constraints present on these lines, including nesting birds, southwestern willow flycatcher, arroyo toad, Stephen's kangaroo rat, bald eagle, golden eagle, California gnatcatcher, least Bell's vireo, Quino checkerspot butterfly, fairy shrimp and endemic plant species.

SDG&E FiRM Projects, sub to AMEC and AECOM, Julian, Pine Valley, Santa Ysabel, Wynola, Lakeside, Fallbrook, De Luz & Ramona, San Diego County, CA - Principal Biologist / Botanist. In an effort to provide safe and reliable energy while also reducing fire risk, SDG&E is analyzing conductors and wood poles throughout its service territory to determine if maintenance or replacement is required for its FiRM (Fire Risk Management) program. Responsible for site walks, pre-activity survey reporting (PSR), existing conditions & sensitive species analyses, photographic documentation, impact area calculations, nesting bird surveys & reporting, construction monitoring, environmental tailboards, variance reporting, arroyo toad monitoring, weekly spot-check monitoring, and Contract Administrator and foremen coordination for multiple separate tie line sections on Circuits 971, 520, 444, 441, CPE1, 240 and 222 in 2014 and 2015.

SDG&E Cleveland National Forest Master Use Permit Project, sub to Chambers Group, sub to Crux SubSurface, Inc., San Diego County, CA - Senior Biologist / Botanist / Technical Lead / Environmental Scientist. This Project covers all the power transmission and distribution lines in and through the Cleveland National Forest (CNF), and was pursued by SDG&E to streamline permitting needs and documentation for all the lines in the CNF for Wood to Steel and Operations & Maintenance work, for a programmatic wood pole to steel pole replacement program. Conducted focused rare plant surveys, arroyo toad, Quino checkerspot butterfly, southwestern willow flycatcher, and least Bell's vireo & California gnatcatcher surveys in 2010 and 2016. Served as a technical lead and was responsible for contractor compliance assistance.

SDG&E Del Mar Reconfiguration Project, sub to AECOM, San Diego & Del Mar, San Diego County, CA - Principal Biologist. Condcuted USFWS protocol presence/absence surveys for the federally threatened coastal California gnatcatcher during the 2017 CAGN breeding season along the biological study area (BSA) of the proposed SDG&E Del Mar Reconfiguration Project to remove from service Transmission Lines (TL) 666D and 674A (Project). The BSA crosses several areas of intact open space in San Dieguito Lagoon and Torrey Pines State Natural Reserve, including a portion of the Los Peñasquitos marsh. The BSA is roughly defined as the 300-footwide transmission corridor along an approximately 7-mile stretch of TL 674A and TL 666D, with a minimum 100-foot buffer around each project feature. Prepared a USFWS 45-day report of findings that incorporated all survey results.

Southern California Edison San Dieguito Wetlands Restoration Project, sub to Chambers Group, Del Mar, San Diego County, CA -Principal Biologist. As mitigation for environmental impacts associated with the San Onofre Nuclear Generating Station (SONGS), this Southern California Edison project consisted of restoring, enhancing or creating various types of wetland and upland habitats in the San Dieguito basin. Responsible for biological construction monitoring, nesting bird surveys, threatened/endangered species surveys, California gnatcatcher nest surveys, clearance surveys, wildlife relocation activities, daily reporting, specialized reporting and other as-needed services in 2014.

Southern California Edison Coolwater to Lugo Transmission Project, sub to Aspen Environmental Group, San Bernardino County, CA - Principal Biologist / Botanist. This Project consists of the construction of a new 220 kV double-circuit transmission line from the existing

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Coolwater switchyard to the new Desert View substation, and a 500 kV single circuit transmission line that would run from the new Desert View substation to the existing Lugo substation. Various other project upgrades include new telecommunication lines installed between the Pisgah and Gale substations as well as new telecommunication lines between the existing Apple Valley substation and new Desert View substation. Assisted with the preparation of the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) by conducting field verification surveys, habitat evaluations and presence/absence surveys for desert tortoise, burrowing owl, golden eagle, desert kit fox and several listed plant species that are known to occur along the proposed alignment in 2014.

Southern California Edison Moorpark to Pardee 230 kV Transmission Line Project, sub to SWCA, Moorpark, Santa Clarita and Pardee, Los Angeles & Ventura Counties, CA - Principal Biologist. This Project includes the proposed installation of a new 230kV transmission line on existing tower and access road infrastructure from Moorpark to Pardee in Ventura and Los Angeles County. The Project extends for approximately 30 miles in both natural and developed habitats. Conducted breeding season and non-breeding season USFWS-protocol coastal California gnatcatcher surveys and reporting. During the 2018 breeding season, surveys occurred within mapped Critical Habitat while non-breeding season surveys occurred in 2018 and 2019 in suitable gnatcatcher habitat outside of mapped Critical Habitat.

Suncrest Substation Project, Alpine, San Diego County, CA -Project Manager / Senior Biologist. The Suncrest Substation was the primary new substation integral to the functioning of the Sunrise Powerlink project. This substation was the point at which 500kV were converted to 230kV. The Project impacted over 20 acres of previously natural land, including numerous cuts and fills and a substantial access road improvement. Served in project management, biological lead, MMCRP compliance, mitigation strategy identification, bullfrog abatement, and monitor scheduling capacities.

SDG&E Tie Line 649 Quino Checkerspot Butterfly Surveys, sub to Chambers Group, Otay Mesa to Chula Vista, San Diego County, CA - Principal Biologist. Conducted a full suite of USFWS protocol Quino checkerspot butterfly assessments and surveys in 2015 for SDG&E Transmission Tie Line 649 from Otay Mesa to Chula Vista. The surveys were conducted to support a pending wood to steel pole replacement project along approximately 7 miles of undeveloped land.

SDG&E Murphy Canyon Housing Restoration Area Weed Management, sub to AECOM, San Diego, San Diego County, CA - Principal Biologist. Conducted a pre-activity survey and report (PSR) and non-focused sensitive plant species survey on federal land within the Murphy Canyon Vernal Pool Preserve in the City of San Diego in 2015. The survey and PSR were conducted to support weed species removal and treatment practices undertaken annually by US Marine Corps contractors.

SDG&E Plaza Bonita Wood to Steel Pole Replacement and Undergrounding Project, sub to AECOM, Bonita, San Diego County, CA - Principal Biologist. This Project involved the replacement of a number of existing wood poles with steel poles and a section of undergrounded transmission line adjacent to the east side of Intersate 5 in the City of Bonita. Led aquatics reources monitoring efforts, nesting bird surveys and environemental tailboards.

Arizona Power Service Tower Relocation Project, sub to Resource Sciences & Planning, Black Canyon City, Yavapai County, AZ -Project Manager. This Project included access road grading and transmission tower relocation efforts in 2015 and 2016 just outside of Black Canyon City, Arizona. The Project was within desert tortoise habitat, and specifications required the presence of a desert tortoise monitoring biologist during construction. Facilitated communications between the monitor, the contractor, and the client while managing the project for budget and schedule.

Water Resources

Sierra Conservation Center Effluent Disposal Pipeline Project, Tuolumne County, CA -Project Manager. The Project involved the construction of an 8-mile pipeline from existing effluent ponds behind the Sierra Conservation Center to an 18-acre reservoir and over 300 acres of spray fields east of the Center. From 2007 through 2012, responsibilities included project management, regulatory agency coordination & mitigation negotiations, landowner access & conservation preserve negotiations, habitat restoration & management plan (HRMP) preparation for oak woodlands, wetland/riparian habitats, visual aesthetics screening & vernal pool deconstruction/ reconstruction & creation, rare plant surveys, sensitive fish species surveys, nesting bird surveys, tree counts & surveys, variance plan preparation, Caltrans coordination, construction monitoring, daily reporting, monitor scheduling, Mr. Alberts was also responsible for Environmentally Sensitive Area (ESA) designation, California Conservation Corps (CCC) coordination, prison staff coordination, and California tiger salamander assessments.

Palo Verde Wastewater Treatment Plant & Collection System Project, Palo Verde, Imperial County, CA - Principal Biologist. The proposed project is to replace failing septic systems in Palo Verde, California, with new sewer lines, a wastewater collection system and treatment plant. Since the systems have degraded over time, poor water quality in the Palo Verde Lagoon has become a



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public health issue for Palo Verde's residents, as well as the people of Mexico, with lagoon connectivity to the Colorado River that flows through Mexico. Responsible for agency coordination, mitigation ratio negotiations, sensitive fish species impact avoidance study, protocol burrowing owl surveys, southwestern willow flycatcher habitat mitigation plan, and report preparation in 2013.

New River Water Quality Improvement Project, sub to Micheal Baker International (MBI), Calexico, Imperial County, CA - Principal Biologist. The purpose of this Project is to reduce and remove pollution from the New River as it passes into the U.S. from Mexico by installing a new trash screen, a bypass encasement to divert the New River into a treatment area, and a 5-million gallon per day (GPD) pump back system to replace the treated water back into the river alignment just past the point of diversion. Performed a literature review, biological reconnaissance survey, vegetation mapping, photographic documentation, special-status species habitat assessment, formal jurisdictional delineation and report, biological technical report production.

Nestle Waters Southwestern Willow Flycatcher & Least Bell's Vireo Surveys, sub to Chambers Group, San Bernardino County, CA - Principal Biologist. This Project included a series of biological surveys, as well as threatened and endangered species surveys, in the large watershed that historically supplied water for the Arrowhead Springs Company, now owned by Nestle Waters. Conducted USGS protocol southwestern willow flycatcher and USFWS protocol least Bell's vireo surveys during the 2015 breeding season.

USACE Beach Sand Replenishment Project, **Orange County**, **CA** -Senior Biologist. This Project involved ongoing operations and maintenance activities to restore sand volume to eroded areas of public beaches for flooding and erosion protection purposes, while minimizing impacts to biological and aquatic resources on and adjacent to selected sites. Conducted grunion surveys and data collection on various public beaches along the Orange County coastline during the 2010 and 2011 spawning seasons.

CDFW Natural Resources Damage Assessment Oil Spill Response Project, sub to Industrial Economics, Inc., Carlsbad, San Diego County, CA - Principal Biologist. Served as part of a team of cross-disciplinary personnel to be trained on oil spill response protocols established by CDFW and other egulatory agencies in 2019. Obtained a 24-Hour HAZWOPER certification and oil spill response protocol training via in-field applications.

Crafton Hills Reservoir Expansion & Pipeline Project, **sub to Environmental Science Associates (ESA)**, **San Bernardino County, CA** -Project Manager / Senior Biologist / Botanist / Wetland Scientist. This Project proposed to expand the capacity of an existing reservoir by building an additional dam, pipeline extension and linkage channel to a new reservoir addition in the adjacent canyon. The Project would involve the conversion of wild lands to a flooded valley in perpetuity, to serve additional water demands for planned housing developments in the region. Responsible for project management, literature reviews, jurisdictional delineations & report preparation, focused rare plant surveys, San Bernardino kangaroo rat trapping, vegetation mapping, baseline biological surveys, and Biological Technical Report (BTR) production.

East Branch Extension Phase II Project, sub to ESA, San Bernardino County, CA - Project Manager / Senior Biologist / Botanist / Wetland Scientist. This Project involved the construction of new waterlines to connect various portions of existing waterlines, in order to increase the capacity and efficiency of the existing systems in the Santa Ana River and Mill Creek floodplains in Redlands and Mentone. Responsible for project management, literature reviews, jurisdictional delineations & report preparation, protocol California gnatcatcher presence/absence surveys, focused rare plant surveys, vegetation mapping, baseline biological surveys, and Biological Technical Report (BTR) production from 2007 to 2009.

SDG&E Aquatic Resources On-Call Services, subs to RECON and AMEC, San Diego & Imperial Counties, CA - Principal Biologist. Performed as-needed jurisdictional assessments, delineations, construction monitoring, reporting and permit compliance.

South Bay Reclaimed Water Truck Fill Station Project, San Diego, San Diego County, CA - Project Manager / Lead Biologist. This Project involved the construction of a new filling station, driveway truck turnaround, and associated appurtenant feature upgrades necessary to supply reclaimed water to trucks for construction projects. Subject properties included both City of San Diego and County of San Diego lands. Served in project management and as lead monitor. Conducted protocol California gnatcatcher & least Bell's vireo presence/absence & nest surveys, devised noise mitigation strategies, provided environmental awareness trainings and weekly summary reporting.

Olivenhain Water District Trunk Sewer Project, sub to Rocks Biological Consulting, Encinitas, San Diego County, CA - Principal Biologist. Conducted USFWS/CDFW protocol-level surveys for Belding's savannah sparrow, southwestern willow flycatcher, least Bell's vireo & California gnatcatcher at San Elijo Lagoon and Escondido Creek in the Encinitas/Olivenhain area of San Diego County. The area surveyed included the trunk sewer centerline up to 500 feet on either side, arterial sewer lines and the entire lagoon area from Interstate 5 eastward.

Santa Ana River Parkway & Open Space Plan, San Bernardino, sub to Placeworks, Riverside, Los Angeles & Orange Counties, CA -Principal Biologiist. The Santa Ana River Parkway & Open Space Plan is a regional land use plan centered on the Santa Ana River





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from its headwaters to the Pacific Ocean and includes a one-mile buffer from its banks. The Project crosses four counties in southern California, encompassing dozens of habitat types, many of them sensitive. Served in an advisory capacity to assist in habitat restoration prioritization.

Sorrento Valley/Los Penasquitos Lagoon Restoration Project, sub to ESA, sub to Burns & McDonnell, San Diego, San Diego County, CA - Principal Biologist / Project Manager. The Sorrento Valley/Los Penasquitos Lagoon Restoration Project is proposed by the City of San Diego as a result of localized flooding of light industrial spaces along the Los Penasquitos Creek in the 2015/2016 rainy season. The project would restore historic salt marsh habitat, increase tidal inundation, remove exotic plant species, restore degraded habitats, reduce mosquito breeding habitat and facilitate fresh water flows during the rainy season and low flow regimes. The project would be among the largest marshland restoration efforts ever conducted in California. In 2016, conducted USFWS protocol least Bell's vireo and southwestern willow flycatcher surveys for ESA in Phases A and B of this Project during the 2016 breeding season and served in a QA/QC capacity to oversee the final 45-Day Report for USFWS submittal. In spring and summer of 2020, Blackhawk and Mr. Alberts conducted focused rare plant surveys, jurisdictional delineation surveys, updated vegetation mapping surveys and City of San Diego Biological Survey Report preparation, utilizing all previous surveys and reports completed for this project. Standalone rare plant and jurisdictional delineation reports were completed and incorporated into the Biological Survey Report. Thirteen rare plant species were documented, accounting for over 2,000 individuals, and approximately 160 acres of jurisdictional wetlands were mapped. Twenty-four vegetation communities were mapped in great detail to aid in project design.

Federal

Marine Corps Air Station Miramar Non-Time Critical Removal Action at IR Site 19 Project, sub to AECOM Marine Corps Air Station Miramar, San Diego County, CA - Principal Biologist. Monitored a lead shot and clay pigeon remediation project on approximately 30 acres of a decommissioned gun range on MCAS Miramar during the summer and fall of 2020. The project occurred adjacent to a vernal pool system occupied by the federally-endangered San Diego fairy shrimp and coastal sage scrub occupied by the federally threatened California gnatcatcher. The primary role was to ensure that all vernal pools occupied by fairy shrimp were not affected by the project.

Marine Corps Air Station Miramar Quino Checkerspot Butterfly Survey, sub to Huffman Environmental, Marine Corps Air Station Miramar, San Diego County, CA - Principal Biologist. Conducted U.S. Fish & Wildlife (USFWS) protocol-level Quino checkerspot butterfly (QCB) surveys at MCAS Miramar during the 2018 USFWS protocol survey season. Host plant assessments and mapping efforts were completed to map host plant distribution on a base-wide level, while QCB presence/absence surveys were conducted to ascertain base-wide QCB distribution.

Angeles National Forest Sand Fire Restoration Project, sub to Geomorphis LLC, Angeles National Forest, Los Angeles County, CA -Principal Biologist. Produced a wildlife-oriented biological evaluation/biological assessment (BA/BE) report to address impacts associated with habitat restoration procedures proposed at several dozen pre-selected plots within the Angeles National Forest that were burned during the Sand Fire.

Naval Air Station North Island (NASNI) Building 651 Demolition Project, sub to RQ Construction, Inc., NASNI, San Diego County, CA -Principal Biologist. Conducted nesting passerine and nesting gull surveys on and within the Building 651 warehouse on North Island Naval Air Station prior to and during the demolition of the building in 2015. Obtained a Special Use Permit through USFWS to support the collection of the young of several species thought most likely to nest on or in the building, including western gull, house finch, mourning dove, great horned owl, and barn owl.

Ysidora Basin Restoration Project, sub to Apex Contracting & Consulting, Marine Corps Base Camp Pendleton, San Diego County, CA - Principal Biologist. Conducted NEPA Categorical Exclusion (CATEX) compliance activities, arroyo toad clearance surveys, arroyo toad fence monitoring, nesting bird surveys, construction monitoring and daily reporting in support of ongoing large-scale habitat restoration activities in 2015, within the Ysidora Basin area of Camp Pendleton.

Naval Base Point Loma Building 400 Redevelopment Project, sub to DLF Construction, Inc., San Diego, San Diego County, CA -Principal Biologist / Project Manager. Conducted nesting bird surveys and provided construction monitoring, in addition to nest survey reports and strategizing nest avoidance methods with the Contractor for the Naval Base Point Loma Building 400 Redevelopment and Fencing Security Project in 2019.

Miramar National Cemetery Natural Resources Managament Consulting Services, Department of Veterans Affairs, San Diego, San Diego County, CA - Principal Biologist. Oversaw natural resources managagement, preserve management, quarterly and annual monitoring reports, and addressed remedial measures to enhance natural resources within preserved lands within and around

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Miramar National Cemetery on MCAS Miramar in 2019. Unique biological resources present include vernal pools, San Diego fairy shrimp, California gnatcatchers, drainage features, hundreds of acres of natural vegetation communities, rare plants and nesting birds.

Chollas Grove Childhood Development Center Project, sub to T.B. Penick & Sons, Inc., San Diego, San Diego County, CA -Senior Biologist. This Project involved the construction of a new childhood development facility, daycare and parkland adjacent to military housing within the City of San Diego. The Project was adjacent to natural canyonlands that were known to contain several pairs of California gnatcatcher. Responsible for NEPA CATEX complance, conducted California gnatcatcher nest surveys, nesting bird surveys, noise and construction monitoring.

US Navy Mountain Warfare Training Camp Michael Monsoor Quino Checkerspot Butterfly Surveys, sub to KMEA, San Diego County, CA - Principal Biologist / Project Manager. Managed subcontractors Cooper Biological Services and Victor Novik, who conducted a basewide protocol Quino checkerspot butterfly survey on Camp Michael Monsoor in east San Diego County.

Thread-leaved Brodiaea Surveys, Marine Corps Base Camp Pendleton, sub to Klutz Biological, San Diego County, CA -Botanist. Conducted protocol-level surveys for the federally threatened, State-endangered thread-leaved brodiaea in the Santa Margarita Mountains within Camp Pendleton in 2015.

Basewide Infrastructure Upgrade Project: P1093 and P1094 12kV Wood to Steel Pole Replacement Project, sub to URS, Marine Corps Base Camp Pendleton, San Diego County, CA - Principal Biologist. This wood to steel pole replacement project is a part of Marine Corps Base (MCB) Camp Pendleton's Base-wide Infrastructure Upgrade project. Tie Lines P1093 and P1094 include many primary and arterial distribution lines throughout Camp Pendleton, essential to support Base operations. The alignment traverses habitats of numerous sensitive, threatened and/or endangered wildlife species, including California gnatcatcher, California least tern, least Bell's vireo, southwestern willow flycatcher, Pacific pocket mouse, Stephen's kangaroo rat, arroyo toad, fairy shrimp, southwestern pond turtle and burrowing owl, among others. In addition to monitoring for these species, conducted arroyo toad presence/absence surveys and relocated arroyo toads found inside fenced areas around poles slated for replacement prior to construction to safe areas away outside the work areas in 2013.

Riparian Restoration, Enhancement & Monitoring Plan, Santa Margarita River Flood Plain, U.S. Navy, sub to Insight Environmental, Engineering & Construction, Inc., Marine Corps Air Station Pendleton, San Diego County, CA -Senior Biologist / Botanist. Designed and oversaw installation of nearly 50 acres of riparian woodland at the Marine Corps Air Station, Camp Pendleton from 2006 to 2007. The comprehensive design included resource protection, weeding, plant and seed lists, planting methods and care after planting, including irrigation inspections. Provided monitoring, instructions and advice to the landscape contractor, and assistance with topics, including weed control and endangered species avoidance, throughout the growing period. Monitored ground water, tree height related to aircraft safety, and various wildlife monitoring functions. Performed nest clearance surveys with a focus on least Bell's vireo prior to weed eradication.

Quino Checkerspot Butterfly Surveys, United States Fish & Wildlife Service (USFWS), San Diego County, CA - Principal Biologist. Conducted U.S. Fish & Wildlife (USFWS) protocol-level Quino checkerspot butterfly (QCB) surveys at two documented QCB reference sites on BLM-managed land in southern San Diego County during the 2013 and 2014 seasons - western Otay Mountain & the Dulzura Occurrence Complex.

United States Army Corps of Engineers Santa Ana River Restoration Project, sub to Chambers Group and Ultrasystems, Norco, Riverside County, CA - Principal Biologist. This multi-year project involves the removal of large stands of non-native vegetation, primarily giant reed (*Arundo donax*), from the Santa Ana River floodplain in order to improve habitat for threatened and endangered, or otherwise sensitive, bird species known to breed in the area. Conducted protocol surveys for least Bell's vireo and southwestern willow flycatcher.

Arroyo Toad Survey of the Santa Margarita River at Fallbrook Naval Ordnance Detachment, Department of the U.S. Navy, sub to Varanus Biological, San Diego County, CA -Biologist. The study area included the entire Santa Margarita River along the north border of the Fallbrook Naval Ordnance Detachment. Assisted with protocol level arroyo toad surveys, bullfrog eradication activities, and bullfrog gut content analyses in 2003.

Monument Fuels Management Project, BLM Palm Springs-South Coast Field Office, sub to Labat Environmental, Snow Creek and Pinyon, Riverside County, CA -Project Manager / Senior Biologist / Botanist. This Project included a new literature review, field surveys, and a report updating an Environmental Assessment (EA) for the Monument Fuels Management Project of the Bureau of Land Management (BLM). Led a small team of biologists and botanists in conducting a standard bio-reconnaissance survey, with a focus



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on potentially occurring sensitive plants or animals in the area, including peninsular bighorn sheep, and produced a report of the findings in 2008. Co-wrote the Environmental Assessment and ensured quality control.

International Border Fuel Break Project, BLM Palm Springs-South Coast Field Office, sub to Labat Environmental, San Diego County,

CA - Project Manager / Senior Biologist / Botanist. This Project included a new literature review, field surveys, and a report updating an Environmental Assessment (EA) for the International Border Fuel Break Management Project of the Bureau of Land Management (BLM). The Project was along the international border over 60 miles in length from West Otay Mountain to east of Campo, California, and covered numerous undisturbed lands harboring dozens of sensitive plant and animal species, including arroyo toad, Quino checkerspot butterfly, California gnatcatcher, burrowing owl, Mexican flannelbush, and Otay ceanothus, among others. Conducted standard bio-reconnaissance surveys and vegetation mapping services, with a focus on potentially-occurring sensitive plants or animals in the area, and produced a report of the findings in 2008 and 2009. Co-wrote the Environmental Assessment and ensured quality control.

BLM International Border Fuel Break 2019 Project, BLM, CALFIRE, sub to Aspen, San Diego & Imperial Counties, CA - Principal Biologist. Conducted baseline biological surveys, vegetation communities mapping, sensitive species analyses, datasheet completion and photo-documentation of BLM-owned areas along the US/Mexico border scheduled for vegetative fuel reduction measures, as well as BLM-owned parcels west of the Salton Sea for tamarisk removal procedures in 2019.

Groundwater Monitoring Wells Replacement Project, Marine Corps Base Camp Pendleton, U.S. Navy, Naval Facilities Engineering Command, Southwest (NAVFAC SW), sub to CDM Constructors, San Diego County, CA -Senior Biologist. CDM was contracted to replace and construct new groundwater monitoring wells in Areas 26 and 52 on Camp Pendleton. This process involved drilling, developing and testing the wells, in addition to constructing the surrounding building and associated structures. Construction took place in areas with suitable habitats for four federally threatened or endangered species: arroyo toad, least Bell's vireo, southwestern willow flycatcher and California gnatcatcher. Inspected the enclosure fence and suggested repairs, performed clearance surveys for arroyo toads and conducted compliance monitoring to satisfy conditions outlined in the NEPA Categorical Exclusion (CATEX) document on an as-needed daily basis in 2010 and 2011. Conducted nest clearance surveys and performed noise mitigation/monitoring.

Groundwater Well Project, Marine Corps Air Station Pendleton, U.S. Navy, Naval Facilities Engineering Command, Southwest (NAVFAC SW), sub to Chambers Group, San Diego County, CA - Principal Biologist. This Project involved exploratory and final well drilling and installation for additional groundwater capabilities to serve the projected water needs of Marine Corps Air Station Pendleton. Served as lead construction monitor in 2014 and 2015, advising the foreman and work crews on arroyo toad avoidance strategies as they pertained to the Categorical Exclusion document specific for the Project, per the National Environmental Policy Act (NEPA).

Water Pipeline Installation Project, sub to Orion, Marine Corps Base Camp Pendleton, San Diego County, CA -Senior Biologist / Botanist. This Project involved the installation of 5.5 miles of fiber optic backbone on Marine Corps Base (MCB) Camp Pendleton. Backbone installation involved Horizontal Directional Drilling (HDD) under the Santa Margarita River. Conducted focused surveys for southwestern willow flycatcher, least Bell's vireo, and arroyo toad, as well as pre-construction nesting bird surveys and vegetation removal monitoring.

Base-wide Least Bell's Vireo Presence/Absence Surveys, sub to Griffith Wildlife Biology, Marine Corps Base Camp Pendleton, San Diego County, CA -Biologist. Surveyed stretches of the Santa Margarita River, San Mateo River, Pilgrim Creek, and several tributary drainages as part of the base-wide least Bell's vireo survey crew in 2000 and 2001.

The Effects of Helicopter Noise on the Reproductive Success of the Coastal California Gnatcatcher, Department of the U.S. Navy, Marine Corps Air Station Miramar, San Diego County, CA -Field Manager / Biologist / Botanist. Hubbs-Sea World Research Institute conducted a five-year study on the potential effects of helicopter noise on the reproductive success of the California gnatcatcher (CAGN) that covered all 23,065 acres of the Station, utilizing CAGN nest-based vegetation transects annually, as well as permanent vegetation transects, regardless of CAGN suitability, established over a grid pattern on the Station. Served as a surveying CAGN biologist during the CAGN breeding season and as lead botanist during the non-breeding season from 1997 through 2002. As field manager, responsibilities included scheduling, survey assignments, QA/QC, document preparation, data management, while conducting daily surveying responsibilities. Botanical activities involved data collection on six line and belt transects centered around all CAGN nest sites as well as 70 permanent vegetation transects throughout the remainder of the Station.

he Effects of Helicopter Noise on Least Bell's Vireo, Department of the U.S. Navy, Marine Corps Base Camp Pendleton, San Diego County, CA -Field Manager / Biologist / Botanist. Hubbs-Sea World Research Institute, in cooperation with Griffith Wildlife Biology, conducted an extended five-year study on the potential effects of helicopter noise on the reproductive success of the least Bell's

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vireo (LBVI) on Marine Corps Base Camp Pendleton (Pendleton). The study focused on the riparian floodplain of the Santa Margarita River in the flight path of Marine Corps Air Station Pendleton (Air Station), utilizing LBVI nest-based vegetation transects annually, as well as permanent vegetation transects, regardless of LBVI suitability, established over a grid pattern on Pendleton. Served as surveying LBVI biologist during the LBVI breeding season and as lead botanist during the non-breeding season from 1999 through 2002. As field manager, responsibilities included scheduling, survey assignments, QA/QC, document preparation and data management, all while conducting daily surveying responsibilities. Botanical activities involved data collection on line transects using the stacked cube methodology centered around all LBVI nest sites as well as permanent vegetation transects throughout the remainder of the study area.

Effects of Fixed-Wing Military Aircraft Noise on Nesting Passerines, San Diego State University (SDSU) Foundation, Marine Corps Air Station (MCAS) Miramar, San Diego County, CA -Ornithologist. Conducted passerine nest search surveys in MCAS Miramar for a study to assess nesting bird responses to overhead helicopter flights from various altitudes in 1997. Results were used as baseline data for the "Effects of Fixed-Wing Military Aircraft Noise on California Gnatcatcher Reproduction" study.

Marine Corps Air Station Miramar Bat Use and Relative Abundance Study, Hubbs-Sea World Research Institute, Marine Corps Air Station (MCAS) Miramar, San Diego County, CA -Biologist. Assimilated data gathered on bat species usage of the various habitats within and adjacent to MCAS Miramar from 1999 to 2001. Assisted on diurnal and nocturnal bat surveys and studied occupied bat roosts in several areas of the Station. Produced Station-specific range maps for a variety of bat species and wrote a highly detailed report on bat usage of the Station.

Fallbrook Naval Ordnance Detachment Bat Exclusion Project, San Diego State University (SDSU) Foundation, San Diego County, CA -Biologist. A public health hazard was identified at the Fallbrook Naval Ordnance Detachment's gymnasium in 1997, when Mexican free-tailed bats were observed roosting by the hundreds in the same facility that contained a café. Conducted diurnal and nocturnal surveys to determine roost locations, installed exclusion netting, built and installed bat houses, and conducted monitoring of bat boxes to gauge usage.

Vertebrate Species Report of Marine Corps Air Station (MCAS) Miramar, San Diego State University (SDSU) Foundation, San Diego County, CA -Technical Writer. Assumed writing duties for retiring professor Dr. George Cox in 1997, on an unfinished comprehensive report documenting all known vertebrate species of MCAS Miramar and their habitat suitability indices.

Development

Santa Catalina Island Company Development Projects, Santa Catalina Island Company, sub to Sage Environmental Group, City of Avalon, Los Angeles County, CA - Principal Biologist / Project Manager. Three distinct development projects are proposed in and adjacent to the City of Avalon on Catalina Island: Kite Hill Country Club, Cliffs Hotel and the Master Plan Phase I Residential Development. Performed literature reviews, field surveys and data collection services for all three projects from 2014 to present. Field surveys consisted of vegetation mapping, general wildlife surveys, habitat assessments for special status wildlife species, habitat assessments for the Santa Catalina Island fox and focused rare plant surveys. Assessed potentially jurisdictional water bodies. Completed the Biological Technical Report (BTR) for the Kite Hill Country Club Project and is awaiting approval to proceed with the preparation of the other two project BTRs.

Torrey Brooke II Housing Development Project, Williams Group LLC, San Diego, San Diego County, CA -Project Manager / Principal Biologist. This Project involved the construction of two new single-family homes on previously undeveloped lands in Carmel Valley of north-central San Diego. Oversaw environmental compliance activities pursuant to the City of San Diego guidelines and its CEQA Mitigated Negative Declaration in 2015. Coordinated planned monitoring methods, conducted compliance reporting and SWPPP compliance, nesting bird surveys, environmental training, monitor scheduling, and construction monitoring.

Magnolia Tank Farm Development Project, Shopoff Realty, Huntington Beach, Orange County, CA - Principal Biologist / Project Manager. The proposed project is to convert a previously existing oil tank farm into a hotel and/or high-density residential development on the coast of Huntington Beach, adjacent to the preserved area of Magnolia Marsh. Conducted literature reviews, biological reconnaissance surveys, special-status species habitat assessments, a jurisdictional delineation, and a nesting bird suitability analysis. Produced a highly vetted biological letter report, complete with mitigation strategies proposed by Blackhawk with input from the project team.

Victoria Park Subdivision Development Project, CRS GC Inc., Brawley, Imperial County, CA - Principal Biologist / Project Manager. The proposed Project is a phased, residential development project in Brawley, CA. Completed literature review, conducted a biological reconnaissance survey, special-status species habitat assessment, vegetation mapping, jurisdictional assessment,

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focused burrowing owl survey and report, biological letter report, and project management tasks to support the project in 2017.

El Portal Subdivision Development Project, CRS GC Inc., Calexico, Imperial County, CA - Principal Biologist. Completed a literature review, conducted a biological reconnaissance survey, special-status species habitat assessment, vegetation mapping, jurisdictional assessment, photographic documentation, focused burrowing owl surveys and report, biological letter report, and project management tasks to support the project in 2018.

California Department of Motor Vehicles Field Office Project, sub to LSA Associates, Inc., Santa Maria, Santa Barbara County, CA -Principal Biologist. This Project was proposed to construct a new DMV office and testing facility on currently vacant land within the City of Santa Maria. Completed a literature review, conducted a biological reconnaissance survey, vegetation mapping, specialstatus species habitat assessment, jurisdictional assessment, photographic documentation, biological technical letter report production, and Initial Study/Mitigated Negative Declaration (ISMND) biological section production tasks in support of the proposed project.

City of Industry Development Project, sub to Sage Environmental Group, Los Angeles County, CA - Project Manager. Served as project manager for nesting bird surveys and nesting least Bell's vireo surveys for an ongoing commercial development project along State Routes 57 and 60 in the City of Industry in 2015.

Diamond & Melrose Pending Development Project, Hunter Irrigation, Thomas Martin, San Marcos, San Diego County, CA - Principal Biologist / Project Manager. Conducted USFWS protocol least Bell's vireo surveys in riparian habitats on 23 acres of undeveloped land in the City of San Marcos in 2015. The Project as proposed would develop a 5-8 acre commercial space, parking lot, street extension, and infrastructure upgrades while leaving the rest as open space. Participated in site walks, mitigation strategy identification, site re-assessments from outdated surveys, sensitive plant and wildlife species identification, jurisdictional waters assessments and related tasks to assess the development feasibility.

Rose Hills Memorial Park Expansion Project, sub to Sage Environmental Group, Whittier, Los Angeles County, CA - Principal Biologist / Project Manager. Performed California gnatcatcher and nesting bird surveys, reporting, and coordination with landscape maintenance crews to avoid adverse impacts to nesting birds and gnatcatchers during the 2015 nesting season. Administered basic project management activities.

Marblehead Coastal Development Project, sub to Chambers Group, Inc., San Clemente, Orange County, CA - Principal Biologist. Marblehead is the largest coastal development project from northern Los Angeles County to the US/Mexico border. The Project as designed includes a commercial district and several hundred new single-family homes and condominiums situated on the Pacific Coast in San Clemente, CA. Conducted an onsite gull survey to develop nuisance avoidance strategies and prepared a letter report of recommendations from 2007 to 2008. Conducted weekly California gnatcatcher nest surveys in large coastal sage scrub restoration plots situated on the slopes and canyons immediately adjacent to the residential and commercial development sites and provided biological monitoring during construction in 2014.

Corona Lake Development Project, sub to WRA, Inc., Corona, Riverside County, CA - Principal Biologist. Conducted USGS protocol surveys for the federally endangered southwestern willow flycatcher (SWFL) at the Lee Lakes properties site surrounding Corona Lake as part of a project permitting update process under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) in 2014. Prepared a biological survey letter report for agency submittal to support permitting of the proposed project.

Paradise Valley Specific Plan Development Project, sub to Aspen Environmental Group and GLC Enterprises, LLC, Riverside County, CA - Wetland Scientist / Senior Biologist. This large-scale jurisdictional delineation systematically covered approximately 5,000 acres of a large alluvial fan system and desert foothills north of the Salton Sea and east of the Coachella Valley in unincorporated Riverside County. Interstate 10 bisected the Project site, proposed for residential and commercial development. Worked with Aspen Environmental to map and measure all drainage features, collect upstream and downstream photographs, and record sub-metric GPS locations for every drainage feature. Stream widths were collected for US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB) and California Department of Fish & Wildlife (CDFW) jurisdictional limits, following the latest protocols and court rulings, including the Arid West Supplement and Rapanos and Carabell court cases.

First Avenue Residential Development Project, Private Landowner, San Diego, San Diego County, CA - Principal Biologist. The Project involved vacant land development within the City of San Diego, with a multi-dwelling residential property and an art studio. Recorded all observed plant and wildlife species, characterized existing conditions and land uses, mapped vegetation communities, collected representative photographs, and assessed the potential for the Project site to harbor any threatened, endangered or otherwise sensitive species, as well as any species covered by the City of San Diego's MSCP and Narrow Endemic list (as adopted by the City council). Prepared a Biological Survey Letter Report in accordance with the City's Biological Guidelines.



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Onondaga Street Development Project, Private Landowner, San Diego, San Diego County, CA - Principal Biologist. The Project included the proposed development of a large outdoor deck behind a single-family home adjacent to City of San Diego-designated Multiple Species Conservation Plan (MSCP) Open Space. Provided project management, conducted sensitive species literature review, baseline biological survey, focused plant survey, vegetation mapping, photographic documentation, impact analysis, and produced a MSCP Biological Letter Survey Report.

Pine Hills Egg Ranch Project, sub to Michael Baker International, Ramona, San Diego County, CA - Principal Biologist. As a County of San Diego-approved CEQA Consultant for Biological Resources, completed a report review on behalf of Michael Baker International for a proposed egg ranch expansion project located in Ramona, California.

Jamul Commercial Development Project, Woodcrest Companies, Jamul, San Diego County, CA - Principal Biologist. This Project was proposed to construct a new Tractor Supply Company and self-storage units on an old olive orchard and disturbed lands in Jamul, CA. Conducted a literature review, biological reconnaissance survey, special-status species habitat assessment, focused rare plant survey, sensitive species mapping survey, and jurisdictional assessment of the Project site in 2017 and 2018. Produced a County of San Diego Biological Resource Letter Report and submitted the report to the County of San Diego for review and approval.

D Street Mixed Use Development Project, Woodcrest Companies, Ramona, San Diego County, CA - Principal Biologist. This Project, beginning in 2018, includes the proposed development of two vacant lots in the City of Ramona into a mixed-use single family residential/light industrial use. A custom motorcycle shop is proposed within the light industrial portion. Conducted a biological reconnaissance survey and jurisdictional assessment. Prepared a due diligence memo report stating that the proposed project would not have any impacts on any special-status species or sensitive biological resources.

City of San Diego Cavallo Twinhomes Development Project, K.C. Yellapu, San Diego, San Diego County, CA - Principal Biologist. This Project involved the biological assessment of two parcels located within the City of San Diego Multiple Species Conservation Plan (MSCP) Subarea Plan Northern Subarea. Conducted a full review of biological resources and habitat evaluation for MSCP-covered, narrow endemic and otherwise sensitive species, vegetation mapping, aquatic resources assessment and general constraints analysis for the proposed development of approximately 1.4 acres for private residences on previously undeveloped land in Carmel Valley. Coordinated the completion of a Biological Letter Survey Report per City guidelines.

Village 605 Center Freeway Pylon Sign Project, sub to EPD Solutions, Inc., Long Beach, Los Angeles County, CA - Principal Biologist. A large pylon billboard was proposed in 2016 as part of the Village 605 Center in Long Beach off Interstate 605. Provided an expert opinion on the anticipated absence of significant avian impacts in the form of a business letter.

Randy Lane Residential Development Project, sub to Klein-Edwards Professional Services, Bonita, San Diego County, CA - Principal Biologist. The proposed Project would redevelop an existing home and surrounding natural lands on a two-acre parcel in Bonita, California into four new single-family residential homes. Mapped host plant patch locations suitable for the potential presence of the federally endangered Quino checkerspot butterfly and existing vegetation types, conducted protocol California gnatcatcher surveys, and provided reports for the butterfly assessment and the gnatcatcher surveys.

Edina Court Residential Development Project, Private Landowner, Poway, San Diego County, CA - Principal Biologist. The proposed Project involves the development of a single-family residence on an undeveloped one-acre parcel of land. Conducted an initial site visit in 2014 to catalog all observed plant and wildlife species, characterize existing conditions and vegetation communities, collect representative photographs and assess the potential for the site to harbor any threatened, endangered or otherwise sensitive species, as well as any species covered by the Poway Subarea Habitat Conservation Plan. Assessed the site for potentially jurisdictional waters of the US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish & Wildlife (CDFW). Prepared a biological resources survey technical report in accordance with the Poway Subarea Habitat Conservation Plan.

Washburn Invasive Plant Species Removal Project, Private Landowner, Poway, San Diego County, CA - Principal Biologist. This Project involved invasive plant removal in order to enhance open space on privately owned land in the City of Poway. Conducted an initial site visit in 2014 to catalog all observed plant and wildlife species, characterize existing conditions and vegetation communities, collect representative photographs and assess the potential for the site to harbor any threatened, endangered or otherwise sensitive species, as well as any species covered by the Poway Subarea Habitat Conservation Plan. Assessed the site for potentially jurisdictional waters of the US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish & Wildlife (CDFW). Prepared a letter report in accordance with the Poway Subarea Habitat Conservation Plan.

Marlow Residential Development Project, Private Landowner, Poway, San Diego County, CA - Principal Biologist. This Project involved

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the construction of a large single-family residence in the outskirts of Poway, CA. Provided project management, photodocumentation, conducted nesting bird surveys, California gnatcatcher presence/absence surveys, permit compliance, City consultation & coordination and meeting tasks on behalf of the landowner before and during construction in 2018.

Corona Masters Residential Development Project, NI Associates, Corona, Riverside County, CA - Senior Biologist / Wetland Scientist. A housing development was proposed for an undeveloped area of Corona within and adjacent to existing housing. performed general wildlife surveys, burrowing owl surveys, vegetation mapping services, and a jurisdictional delineation of the approximate 20-acre site in 2007. Provided a constraints analysis of the site to aid in the construction schedule and permitting needs.

Rosamond Residential Development Project, Capital Pacific Homes Inc., Rosamond, Kern County, CA - Senior Biologist. Consulted Capital Pacific Homes on coordination and negotiations with regulatory and planning agencies with jurisdiction over this proposed residential development. Conducted or assisted on protocol-level surveys for the Mohave ground squirrel, burrowing owl and the desert tortoise on this Mojave Desert site.

Brookfield Cleveland Avenue Residential Development Project, Ontario, San Bernardino County, CA - Senior Biologist. Conducted field surveys on the Project site prior to construction activities in 2007, involving heavy equipment and windrow tree removal to determine if active nests of species protected by the Migratory Bird Treaty Act (MBTA) and/or by the California Department of Fish and Game (CDFG) were present in the construction zone or within a buffer of 500 feet.

Senior Living Community Development Project, Canyon Creek Development, Inc., Highland, San Bernardino County, CA - Senior Biologist. Canyon Creek Development, Inc. proposed to develop a senior living community on an approximately 5-acre area in the City of Highland, San Bernardino County, California. Extensive grading is expected to be required prior to construction. Served as technical lead on bat and avian issues on and adjacent to the site in 2008. Led and conducted burrowing owl surveys per the Western Riverside County MSHCP protocol.

Sun City Commercial Development Project, Hollander Management, LLC., Sun City, Riverside County, CA - Senior Biologist. Conducted a habitat assessment for burrowing owl and sensitive plants on a 3.07-acre site according to Western Riverside County MSHCP guidelines. A Bio-Technical Report (BTR) was prepared based on these findings and submitted to the County.

Rancho Las Flores Development Project, Rancho Las Flores Development, Hesperia and Rancho Las Flores, San Bernardino County, CA - Senior Biologist. Worked with the client to keep biological data up to date on a stalled development project. Conducted surveys for arroyo toad, southwestern pond turtle, and least Bell's vireo on this site in 2003. In 2006 and 2007, worked with GIS analysts and a host of biologists to evaluate a large land area represented on a cadre of maps, in pre-burn and post-burn conditions. Biological data had to be updated based on these changed site conditions and listing statuses of sensitive plant and animal species known to occupy or that could occupy the area.

Copper Meadows Administrative Permit Project, Woodcrest Real Estate Ventures, Ramona, San Diego County, CA - Principal Biologist. Led biological and water resources disciplinary efforts in 2014 on behalf of the private landowner of Copper Meadows Event Training equine facility in their pursuit of an Administrative Permit pursuant to Tier 3 of the County of San Diego's Equine Ordinance. Conducted a site visit, literature review, sensitive species habitat & jurisdictional waters assessment, equine ordinance compliance, letter report production, and permit assistance to facilitate the permit process.

Egson Residential Development Site CEQA Review, sub to Victor Novik Consulting, Bonita, San Diego County, CA - Principal Biologist. The Egson Residential Development Project proponent proposes to construct two single-family residences on currently vacant land adjacent to the Sweetwater River in Bonita, CA. In 2016, Victor Novik conducted a biological survey and prepared a biological letter report, per County of San Diego MSCP guidelines. After being retained by Victor Novik, conducted a County of San Diego CEQA Consultant review of the biological letter report; provided feedback and comments to Mr. Novik for his use in preparing a final version, and also prepared a cover letter for the County to acknowledge the review and approval of the document in its final version.

Brodiaea Avenue Commercial Development Site Project, sub to EPD Solutions, Inc., Moreno Valley, Riverside County, CA - Principal Biologist / Project Manager. This Project involved the buildout of a commercial warehouse facility with associated parking, loading docks, offices, landscaping and other features on 6.71 acres of disturbed, vacant land in Moreno Valley, CA. Conducted a literature review, focused burrowing owl burrow survey, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, photo-documentation and jurisidctional waters assessment of the Project site, per Western Riverside County MSHCP guidelines in 2016. Prepared a Habitat Assessment Report (HAR) per MSHCP guidelines that included burrowing owl survey results.



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Class Leasing Commercial Development Site Project, sub to EPD Solutions, Inc., San Jacinto, Riverside County, CA - Principal Biologist / Project Manager. This Project involved the buildout of a commercial manufacturing facility with associated parking, office buildings, storage areas, landscaping and other features on 14 acres of disturbed, vacant land in San Jacinto, CA. Conducted a literature review, focused burrowing owl burrow survey, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, photo-documentation and jurisidctional waters assessment of the Project site, per Western Riverside County MSHCP guidelines in 2020. Assisted in the preparation of a Habitat Assessment Report (HAR) per MSHCP guidelines that included burrowing owl survey results.

Tige Watersports Commercial & Retail Development Project, Private Landowner, Lake Elsinore, Riverside County, CA - Principal Biologist / Project Manager. This Project was proposed for the construction of a light industrial and retail facility on a previously graded and vacant pad to customize and sell motorboats in Lake Elsinore, CA. Conducted a literature review, focused burrowing owl burrow surveys, focused rare plant survey, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, photo-documentation and jurisidctional waters assessment of the Project site, per Western Riverside County MSHCP guidelines in 2017. Prepared a Habitat Assessment Report (HAR), Focused Burrowing Owl Survey Report and Focused Rare Plant Survey Report per MSHCP guidelines. Worked directly with Riverside County and Lake Elsinore staff to address all mitigation measures and design features to facilitate the project while minimizing and avoiding impacts to adjacent open space riparian habitat.

City of Claremont General Plan Housing Element Update, **sub to EPD Solutions**, **Inc.**, **Claremont**, **Los Angeles County**, **CA** - Principal Biologist. A General Plan update was proposed to facilitate the development of several vacant land parcels within the City of Claremont; Project adversaries were opposed to redevelopment. Contracted by CEQA consultant EPD Solutions, **Inc.** to complete literature reviews, fieldwork and reports necessary to support the biological discipline in 2017. Conducted a biological records search, literature review, special-status species habitat assessment, biological reconnaissance survey, photographic documentation and vegetation mapping services for inclusion in the biological technical letter report that was prepared by Blackhawk.

Jurupa Valley Medical Center Project, sub to EPD Solutions, Inc., Jurupa Valley, Riverside County, CA - Principal Biologist / Project Manager. This Project involved the buildout of a medical services facility with associated parking, landscaping and other features on four acres of disturbed, vacant land in Jurupa Valley, CA. Conducted a literature review, focused burrowing owl burrow survey, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, photo-documentation and jurisidctional waters assessment of the Project site, per Western Riverside County MSHCP guidelines in 2016. Prepared a Habitat Assessment Report (HAR) per MSHCP guidelines that included burrowing owl survey results.

South Corona Commerce Center Project, sub to EPD Solutions, Inc., Corona, Riverside County, CA - Principal Biologist / Wetland Scientist / Project Manager. This Project involved the buildout of a commercial warehouse facility with associated parking, street upgrades, driveway entries, loading docks, offices, landscaping and other features on 9.21 acres of disturbed, vacant land in Corona, CA. Conducted a literature review, focused burrowing owl burrow survey, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, photo-documentation and jurisdictional delineation of the Project site, per Western Riverside County MSHCP guidelines and USACE Arid West wetland delineation methodology in 2016. Prepared a Habitat Assessment Report (HAR) per MSHCP guidelines that included burrowing owl survey results.

Rancho Highlands Residential Subdivision Development Project, RTA Rancho Highlands LLC, Temecula, Riverside County, CA -Principal Biologist / Project Manager. This Project is part of a multi-phased residential subdivision development project in the City of Temecula, CA. Completed a Western Riverside County MSHCP Habitat Assessment Report (HAR), Habitat Acquisition Negotiation Strategy (HANS), Determination of a Biologically Equivalent or Superior Plan (DBESP), literature review, focused burrowing owl burrow surveys and report, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, photo-documentation, jurisidictional delineation and report and project management tasks in 2018.

Menifee Industrial Park Project, sub to EPD Solutions, Inc., Menifee, Riverside County, CA - Principal Biologist / Project Manager. This project includes the development of an industrial park and associated parking, stormwater conveyance system and other features on approximately 12 acres of former pasture land project in the City of Menifee, CA. Completed a Western Riverside County MSHCP Habitat Assessment Report (HAR), jurisdictional delineation survey and report, Determination of a Biologically Equivalent or Superior Plan (DBESP) report, literature review, focused burrowing owl surveys and report, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, photo-documentation, and project management tasks in 2019 and 2020. Also attended meetings with the Western Riverside County Regional Conservation Authority

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to discuss and approve off-site mitiation strategies for impacts to an ephermeral drainage feature that would be fully impacted by the project. Mr. Alberts advised the ultimate client that impacting the drainage to facilitate full project buildout would be more cost effective than avoidance of the drainage, as portions of the drainage would have been impacted under any scenario, requiring USACE, RWQCB and CDFW permits and mitigation.

Nittobo Facility Expansion Project, sub to EPD Solutions, Inc., Murrieta, Riverside County, CA - Principal Biologist / Project Manager. This project involves the expansion and redevelopment of existing failities on the Nittobo bio-pharmaceutical facility that researches goat plasma for medicinal uses. Conducted a pre-construction burrowing owl and nesting bird survey of the prject site and its 150meter buffer in summer 2020 prior to ground-disturbing activities; no owls were found.

City of San Diego Native Habitat Restoration Plan and Implementation Project, Private Landowner, Del Mar, San Diego County, CA-Restoration Ecologist / Project Manager. This Project involved perennial non-native plant species removal and native habitat restoration on less than 0.2 acre of land behind a private residence. The area was illegally graded several years ago, and the City of San Diego is requiring that restoration must be undertaken in order to return the land closer to its original state. Conducted an initial meeting with key City personnel in 2014, prepared the draft and final habitat restoration & management plan (HRMP), performed non-native plant removal oversight, provided native plant and irrigation installation oversight, monthly and bi-monthly maintenance monitoring, annual quantitative vegetation sampling studies, and annual/final reporting.

Murrieta Hospitality Commons Project, sub to EPD Solutions, Inc., Murrieta, Riverside County, CA - Principal Biologist / Wetland Scientist. This Project involved the buildout of a Holiday Inn hotel and two restaurants, plus associated parking, street upgrades, water and sewer connections, driveway entries, landscaping and other features on 6.95 acres of vacant land in Murrieta, CA. Conducted a literature review, focused burrowing owl burrow survey, burrowing owl surveys, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, photo-documentation and jurisdictional delineation of the Project site, per Western Riverside County MSHCP guidelines and USACE Arid West wetland delineation methodology in 2016. Prepared a Habitat Assessment Report (HAR) per MSHCP guidelines that included burrowing owl survey results. A stand-alone jurisdictional delineation report was prepared for a jurisdictional drainage feature that bisects the Project site.

Cardinal Glass Facility Expansion Project, sub to EPD Solutions, Inc., Moreno Valley, Riverside County, CA - Principal Biologist. This Project involved the 1.14-acre expansion of an existing glass manufacturing facility with associated parking, loading docks, landscaping, retention basin and other features on an 18.37-acre parcel in Moreno Valley, CA. Conducted a literature review, focused burrowing owl burrow survey, pre-construction burrowing owl survey, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, photo-documentation and jurisidctional waters assessment of the Project site, per Western Riverside County MSHCP guidelines in 2015. Prepared a Habitat Assessment Report (HAR) per MSHCP guidelines that included burrowing owl survey results.

Scottish Village Residential Development Project, sub to EPD Solutions, Inc., Moreno Valley, Riverside County, CA - Principal Biologist. The proposed Project is a planned residential development of 194 residential units on a 26.12-acre site. The Scottish Village proposes three planning areas providing detached condominiums, attached condominiums, and senior condominiums. The proposed Project also includes four common recreation areas, three water quality basins, off-site improvements on Bremen Street and Baywood Drive, and completion of linear bikeway/greenbelt improvements along the California Aqueduct right-of-way between Dracaea Avenue and Pan Am Boulevard. conducted a Western Riverside County MSHCP consistency analysis that included a literature review, burrowing owl assessment, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey and photo-documentation in 2019.

Spring Mountain Residential Development Project, sub to Sage Environmental Group, Riverside, Riverside County, CA - Principal Biologist. The Project is a multi-lot single-family home subdivision of an approximately 87.7-acre vacant property located to the north of Pigeon Pass Road and east of Stockyard Road in the City of Riverside, California. The proposed Project includes new street layouts, lot layouts, and sewer, gas and electrical infrastructure. The proposed Project includes an extension of Center Street easterly through to the site, with new streets branching within the site and off of Pigeon Pass Road from the south. Completed focused burrowing owl surveys and the corresponding burrowing owl survey report in 2019.

Palm Springs Care Clinic Project, Sunquitz EMC LLC, Palm Springs, Riverside County, CA - Principal Biologist / Project Manager. The project includes the full buildout of 4.2 acres of undeveloped desert scrub in the City of Palm Springs to support a new medical facility on land owned by the Agua Caliente Tribal Reservation. Conducted four burrowing owl surveys of the site and 150 meters surrounding the site in June 2020 and produced a focused burrowing owl survey report. No owls or owl sign were found onsite.

Renewable Energy

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Seville Solar Project, Kruger Energy and Duke Energy, Imperial County, CA - Principal Biologist / Project Manager. The solar array encompassed 640 acres on former agricultural land. Contracted in 2014 and 2015 to oversee all environmental compliance activities on the Seville Solar array site just east of Ocotillo Wells in Imperial County, CA. Utilized Blackhawk's paleontological monitoring subcontractor (the San Diego Natural History Museum) and its cultural resources specialist (Petra Resource Management) to round out its complete team of specialists. Served as project manager, conducted nesting bird surveys and reports, burrowing owl surveys and burrow exclusions, flat-tailed horned lizard assessment, nesting bird management plan production, construction monitoring, monitor scheduling, agency liaison, budget management, proposal production, bat surveys, CDFW coordination, Imperial County coordination, Environmental Awareness Training presentation production and instruction, and wallet card design and production tasks.

Titan I Solar Project, Imperial County Planning & Development Services, Imperial County, CA - Principal Biologist / Project Manager. The solar array encompassed 380 acres on former agricultural land. Contracted in 2020 to oversee all environmental compliance activities on the Titan Solar I array site just east of Ocotillo Wells in Imperial County, CA, adjacent to and immediately south of the previously constructed Seville Solar Project. Utilized Blackhawk's preferred paleontological monitoring subcontractor (the San Diego Natural History Museum), its preferred cultural resources specialist (Petra Resource Management) and its preferred storm water professionals (Geosyntec Consultants) to round out its complete team of specialists. Served as project manager and principal biologist, oversaw nesting bird surveys and reports, conducted burrowing owl surveys and flat-tailed horned lizard assessments, oversaw nesting bird management plan and Bird and Bat Conservation Strategy (BBCS) production, construction monitoring, monitor scheduling, agency liaison, budget management, proposal production, CDFW and USFWS coordination, Imperial County coordination, Environmental Awareness Training presentation production and instruction, and wallet card design and production tasks. Several flat-tailed horned lizards were observed and passively relocated east of the project.

Wistaria Solar Project, Calexico, Imperial County Planning & Development Services, Imperial County, CA - Third Party Environmental Inspector / Project Manager. The Wistaria Solar Project is part of a larger development of up to 17 individual solar projects or clusters of multiple solar projects on 32 parcels totaling approximately 2,793 acres. Ensured that the Project complied with the Mitigation, Monitoring & reporting Program (MMRP), CUPs and all other Project-specific plans and permits, such as the Bird and Bat Conservation Strategy and Burrowing Owl Exclusion Plan. Conducted pre-construction document and permit reviews, conducted weekly to twice-weekly onsite inspections and issued daily reports to the Project team via an e-mail distribution list from 2016 to 2018.

Midway III Solar Project, Imperial County Planning & Development Services, Calipatria, Imperial County, CA - Third Party Environmental Inspector / Project Manager. This Midway III Solar Project is a renewable energy project employing photovoltaic (PV) or concentrated photovoltaic (CPV) technology. The Project is part of a larger development of up to totaling approximately 1,738 acres. County-issued Conditional Use Permits (CUPs) have been granted for the subject parcels, each of which is approximately 20 megawatts (MW). The entire Project is anticipated to generate 275 MW. Ensured that the Project complied with the Mitigation, Monitoring & reporting Program (MMRP), CUP and all other Project-specific plans and permits, such as the Bird and Bat Conservation Strategy and Burrowing Owl Exclusion Plan. Conducted pre-construction document and permit reviews, conducted weekly to twice-weekly onsite inspections and issued daily reports to the Project team via an e-mail distribution list in 2018.

Mount Signal III Solar Project, Imperial County Planning & Development Services, Calexico, Imperial County, CA - Third Party Environmental Inspector / Project Manager. The Mount Signal III Solar Project is a renewable energy project employing photovoltaic (PV) or concentrated photovoltaic (CPV) technology. The Project covers approximately 1,920 acres. The entire Project is anticipated to generate 252 MW. Ensured that the Project complied with the MMRP, CUPs and all other Project-specific plans and permits, such as the Bird and Bat Conservation Strategy and Burrowing Owl Exclusion Plan. Conducted pre-construction document and permit reviews, conducted weekly to twice-weekly onsite inspections and issued daily reports to the Project team via an e-mail distribution list in 2017 and 2018.

Mount Signal II Solar Project, Imperial County Planning & Development Services, Calexico, Imperial County, CA - Third Party Environmental Inspector / Project Manager. The Mount Signal II Solar Project is a renewable energy project employing photovoltaic (PV) or concentrated photovoltaic (CPV) technology. The Project covers approximately 1,360 acres. County-issued Conditional Use Permits (CUPs) have been granted for the subject parcels, each of which is approximately 20 megawatts (MW). The entire Project is anticipated to generate 275 MW of AC power and 199 MW of DC power. Ensured that the Project complied with the Mitigation, Monitoring & reporting Program (MMRP), CUP and all other Project-specific plans and permits, such as the Bird and Bat Conservation Strategy and Burrowing Owl Exclusion Plan. Conducted pre-construction document and permit reviews, conducted weekly to twice-weekly onsite inspections and issued daily reports to the Project team via an e-mail distribution list in 2018.

Citizens Solar Project, Imperial County Planning & Development Services Calipatria, Imperial County, CA - Third Party Environmental Inspector / Project Manager. This Project, completed in 2019, was initiated by the Imperial Irrigation District (IID) with the intent of providing locally sourced renewable energy to lower income residents of the Imperial Valley. The 30-megawatt (MW) project was constructed on approximately 223 acres across two parcels of former agricultural lands adjacent to the west side of the East Highline

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Canal near Calipatria, California. Conducted thorough Mitigation Monitoring & Reporting Program (MMR)P/Conditional Use Permit (CUP) compliance inspections while also ensuring that operations were abiding by other approved documents, such as the Bat and Brid Conservation Strategy, Stormwater Pollution Prevention Plan (SWPPP), Dust Control Plan and Pest Management Plan. Weekly reports were compiled and sent to an email distribution group following each site visit.

Rugged Solar Project, sub to Soil Ecology, Inc., Boulevard, San Diego County, CA - Principal Biologist. This proposed project would convert existing pasture lands in eastern San Diego County to a 400-acre solar facility. Updated the literature review, updated the field survey, and produced a CEQA addendum letter report, complete with an updated effects analysis and impact projections in order to issue a permit extension for the proposed project in 2017.

McCain Valley Solar Project Quino Checkerspot Butterfly Surveys Project, sub to Greenskies Renewables LLC, Boulevard, San Diego County, CA - Principal Biologist / Project Manager. This proposed project would convert existing pasture lands in eastern San Diego County to a 416-acre solar facility. In 2020, coordinated and completed a full suite of 12 USFWS protocol presence/absence surveys for the federally endangered Quino checkerspot butterfly on the proposed footprint, plus 100 feet beyond the boundaries. Survey areas were divided into five sections, and a team of permitted biologists handled the surveys according to protocol guidelines. All host plant patches were mapped, and a 45-day report was produced; no Quino checkerspot butterflies were observed.

Donovan State Prison Solar Project, sub to EPD Solutions, Inc., San Diego, San Diego County, CA - Principal Biologist / Project Manager. This Project includes the development of a new solar facility to provide renewable energy to the RJ Donovan State Prison in San Diego, California. The proposed Project includes the installation of solar arrays, a perimeter security fence, and an underground electrical collection system; the Project Area will be graded to provide a level surface for the array. Conducted literature reviews, vegetation mapping, special-status species habitat assessments, photographic documentation, focused burrowing owl surveys and reporting, including a CEQA Addendum Letter Report and a Focused Burrowing Owl Survey Report in 2019 and 2020. During the construction phase, conducted pre-construction surveys and served as the County of San Diego-approved CEQA Consultant.

Dixieland East & West Solar Project, sub to AES/Blue Oak Energy, Centinela, Imperial County, CA - Principal Biologist / Project Manager. This Project was commenced and completed within 2016. The Project involved the development and operation of a photovoltaic (PV) electric generation facility in Imperial County, CA. The overall acreage of the Project is 53 acres: 24 acres, referred to as Dixieland East, and 29 acres, referred to as Dixieland West. Completed Mitigation Monitoring & Reporting Program (MMRP) compliance, an ambient conditions/drill hammer noise analysis, construction monitoring, project management, scheduling, preconstruction nesting bird and burrowing owl surveys, burrowing owl mitigation plan, dust compliance, spot-check monitor reporting and photo-documentation in support of the Project.

Chino Institute for Women Solar Project, sub to EPD Solutions, Inc., Chino, San Bernardino County, CA - Principal Biologist. This Project was proposed by the California Department of Corrections and Rehabilitation (CDCR) to generate renewable solar power on Stateowned prison grounds for the prison. Conducted literature reviews, vegetation mapping, special-status species habitat assessments, photographic documentation, focused burrowing owl surveys, focused rare plant surveys and reporting in 2017 and 2018. A Biological Technical Report (BTR) was produced to detail all special-status species results and recommendations for the Project site. In addition, a Focused Rare Plant Survey Report and Burrowing Owl Reports were produced.

Centinela State Prison Solar Project, sub to EPD Solutions, Inc., Centinela, Imperial County, CA - Principal Biologist. This Project was proposed by the California Department of Corrections and Rehabilitation (CDCR) to generate renewable solar power on Stateowned prison grounds for the prison. Conducted literature reviews, vegetation mapping, special-status species habitat assessments, photographic documentation, focused burrowing owl surveys and reporting in 2017 and 2018. A Biological Technical Report (BTR) was produced to detail all special-status species results and recommendations for the Project site. In addition, Burrowing Owl Reports were produced.

Ironwood State Prison & Chuckawalla Valley State Prison Solar Project, sub to EPD Solutions, Inc., Blythe, San Bernardino County, CA - Principal Biologist. This Project was proposed by the California Department of Corrections and Rehabilitation (CDCR) to generate renewable solar power on State-owned prison grounds for the prison. Conducted literature reviews, vegetation mapping, a biological reconnaissance survey, special-status species habitat assessment, jurisdictional waters assessment, photographic documentation, focused desert tortoise/burrowing owl burrow survey and reporting in 2017 and 2018. A Biological Technical Report (BTR) was produced to detail all special-status species results and recommendations for the Project site.

Calipatria State Prison Solar Project, sub to EPD Solutions, Inc., Calipatria, Imperial County, CA - Principal Biologist. This Project was proposed by the California Department of Corrections and Rehabilitation (CDCR) to generate renewable solar power for the prison. Conducted literature reviews, vegetation mapping, special-status species habitat assessments, photographic documentation, focused burrowing owl surveys and reporting in 2017 and 2018. A Biological Technical Report (BTR) was produced to detail all

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special-status species results and recommendations for the Project site. In addition, Burrowing Owl Reports were produced.

Poway Fire Department Station 3 Solar Project, sub to EPD Solutions, Inc., Poway, San Diego County, CA - Principal Biologist / Project Manager. The Project is a 1-megawatt solar photovoltaic array located on a hillside adjacent to Fire Station #3 in the City of Poway. The facility includes solar modules installed on fixed-tilt racking, inverters, and a point of connection to the electric grid adjacent to the main building of Fire Station #3. Completed a literature review, onsite reconnaissance-level biological surveys, jurisdictional assessment, special-status species habitat assessments, focused rare plant surveys and reports, USFWS protocol-level California gnatcatcher survey and report, and two biological technical letter reports (BTLR) incorporating all the results from 2016 to 2018.

SDG&E Solar Array Project, sub to ICF, Warner Springs, San Diego County, CA - Project Manager. Provided project management and personnel coordination in 2014. Coordinated Stephens' kangaroo rat surveying services to support the project.

SDG&E Valley Center Solar Battery Storage Project, sub to Chambers Group, Valley Center, San Diego County, CA – Principal Biologist. Provided County of San Diego-approved CEQA Consultant services for document review and approval in 2020.

Tule Wind Farm Project, sub to Balk Biological, AMEC and CH2MHill, San Diego County, CA - Principal Biologist. The proposed project is the development of a wind farm on BLM-managed land in the McCain Valley area of east San Diego County. Conducted the initial nesting bird surveys with AMEC biologists prior to geotechnical borings during the 2013 bird breeding season.

Ormat Geothermal Exploratory Sources Project, sub to Power Engineers, Truckhaven, Imperial County, CA - Principal Biologist / Project Manager. This Project was initiated in 2016 by Ormat Technologies to cover a large area of unexplored geothermal energy production potential on the western side of the Salton Sea. The 25-square mile area included large undisturbed and disturbed areas of California State Park land, as well as Bureau of Land Management (BLM) land, plus several smaller private parcels. Deployed a team of biologists and botanists for this Project, including rare plant, flat-tailed horned lizard and burrowing owl specialists, per California State Parks' request and upon resume approval procedures. Served as the Project Manager, while also serving as a botanist, flat-tailed horned lizard, and burrowing owl specialist.

Geo-Genco Geothermal Plant Project, sub to EB Environmental, Imperial County, CA - Principal Biologist. This Project was undertaken to document existing conditions and burrowing owl presence/absence prior to the development of a geothermal energy production facility on agricultural fields in unincorporated Imperial County. Conducted focused burrowing owl surveys and completed a report of findings following the surveys.

Sun Edison Solar Project, sub to EPD Solutions, Inc., Rancho Mirage, Riverside County, CA - Principal Biologist. This proposed smallscale solar generation project covers approximately 4 acres of primarily native desert scrub in Rancho Mirage, CA. The Project site is nestled between a golf course, residential development and roadways. Conducted a focused plant survey, focused burrowing owl surveys, and sensitive species analyses. Following the field surveys, a biological letter report was prepared following the Coachella Valley MSHCP guidelines, with proposed mitigation measures to reduce biological impacts to less than significant levels.

Chevron Lucerne Valley Solar Project, Chevron, San Bernardino County, CA - Senior Biologist / Wetland Scientist. This Project proposes the construction of a solar array on undeveloped land. Led and participated in protocol desert tortoise, rare plant, avian point count and burrowing owl surveys. Assisted with the transect-based jurisdictional delineation and contributed to the writing of the Biological Assessment (BA). Conducted a Phase II burrow survey for the burrowing owl and presence/absence and ZOI surveys for the desert tortoise following the initial surveys.

Solar Farm Initial Assessment Study, Confidential Client, Dona Ana County, NM - Principal Biologist. A solar energy company was pre-planning the siting of solar facilities in southern New Mexico in 2009 and 2010. The Project site was approximately 240 acres in size on former pasture land that had since gone fallow and was in a state of desert scrub recovery. Led and conducted all phases of the project, including project management, logistics and coordination, baseline biological surveys, sensitive species analysis, cultural resources surveys, jurisdictional waters assessments, nesting bird surveys, BLM coordination and producing the report of findings.

PdV Wind Energy Project, County of Kern Planning Department, Sheppard, Mullin, Richter, & Hampton LLP, Kern County, CA - Senior Biologist. Served in a lead role on a peer review with a focus on bat and bird strike mortality at wind turbines for a Draft Environmental Impact Report (EIR) on the PdV Wind Energy Project in 2007 and 2008 in the Tehachapi Mountain foothills. Documents reviewed included the Draft EIR, the Bio-Technical Report, and the survey reports related to these issues of the EIR.

Transportation

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Caltrans I-5 Managed Lanes Project, sub to Jacobs, Orange County, CA - Principal Biologist / Project Manager. The proposed Project would increase carpool and electric vehicle lanes from State Route 55 north to the Los Angeles County line on Interstate 5. Four alternatives are proposed; some include new bridges, ramps and roadway improvements. Conducted a literature review and biological/aquatic resources windshield survey to prepare a Preliminary Environmental Analysis Report (PEAR) for any sensitive biological and aquatic resources that may be impacted by the proposed Project in 2018.

San Diego County Camino Del Rey Drainage and Road Improvements Project, sub to RECON, Bonsall, San Diego County, CA -Principal Biologist. This Project includes the proposed realignment and elevational increase of Camino del Rey and drainage improvements associated with the adjacent Moosa Creek flood zone. In addition, a series of culverts are scheduled for repairs or replacement along the roadway to better facilitate water flows without damaging the roadway. Conducted USFWS protocol least Bell's vireo surveys and USGS protocol southwestern willow flycatcher surveys in the Project area up to 500 feet beyond the boundaries during the 2018 nesting season. Produced a USFWS 45-Day Report.

San Bernardino County Department of Public Works Dola Ditch and Lanzit Ditch Bridge Replacement Project, sub to Aspen Environmental Group, San Bernardino County, CA - Principal Biologist. The proposed Project involves the replacement of two timber trestle bridges along historic Route 66 with new, engineered, American Association of State Highway and Transportation Officials (AASHTO) approved, and prefabricated timber trestle "kit" bridges. Conducted site assessments that included reconnaissancelevel and ground-truthing desert tortoise, burrowing owl, kit fox and rare plant surveys in 2014. Prepared a Caltrans Natural Environment Study (NES) and Biological Assessment (BA) for the Dola Ditch bridge.

Caltrans State Route 73 Retention Basins Cleanout Project, sub to Chambers Group, Inc., Orange County, CA - Principal Biologist. To reduce potential flooding hazards or damages to the integrity of State Route 73, this Project involved the cleanout of all the retention basins and large culverts between Irvine and San Juan Capistrano along SR-73. Conducted protocol California gnatcatcher and nesting bird surveys in the vicinity of various storm water basins along SR-73 in Orange County during the early 2014 nesting season.

Saddleback College Loop Road Project, sub to EPD Solutions, Inc., Mission Viejo, Orange County, CA - Principal Biologist / Project Manager. The Saddleback College Loop Road Project is a redevelopment project to increase parking space and improve traffic flow on the eastern side of the Saddleback College Campus in Mission Viejo, California. Other elements include the closure and redevelopment of existing sport fields and facilities. A previously prepared report had labelled a concrete ditch excavated from uplands as potentially jurisdictional across a section of the proposed Loop Road and parking lot. Provided a second opinion on the jurisdictional nature of the subject feature by conducting a jurisdictional waters assessment and providing a jurisdictional assessment report.

Los Angeles World Airports LAX Electric Bus Yard Facility Project, sub to Landrum & Brown, Los Angeles, Los Angeles County, CA -Principal Biologist / Project Manager. Los Angeles International Airport (LAX) is proposing to develop a new, larger electric bus yard, maintenance and recharging facility on 5 acres of previously developed and disturbed land located toward the southwest corner of the LAX boundary. The Project site is located across from the El Segundo Blue Butterfly Preserve, which is the largest expanse of habitat that remains for this critically endangered butterfly species. Completed a special-status species habitat analysis and baseline biological survey, after which a letter report was prepared to illustrate no significant environmental impacts.

Carnegie SVRA Biological Assessment Project, sub to Michael Baker International, Livermore, San Joaquin County, CA - Principal Biologist / Project Manager. The Project involves road reconstruction of a previously utilized, unimproved road crossing ("SRI crossing") through Corral Hollow Creek in the Carnegie State Vehicular Recreational Area (SVRA), near Livermore and Tracy, California. This Project would resurrect an access route in order to reestablish connectivity to these facilities and provide quicker emergency response times to the eastern portion of the park. Conducted a jurisdictional waters assessment, special-status species habitat analysis and baseline biological survey, and completed vegetation community mapping, focused rare plant survey and Biological Assessment report production tasks in 2019.

Railroad Track Upgrade Project, Union Pacific Railroad - Yuma Subdivision, sub to Parsons Water & Infrastructure, Thermal CA to Yuma AZ, Imperial County, CA - Senior Biologist / Wetland Scientist. This project involved biological surveys, vegetation mapping and wetland delineations along a 100-mile-long corridor for a proposed double-track rail line for Union Pacific Railroad. Conducted biological reconnaissance surveys, focused sensitive species surveys for desert tortoise, desert pupfish, Coachella Valley fringe-toed lizard, least Bell's vireo & southwestern willow flycatcher, jurisdictional delineations, and vegetation mapping within the 200 to 1000-foot right-of-way. Led the team of biologists in preparing the comprehensive Bio-Technical Report (BTR) encompassing all baseline and focused surveys for this Project.

State Routes 57 & 60/Grand Avenue Interchange Improvement Project, EIP Associates, a Division of PBS&J, sub to Sage Environmental

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Group, Diamond Bar and City of Industry, Los Angeles County, CA - Project Manager / Principal/Senior Biologist / Botanist / Wetland Scientist. The area of concern included hundreds of undeveloped acres and Diamond Bar Golf Course adjacent to the section of highway where State Routes 57 and 60 run in confluence for several miles. Served as Project Manager, as well as Senior Biologist, Botanist, and Wetland Scientist, and was the main point of contact for all biological work related to this project from 2007 to 2011. Led and organized several biologists in conducting baseline wildlife surveys, updating outdated reports by other firms, protocol least Bell's vireo, southwestern willow flycatcher and California gnatcatcher surveys, detailed vegetation mapping over hundreds of acres, exotic plant mapping, wetland and jurisdictional delineations, construction monitoring during fuel maintenance activities, and all reports related to these surveys for this Project within and adjacent to the Project footprint. In 2019, Blackhawk and Mr. Alberts again served on this project to complete jurisdictional delineations on the golf course and the southerly adjacent portions of the highway.

Pacific Street Bridge Project, sub to Harris & Associates, Oceanside, San Diego County, CA - Senior Biologist / Botanist. The proposed Project involves the construction a new bridge that replaced an earthen crossing near the mouth of the San Luis Rey River adjacent to Oceanside Harbor. Assisted with the creation of the Mitigation Monitoring Implementation Plan and the Environmental Awareness Program. Conducted baseline surveys for plant and animal species within the project footprint, as well as pre-construction surveys for sensitive fish and bird species, including southern steelhead, least Bell's vireo, southwestern willow flycatcher, light-footed clapper rail and coastal California gnatcatcher. Provided worker awareness trainings and monitored construction for compliance with project permits from 2007 to 2009.

Sierra Highway Widening Project, Los Angeles County Department of Public Works (LADPW), Programs Development Division. unincorporated Los Angeles County, CA - Wetland Scientist. The Project sought to increase the lane capacity of the Sierra Highway in the Antelope Valley area of Los Angeles County. Performed a jurisdictional delineation along approximately 1.5 miles of the highway that contained an adjacent and deeply incised drainage feature in order to update incomplete data from a previously completed delineation.

Reche Vista Drive Realignment, sub to KOA Corporation and Geovironment, Moreno Valley, Riverside County, CA - Principal Biologist / Senior Biologist / Botanist / Wetland Scientist. The proposed Project would realign Reche Vista Drive in Moreno Valley from the intersection of Perris Boulevard & Heacock Street to 200 feet north of the city limits. Completed a jurisdictional delineation, sensitive species habitat assessment, vegetation map, and conducted a focused burrow survey for burrowing owl according to the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) in 2008 and 2009. In 2015, conducted a jurisdictional delineation update assessment and report to document any change in conditions since 2009.

Kitching Street Improvements Project, sub to Proactive Engineering Consultants, Inc., City of Moreno Valley, Riverside County, CA -Senior Biologist / Botanist / Wetland Scientist. Completed a jurisdictional delineation, conducted a habitat assessment, and conducted a focused burrow survey for burrowing owl according to the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) in 2008 and 2009. Co-authored the biological reports documenting the findings of the jurisdictional delineation, habitat assessment, and the owl survey.

Lasselle Street Widening Project from John F. Kennedy Drive to Alessandro Boulevard, sub to Psomas, Moreno Valley, Riverside County, CA - Senior Biologist / Botanist / Wetland Scientist. Completed a jurisdictional delineation, conducted a habitat assessment, and conducted a focused burrow survey for burrowing owl according to the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) in 2007 and 2008. Co-authored the biological reports documenting the findings of the jurisdictional delineation, habitat assessment, and the owl survey.

Wildlife Corridor Report for California State Route 52, San Diego State University Foundation, Santee to San Diego, San Diego County, CA - Technical Writer. Assumed writing duties on an unfinished report documenting wildlife corridor usage of four under-crossings along California State Route 52 between Santee and San Diego.

Verizon Wireless Ribbonwood/I-8 Boulevard Wireless Communications Facility Project, Boulevard, San Diego County, CA - Verizon Wireless, sub to Trileaf Environmental & Property Consultants and M&M Telecom Inc. Quino checkerspot butterfly surveys, MSCP sensitive species surveys, focused rare plant surveys, photographic documentation, agency & County coordination, County of San Diego MSCP Biological Resource Letter Report production, USFWS protocol reporting.

AT&T Fiber Optic Cable Installation Project, sub to Forkert Engineering & Surveying, Inc., San Bernardino County, CA to Clark County, NV - Principal Biologist. Completed desert tortoise clearance surveys, cacti salvage, provided construction monitoring, and environmental compliance.



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Restoration

Imperial Irrigation District - Habitat Assessment for Phase 2 of the Managed Marsh Complex, Niland, Imperial County, CA - Principal Biologist. The Managed Marsh Complex is a 360-acre wetland complex created by the Imperial Irrigation District as part of required habitat mitigation for reduced flows due to various water conservation efforts and water transfers. Completed a habitat assessment via a combination of high-resolution aerial imaging and ground truth transect surveys on a point-based grid system. Assisted in composing the report for submittal to reviewing agencies to reach final sign-off on completion of mitigation requirements.

Communications

Verizon Wireless I-8 Boulevard/Ribbonwood Road Cell Tower Project, sub to Trileaf Environmental & Property Consultants and M&M Telecom, Inc., Boulevard, San Diego County, CA - Principal Biologist. The Project involves the installation of a 35-foot tall unmanned wireless telecommunication facility that would appear as an antiquated faux water tank mounted with 12 panel antennas, a prefabricated equipment enclosure, and a CMU block wall equipment enclosure on County of San Diego land. Performed a Quino checkerspot butterfly (QCB) habitat assessment, protocol QCB surveys, focused rare plant surveys, general nesting bird surveys and focused surveys for County of San Diego sensitive bird species in 2014 and 2015.

Fiber Optic Cable Installation, Victorville, AT&T, sub to Forkert Engineering & Surveying, Inc., San Bernardino County, CA to Las Vegas, Clark County, NV - Senior Biologist / Botanist / Wetland Scientist. Conducted surveys to map vegetation communities, and to document the existing biological resources while assessing the habitat for its potential to support sensitive plant and wildlife species. Assisted with the identification and delineation of areas of the Project site that fell under U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB) and California Department of Fish and Game (CDFG) jurisdiction as well as conducted U.S. Fish and Wildlife Service (USFWS) protocol level presence/absence surveys before and during construction for the federally and state-threatened desert tortoise. Conducted substantial construction monitoring over this period, desert tortoise clearance surveys, and monitoring of desert tortoises in and near construction areas to ensure no impacts.

Waste Management

South Region Landfills Biological Surveys, County of Orange Integrated Waste Management Department, San Juan Capistrano, Orange County, CA - Senior Biologist / Botanist / Wetland Scientist. Responsible for coastal California gnatcatcher and least Bell's vireo surveys, biological mitigation site monitoring, a jurisdictional delineation, implementation of annual brown-headed cowbird trapping program, Natural Community Conservation Planning (NCCP), State, and Federal regulatory planning assistance from 2007 to 2010. Provided additional California Environmental Quality Act (CEQA) documentation and updated the General Development Plan (GDP), Master Plan of Arterial Highways (MPAH) and supplemental Environmental Assessment (EA). Performed as-needed biological consulting services and assisted with contractor coordination, and served as technical lead on endangered species issues for these sites as well as on an advisory role as-needed.

Public Works

East Peak Mount Tamalpais Management Plan, California State Parks, sub to Placeworks, Mount Tamalpais State Park, Marin County, CA - Principal Biologist. This project involved baseline biological surveys, vegetation mapping and sensitive species analyses in support of a future conceptual facilities improvement project on the East Peak of Mount Tamalpais, the highest point in Marin County. Conducted a biological reconnaissance survey, vegetation mapping, jurisdictional waters assessment and sensitive species habitat analyses; all results were summarized in a letter report.

Keys Creek Channel Access and Flood Control Maintenance Project, sub to RECON, Fallbrook, San Diego County, CA - Principal Biologist. The Keys Creek Channel Access and Maintenance Project included three separate elements: 1) construction of two access ramps into the channel to facilitate maintenance activities, 2) conduct flood control maintenance (sediment removal) of the existing Keys Creek flood control facility in accordance with the Adaptive Management Plan (AMP), and 3) habitat and species management of the 8.5-acre mitigation area that overlaps with the flood control channel. Conducted environmental awareness trainings for construction personnel, construction monitoring, arroyo toad/California gnatcatcher/aquatic resources monitoring, daily reporting, and attended onsite meetings with County of San Diego project managers in 2016 and 2017. Assisted on jurisdictional permit compliance activities, including the CDFW Streambed Alteration Agreement and the Section 404 Clean Water Act permit

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from USACE.

Los Angeles Department of Public Works Dominguez Gap Basin Spreading Grounds Sediment Removal Project, sub to EPD Solutions, Inc., Carson, Los Angeles County, CA - Principal Biologist. This Project is part of an ongoing, annual effort to facilitate water storage overflow during rain events and groundwater percolation in a constructed basin adjacent to the Los Angeles River. LADPW annually maintains the vegetative regrowth within the basin, but this Project included the excavation and offsite transport of up to 14 feet of existing soils from within the basin bottom to reach the sandier soil horizon below that was detected during a geotechnical coring study. The basin covers approximately 13 acres and is surrounded by a riparian fringe of black willows and mulefat, as well as restored coastal sage scrub. Conducted all pre-construction clearance survey, nesting bird survey, turtle survey, daily reporting and County coordination tasks to support the Project in 2018.

Los Angeles Department of Public Works Iron Canyon Channel Improvement Project, sub to EPD Solutions, Inc., Santa Clarita, Los Angeles County, CA - Principal Biologist / Project Manager. This Project involved major channel improvement activities to remove accumulated sediment and debris, deepen the retention basin, trim proximal vegetative regrowth, and facilitate high water flows and in-ground infiltration of the modified stream channel. prepared a Nesting Bird Management Plan following stipulations within the CDFW Streambed Alteration Agreement In 2019.

Los Angeles Department of Public Works Tujunga Spreading Grounds Channel Improvement Project, sub to EPD Solutions, Inc., Sylmar, Los Angeles County, CA - Principal Biologist / Project Manager. This Project involved major channel improvement activities to facilitate high water flows and in-ground infiltration of the adjacent Tujunga spreading grounds. Prepared a Nesting Bird Management Plan following the stipulations within the CDFW Streambed Alteration Agreement and conducted nesting bird surveys before and during construction in 2019.

California State Lands Commission Land Transfer Project, California State Lands Commission, sub to Evans-DeShazo, Niland, Imperial County, CA - Principal Biologist. This Project involved a land transfer for three parcels of land (30 acres, 160 acres and 450 acres) in and adjacent to Slab City and Salvation Mountain. Conducted sensitive species analyses, burrowing owl and flat-tailed horned lizard habitat assessments, jurisdictional waters assessments, vegetation mapping, biological reconnaissance surveys, plant species identification, photographic documentation and letter report production tasks.

City of San Diego Open Space Restoration Project, Private Landowner, Del Mar, San Diego County, CA - Principal Biologist. Responsible for habitat restoration plan design and report production, biological monitoring, long-term vegetation sampling, maintenance monitoring and reporting, annual quantitative analysis reporting, and agency coordination.

City of San Diego Tierrasanta Trails Project, sub to Rocks Biological Consulting, San Diego, San Diego County, CA - Avian Biologist. This Project involved the improvement of existing rails, closure of non-approved trails, and new trail routes that will better link the trail network throughout the Tierrasanta canyonlands area of San Diego. Assisted with baseline habitat assessments and general baseline avian surveys throughout the project area.

Santa Ana River Trail Project - Phase III, San Bernardino County Regional Parks Department, Redlands, San Bernardino County, CA -Senior Biologist. The 3.6-mile stretch of Phase III extends from Waterman Avenue to California Street as a part of the Santa Ana River Trail Project in Redlands. Led biological surveys to map jurisdictional limits, biological resources and endangered species presence/absence. Coordinated directly with San Bernardino County staff, as well as CALTRANS biologist Juan Torres, and attended several key meetings to facilitate project progress. Devised mitigation strategies to reduce below significant thresholds any direct or indirect impacts to listed species within and adjacent to the project footprint.

Los Angeles County Fire Department and California Department of Forestry and Fire Protection (CalFire) Tonner Canyon Vegetation Management Plan Update Project, sub to Sage Environmental Group, Diamond Bar, Los Angeles County, CA - Principal Biologist. This Project involved fuel management activities on 1,245 acres of undeveloped land in Tonner Canyon to reduce the fire hazard potential for adjacent residential areas in the City of Diamond Bar, Los Angeles County, California. Prepared a Biological Addendum Letter Report in 2014 to update the Biological Assessment of the Tonner Canyon Vegetation Management Plan (VMP) prepared by Sage Environmental Group in April 2010.

Oxford Basin Low Flow Diversion Project, Los Angeles Department of Public Works, Marina Del Rey, Los Angeles County, CA - Project Manager / Avian Biologist. The Project included engineering enhancements to facilitate increased water flows within a degraded urban brackish water basin during low water flow periods (i.e., summer and fall months). Challenges to project construction schedules and closures were evident, as the project area included public park land, some public opposition, and egret and heron rookeries with active nests. Documented dozens of active snowy egret and black-crowned night heron nests, as well as one great egret nest, in large ornamental trees within the park space, conducted noise analyses on ambient conditions at various points



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around the Project area and correlated the results with known noise levels of the vehicles and equipment proposed for use in the Project from 2008 through 2010, and prepared data and materials in a comprehensive letter report. Attended a public Coastal Commission hearing with LADPW staff to answer questions from the public and illustrate how the project may proceed without affecting the nesting birds.

San Gabriel River Sediment Management Plan, Los Angeles County Department of Public Works (LADPW), Azusa, Los Angeles County, CA - Senior Biologist / Botanist. Conducted numerous biological surveys over the San Gabriel River watershed area including fish sampling surveys, and expansive data collection for vegetation characteristics, fish, macroinvertebrates, birds, amphibians, reptiles, large mammals, stream characterization, topography, and water quality from 2007 to 2011. Annual reports were prepared to convey the results of these functional analyses to the resource/permitting agencies (California Department of Fish and Game [CDFG], U.S. Fish and Wildlife Service [USFWS], and U.S. Army Corps of Engineers [USACE]).

Big Dalton Dam Sediment Removal Project, Los Angeles County Department of Public Works (LADPW), Water Resources Division, Glendora, Los Angeles County, CA - Senior Biologist / Botanist. Conducted pre- and post-dewatering surveys to assess sediment removal Project impacts that included vegetation mapping, plant assessments using the California Native Plant Society (CNPS) Rapid Assessment Protocol, focused plant surveys, amphibian, reptile, fish, avian, and mammal tracking surveys, stream assessments and macroinvertebrate collections from above the reservoir to two miles downstream of the Big Dalton Dam from 2006 to 2009. Developed a Newt Monitoring and Relocation Plan that was approved by the California Department of Fish and Game [CDFG] and provided a Biological Technical Report for the Big Dalton Dam Reservoir Cleanout Project.

San Dimas Reservoir Cleanout Project, Los Angeles County Department of Public Works (LADPW), Programs Development Division, San Dimas, Los Angeles County, CA - Senior Biologist / Botanist. Performed environmental services for LADPW to support the sediment cleanout operation for the San Dimas Reservoir in 2008 and 2009. Surveys included vegetation mapping, plant assessments using the CNPS Rapid Assessment Protocol, focused plant surveys, amphibian, reptile, fish, avian, and mammal tracking surveys, stream assessments and macroinvertebrate collections from above the reservoir to several miles downstream. Performed an additional Santa Ana sucker surveys along the rest of the river system, as well as conducted bird surveys, and set up a study station.

Live Oak Reservoir Cleanout Project, Los Angeles County Department of Public Works (LADPW), La Verne, Los Angeles County, CA -Senior Biologist. Assisted with field surveys, including vegetation mapping, focused plant surveys, amphibian, reptile, fish, avian, and mammal surveys, and stream assessments from above the reservoir to 0.5 miles downstream of the Live Oak Dam in 2008. Provided daily monitoring/relocation activities for two-striped garter, a California Species of Concern, during construction.

San Clemente Shoreline Protection Project, U.S Army Corps of Engineers (USACE), sub to Noble Consultants, San Clemente, Orange County, CA - Senior Botanist. Chambers Group prepared an integrated EIS/EIR for the Los Angeles District of the US Army Corps of Engineers (USACE) and the City of San Clemente (local non-federal sponsor) for the San Clemente Shoreline Protection Project. This environmental document provided the analysis of impacts of the proposed action and alternatives to address the ongoing problem of beach erosion that threatens the stability of City facilities, private property and a major southern California commuter rail corridor. Performed a focused plant survey for sensitive sand dune-associated plant species, and also conducted wildlife analyses for amphibians at drainage mouths in 2009; reports from these surveys were included in the project documents.

San Diego Creek In-Channel Basins Maintenance Project, Orange County, CA - County of Orange, Public Works. Vegetation mapping, baseline biological surveys.

Construction of a Pier at Perret Park, Riverside County Redevelopment Agency, Wildoar, Riverside County, CA - Senior Biologist / Wetland Scientist. This Project involved the construction of a pier, "Perret Park Boardwalk" located in Lakeland Village, California, consisting of a 270-foot long wooden dock with two lake viewing areas, wooden benches and a gazebo overlooking Lake Elsinore at Perret Park. Performed a jurisdictional delineation of the area proposed for construction using a combination of historical lake level data, aerial photographs, and Arid West protocols. Conducted burrowing owl surveys per the Western Riverside County MSHCP protocol and assisted on report writing for agency submittal.

Existing Concrete V-Ditch System Survey of Buck Gully, City of Newport Beach, Newport Beach, Orange County, CA - Senior Biologist. Reviewed existing aerial photography and field mapping to determine the likely locations of the existing concrete v-ditch system within Buck Gully. Conducted a field verification and GPS mapping survey of the existing concrete v-ditch system in the Buck Gully area of Newport Beach.

Metropolitan State Hospital Environmental Documents & Related Studies Increased Secured Bed Capacity and Security Fence Project, sub to EPD Solutions, Inc., California Department of General Services, Norwalk, Los Angeles County, CA - Principal Biologist / Project Manager. This State of California-funded Project was initiated to provide additional facilities for mental needs patients and

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to provide enhanced security fencing at the Metropolitan State Hospital complex in Norwalk, CA. Conducted a literature review, GIS analysis, vegetation mapping, baseline biological inventory, sensitive species analysis, photo-documentation, mitigation measure development, jurisdictional waters assessment, and produced a biological letter report in 2016. The mitigation measures proposed within the report were ultimately adopted into the Mitigation Monitoring & Reporting Program (MMRP) and would be implemented before and during construction activities.

San Diego County Sheriff Emergency Vehicles Operations Course Project, sub to RECON, San Diego County, CA - Principal Biologist / Project Manager. The Emergency Vehicles Operations Course Project is proposed for the construction of an off-road vehicle course near Jamul to be used for the training of San Diego Sheriff personnel; the Project would expand the existing disturbed/developed footprint to accommodate larger vehicles and add office buildings associated with the track. The County of San Diego stipulated that a suite of sensitive species surveys must be completed before implementing the project. For avian species, the surveys were to extend 500 feet beyond the proposed project envelope, which would include the riparian habitat of Jamul Creek, approximately one mile upstream of Lower Otay Reservoir. Conducted USFWS protocol least Bell's vireo and southwestern willow flycatcher surveys along Jamul Creek and its adjacent habitat types in 2016. Worked with County of San Diego personnel and RECON biologists to develop mitigation strategies to avoid and minimize impacts to least Bell's vireo, including pre-construction nest surveys and nest monitoring during construction.

San Diego Unified School District Salk Elementary Vernal Pool Mitigation and Monitoring Project, sub to RECON, San Diego, San Diego County, CA - Principal Biologist / Project Manager. The construction of Salk Elementary School resulted in the loss of several vernal pools requiring compensatory mitigation, per CEQA standards. This Project involves the long-term biological and hydrological monitoring of created, enhanced, restored and existing vernal pools in two vernal pool complexes on mesa tops within one mile of Salk Elementary School in the Mira Mesa area of the City of San Diego. Worked as a part of a team to conduct San Diego fairy shrimp sampling, invertebrate sampling, plant surveys, bird surveys, and hydrological data collection beginning in 2015.

SANDAG Inland Rail Trail Project, Sierra Pacific West, Inc., San Marcos, San Diego County, CA - Environmental Compliance Officer. The Inland Rail Trail Project is a SANDAG-sponsored multi-phase 21-mile paved bike trail construction project that will ultimately extend from Oceanside to east of Escondido. Oversaw Mitigation Monitoring & Reporting Program (MMRP) compliance on phases 1A and 1B, in the City of San Marcos, CA. Conducted weekly or bi-weekly MMRP reporting as necessary, spot-check monitoring services, photographic documentation and monthly MMRP compliation.

Torrey Pines State Reserve Utility Modernization Project, sub to ECORP Consulting, San Diego, San Diego County, CA - Principal Biologist. The proposed Torrey Pines Utility Modernization Project (Project) will upgrade existing infrastructure within Torrey Pines State Natural Reserve (TPSNR; Reserve) by installing new underground sewer, domestic water, fire, and telephone utilities on both California Department of Parks and Recreation (DPR; State) and City of San Diego property to serve the 2,000-acre Reserve. Assisted with the completion of a City of San Diego Full Biological Survey Report in support of the Project.

Preserve Management & Mitigation Banking

County of San Diego Preserves Biological Surveys Project, sub to ESA, San Diego County, CA - Principal Biologist. Surveys were conducted on County of San Diego Preserves throughout the County, including Keys Creek and Hellhole Canyon in Valley Center, and Dictionary Hill in Spring Valley to understand which species are present, particularly special-status species, or that may be present, and how best to manage the preserves for those species. Assisted and/or lead several types of focused biological surveys in 2019; survey types included small mammal trapping, herpetological trapping and avian surveys. Led and conducted the diurnal herpetological trapping surveys and nocturnal amphibian surveys at three County preserves (Dictionalry Hill, Keys Creek, Hellhole Canyon).

Moosa Creek Mitigation Bank/Restoration Project, sub to Burns & McDonnell, sub to Moosa Creek LLC, c/o Conservation Land Group, sub to WRA, Bonsall, San Diego County, CA - Principal Biologist / Project Manager. The Project seeks to convert the existing golf course into a riparian and wetland mitigation bank for several threatened and endangered species, including southwestern willow flycatcher, least Bell's vireo, yellow-billed cuckoo and arroyo toad. In 2013, conducted US Geological Service (USGS) protocol southwestern willow flycatcher surveys for the proposed Moosa Creek Mitigation Bank in Bonsall, CA on the San Luis Rey River and the Moosa Creek tributary adjacent to San Luis Rey Downs Golf Course; two breeding territories were documented. In 2015, served as the County of San Diego-approved CEQA Consultant to review and approve the comprehensive Biological Survey report prepared by WRA to support the project and gain County approvals. In 2020, Blackhawk and Mr. Alberts completed protocol least Bell's vireo and southwestern willow flycatcher surveys on Phase 1 of the overall project; six least Bell's vireo locations were found, but no southwestern willow flycatchers were documented. Also in 2020, updated vegetation mapping, focused rare plant surveys and jurisdictional delineation surveys were performed, enhancing the detail collected previously. No rare plant species were

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observed, but additional jurisdictional areas were documented along the historic channel of Moosa Creek that existed prior to the golf course's development.

Ryan Electronics Biological Surveys Project, ATI Metals, Inc., San Diego, San Diego County, CA - Principal Biologist / Project Manager. The Project site is part of the old Teledyne Ryan Electronics property just northeast of the Balboa Avenue and CA-163 intersection. The Project site represents an example of San Diego Mesa Hardpan Vernal Pool habitat within coastal sage scrub and grassland communities that has largely disappeared from the region due to development. Conducted a suite of biological surveys and services to update the biological resources inventory results on a sensitive lands parcel within a surrounding area of complete development in 2019. Completed a current literature review, special-status species habitat analysis, vegetation community mapping, vernal pool and jurisdictional resources mapping, focused rare plant surveys, Best Management Practice (BMP) installation, USFWS consultations, and Biological Technical Report (BTR) production tasks in support of a groundwater well drilling and installation project within the subject parcel.

Lakeside Ranch Mitigation Bank Quino Checkerspot Butterfly Surveys, Endangered Habitats Conservancy, Lakeside, San Diego County, CA - Principal Biologist / Project Manager. The Lakeside Ranch Mitigation Bank covers over 450 acres of preserved land owned by San Diego Gas & Electric to offset mitigation for impacts on QCB habitat from the Sunrise Powerlink project. Assisted with protocol Quino checkerspot butterfly (QCB) presence/absence surveys in two assigned subsections of the Project.

Bandy Canyon Mitigation Bank Project, Conservation Land Group, Inc., Escondido, San Diego County, CA - Principal Biologist / Project Manager. The Bandy Canyon Mitigation Bank Project is a multi-year effort involving several landowners with lands proposed for addition to existing conservation easements. The overall area includes 225 acres, 73 acres of which are already encumbered by easement protections held by the San Dieguito River Park JPA. In June and July of 2020, conducted vegetation mapping, characterized coastal sage scrub as low/medium/high suitability for California gnatcatcher, conducted a one-time California gnatcatcher survey, collected representative photographs, and produced detailed vegetation maps and a letter report of findings.

Etiwanda Residential Development Mitigation Site, C.A. Page, Rancho Cucamonga, Riverside County, CA - Senior Biologist. A housing development project at the north end of Etiwanda Avenue in Rancho Cucamonga caused the loss of approximately 100 acres of white sage-dominant Riversidian sage scrub, habitat for the federally threatened California gnatcatcher. As mitigation, the client agreed to purchase 1,070 acres of land to be held undisturbed in perpetuity. Designed a brown-headed cowbird trapping plan for acquired sites to aid gnatcatcher reproductive success within the mitigation strategy in 2007.

Biological Preserve Management, Environmental Trust, San Diego County, CA - Biologist / Botanist / Preserve Manager/ Restoration Specialist. Managed approximately 12 parcels of land held in perpetuity as mitigation lands/preserves in various parts of San Diego County from near the coast to the mountains from 1997 to 1998. Land sizes ranged from a few acres to over 300 acres, and management conditions were uniquely designed and required for each area. Conducted bird counts, vegetation mapping, trail design and construction, public outreach, exotic species removal, native plant restoration, endangered species surveys, baseline wildlife surveys, and annual report writing and submittal to the California Department of Fish & Game (CDFG).

Other Biological Surveys

Seasonal Bird Population Surveys, Monitoring of Bolsa Chica After Construction, California State Lands Commission, sub to Merkel & Associates, Inc., Orange County, CA - Senior Biologist. This Project is a large-scale coastal wetlands restoration project that is strategically converting human-altered/constructed basins within active oil fields to previously occurring natural, biological, chemical and hydrological functional capacities. Assisted with seasonal shorebird and terrestrial avian population studies through the avian wintering and breeding seasons from 2009 to 2011. Served as a point of contact and team lead for approximately 18 of these surveys.

Pio Pico RV Park Master Use Permit Project, Lions Engineering & Construction, Jamul, San Diego County, CA - Principal Biologist / Project Manager. Completed special-status species habitat analyses and open space designation assistance, while serving as a liaison between the County of San Diego biological and planning staff and the US Fish & Wildlife Service and California Department of Fish & Wildlife (CDFW) staff. Serves in an on-call capacity to support the park's goal of obtaining a current Master Use Permit to cover existing operations and land uses.

Bell Valley Ranch Quino Checkerspot Butterfly Surveys, ESR, Inc., San Diego County, CA - Principal Biologist / Project Manager. Assisted with Quino checkerspot butterfly (QCB) surveys, special-status species habitat analyses, an arroyo toad habitat assessment, and report production tasks on a large parcel of privately-owned land immediately north of the US/Mexico border between Campo and Potrero in eastern San Diego County in 2019.



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USFWS Protocol Biological Surveys and Habitat Assessments, Southern CA - Independent Biologist. Conducted numerous surveys and habitat assessments for several threatened and endangered species in many areas of San Diego County and beyond. Highlights included: USFWS protocol-level California gnatcatcher surveys and least Bell's vireo surveys for EDAW in Riverside County and northern San Diego County in 2001 and 2002; USFWS protocol-level least Bell's vireo surveys of the upper Santa Margarita River near the San Diego/Riverside County line under Griffith Wildlife Biology in 2001; USFWS protocol-level California gnatcatcher surveys of the Dehesa, CA area under REC in 2002; USFWS-protocol diurnal and nocturnal arroyo toad surveys of the San Pasqual Valley under Varanus Biological in 2003; least Bell's vireo surveys in the Indian Canyons area of Palm Springs under Varanus Biological in 2003; southwestern willow flycatcher surveys of the upper San Luis Rey River under Varanus Biological in 2003; USFWS protocol-level California gnatcatcher surveys in several areas of San Diego and Vista, CA under Tierra Consulting in 2001; USFWS protocol-level California gnatcatcher surveys in several areas near Escondido and Vista, CA under Varanus Biological in 2003; small mammal trapping in Borrego Springs, CA under Varanus Biological in 2003; baseline wildlife surveys and vegetation mapping of proposed preserve sites in San Diego County under Varanus Biological in 2003.

Brown-Headed Cowbird Trapping Program, sub to Griffith Wildlife Biology, Santee, San Diego County, CA - Biologist. The golf course was required to financially support a brown-headed cowbird trapping effort as compensatory mitigation for damages to onsite riparian habitats associated with unlawful grading activities. Assisted with implementation of the trapping program from 1998 to 2001.

Brown-Headed Cowbird Trapping Program, Huntington Central Park Sports Complex, City of Huntington Beach Huntington Beach, Orange County, CA - Senior Biologist. The Brown-headed Cowbird Trapping Program was located on the approximately 45-acre Huntington Central Park Sports Complex in the City of Huntington Beach in Orange County. Assisted with implementation of the trapping program from 2007 to 2008.

Research

Border Field State Park Bird Monitoring Project, California State Parks, San Diego, San Diego County, CA - Principal Biologist. The Project survey area encompasses roughly 221 acres and includes approximately 120 acres of riparian woodland and scrub habitat in the Goat Canyon sediment basin, Tijuana River Valley Regional Park and areas west of Bunker Hill. Completed protocol least Bell's vireo (LBVI) and California gnatcatcher surveys during the 2017 and 2018 breeding seasons in the vicinity of the Goat Canyon sedimentation basin complex of Border Field State Park. Served as a contributing author on the 2017 and 2018 LBVI 45-day reports.



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Trainings & Permits

- o USFWS Permit TE-14749C-1 2019- present
 - Listed Vernal Pool Branchipods
 - California gnatchatcher
- CDFW Scientific Collecting Permit #SC-192840001 -2020-present
- o 40-Hour HAZWOPER -2021-present
- Desert Tortoise Council Survey Techniques and Handling Workshop – Desert Tortoise Council, 2016
- Southwestern Willow Flycatcher Workshop and Training – Southern Sierra Research Station, 2012
- o **Desert Bighorn Sheep Workshop** -Arizona Game and Fish, 2012
- o **BLM Flat-tailed Horned Lizard Handler –** 2012 to present
- Preventing the Introduction of Invasive Weeds Workshop – 2013
- City of San Diego Public Utilities Water and Wastewater Certified Recycled Water Site Supervisor – 2011
- NAUI certified scuba diver (open water, basic); PADI certified scuba diver (advanced)

Skills and Proficiencies

- Environmental compliance management and coordination
- General nesting bird and raptor surveys
- Habitat assessments and mapping
- Biological assessment and technical reporting
- Fluent in Spanish

Education

BA, Biology, May 2010
University of San Diego
Mallow Calcular Canavad Hawara

BACKGROUND

LORENA BERNAL is a Project Biologist and Project Manager for Blackhawk Environmental. She is a multiskilled, highly motivated biologist with over 9 years of experience in the environmental consulting field including ornithology, herpetology, mammalogy, entomology and botany. Her experience includes monitoring and reporting of environmental impacts to biological resources, noise, air quality, and overall environmental compliance. She is trained and experienced in the design and implementation of mitigation plans, biological assessments, and various NEPA/CEQA documents. Ms. Bernal has conducted reconnaissance-level and focused protocol-level surveys for a number of wildlife and plant species, including federally and state listed and special-status species. She is an effective bilingual communicator, versed with high profile clients (SDGE, US Navy, SCE) and federal and state agencies (BLM, USFS, CPUC).

PROJECT EXPERIENCE

Energy

Cleveland National Forest Master Special Use Permit (MSUP) and Permit to Construct (PTC) Power Line Replacement Project, San Diego County, CA. - Crux Subsurface, Inc. Contractor Environmental Compliance Manager. Contractor point of contact for all environmental compliance submittals and communications for this large scale linear powerline replacement project performed as an Engineer/Procure/Construct (EPC) task by Crux Subsurface. Prepared biological resource data for associated California Department of Transportation Encroachment Permit Authorization and Categorical Exemption including: tree inventory, biological monitoring, avoidance signage, SWPPP related compliance, and restoration documentation. Prepared all County Hazardous Materials Business Plans, Spill Prevention, Conainment, and Contermeasure (SPCC) plans, dewatering plans, cultural resource avoidance work plans, nesting bird avoidance and minimization work plans, and compliance corrective action plans. Provided input on implimentation of SWPPP and CGP closeout. Submitted purchased water

source documentation and emissions logs documentation. Coordinated with project owner on ovaoidance of golden eagle, bald eagle, Stephen's kangaroo rat, spotted owl, and arroyo toad. Coordinated with the Contractor engineering team and Owner environmental team for segment design review to avoid impacts consistent with the EIR/EIS and to avoid permitting. Developed and implimented a stadardized GIS schema for EPC worklimits submittals in geodatabase format to facilitate easement aquistion, land owner coordination, and environmental review.

C357 Apollo Underground Conversion Project, San Diego Gas and Electric, Alpine, San Diego County, CA – sub to AECOM. Staff Biologist. Performed and managed pre-construction nest surveys ahead of underground distribution work within a residential neighborhood in Alpine, CA. Performed overall environmental compliance checks on a weekly basis and completed nest survey daily activity and compliance reports/summaries.



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Los Angeles Department of Water and Power (LADWP) Barren Ridge Renewable Transmission Project, Santa Clarita and Castaic, CA – ASPEN. Staff Biologist. Conducted quantitative rare plant species mapping within the project Right-of-Way (ROW). Specifically, targeted rare plant species included: round leaved filaree (California macrophylla), paniculate tarplant (Deinandra paniculata), Catalina mariposa lily (Calochortus catalinae), slender mariposa lily (Calochortus clavatus var. gracilis), Peirson's morning glory (Calystegia peirsonii), Palmer's grapplinghook (Harpagonella palmeri), Southern California black walnut (Juglans californica), wire grass or spiny rush (Juncus acutus ssp. leopoldii), and short joint beavertail (Opuntia basilaris var. brachyclada). Completed survey transects throughout a 15 to 20-mile span of the ROW to collect population data on all the target species. Collected all points and polygons data with Trimble GPS units and larger polygon data was recorded on paper maps. Maintained a general wildlife and plant species list for submittal at the end of the survey effort.

SDG&E Salt Creek Substation Project, San Diego County, CA. – San Diego Gas & Electric (SDG&E), sub to AECOM. Lead Environmental Inspector (LEI). Attended daily construction tailboard meetings, coordinated implementation of mitigation measures. Daily inspection of the Project site for potential compliance issues and daily communication with construction crews to explain compliance requirements. Relocated wildlife, provided Worker & Environmental Awareness Program (WEAP) training for all new Project personnel, scheduled paleontological and cultural monitors as needed, and completion of daily compliance reports. Conducted pre-construction surveys for nesting birds, including protocol surveys for California gnatcatcher and focused burrowing owl surveys. Conducted nesting bird monitoring and implemented appropriate nest buffers per the Project Nesting Bird Plan. Attended weekly construction/environmental meetings. Provided environmental compliance information and advice to Project construction managers and contactors. Completed and submitted weekly and annual summary compliance reports as well as nesting bird reports.

Path 42 Transmission Line Rebuild Project, Imperial Irrigation District (IID), Coachella Valley, CA. Biological Monitor / Associate Biologist. Responsible for conducting pre-construction and clearance surveys for desert tortoise, burrowing owl, flat-tailed horned lizard, Coachella Valley fringe-toed lizard, desert kit fox, nesting birds and Coachella Valley milk vetch. Conducted pre-construction and clearance surveys in accordance with IID's Applicant Proposed Measures and the Coachella Valley Multi Species Habitat Conservation Plan (CVMSHCP). Survey efforts consisted of transect surveys to identify suitable burrows, animal sign, potential nests, and follow-up surveys as needed to determine presence/absence. Conducted construction monitoring and was responsible for keeping all construction-related activities in compliance with federal and state permits and regulations. Surveys were conducted within various desert and desert wash habitats including desert saltbush scrub, creosote bush scrub, aeolian dune habitat, and dry desert wash woodland habitat. Prepared reports for wildlife agencies and recommended nest and burrow avoidance buffers. Conducted construction monitoring and provided advice to crews in the task of compliance with federal and state permits and regulations.

SDG&E Wood to Steel Pole Replacement Project TL690C, Marine Corps Base Camp Pendleton, San Diego County, CA. – San Diego Gas & Electric Field, sub to AMEC. Lead / Construction Monitor. Conducted daily general wildlife pre-construction surveys to facilitate construction activities. Conducted nesting bird surveys during the 2013 avian breeding season. Performed passive nest monitoring as needed to monitor nest status ahead of construction activities. Monitored construction in occupied California gnatcatcher habitat. Authored vegetation impact reports and nesting bird reports when requested. Construction monitoring and surveys were conducted within the following habitats: coastal sage scrub, maritime succulent scrub, non-native grasslands, agricultural fields, developed areas, and disturbed habitats.

SDG&E Sunrise Powerlink Project Operations and Maintenance, San Diego Gas & Electric, Imperial County, CA. – San Diego Gas & Electric Field, sub to Chambers Group. Avian Biologist. Conducted pre-construction nesting bird surveys for active raptor nests within 500 feet of Project work areas, active non-listed, Migratory Bird Treaty Act (MBTA) and California Department of Fish and Wildlife (CDFW)-protected bird nests within 100 feet of Project work areas, and surveys for burrowing owl (BUOW) and/or BUOW presence indicators (appropriate-sized burrows, whitewash, pellets, and feathers) within 500 feet of Project work areas.

SDG&E Sunrise Powerlink Project, San Diego Gas & Electric, San Diego and Imperial Counties, CA. Construction Monitor / Avian Biologist / Associate Biologist. Provided environmental compliance guidance to construction crews. Conducted pre-construction biological surveys for all non-listed and listed species of reptiles, amphibians, insects, and mammals along the Sunrise Powerlink right-of-way. Responsible for wildlife relocation, including rattlesnakes and flat-tailed horned lizards, that could have been potentially impacted by construction. Conducted habitat assessment surveys for approval of temporary extra workspaces from state and federal agencies. Frequent hours were spent observing bird and breeding behavior along the 120-mile long power line, transecting San Diego and Imperial Counties through numerous habitats, including riparian forest and woodland, nonnative vegetation, developed areas, disturbed habitats, chaparral, coastal and montane scrub, desert scrub and dunes, grasslands and meadows, herbaceous wetlands, freshwater bodies and streams. Numerous hours were spent in avian identification through audio and visual means. Conducted surveys for all non-listed species, raptors, and federally, state listed and special-status species, including

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California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, burrowing owl, yellow-breasted chat, white-tailed kite, loggerhead shrike, northern harrier, yellow warbler, grasshopper sparrow and peregrine falcon.

Tehachapi Renewable Transmission Project, Southern California Edison, Kern, Los Angeles & San Bernardino Counties, CA. Biological Monitor / Construction Monitor. This was a multi-year project to connect renewable energy sources, such as wind and solar, from desert and foothill regions to the greater Los Angeles area with a new 500 kV transmission line and various upgrades to existing infrastructure. The Project traversed over 175 miles from Tehachapi to Ontario, CA. Conducted construction clearance and final surveys, nesting bird surveys, and construction monitoring. Provided recommendations to construction crews in order to ensure compliance with all project mitigation measures and ultimate compliance with state and federal regulations. Conducted wildlife relocation and sensitive plant and wildlife documentation while in the field.

Kimball Substation Environmental and Monitoring Support Services, Southern California Edison, Chino, San Bernardino & Riverside Counties, CA. Biological Monitor. Supported environmental compliance during the construction of a substation and 10 miles of Southern California Edison (SCE) project construction activities (including wood-to-steel pole conversion, 66kV sub-transmission line installation, 12kV distribution line installation, and telecommunication line installation). Responsible for Migratory Bird Treaty Act (MBTA) compliance and pre-construction nesting bird surveys.

SDG&E Wood to Steel Pole Replacement Projects, San Diego County, CA. – San Diego Gas & Electric Field, sub to Chambers Group, AMEC, & AECOM. Associate Biologist / Biological Monitor. Conducted pre-construction general avian and raptor surveys, raptor habitat assessment, vegetation surveys, and determined presence/absence of jurisdictional waterways, sensitive species and resources along several SDG&E Tie Lines on Wood to Steel Pole Replacement initiatives. Served as a construction monitor, reporting daily to project leads. Conducted biological surveys and construction monitoring within the following habitats: coastal sage scrub, woodlands, non-native grasslands, developed areas, disturbed habitats, and chaparral.

Renewable Energy

McCain Valley Solar Project Quino Checkerspot Butterfly Surveys Project, **Boulevard**, **San Diego County**, **CA** - sub to Greenskies Renewables LLC. Staff Biologist. This proposed project would convert existing pasture lands in eastern San Diego County to a 416acre solar facility. In 2020, coordinated and completed a full suite of 12 USFWS protocol presence/absence surveys for the federally endangered Quino checkerspot butterfly on the proposed footprint, plus 100 feet beyond the boundaries. Survey areas were divided into five sections. Accompanied and assisted as a trainee of permitted biologists with Quino checkerspot butterfly surveys according to protocol guidelines. Performed host plant mapping and data collection. Produced a 45-day report; no Quino checkerspot butterflies were observed.

Seville Solar Project, Imperial County, CA. – Kruger Energy and Duke Energy. Field Contact Representative / Lead Inspector. Blackhawk Environmental was contracted directly through Kruger Energy, Inc. in late 2014 to oversee all environmental compliance activities on the Seville Solar array site just east of Ocotillo Wells in Imperial County, CA. In 2015, project ownership was transferred to Duke Energy, where Blackhawk stayed onboard as the compliance contractor. Conducted construction monitoring, nesting bird surveys, compliance reporting, and associated tasks for this project, including biological and aquatics resources, dust control, hazardous materials and adaptive techniques to minimize and avoid impacts. Conducted flat-tailed homed lizard clearance surveys and relocations, construction monitoring, environmental awareness trainings, nesting bird surveys and reports, burrowing owl surveys and burrow exclusions, and bat surveys. Conducted daily construction monitoring which involved tracking of several hundred personnel and multiple contractors involved in multiple facets of the new solar array construction, construction, and post-construction phases. This project to environmental compliance which included: pre-construction, construction, and post-construction phases. This project spanned multiple jurisdictions including privately owned land, Imperial Irrigation District land and BLM land. Concentrated monitoring efforts in areas of medium and high impact activities as defined by the CDFW Incidental Take Permit for the State Candidate Species, the flat-tailed horned lizard. One of only three Designated Biologists for this Project, as defined by CDFW through their resume and qualifications approval process.

Dixieland East & West Solar Project, Centinela, Imperial County, CA – sub to AES / Blue Oak Energy. Staff Biologist. MMRP compliance, noise analysis, construction monitoring, project management, scheduling, nesting bird and burrowing owl surveys, burrowing owl mitigation plan, dust compliance, spot-check monitor reporting, and photo-documentation.

McCoy Solar LLC, McCoy Solar Energy Project, Riverside County, CA. Staff Biologist. Conducted pre-construction nesting bird and focused desert tortoise and burrowing owl burrow surveys. Assessed habitat suitability for burrowing owl and inspected all burrows/crevices for desert tortoise or burrowing owl sign.



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First Solar, Solar Gen2 Solar Project, Imperial County, CA. Associate Biologist. Conducted pre-construction nesting bird surveys, burrowing owl take avoidance surveys and protocol burrowing owl surveys (non-breeding and breeding season) for the 150-megawatt solar facility which included 3 projects (Sonora, Arkansas, and Alhambra). Conducted passive relocation/exclusion efforts of burrowing owls per the California Department of Fish and Wildlife Service Staff Report on Burrowing Owls. Assisted and oversaw the construction of 12 artificial burrows and assisted in an extensive monitoring effort to evaluate the success of these burrows and protect active burrows from harassment or take as a result of construction. Oversaw the installation of 28 shelters-in-place which involved installation of hay bale shelters between active burrow entrances and the project site to offset any potential indirect impacts during construction. Over the period of approximately on year, conducted over 100 hours of burrowing owl monitoring, as well as over 100 survey hours for burrowing owl sign. Responsible for implementing and adjusting buffers for active burrowing owl burrows based on observed behavior with the ultimate purpose of preventing harassment or take due to construction. Responsible for construction monitoring, environmental compliance reporting, and providing recommendations to the construction team to ensure compliance with all project mitigation measures, including the protection of applicable environmental and cultural resources within the project right-of-way.

Ocotillo Wind Energy Facility Project, Imperial County, CA. Environmental Monitor. Conducted third party CPUC monitoring during and after construction of the Ocotillo Wind Energy Project, consisting of 112 wind turbines and connective transmission features and facilities in Ocotillo, CA. Responsible for ensuring that all construction contractors and the biological monitors followed all project mitigation measures under all applicable federal and state permits and regulations issued by the BLM, USFS, CDFG, CPUC, and USACE under CEQA and NEPA regulations as outlined in the Mitigation Monitoring and Reporting Program (MMRP) and Environmental and Construction Compliance Monitoring Plan (ECCMP) during night work operations. Compliance monitoring involved day and night shifts throughout construction work. Provided accurate and thorough compliance reports.

Restoration

SDG&E Murphy Canyon Housing Restoration Area Weed Management, San Diego, San Diego County, CA – sub to AECOM. Associate Biologist. Conducted a pre-activity survey and report (PSR) and non-focused sensitive plant species survey on federal land within the Murphy Canyon Vernal Pool Preserve in the City of San Diego in 2015. The survey and PSR were conducted to support weed species removal and treatment practices undertaken annually by US Marine Corps contractors. Conducted an environmental tailboard in English and Spanish for the benefit of the landscape crew to effectively communicate compliance needs during weed abatement work. Helped ensure that all sensitive plant species populations were avoided by weed treatment crews.

Brodiaea filifolia Habitat Enhancement, NAVFAC Southwest, US Marine Corps Base Camp Pendleton, San Diego County, CA.

Staff Biologist. Assisted restoration ecologists to complete habitat enhancement for the federally threatened thread-leaved brodiaea (Brodiaea filifolia) on Marine Corps Base Camp Pendleton (MBBCP) in northwestern San Diego County, California. Conducted pre-activity clearance surveys to avoid impacts to endangered species such as least Bell's vireo and coastal California gnatcatcher known to occur within and adjacent to the enhancement areas. The restoration process implemented a program of habitat enhancement for the brodiaea while avoiding populations of the listed bird species. The results of this habitat enhancement effort will provide the mitigation necessary for impacts to the brodiaea associated with various mission-related projects at MCBCP, and will assist in the recovery of this rare species. Conducted site preparation, invasive weed removal/control, and exclusion fence installation.

Federal

BLM International Border Fuel Break 2019 Project, BLM, CALFIRE, San Diego & Imperial Counties, CA - sub to Aspen. Staff Biologist. Conducted baseline biological surveys, vegetation communities mapping, sensitive species analyses, datasheet completion and photo-documentation of BLM-owned parcels west of the Salton Sea for tamarisk removal procedures in 2019.

San Nicholas Island (SNI) Navy Offshore Landing Field (NOLF) - Invasive Species Mapping Project, NAVFAC Southwest, SNI NOLF, CA. Staff Biologist. Conducted quantitative invasive species mapping in 2015 on San Nicholas Island as a component of the broader goal of identifying target locations for treating and preventing the spread of noxious invasive species within the island to restore the island's unique and sensitive natural resources. Specifically, targeted invasive species including tocalote, Sahara mustard, purple salsify, European beach grass, Bermuda grass, purple false brome and kikuyu grass, Mapped invasive species across the entire, 23-mile coastal zone and some inland portions of the island. Managed work in very remote areas of the island during severe weather, traversing more than 10 miles per day on-foot, much of which was within environmentally sensitive zones, including northern elephant seal pupping areas and Brandt's cormorant nesting colonies. Assisted team in collection of target invasive species within target location on the island. Gained direct experience with northern elephant seal colonies, among other pinnipeds, cormorant nesting colonies, and endemic island species such as the island horned lark, island night lizard, and island kit fox.

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US Navy San Clemente Island Weed Treatment Project/Navy San Clemente Island Range Complex (San Clemente Island), NAVFAC Southwest, San Clemente Island (SCI) Range Complex, CA. Staff Biologist. The Navy San Clemente Island Range Complex has been in a long-term invasive plant species eradication effort on San Clemente Island. The eradication is being conducted to facilitate native plant species establishment while also ensuring that invasive plant species do not impact base operations. Conducted invasive plant species data collection and mapping, herbicidal applications monitoring and daily reporting in 2015.

Development

Sweetwater Summit Campground Expansion Project, Bonita, San Diego County, CA – County of San Diego Department of Parks and Recreation (DPR), sub to ESA. Staff Biologist. Assisted with Quino checkerspot butterfly presence/absence surveys as a trainee on and adjacent to the Sweetwater Summit Campground within an area spanning over 100 acres proposed for development and expansion in 2020.

Alvarado Creek Affordable Housing Project, San Diego, San Diego County, CA – Pacific West Communities, Inc. Staff Biologist. Performed biological and habitat assessment surveys, literature reviews, baseline biological resource inventories, GIS analysis, sensitive species suitability analysis, and photo documentation. Assisted in the preparation of Biological Survey Report per City of San Diego guidelines, including identification of City Environmentally Sensitive Areas. Assisted in the preparation of the Jurisdictional Delineation Report of USACE wetland and non-wetland waters of the US, CDFW streambed and riparian areas, and RWQCB wetland and non-wetland waters of the state as part of Alvarado Creek revitalization efforts.

Bell Valley Ranch Project, Potrero, San Diego County, CA – ESR, Inc. Staff Biologist. Performed Quino checkerspot butterfly host plant mapping and assisted with presence/absence surveys as a trainee on a nearly 1000-acre plot of land proposed for development in 2019.

Jurupa Valley Medical Center Project, Jurupa Valley, Riverside County, CA – sub to EPD Solutions, Inc. Staff Biologist. Assisted with the preparation of a Western Riverside County MSHCP Habitat Assessment Report (HAR), literature review, focused burrowing owl survey, baseline biological resources inventory, GIS analysis, sensitive species suitability analysis, vernal pool/riparian/riverine presence/absence survey, and photo-documentation.

Communications

Digital 395 Broadband Project, California Broadband Cooperative, Southern CA and NV. Associate Biologist. Conducted preliminary biological surveys and jurisdictional/wetland delineations, including the identification of all species found within the project right-of-way on the portion of the alignment between Lone Pine and Bishop, CA. Responsible for general biological surveys within riparian woodlands, herbaceous wetland, and desert scrub habitats. These surveys were submitted to the lead federal agency, (Department of Commerce National Telecommunication and Information Administration) and the State lead agency (California Public Utilities Commission).

Transportation

State Routes 57 & 60/Grand Avenue Interchange Improvement Project, Diamond Bar and City of Industry, Los Angeles County, CA -EIP Associates, a Division of PBS&J, sub to Sage Environmental Group. Staff Biologist. The area of concern included hundreds of undeveloped acres and Diamond Bar Golf Course adjacent to the section of highway where State Routes 57 and 60 run in confluence for several miles. Assisted the Principal Biologist/Wetland Scientist with jurisdictional delineations in 2019. Jurisdictional delineations were conducted on the golf course and the southerly adjacent portions of the highway.

Interstate 405 Expansion Project, Kiewit, Los Angeles County, CA. Biological Monitor / Avian Biologist. Responsible for keeping all construction-related activities in compliance with federal and state permits and regulations during construction of this major interstate highway improvement project. Conducted pre-construction clearance surveys and nesting bird surveys in coastal sage scrub habitat adjacent to the I-405 freeway in Los Angeles, CA. Involved in the submission of nest survey reports to wildlife agencies and recommended appropriate nest buffers. In keeping with safety and compliance considerations, conducted wildlife relocation when necessary.



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Water Resources

Sorrento Valley/Los Penasquitos Lagoon Restoration Project San Diego, San Diego County, CA – sub to ESA and Burns & McDonnell. Staff Biologist. The Sorrento Valley/Los Penasquitos Lagoon Restoration Project is proposed by the City of San Diego as a result of localized flooding of light industrial spaces along the Los Penasquitos Creek in the 2015/2016 rainy season. The project would restore historic salt marsh habitat, increase tidal inundation, remove exotic plant species, restore degraded habitats, reduce mosquito breeding habitat and facilitate fresh water flows during the rainy season and low flow regimes. The project would be among the largest marshland restoration efforts ever conducted in California. Conducted focused rare plant surveys and assisted with updating vegetation mapping surveys. Assisted in completing data analysis, species lists, and portions of the rare plant report. Thirteen rare plant species were documented, accounting for over 2,000 individuals. 24 vegetation communities were mapped in great detail to aid in project design.

SDG&E South Bay Reclaimed Water Fill Station, San Diego Gas & Electric, San Diego County, California. Biological Monitor/

Avian Biologist. Accountable for keeping all activities associated with the construction of a water truck refill station in compliance with mitigation measures, project permits and state and federal regulations. Conducted presence/absence surveys and nesting bird surveys for all non-listed species, raptors, and federally, state listed and special status species including coastal California gnatcatcher, least Bell's vireo, yellow-breasted chat, white-tailed kite, northern harrier, yellow warbler, and grasshopper sparrow. All permit-required surveys were under the supervision of a permitted biologist. Responsible for daily compliance reporting to the overall project team, ensuring full environmental compliance and no delays to construction progress.

Grunion Surveys, San Dieguito Lagoon Restoration Project, Southern California Edison, Del Mar, San Diego County, CA. Conducted grunion surveys for the San Dieguito Lagoon Project Site. The project involved restoration of the San Dieguito Lagoon wetlands, including restoration of native plant communities, weed removal, creation of nest sites for California least tern and western snowy plover, and channel dredging to improve drainage. The site contains habitat for many sensitive species including least Bell's vireo, coastal California gnatcatcher, California least tern, clapper rail, Belding's savannah sparrow, western snowy plover, and burrowing owl, among others. Grunion surveys were conducted along the beach and channel outlet on nights of high tide events during full and new moons, beginning half an hour before high tide and concluding two hours after high tide. Thousands of grunion, including hundreds of spawning events, were identified and their GPS locations were recorded and mapped. Compiled data for timely submission to project proponents and regulatory agencies.

City of Los Angeles Non-Storm Water Sampling and Source Investigation, L.A. Sanitation District, sub to Larry Walker Associates, Los Angeles County, CA. Aquatics Specialist. Blackhawk Environmental was retained by Larry Walker Associates to assist during both the non-storm water and storm water sampling efforts conducted in Ballona Creek, Upper Los Angeles River, and Compton Creek. During the dry season, worked as part of a team to collect *E. coli* samples and measure the temperature, specific conductivity and volume of flow of water from outfall drains pouring into each watershed. Roughly 75 sites were sampled during the dry season.

Public Works

Encina Wastewater Authority Flood Control Channel Rip Rap Bed Maintenance Project, Carlsbad, San Diego County, CA. – Encina Wastewater Authority. Staff Biologist. Performed biological and habitat assessment surveys, literature review, baseline biological resource inventory, GIS analysis, sensitive species suitability analysis, and photo documentation. Prepared the Biological Resource Assessment Report per City of Carlsbad guidelines, including identification of City Environmentally Sensitive Areas. Assisted in the preparation of associated Jurisdictional Delineation Report of USACE wetland and non-wetland waters of the US, CDFW streambed and riparian areas, RWQCB wetland and non-wetland waters of the state, and City of Carlsbad/ California Coastal Commission jurisdictional wetlands and waters as part of the Encina Wastewater Authority Flood Control Channel Rip Rap Bed Maintenance efforts.

Border Field State Park Bird Monitoring Project, San Diego, San Diego County, CA. - California State Parks. Staff/Permitted Biologist. Assisted in completing protocol least Bell's vireo (LBVI) and California gnatcatcher surveys during the 2017, 2018, 2019, and 2020 (LBVI only) breeding seasons in the vicinity of the Goat Canyon sedimentation basin complex of Border Field State Park. Assisted in the preparation of annual reporting to agencies including habitat assessment, breeding data and photo documentation. The Project survey area encompasses roughly 221 acres and includes approximately 120 acres of riparian woodland and scrub habitat in the Goat Canyon sediment basin, Tijuana River Valley Regional Park, and areas west of Bunker Hill. These areas are primarily located in the City of San Diego, with smaller portions also extending into unincorporated areas of San Diego County.

Mission Trails Flow Regulatory Structure II, San Diego County, CA – sub to ESA. Assisted with Quino checkerspot butterfly presence/absence surveys as a trainee.



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County of San Diego Preserves Biological Surveys Project, San Diego County, CA – San Diego County Department of Parks and Recreation, sub to ESA. Staff Biologist. Surveys were conducted on County of San Diego Preserves throughout the County, including Keys Creek and Hellhole Canyon in Valley Center, and Dictionary Hill in Spring Valley to understand which species are present, particularly special-status species, or that may be present, and how best to manage the preserves for those species. Assisted and/or lead several types of focused biological surveys in 2019; survey types included nocturnal/diurnal avian surveys at one of the County preserves (Hellhole Canyon).

Academia and Research

Coastal California Gnatcatcher Winter Territory Surveys/Habitat Transects, Post-Fire Habitat Study, NAVFAC Southwest, US Marine Corps Base Camp Pendleton, San Diego County, CA. Volunteer Biologist. Assisted permitted, Staff Biologists with data collection and survey efforts as a part of winter home range mapping of California gnatcatcher (CAGN). Survey efforts involved modified burst sampling of banded and unbanded CAGN pairs. Conducted 5 individual surveys for 2 distinct pairs, totaling over 4 hours of protocol surveys. Point data and behavioral data was collected using the ArcGIS Collector application.

Bird Banding Study, Audubon Starr Ranch Sanctuary, Mission Viejo, Orange County, CA. Volunteer. This program aims to collect information as it relates to overwintering and annual bird survival rates and indices of physical condition for migratory bird species in a variety of habitats and geographical regions ultimately to inform habitat conservation and management. In 2012, 2013 and 2014, served as a volunteer bird banding trainee. Participated in bird capture, banding and scientific data collection for the 2012 and 2013 MoSI (Monitoring Overwintering Survival) seasons and in 2014 for the MAPS (Monitoring Avian Productivity and Survivorship) season.

Desert Bighorn Sheep Study, Arizona Department of Game and Fish (ADGF), Kingman, Mohave County, AZ. Volunteer. Served as a volunteer biologist for a large-scale desert bighorn sheep capture and collaring effort. Participated in the ADGF effort consisting of the capture of 37 desert bighorn sheep in the Lake Mead National Recreation Area and Mt. Wilson Wilderness Area. Volunteers aided in locating sheep herds and reporting their GPS locations, sizes, sexes and other pertinent information to an aerial patrol crew that was in charge of the sheep capture. Acquired over 24 hours of field observations and over 10 hours of direct observation hours for this species.

Golden Eagle Aerial Productivity Surveys, San Diego County, CA. Wildlife Research Institute. Volunteer Biologist. Conducted over 10 hours of helicopter surveys according to U.S. Fish and Wildlife Service's Interim Golden Eagle Inventory Protocol. Acted as note-taker for observations at 26 golden eagle territories in a multi-year survey effort of San Diego County's golden eagle population.



Tawni Gotbaum Associate Biologist

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Trainings & Permits

- CDFW Scientific Collecting Permit #SC-192830009 - 2020-present
- Marine Corps Base Camp Pendleton DBIDS 2021-present
- **Master Herpetologist Program** The Amphibian Foundation, in progress (2021
- Southwestern Willow Flycatcher Workshop Southern Sierra Research Station, 2021
- Desert Tortoise Council Survey Techniques and Handling Workshop – Desert Tortoise Council, 2015, 2018
- o Golden Eagle Workshop USGS, 2017
- o Certificate in Field Ornithology UCR, 2016
- Yellow-billed Cuckoo Workshop Southern Sierra Research Station, 2016
- CEQA Workshop University of California, San Diego, 2016
- Basic Wetland Delineation Training Wetland Training Institute, 2016

Skills and Proficiencies

- Environmental compliance management and coordination
- o General nesting bird and raptor surveys
- Habitat assessments and mapping
- Threatened and endangered species surveys
- Biological assessment and technical reporting

Education

Specialized Certificate in Field Ornithology June 2016 University of California, Riverside

BA, Geography and Environmental Studies December 2014 Simon Fraser University, British Columbia

BACKGROUND

TAWNI GOTBAUM is a biologist with experience conducting nesting bird and pre-construction surveys, biological and construction monitoring for various projects that include transmission line, pipeline, and renewable energy, overall environmental compliance, and biological reconnaissance surveys. Additional experience includes special-status species surveys and monitoring, as well as post-construction fatality surveys for renewable energy facilities. Her areas of expertise include avian identification and behavioral observations, wildlife and botanical surveys, GPS field data collection, and environmental compliance throughout Southern, Central, and Northern California. Ms. Gotbaum has conducted reconnaissance-level and focused protocol-level surveys for several wildlife and plant species, including special-status and both federally and statelisted species that include least Bell's vireo, California gnatcatcher, burrowing owl, desert tortoise, Swainson's hawk, Quino checkerspot butterfly, western snowy plover, California least tern, and thread-leaved brodiaea.

PROJECT EXPERIENCE

Energy

SDG&E Wood to Steel Pole Replacement Projects, San Diego Gas & Electric, San Diego County, CA – sub to AECOM. Project Biologist / Biological Monitor. Conducted pre-construction general avian and raptor surveys, raptor habitat assessment, vegetation surveys, and determined presence/absence of jurisdictional waterways, special-status species and resources along several SDG&E Tie Lines on Wood to Steel Pole Replacement initiatives. Served as a construction monitor, reporting daily to project leads. Biological surveys and construction monitoring were conducted within, but not limited to, the following habitats: coastal sage scrub, riparian forest, oak woodland, non-native grasslands, developed areas, disturbed habitats, chaparral, and desert scrub.

SDG&E Pipeline Upgrade Project, San Diego Gas & Electric, San Diego

County, CA – sub to AECOM. Project Biologist / Biological Monitor. Conducted pre-construction burrowing owl, general avian, and raptor surveys in support of pipe replacement inside the Otay Mesa Metering Station and underground pipe replacement outside the station fenceline. Located three active burrowing owl burrows within and immediately adjacent to the project site. Coordinated with the client and construction contractors to install visual buffers (i.e., temporary fencing with privacy screening and hay bales) at two of the active burrow locations to reduce disturbance to burrowing owls. Monitored five adult and one juvenile burrowing owl during construction activities. Inspected work areas for general construction compliance and adherence to the project's Environmental Release.



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SDG&E Cleveland National Forest Master Special Use Permit (MSUP) and Permit to Construct (PTC) Power Line Replacement Project, Crux Subsurface Inc., San Diego County, CA. Environmental Compliance Coordinator (ECC). San Diego Gas & Electric (SDG&E) is undergoing the replacement of several existing 12-kilovolt(kV) and 69kV electric facilities spread throughout an approximately 880-square-mile area in eastern San Diego County. Six 69kV lines and up to seven 12 kV lines will be rebuilt, and approximately 1,800 existing wood poles will be replaced with fire-resistant weatherized steel poles. Responsible for coordinating the dissemination of environmental information from the office to the field appropriately. Attended appropriate tailboard meetings and coordinated the implementation of mitigation measures as required and necessary in the field. Reviewed daily/weekly construction schedules for work site approval, addressed environmental inspector concerns, inspected project lines for potential issues with signage, staking, BMP installation and composed internal daily compliance reports in 2019 and 2020.

Protocol Arroyo Toad Surveys in support of SDG&E Cleveland National Forest MSUP and PTC Power Line Replacement Project, Borcher Environmental, San Diego County, CA. Associate Biologist. Under direction of Principal Biologist, Andrew Borcher, assisted with protocol-level arroyo toad surveys during the 2019 breeding season. Nocturnal pedestrian surveys utilizing head lamps were completed at numerous sites within Cleveland National Forest. Observed two adult arroyo toads and at least three were heard. Toad locations and data required for USFWS report submittal were collected in the field.

SDG&E Sunrise Powerlink Project, Operations & Maintenance, San Diego Gas & Electric, San Diego & Imperial Counties, CA. Project Biologist. Conducted pre-construction nesting bird surveys and construction monitoring prior to power line maintenance activities in 2019 and 2020. Active and passive nest searching methods were completed in numerous habitat types throughout San Diego and Imperial Counties. Active nests were monitored for signs of disturbance and notes on behavior were also recorded.

SCE Environmental Clearance and Off-Cycle Inspections, Operations and Maintenance, Southern California Edison, San Bernardino, Riverside, and San Diego Counties, CA. Associate Biologist. Conducted environmental clearance and pre-activity surveys for nesting birds, woodpecker activity, burrows, and special-status plants prior to SCE pole removal/replacement activities in 2018 and 2019. Provided construction and environmental compliance monitoring. Incidental species (in particular, avian and botanical) were recorded and habitat was assessed for nesting suitability. Resources were collected and documented using Collector for ArcGIS. Survey and monitoring results, photo documentation, and KMZ's outlining disturbance were submitted to the client using Survey123. Trained other staff in survey, monitoring, and reporting methodology and reviewed staff reports prior to delivery to the client.

SCE Mesa Facilities Orphan Properties Soil Sampling, California Gnatcatcher Habitat Assessment, Southern California Edison, San Diego County, CA. Associate Biologist. Assessed habitat suitability for California gnatcatchers, with additional focus on San Diego fairy shrimp and arroyo toad in 2018. The biologist met with SCE project managers and Marine Corps Base Camp Pendleton biologists to discuss potential disturbance and avoidance measures. Provided a memo with survey results, monitoring recommendations, photo documentation, and KMZ's of gnatcatcher locations to the client. Observed and heard five California gnatcatchers.

SCE Devers-Palo Verde I Transmission Line Upgrades, Operations and Maintenance, Southern California Edison, Riverside County, CA. Associate Biologist. Conducted raptor and general nesting bird surveys in desert tortoise, golden eagle, California condor, loggerhead shrike, Le Conte's thrasher, Coachella Valley fringe-toed lizard, and Coachella Valley milkvetch habitat in 2018. Located active nests in towers and along access roads, recorded nest status, monitored avian behavior, and established both ESAs and nest buffers. Extensive use of FRED for report submittal and CarryMap for resource updates.

SoCalGas Pipeline Safety Enhancement Plan, Operations and Maintenance, Southern California Gas Company, Imperial County, CA. Associate Biologist. Conducted pre-construction sweeps for burrowing owls, small mammals, and reptiles in support of pipeline upgrade and replacement activities in Brawley and El Centro in 2018. Monitored construction crews and provided WEAP training, focusing on air and water quality protection, SWPPP, BMP enforcement, proper pipe abatement, and hazardous waste storage/disposal. Daily monitoring logs and photo documentation were submitted to the client using strict vocabulary and protocol. Observed 10 burrowing owls and six burrows which were monitored before, during, and after construction activities.

SCE Devers-Palo Verde I Transmission Line Upgrades, Operations and Maintenance, Southern California Edison, Riverside County, CA. Associate Biologist. Conducted pre-construction raptor and general nesting bird surveys, as well as daily sweeps for desert tortoise, Coachella Valley fringe-toed lizard, and Coachella Valley milkvetch, and monitored construction activities in the above-mentioned species' habitat in support of SCE line upgrades in 2018. Escorted vehicles to and from the project site in desert tortoise habitat.



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SCE Devers-Palo Verde I Transmission Line Upgrades, Desert Tortoise/Preconstruction Surveys, Southern California Edison, Imperial County, CA. Associate Biologist. Conducted pre-construction surveys in desert tortoise, Coachella Valley fringe-toed lizard, and Coachella Valley milkvetch habitat in 2018 ahead of SCE line upgrade activities. Recorded active and inactive raven and raptor nests, as well as all avian, reptile, mammal, and botanical species observed using Trimble units. Composed species and habitat type reports using FRED, and worked effectively both independently and in a team setting. Observed three desert tortoises, and multiple active and inactive tortoise burrows were located. Identified and recorded tortoise sign (scat, tracks, carcasses, etc.) over a period of three weeks.

PG&E ID-106 Gas Line 132 Immediate Digs Project, Operations and Maintenance, Pacific Gas and Electric, San Mateo County, CA. Associate Biologist. Provided environmental clearance and conducted pre-construction surveys for burrows, reptiles and small mammals, birds, and special-status plants in Bay checkerspot butterfly and California red-legged frog habitat in 2018. Monitored crews during ground disturbance, movement between sites, and during pipeline inspections. Ensured bio-security measures were enacted (vehicle washing, boot spraying, etc.) and provided WEAP training to both site visitors and workers.

SCE Devers-Palo Verde ROW/TCO Road Grading, Willow Flycatcher and Yellow-billed Cuckoo Habitat Assessment, Southern California Edison, Riverside County, CA. Associate Biologist. Conducted a riparian bird survey in southwestern willow flycatcher, yellow-billed cuckoo, least Bell's vireo, Le Conte's thrasher, and loggerhead shrike habitat prior to road grading for access to SCE facilities in 2018. Recorded the presence of active and/or inactive nests and locations of special-status species using Collector for ArcGIS. Recorded all wildlife species detected within the survey area and assessed habitat for special-status species' nesting suitability. Provided a memo with survey results, photos of suitable and unsuitable habitat, and species observations directly to the client.

SCE North of Magunden Transmission Line Upgrades, Operations and Maintenance, Southern California Edison, Kern County, CA. Associate Biologist. Conducted raptor, raven, and general nesting bird surveys, recorded nest status and bird behavior, and established both ESAs and active nest buffers during SCE line upgrades in 2018. Extensive use of FRED for daily monitoring report submittal and CarryMap for biological resource updates. Performed pre- and post-construction sweeps for nesting birds and other wildlife, and monitored construction activities in Swainson's hawk, golden eagle, blunt-nosed leopard lizard, Tipton kangaroo rat, and San Joaquin kit fox habitat. Observed three Swainson's hawks, four golden eagles, over 10 loggerhead shrikes (including two nests), and one San Joaquin kit fox.

SCE Pole Replacement Projects, Operations and Maintenance, Southern California Edison, San Bernardino County, CA. Associate Biologist. Conducted pre- and post-construction surveys for desert tortoise, burrowing owl, raptors and general nesting birds, and other wildlife in support of SCE wood pole replacement activities in 2018. Monitored construction activities in desert tortoise and burrowing owl habitat. Located, identified, and alerted crew leads of active raven and raptor nests as well as potential tortoise and/or mammal burrow locations. Served as a point of contact for questions regarding biological resources. Submitted daily monitoring reports and updated biological resource logs.

SCE Magunden-Pastoria Transmission Line Upgrades, Operations and Maintenance, Southern California Edison, Kern County, CA. Associate Biologist. Conducted pre- and post-construction surveys for raptor and raven nests, nesting birds, and other wildlife in support of SCE line upgrade activities in 2018. Monitored construction activities in golden eagle, Swainson's hawk, Tipton kangaroo rat, and San Joaquin kit fox habitat. Located and alerted crew leads of active raven and raptor nests, and served as a point of contact for questions regarding biological resources. Submitted daily monitoring reports and updated biological resource logs. Observed two golden eagles.

Renewable Energy

Hydrostor Solar Project, Golder Associates, Inc., Kern County, CA. Project Biologist. The proposed Hydrostor Solar Project encompasses a 61-acre solar site and approximately 15 miles of gen-tie lines in two separate 200-foot wide corridors within Willow Springs, CA. Conducted a biological reconnaissance survey to assess suitability for special-status species, presence/absence of jurisdictional drainages and/or water bodies, and map vegetation communities. Conducted protocol-level surveys for Swainson's hawks and burrowing owls, presence/absence surveys for desert tortoise and other special-status wildlife species in 2021. Recorded inactive and active nests throughout the project. Conducted presence/absence surveys for rare and special-status plant species, and mapped Joshua trees throughout the project right-of-way. Observed three Swainson's hawks, numerous loggerhead shrikes, one long-eared owl, five Le Conte's thrashers, two prairie falcons, numerous Vaux's swifts, and four yellow warblers.



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Titan Solar 1 Energy Project, Sunpin Solar, Imperial County, CA. Environmental Field Lead / Project Biologist. Sunpin Solar, in coordination with Hanwha Q-Cells, developed a solar facility over 400 acres in Imperial County. Responsible for WEAP training, environmental compliance, SWPPP inspections, nesting bird and burrowing owl surveys, coordination among monitors, and general construction monitoring in 2020. Completed focused burrowing owl and nesting bird surveys, and assisted writing both the Project's Bird and Bat Conservation Strategy and Pest Management Plan. Observed at least five flat-tailed horned lizards, two of which were safely relocated during construction activities.

NextEra Energy Blythe/McCoy Solar Energy Centers, Post-Construction Fatality Monitoring, WEST Inc., Riverside County, CA. Biological Field Technician. Conducted post-construction biological surveys in desert tortoise, burrowing owl, and golden eagle habitat in 2017 and 2018. With a biological collection permit, avian fatalities were identified, processed, and prepared for collection by USFWS and BLM. Managed and conducted both searcher efficiency and carcass persistence trials and composed daily reports for the client. Ability to identify desert tortoise sign, burrows, and understand regulations in the event of incidental encounters. Observed one juvenile desert tortoise, one American badger, over 10 desert kit foxes, two burrowing owls, and three Le Conte's thrashers.

Development

Pio Pico RV Park Master Use Permit Project, Lions Engineering & Construction, Jamul, San Diego County, CA. Project Biologist. Completed special-status wildlife and plant surveys in support of the park's goal of obtaining a current Master Use Permit to cover existing operations and land uses. Assisted with special-status species and habitat mapping.

Lavender & Olive Development Project, Woodcrest Real Estate Ventures, Ramona, San Diego County, CA. Project Biologist. Blackhawk Environmental was retained by Woodcrest Real Estate Ventures to conduct biological fieldwork and associated reporting in accordance with the County of San Diego Biological Guidelines for the Lavender & Olive development project. The project involved the design of an outdoor special events center and right-of-way improvements, situated within previously disturbed lands, but in proximity to several special-status resources such as burrowing owls. Conducted a pre-construction nesting bird survey and provided the client with a report outlining results and recommendations within 24 hours.

Nittobo Facility Expansion Project, Murrieta, Riverside County, CA – sub to EPD. Project Biologist. This project involves the expansion and redevelopment of existing failities on the Nittobo bio-pharmaceutical facility that researches goat plasma for medicinal uses. Conducted a pre-construction burrowing owl and nesting bird survey of the prject site and its 150-meter buffer in summer 2020 prior to ground-disturbing activities; no owls were found. Prepared the Focused Burrowing Owl Survey Report.

Cactus Avenue Development Project, Moreno Valley, Riverside County, CA – sub to EPD. Project Biologist. Conducted field assessments and prepared reporting for consistency analysis of the proposed project with the Western Riverside MSHCP, including mammal and amphibian special status species assessments, riparian/riverine assessments, fairy shrimp and vernal pool assessments, and the evaluation of impacts to non-covered species in 2020. Conducted protocol-level surveys for burrowing owl and prepared the Focused Burrowing Owl Survey Report.

Iris Park Development Project, Riverside, Riverside County, CA – sub to EPD. Project Biologist. Assisted with a literature review, field reconnaissance survey, biological assessment, and helped prepare the Western Riverside MSHCP Habitat Assessment and Consistency Analysis Report for the proposed the 10.8-acre Iris Park Project in 2020.

Anza-Ramona Water System Improvement Project, Western Water Authority, Anza, Riverside County, CA. Project Biologist. This project included the proposed development of approximately 3 miles of new 6-inch distribution water lines, 3 miles of new 6-inch transmission lines, 4 new storage tank facilities and 2 new pump stations servicing the Anza community of unincorporated Riverside County. Conducted field assessments and assisted on the consistency analysis of the proposed project with the Western Riverside MSHCP, including mammal and amphibian special status species assessments, riparian/riverine assessments, fairy shrimp and vernal pool assessments, and assisted with the evaluation of impacts to non-covered species in 2020.



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Water Resources

Sorrento Valley/Los Penasquitos Lagoon Restoration Project, San Diego, San Diego County, CA – sub to Burns & McDonnell. Project Biologist. The Sorrento Valley/Los Penasquitos Lagoon Restoration Project is proposed by the City of San Diego as a result of localized flooding of light industrial spaces along the Los Penasquitos Creek. The project would restore historic salt marsh habitat, increase tidal inundation, remove exotic plant species, restore degraded habitats, reduce mosquito breeding habitat, and facilitate freshwater flows during the rainy season and low flow regimes. Assisted with focused rare plant surveys, jurisdictional delineation surveys, and updated vegetation mapping surveys, utilizing all previous surveys and reports completed for this project in the spring and summer of 2020. Approximately 160 acres of jurisdictional wetlands were mapped and 24 vegetation communities were mapped in great detail to aid in project design.

IID Burrowing Owl Occupancy and Abundance Survey, Imperial Irrigation District, Imperial County, CA. Project Biologist. Conducted protocol-level burrowing owl surveys for the Imperial Valley Irrigation District (IID) in order to document and extrapolate overall burrowing owl abundance and occupancy of the IID Service Area to be compared between past and future survey years in 2019 and 2020. Surveys were conducted by vehicle and encompassed 55 3-kilometer by 3-kilometer grids and were completed in weather conditions conducive to observing owls outside their burrows. Owls, burrow locations, and covariate data were documented using Collector for ArcGIS. During the survey, over 1,000 burrowing owls were observed from April to mid-May.

City of San Diego Storm Water Sampling, San Diego, San Diego County, CA – sub to Wood. Project Biologist. Assisted with stormwater sampling along the Penasquitos Creek in 2020 and 2021. Assisted with stream flow measurements that included water velocity and pebble-counts, as well as photo documentation and data entry.

PG&E Salmanoid Summer Rearing Monitoring, Aquatic Species Surveys, Potter Valley, Mendocino County, CA. Associate Biologist. Assisted with electrofishing and stream measurements in support of salmonid studies in foothill yellow-legged frog habitat in 2018. Netted fish and provided support for the electrofishing crew. Responsible for collecting data on stream width and water height. During the project, five foothill yellow-legged frogs were encountered.

Disaster Response

Pipeline P00547 Incident Human Use Ephemeral Data Collection, Orange County, CA – sub to Industrial Economics. Project Biologist. Implemented recreation count protocols by documenting activities at various beaches throughout Orange County, CA following the oil spill that occurred near Huntington Beach in 2021. Walked along predetermined transects both independently and with a teammate will counting recreators on the beach, in the water, and along boardwalks and piers.

California Department of Resources Recycling and Recovery (CalRecycle) Consolidated Debris Removal Program, Bay Branch, Santa Cruz, Santa Clara, Stanislaus & Monterey Counties, CA - sub to WSP. Project Biologist / Lead Avian Biologist. The California Governor's Office of Emergency Services (Cal OES) has tasked the California Department of Resources Recycling and Recovery to operate the statewide Consolidated Debris Removal Program, in support of local governments, to remove debris resulting from disasters. As a part of Phase II operations (remove remaining asbestos, assess and document properties, and clear contaminated soil, ash, metal, concrete, hazard trees and other debris to restore properties to pre-fire conditions), conducted biological site assessments prior to debris and hazardous tree removal. Site were assessed for proximity to sensitive habitats and presence/absence of federally and state-listed species, and special-status species that include (but are not limited to) California red-legged frog, foothill yellow-legged frog, California tiger salamander, marbled murrelet, and tricolored blackbird. In addition to documenting all wildlife observed, aquatic resources were classified and flagged for avoidance, and sites were assessed for nesting bird suitability. During the 2021 nesting bird season, conducted pre-activity nesting bird surveys, completed nest monitoring, and assisted in the management of nest survey schedules, activity logs, and nest survey reports. Served as a biological monitor during debris removal that occurred adjacent to sensitive habitats and/or aquatic resources.

Restoration

SDG&E Murphy Canyon Housing Restoration Area Weed Management, San Diego, San Diego County, CA – sub to AECOM. Project Biologist. Conducted a pre-activity survey and report (PSR) and non-focused special-status plant species survey on federal land within the Murphy Canyon Vernal Pool Preserve in the City of San Diego in 2018. The survey and PSR were conducted to support weed species removal and treatment practices undertaken annually by US Marine Corps contractors. Conducted environmental tailboards and assisted crews with native plant identification and avoidance.



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Federal

SDG&E Annual Road Grading, San Diego Gas & Electric, Marine Corps Base Camp Pendleton (CPEN), CA – sub to AECOM. Project Biologist / Biological Monitor. Conducted nesting bird and general wildlife surveys prior to road maintenance in the form of vegetation trimming, mowing, and grading along main access and spur roads to 230kV transmission towers throughout CPEN. Established nest buffers and flagged both biological and environmental resources that included active nests, woodrat middens and small mammal burrows, sensitive plants, and water crossings. Monitored work permitted within and adjacent to active nest buffers to ensure nest success. Coordinated among crew members, biological monitors, cultural and Native American monitors, and the Range Safety Officer regarding access and resources. Observed and heard at least four adult and three fledgling California gnatcatchers, two adult golden eagles, and two adult least-Bell's vireos.

California Least Tern and Western Snowy Plover Conservation Program, San Diego Zoo Institute for Conservation Research, Marine Corps Base Camp Pendleton, San Diego County, CA. Research Assistant. Assisted with daily monitoring to locate California least tern and western snowy plover nests through active (i.e., walking transects) and passive search methods (i.e. behavioral observations using binoculars from selected vantage points or from vehicles) along the beaches of Marine Corps Base Camp Pendleton during the 2017 breeding season. Assisted with banding and biometric measurements of both tern and plover chicks, re-sighted USGS service and color bands, and monitored both species during military vehicle operations. Documented predation events and nest failures. Interacted effectively with the public and military personnel during observed habitat encroachment.

Riparian and Coastal Sage Scrub Habitat Restoration Project, Vegetation Surveys and Habitat Restoration, Marine Corps Base Camp Pendleton, Gulf South Research Corporation, San Diego County, CA. Assistant Supervisor / Restoration Technician. Conducted botanical presence-absence surveys throughout Marine Corps Base Camp Pendleton in California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, California least tern, and western snowy plover habitat in 2016 and 2017. Additional projects were located on MCAS Miramar, NAWS China Lake, and MCB Barstow. Monitored crews during herbicide application and mechanical removal of invasive plants. Responsible for native plant identification and avoidance, GPS data collection, and crew safety. Reviewed activity logs and daily reports. Assisted with both project report composition and database organization.

Thread-leaved Brodiaea Surveys, Marine Corps Base Camp Pendleton, HDR Inc., San Diego County, CA. Associate Biologist. Assisted with protocol-level surveys for federally listed thread-leaved brodiaea (*Brodiaea filifolia*) throughout Marine Corps Base Camp Pendleton in California gnatcatcher, least Bell's vireo, and San Diego and Riverside fairy shrimp habitat in 2015. Walked transects and recorded population locations, as well as site features including - but not limited to - surrounding vegetation and community type and soil structure. Incidental avian, mammal, and reptile species were recorded. Observed numerous flowering and senescent populations of brodiaea, as well as 10 California gnatcatchers and three least Bell's vireos.

Academía and Research

Hellhole Canyon Small Mammal Trapping, San Diego County, CA – sub to ESA. Project Biologist. Assisted ESA staff and Stephen's kangaroo rat authorized biologist, Steven Chen, with small mammal trapping within the Hellhole Canyon Preserve's Fureigh Addition. Handled and processed (i.e. weight, ear length, and sexing) Dulzura kangaroo rats, spiny pocket mice, deer mice, cactus mice, and woodrats under the supervision of Mr. Chen.

USGS Southwestern Pond Turtle Trapping, San Diego County, CA. Volunteer. Assisted USGS and CDFW with protocol southwestern pond turtle trapping. Handled pond turtles and re-baited traps while USGS personnel measured and assessed presence of passive integrated transponder (PIT) tags and fitted new captures with PIT tags.

Tijuana River Valley Regional Park Least Bell's Vireo Surveys, San Diego County, CA – sub to ESA. Project Biologist. Assisted with protocol-level presence/absence surveys for least Bell's vireos throughout the Tijuana River Valley Regional Park during the 2021 breeding season. Locations, behavioral observations, and nesting status of multiple pairs and individuals (adults and fledglings) were documented. Mapped locations of brown-headed cowbirds and documented all avian species observed.

Hellhole Canyon San Diego Sedge Mapping, San Diego County, CA – sub to ESA. Project Biologist. Mapped San Diego sedge (Carex spissa) throughout Hellhole Canyon Preserve with particular focus along Hell Creek in support of Harbison's dun skipper larval and adult surveys.



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Hellhole Canyon Fall Avian Surveys, San Diego County, CA – sub to ESA. Project Biologist. Conducted nocturnal and diurnal avian surveys within and along pre-determined parcels and transects throughout Hellhole Canyon Preserve in 2019. Stationary nocturnal surveys for common poorwill, burrowing owl, western screech owl, great-horned owl, and barn owl were performed using playback recordings at set intervals. Diurnal surveys were conducted by walking transects and recording all species observed by sight and sound.

Border Field State Park Bird Monitoring Project, San Diego, San Diego County, CA. Project Biologist. Assisted with protocol-level surveys for least Bell's vireos during the 2019 breeding season in the vicinity of the Goat Canyon sedimentation basin complex of Border Field State Park. Surveys were conducted without using recorded vocalization playbacks and involved active visual and aural searches by walking slowly through and/or adjacent to suitable habitats. Numbers of individuals, specific locations using GPS coordinates and/or territory mapping, sex, age, pairing and nesting status, and presence of leg bands were recorded. Other special-status species encountered and documented included California gnatcatcher, northern harrier, white-tailed kite, yellow warbler, and yellow-breasted chat. All other avian species and presence of brown-headed cowbirds were also recorded. Observed at least seven least Bell's vireo pairs and four active nests.

San Dieguito River Park Monthly Bird Counts, Del Mar, CA. Volunteer. Assisted with monthly bird counts throughout the San Dieguito Lagoon and along the San Dieguito River beginning in 2017. Detected numerous avian species through site and sound that included sensitive and endangered species such as light-footed Ridgway's rail, California least tern, loggerhead shrike, and white-tailed kite.

Salton Sea Bird Surveys, Cooper Ecological, Salton Sea, Riverside and Imperial Counties, CA. Volunteer. The Audubon Society contracted Mr. Cooper (Cooper Ecological) to conduct bi-monthly bird surveys at numerous sites around the Salton Sea to document population trends and changes. Assisted with avian identification and counts, as well as data entry in 2017 and 2018.

Bird Banding Study, Audubon Starr Ranch Sanctuary, Mission Viejo, Orange County, CA. Volunteer. This program aims to collect information as it relates to overwintering and annual bird survival rates and indices of physical condition for migratory bird species in a variety of habitats and geographical regions ultimately to inform habitat conservation and management. Served as a volunteer bird banding trainee in 2016 and 2017. Participated in bird capture, banding, and scientific data collection for the 2016 and 2017 MoSI (Monitoring Overwintering Survival) and MAPS (Monitoring Avian Productivity and Survivorship) seasons.



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Trainings & Permits

- CDFW Scientific Collecting Permit #SC-192970004 -2020-present
- Riparian Habitat Restoration for the Arid Southwest Workshop - Wetland Training Institute, Inc., 2020
 Eidel Betrawy of San Diago County
- Field Botany of San Diego County -SDSU, 2020
- WEAP Training SDG&E Cleveland National Forest Power Line Replacement Projects, 2019
- Emergency First Responder
- PADI certified scuba diver (advanced, rescue)

Skills and Proficiencies

- Environmental compliance monitoring
- Nesting bird and raptor surveys
- Threatened and endangered species surveys
- o Rare plant surveys
- Habitat assessments and mapping
- Biological assessment reporting
- Impacts analysis and mitigation

Education

BS, Environmental Management and Protection; Minor, Biology June 2015 California Polytechnic State University San Luis

California Polytechnic State University San Luis Obispo

BACKGROUND

Desiree Johnson is an Associate Biologist with experience conducting surveys and environmental compliance monitoring in California. She has extensive experience in avian identification and survey techniques. Her experience also includes sensitive plant surveys, vegetation mapping, and habitat restoration monitoring. Ms. Johnson has helped perform biological assessments, submitted documents and coordinated with regulatory agencies, conducted reconnaissance-level and focused protocol-level surveys for wildlife (birds, mammals, reptiles, and amphibians) and plants, including federally and state-listed and special-status species, and performed biological compliance monitoring for large and complex projects and high-profile clients throughout southern California. Ms. Johnson's professional responsibilities have included preparing and assisting with biological documents, including annual monitoring reports, post-construction reports, and Biological Technical Reports (BTRs).

PROJECT EXPERIENCE

Energy

SDG&E Tie Line 6957 Valley Fire Fiber Project, San Diego Gas & Electric, San Diego County, CA. Project Biologist. This Project installed 4.5 miles of 96-Count ADSS Fiber Optic Cable between a span of approximately 45 structures supporting TL6957 in February and March of 2021 to replace the fiber cables on TL6957 which were damaged during the 2020 Valley

Fire in the city of Jamul, California. Ms. Johnson performed pre-construction surveys for Quino checkerspot butterfly (QCB) and host plants associated with QCB, as well as biological monitoring for overhead line crews. Other duties included interfacing with construction crews and explaining compliance requirements, monitoring for nesting birds, and writing daily compliance reports.

SDG&E Cleveland National Forest Master Special Use Permit (MSUP) and Permit to Construct (PTC) Power Line Replacement Project, Crux Subsurface Inc., San Diego County, CA. Environmental Compliance Coordinator (ECC). San Diego Gas & Electric (SDG&E) is undergoing the replacement of several existing 12-kilovolt(kV) and 69kV electric facilities spread throughout an approximately 880square-mile area in eastern San Diego County. As the ECC working on behalf of Crux (and its subcontractors), Ms. Johnson is responsible for coordinating the dissemination of environmental information from the office to the field appropriately. Ms. Johnson attends appropriate tailboard meetings and construction/environmental meetings as necessary and coordinates the implementation of mitigation measures as required and necessary in the field. This involves direct field coordination with SDG&Econtracted environmental inspectors (Els) and the lead environmental inspector (LEI), as well as Crux (and its subcontractors) superintendents and foremen. Daily tasks include but are not limited to, reviewing daily/weekly construction schedules for work site approval, addressing concerns from LEI or Els, roving project lines for potential issues with signage, staking, BMP inspections and writing internal daily compliance reports. Ms. Johnson also coordinates with Crux (and its subcontractors) for schedule changes, work activity changes, and general environmental questions. For ultimate guidance, Ms. Johnson utilizes the Blackhawk Environmental Compliance Manager (ECM) as a resource for all internal environmental compliance-related questions and appropriate direction with LEI and Els, on behalf of Crux and its subcontractors.



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SDG&E Sunrise Powerlink Project Operations and Maintenance, San Diego Gas & Electric, Imperial County, CA. Avian Biologist/ Project Biologist. Ms. Johnson conducts an assortment of biological surveying and monitoring services for the O&M phase of Sunrise Powerlink. Services specifically involve threatened and endangered species that exist along the line (including Quino checkerspot butterfly, arroyo toad, flat-tailed horned lizard, southwestern willow flycatcher, least Bell's vireo, burrowing owl, golden eagle and peninsular bighorn sheep), but also include on-call/as-needed services such as nesting bird surveys and construction monitoring.

SDG&E Wood to Steel Pole Replacement Projects, San Diego Gas & Electric, San Diego County, CA – sub to AECOM. Project Biologist/ Biological Monitor. Conducted pre-construction general avian and raptor surveys, raptor habitat assessment, vegetation surveys, and determined presence/absence of jurisdictional waterways, sensitive species and resources along several SDG&E Tie Lines on Wood to Steel Pole Replacement initiatives between 2017 and 2020. She also served as a construction monitor, reporting to project leads. Biological surveys and construction monitoring are conducted within the following habitats: coastal sage scrub, woodlands, non-native grasslands, developed areas, disturbed habitats, and chaparral.

Renewable Energy

Hydrostor Solar Project, Golder Associates, Inc., Kern County, CA. Project Biologist. The proposed Hydrostor Solar Project encompasses a 61-acre solar site and approximately 15 miles of gen-tie lines in two separate 200-foot wide corridors within Willow Springs, CA. Conducted a biological reconnaissance survey to assess suitability for special-status species, presence/absence of jurisdictional drainages and/or water bodies, and map vegetation communities. Conducted protocol-level surveys for Swainson's hawks and burrowing owls, and presence/absence surveys for other special-status wildlife species in 2021. Recorded inactive and active nests throughout the project. Conducted presence/absence surveys for rare and special-status plant species, and mapped Joshua trees throughout the project right-of-way. Observed three Swainson's hawks, numerous loggerhead shrikes, one great-horned owl, several Le Conte's thrashers, numerous Vaux's swifts, and several yellow warblers.

Donovan State Prison Solar Project, EPD Solutions, Inc., San Diego, CA. Project Biologist. This Project was proposed by the California Department of Corrections and Rehabilitation (CDCR) to generate renewable solar power for the prison. Ms. Johnson and Blackhawk Environmental biologists, under contract with EPD Solutions, Inc., conducted a suite of surveys and reports to support the Project. Blackhawk and Ms. Johnson conducted special-status species habitat assessments, photographic documentation, focused burrowing owl surveys and reporting, A Focused Burrowing Owl Report was produced.

Calipatria State Prison Solar Project, EPD Solutions, Inc., Calipatria, Imperial County, CA. Project Biologist. This Project was proposed by the California Department of Corrections and Rehabilitation (CDCR) to generate renewable solar power for the prison. In 2018 and 2019, Ms. Johnson and Blackhawk Environmental biologists, under contract with EPD Solutions, Inc., conducted a suite of surveys and reports to support the Project. Blackhawk and Ms. Johnson conducted special-status species habitat assessments, photographic documentation, focused burrowing owl surveys and reporting, A Biological Technical Report (BTR) was produced to detail all special-status species results and recommendations for the Project site. In addition, Burrowing Owl Reports were produced. Seven occupied burrowing owl burrows were found adjacent to the Project site, and each was recommended for shelter-in-place hay bales prior to construction. In addition, logger shrike observations were detailed adjacent to the Project, though this species would not be affected by the Project.

Harvill Project Site, Riverside County, CA. Project Biologist. Ms. Johnson conducted focused surveys for a 30-Day Pre-Construction Burrowing Owl Survey Report within a project site located within the Western Riverside HCP area in 2017.

Centinela State Prison Solar Project, EPD Solutions, Inc., Centinela, Imperial County, CA. Project Biologist. This Project was proposed by the California Department of Corrections and Rehabilitation (CDCR) to generate renewable solar power on State-owned prison grounds for the prison. In 2018, Ms. Johnson and Blackhawk Environmental biologists conducted a suite of surveys and reports to support the Project. Blackhawk and Ms. Johnson conducted focused burrowing owl surveys and reporting, A Biological Technical Report (BTR) was produced to detail all special-status species results and recommendations for the Project site. In addition, Burrowing Owl Reports were produced. No sensitive species or burrowing owls were found on or adjacent to the Project site.

Chino Institute for Women Solar Project, EPD Solutions, Inc., Chino, San Bernardino County, CA. Project Biologist. This Project was proposed by the California Department of Corrections and Rehabilitation (CDCR) to generate renewable solar power on Stateowned prison grounds for the prison. In 2018, Ms. Johnson and Blackhawk Environmental biologists conducted a suite of surveys and reports to support the Project. Blackhawk and Ms. Johnson conducted literature reviews, vegetation mapping, special-status species habitat assessments, photographic documentation, focused burrowing owl surveys, focused rare plant surveys and reporting, A Biological Technical Report (BTR) was produced to detail all special-status species results and recommendations for the Project site. In addition, a Focused Rare Plant Survey Report and Burrowing Owl Reports were produced. No rare plants or burrowing

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owls were found on or adjacent to the Project site.

2019 Ocotillo Wind Energy Project, Pattern Energy Group LLP, Imperial County, CA. Project Biologist. In early 2019, Ms. Johnson conducted biological surveys for the 265-megawatt turbine-generated Ocotillo Wind Energy Facility located on approximately 12,500 acres of BLM-administered lands in Imperial County. She also conducted peninsular bighorn sheep monitoring and vegetation surveys of the project site and areas adjacent to the project boundary.

Water Resources

City of San Diego Storm Water Sampling, San Diego, San Diego County, CA – sub to Wood. Project Biologist. Assisted with stormwater sampling along the Peñasquitos Creek and Famosa Slough for the City of San Diego. Stream flow measurements that include water velocity and pebble-counting, as well as photo documentation and data entry were completed.

Sorrento Valley/Los Peñasquitos Lagoon Restoration Project, sub to ESA, sub to Burns & McDonnell, San Diego, San Diego County, CA - Project Biologist. The Sorrento Valley/Los Peñasquitos Lagoon Restoration Project is proposed by the City of San Diego as a result of localized flooding of light industrial spaces along the Los Peñasquitos Creek in the 2015/2016 rainy season. The project would restore historic salt marsh habitat, increase tidal inundation, remove exotic plant species, restore degraded habitats, reduce mosquito breeding habitat and facilitate freshwater flows during the rainy season and low flow regimes. The project would be among the largest marshland restoration efforts ever conducted in California. In the summer of 2020, Blackhawk and Ms. Johnson conducted jurisdictional delineation surveys and City of San Diego Biological Survey Report preparation, utilizing all previous surveys and reports completed for this project. Stand-alone rare plant and jurisdictional delineation reports were completed and incorporated into the Biological Survey Report. In 2021 Ms. Johnson performed an aquatics survey through the lagoon by use of kayak to document special-status species and perform vegetation mapping.

Restoration

Los Peñasquitos Canyon Preserve Wetland Enhancement Project, City of San Diego, Sorrento Valley, San Diego County CA - sub to ESA. Completed rare plant and jurisdictional delineation surveys, results for which were incorporation into a Biological Survey Report in support of a project that will be among the largest marshland restoration efforts ever conducted in California. Thirteen rare plant species were documented, accounting for over 2,000 individuals, and approximately 160 acres of jurisdictional wetlands were mapped. Twenty-four vegetation communities were mapped in great detail to aid in project design.

Habitat Assessment for Phase 2 of the Managed Marsh Complex, Imperial Irrigation District, Niland, Imperial County, CA. Project Biologist. Ms. Johnson collected habitat data and conducted habitat mapping in order to model habitat suitability for Yuma Ridgway's rail, California black rail, and southwestern willow flycatcher in 2018.

Salk School Vernal Pool Restoration and Monitoring Project, Mira Mesa, San Diego County, CA – Assistant Biologist. Ms. Johnson worked as a trainee assisting with protocol-level large vernal pool branchiopod surveys as part of vernal pool restoration and enhancement project at San Diego Unified School District in the 2018 and 2019 wet season. Ms. Johnson gained experience observing the endangered San Diego fairy shrimp in the wild as well as taking quantitative and qualitative data on a variety of vernal pools.

San Elijo Lagoon Restoration Project, AECOM, Encinitas, San Diego County, CA. Project Biologist. Ms. Johnson conducted focused marsh bird monitoring surveys for target species including light-footed Ridgway's rail, Virginia rail, sora, least bittern, American bittern, and pied-billed grebe.

Los Peñasquitos Canyon Enhancement Monitoring Project, City of San Diego, San Diego County, CA. Project Biologist. Ms. Johnson assisted in monitoring enhancement activities within Los Peñasquitos Canyon Reserve in the upper reach of Lopez Canyon Creek in San Diego County from July 2017 to June 2018. Primary tasks included evaluating the condition of the enhancement area by noting all native and non-native plant species and conducting restoration monitoring.



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Development

Cactus Avenue Development Project, Moreno Valley, Riverside County, CA – sub to EPD. Project Biologist. Conducted field assessments and prepared reporting for consistency analysis of the proposed project with the Western Riverside MSHCP, including mammal and amphibian special status species assessments, riparian/riverine assessments, fairy shrimp and vernal pool assessments, and the evaluation of impacts to non-covered species in 2020. Conducted protocol-level surveys for burrowing owl and prepared the Focused Burrowing Owl Survey Report.

Pio Pico RV Park Master Use Permit Project, Lions Engineering & Construction, Jamul, San Diego County, CA. Project Biologist. Completed special-status wildlife and plant surveys in support of the park's goal of obtaining a current Master Use Permit to cover existing operations and land uses. Assisted with special-status species and habitat mapping.

West Coast Basin Barrier Unit 13 Project, Los Angeles County Public Works Stormwater Engineering Division, Cities of Manhattan Beach and Hermosa Beach, Los Angeles County, CA. This project proposes to construct 11 new injection wells and one observation well to replace and supplement existing West Coast Basin Barrier Project (WCBBP) facilities located within the Cities of Manhattan Beach and Hermosa Beach. Nine injection wells will be constructed to replace existing injection wells that are beyond their useful life and require immediate replacement. Two supplemental injection wells will be constructed at locations between existing injection wells along the WCBBP to provide increased protection against seawater intrusion. Prior to constructing the new wells, the existing injection wells will be destroyed to prevent the possibility of subsidence and/or groundwater cross contamination. Ms. Johnson performed a pre-construction analysis of each proposed project site to assess the sites and their immediate surroundings for potential nesting bird locations, followed by installation of avian nest deterrents by use of flash tape in all areas around the project site that proposed risks of nesting birds. Ms. Johnson performed pre-construction nesting bird surveys throughout the 2021 project procession.

Nittobo Facility Expansion Project, Murrieta, Riverside County, CA – sub to EPD. Project Biologist. This project involves the expansion and redevelopment of existing failities on the Nittobo bio-pharmaceutical facility that researches goat plasma for medicinal uses. Conducted a pre-construction burrowing owl and nesting bird survey of the prject site and its 150-meter buffer in summer 2020 prior to ground-disturbing activities; no owls were found. Prepared the Focused Burrowing Owl Survey Report.

Cactus Avenue Development Project, Moreno Valley, Riverside County, CA – sub to EPD. Project Biologist. Conducted field assessments and prepared reporting for consistency analysis of the proposed project with the Western Riverside MSHCP, including mammal and amphibian special status species assessments, riparian/riverine assessments, fairy shrimp and vernal pool assessments, and the evaluation of impacts to non-covered species in 2020. Conducted protocol-level surveys for burrowing owl and prepared the Focused Burrowing Owl Survey Report.

Anza-Ramona Water System Improvement Project, Western Water Authority, Anza, Riverside County, CA. Project Biologist. This project included the proposed development of approximately 3 miles of new 6-inch distribution water lines, 3 miles of new 6-inch transmission lines, 4 new storage tank facilities and 2 new pump stations servicing the Anza community of unincorporated Riverside County. Conducted field assessments and assisted on the consistency analysis of the proposed project with the Western Riverside MSHCP, including mammal and amphibian special status species assessments, riparian/riverine assessments, fairy shrimp and vernal pool assessments, and assisted with the evaluation of impacts to non-covered species in 2020.

Spring Mountain Ranch Residential Development Project, City of Riverside, Riverside County, SD. Project Biologist. Ms. Johnson and Blackhawk Environmental biologists conducted a burrowing owl habitat assessment, as well as a series of focused burrowing owl surveys and created a Focused Burrowing Owl Survey Report to fulfill the request for a 30-day pre-construction survey effort for Sage Environmental Group.

Moreno Valley Kia Dealership Project, Riverside County, CA. Project Biologist. Ms. Johnson conducted focused burrowing owl and nesting bird surveys within the project site located within the Western Riverside MSHCP area.

Tujunga Spreading Grounds Avian Protection Plan, Los Angeles Department of Public Works, Los Angeles, CA. Project Biologist. Ms. Johnson drafted an Avian Protection Plan for the LADPW Tujunga Spreading Grounds Intake Project. Ms. Johnson also performed multiple nesting bird surveys of the Project site prior to construction activities.

Nesting Bird and Raptor Survey Results for the College Prep Middle School, Spring Valley, San Diego County, CA. Project Biologist. R&R Construction proposed the demolition of a vacant building and the clearing of surrounding vegetation, followed by the construction of a College prep middle school. In 2018, Ms. Johnson conducted the avian survey ahead of the planned activities to



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determine if active bird or raptor nests were present within the project site or adjacent to the project site within 500 feet. Ms. Johnson conducted the survey by a combination of passive observation of avian activity to search for nesting and breeding behaviors and by looking for bird and raptor nests in and adjacent to the area of impact.

Horse Creek Ranch Housing Development Project, D. R. Horton, Fallbrook, San Diego County, CA. Project Biologist. In 2017 and 2018, Ms. Johnson served as a biological compliance monitor for a long-term urban development project. She performed wildlife capture and relocation during construction activities and conducted avian surveys focusing on least Bell's vireo and yellow-breasted chat. She also performed pre-construction habitat assessment and rare plant surveys.

12 Oaks Winery Resort Project, Standard Portfolio Temecula LLC, Riverside County, CA. Project Biologist. From 2018 to early 2019, Ms. Johnson served as a biologist for this approximately 633-acre site in the Temecula Wine Country area of unincorporated Riverside County. She conducted presence/absence surveys for the federally and State-endangered least Bell's vireo in accordance with current survey protocol (USFWS 2001). The surveys were conducted by walking along the edges of, as well as within, potential vireo habitat while listening for their calls and songs and viewing birds with the aid of binoculars. The survey targeted an approximately 3.6-acre survey area comprised of suitable riparian habitat within and adjacent to the area planned for the 12 Oaks Winery Resort Project.

Loma Linda TTM 18990 Project, Highpointe Management Group, Inc., Redlands, San Bernardino County, CA. Project Biologist. In 2018, Ms. Johnson performed a pre-demolition nesting bird survey throughout a large citrus grove. The survey included inspecting trees and shrub for nests along with stationary monitoring for birds exhibiting nesting behaviors such as carrying food or nest material. Nests observed were inspected for signs of occupancy such as fresh building, presence of down, eggs, or chicks.

Mesa Housing Nuevo West Project, University of California San Diego, San Diego, San Diego County, CA. Project Biologist. In 2018, Ms. Johnson conducted full-time biological construction monitoring during silt fence installation and vegetation clearing/grading for the sewer upgrade project located within the University of California, San Diego. Monitoring took place at the beginning of the project, and weekly monitoring visits thereafter until the completion of hydroseeding. During monitoring visits, the silt fence was inspected for any damage or evidence of construction-associated sedimentation into the adjacent biologically sensitive area. Ms. Johnson also verified that there were no construction-related impacts or trash within the biologically sensitive area. Any issues were reported to Hensel Phelps personnel and were corrected within 24 hours.

Sweetwater Vistas - Biological Monitoring for Phase II Testing Project, D. R. Horton, San Diego County, CA. Project Biologist. Ms. Johnson conducted a nesting bird survey during the 2018 nesting season associated with a habitat assessment for an upcoming urban development project. She identified sensitive species such as the California gnatcatcher, including a gnatcatcher nest. She also performed geotechnical monitoring throughout the site.

Communications

LAX-391 2016 Luau Project, Spectrum Services, Inc., Winchester, Riverside County, CA. Project Biologist. From 2018 to early 2019, Ms. Johnson performed a habitat assessment and general biological survey for the proposed construction of an unmanned telecommunications facility within the disturbed and developed grounds of the Abelioa Sports Park in the community of Winchester, unincorporated Riverside County, California. Work consisted of meandering pedestrian transects within site and buffer to identify vegetation communities and habitat types, as well as a general habitat assessment to evaluate potential for sensitive plant and animal species to occur. Also assessed jurisdictional waters and wetlands.

Transportation

Otay Crossings Commerce Park EIR and Habitat Restoration Project, Kearny PCCP Otay 311 LLC, San Diego County, CA. Project Biologist. Ms. Johnson performed pre-construction burrowing owl surveys as well as construction monitoring for the development of a new border crossing along the Otay border in San Diego, California in 2018 and 2019. She identified an active burrow as well as a resident owl and performed owl monitoring and checks. Construction monitoring was performed during vegetation clearing throughout the site, and the biologist watched for sensitive species.

Preserve Management & Mitigation Banking



Associate Biologist

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County of San Diego Preserves Biological Surveys Project, sub to ESA, San Diego County, CA - Project Biologist. Surveys were conducted on County of San Diego Preserves throughout the County, including Keys Creek and Hellhole Canyon in Valley Center, and Dictionary Hill in Spring Valley to understand which species are present, particularly special-status species, or that may be present, and how best to manage the preserves for those species. Assisted and/or lead herpetological trapping surveys at three County preserves (Dictionalry Hill, Keys Creek, Hellhole Canyon) in 2019.

Moosa Creek Mitigation Bank/Restoration Project, sub to Burns & McDonnell, sub to Moosa Creek LLC, c/o Conservation Land Group, sub to WRA, Bonsall, San Diego County, CA - Project Biologist. The Project seeks to convert the existing golf course into a riparian and wetland mitigation bank for several threatened and endangered species, including southwestern willow flycatcher, least Bell's vireo, yellow-billed cuckoo and arroyo toad. In 2013, conducted US Geological Service (USGS) protocol southwestern willow flycatcher surveys for the proposed Moosa Creek Mitigation Bank in Bonsall, CA on the San Luis Rey River and the Moosa Creek tributary adjacent to San Luis Rey Downs Golf Course; two breeding territories were documented. In 2015, served as the County of San Diego-approved CEQA Consultant to review and approve the comprehensive Biological Survey report prepared by WRA to support the project and gain County approvals. In 2020, Blackhawk and Mr. Alberts completed protocol least Bell's vireo and southwestern willow flycatchers were documented. Also in 2020, updated vegetation mapping, focused rare plant surveys and jurisdictional delineation survey following United States Army Corp of Engineers (USACE) guidelines.

Ryan Electronics Biological Surveys Project, ATI Metals, Inc., San Diego, San Diego County, CA - Project Biologist. The Project site is part of the old Teledyne Ryan Electronics property just northeast of the Balboa Avenue and CA-163 intersection. The Project site represents an example of San Diego Mesa Hardpan Vernal Pool habitat within coastal sage scrub and grassland communities that has largely disappeared from the region due to development. Assisted in a suite of biological surveys and services to update the biological resources inventory results on a sensitive lands parcel within a surrounding area of complete development in 2019. Assisted with special-status species habitat analysis, vegetation community mapping, vernal pool and jurisdictional resources mapping, focused rare plant surveys, and Biological Technical Report (BTR) production tasks.

Academía and Research

IID Burrowing Owl Occupancy and Abundance Survey, Imperial Irrigation District, Imperial County, CA. Project Biologist. Conducted protocol-level burrowing owl surveys for the Imperial Valley Irrigation District (IID) in order to document and extrapolate overall Burrowing Owl abundance and occupancy of the IID Service Area to be compared between past and future survey years in 2019 and 2020. Surveys were conducted by vehicle and encompassed 55 3-kilometer by 3-kilometer grids and were completed in weather conditions conducive to observing owls outside their burrows. Owls, burrow locations, and covariate data were documented using Collector for ArcGIS. During the survey, over 1,000 burrowing owls were observed from April to mid-May.



DESIREE JOHNSON

Associate Biologist

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Baseline Surveys for Tijuana River Valley Regional Park, County of San Diego Department of Parks and Recreation, San Diego County,

CA. Project Biologist. Ms. Johnson worked as a biologist in 2018 conducting baseline biological resources surveys to identify and map existing biological resources within the County of San Diego Department of Parks and Recreation Tijuana River Valley Regional Park. Work consisted primarily of avian morning and evening surveys, as well as assisting with small mammal trapping.

TAMARA KRAMER, B.S., WILDLIFE BIOLOGIST

Ms. Tamara Kramer is an environmental consultant with a diverse background in the biological sciences. Outside of her field experience, she is adept in communication and in teaching scientific principles. Ms. Kramer has excelled in the environmental field, as a project coordinator and wildlife biologist. Ms. Kramer is experienced in surveying terrestrial flora and fauna in southern California. Specifically, Ms. Kramer has conducted general surveys for the following: nesting birds, raptor and passerine species, trees, and numerous rare plants.

Ms. Kramer is also experienced in the flora and fauna of Cleveland National Forest, El Centro desert regions, border regions including Otay Mountain and Otay mesa, and areas throughout southeast San Diego. Ms. Kramer has monitored and surveyed for special-status species such as California gnatcatcher, marbled murrelet, least Bell's vireo, Western snowy plover, arroyo toad, burrowing owl, Quino checkerspot butterfly, peninsular bighorn sheep, flat-tailed horned lizard, and numerous tree species occurring in California. Ms. Kramer also has strong experience with desert and montane plant species in southern California.

YEARS OF EXPERIENCE

5

EXPERTISE

Rare plant surveys

SWCA

Wildlife surveys

Desert and montane plant species

Nesting bird surveys

EDUCATION

B.S., Ecology and Evolutionary; University of California Santa Cruz; 2016

REGISTRATIONS / CERTIFICATIONS

Wilderness First Responder Certified; National Outdoor Leadership School (NOLS); 2016

Desert Tortoise- Field Certification; 2020

HAZWOPER; 2021

TRAINING

CEQA Workshop; Association of Environmental Professionals

Marbled Murrelet Survey Techniques Training; US Fish and Wildlife

Introduction to Desert Tortoises & Field Techniques: San Diego. CA

SELECTED PROJECT EXPERIENCE (* denotes project experience prior to SWCA)

*On-Call Environmental Services Contract for Bio Studies; Cogstone; California. Role: Biologist. Responsibilities included construction monitoring, vegetation monitoring prior to construction and vegetation maintenance activities, monitoring for peninsular bighorn sheep, conducting nesting bird surveys including burrowing owl and California gnatcatcher surveys, and completing detailed daily reports documenting compliance as well as construction activities.

*Border Wall Construction Monitoring; US Border Patrol; Jacumba/Campo/Ocotillo, California. Role: Biological Monitor. Ensured compliance throughout the project. Monitor in charge of documenting all construction activities and infractions. Biologist surveyed for peninsular bighorn sheep (PBS) throughout the day documenting all PBS observations. Prior to construction, the Biologist conducted nesting bird, rare plant, and Peninsula banded gecko surveys. Verified no flat-tailed horned lizards were present underneath construction equipment at the start of each day. Biologist documented all plant and wildlife surveys observed within the project area.

*Road Maintenance Monitoring; US Border Patrol; Ocotillo, California. Role: Biological Monitor. Conducted sweeps of the road prior to grading ensuring no flat-tailed horned lizards were present. Monitor also conducted pre-maintenance nesting bird and vegetation surveys documenting any rare plant species observed and placing buffers around any nests found within the project area.

*Otay Mountain Road and Vegetation Maintenance Monitoring; US Border Patrol; Otay, California, San Diego County. Role: Biological Monitor. Responsible for conducting nesting bird and rare plant surveys ahead of vegetation maintenance crews in Otay Mesa and Otay Mountain. Pre-maintenance surveys took place within Quino checkerspot, least Bell's vireo, California gnatcatcher, burrowing owl, least tern, and Western snowy plover habitat. Monitor was responsible for flagging any sensitive Quino Checkerspot host plants observed within the project area. Biologist monitored crews to ensure road and vegetation maintenance stayed within designated project limits. *On-Call Environmental Services Contract for Blackhawk Environmental; San Diego Gas and Electric; San Diego County, California. Role: Biologist. Responsibilities included construction monitoring, assessing compliance on Cleveland National Forest Wood to Steel Replacement Project, storm-water monitoring, conducting nesting bird surveys including burrowing owl and California gnatcatcher surveys, and completing detailed daily reports documenting compliance as well as construction activities.

*Imperial Irrigation District Burrowing Owl Surveys; Imperial Irrigation District; El Centro, California, Imperial County. Role: Biologist. Responsible for conducting burrowing owl population studies along canals and irrigation ditches throughout 50 acres of land managed by Imperial Irrigation District. Duties included mapping burrowing owl populations using collector, determining nesting status, classifying habitat type for each burrow, and creating maps of routes taken during the survey.

*San Diego Gas and Electric Cleveland National Forest Wood to Steel Replacement Project; SDG&E; Multiple Counties, California. Role: Biologist. Responsible for monitoring compliance throughout the project and conveying environmental compliance needs to biologists, construction, archeologists, cultural monitors, and superintendents. Project was located within Quino checkerspot and arroyo toad habitat. The biologist monitored for proper hazardous waste disposal, trash cleanup, cement storage and disposal, creation of escape routes in pole holes, containment of sediment at each pole site, and work remaining within designated work limits. The biologist fixed any environmentally related issues on the project and conveyed larger issues to project managers. Biologist was also responsible for nesting bird surveys throughout the project, ensuring no nesting was occurring within project equipment. The biologist tracked nesting surveys for each pole site, ensured no ground disturbing work occurred within arroyo toad habitat, coordinated tree trimming, added work limits in novel work areas, and kept astride of conditions which could influence environmental maintenance on the project.

*California Gnatcatcher and Nesting Bird Surveys; Sunrise Powerlink Maintenance; San Diego County, California. Role: Biologist. Conducted California gnatcatcher surveys with a permitted California gnatcatcher biologist at designated transmission tower sites on Sunrise Powerlink prior to maintenance.

*Environmental Educator and Logistics Coordinator; Positive Adventures; California. Role: Environmental Educator. Led backpacking and camping trips throughout California, teaching high school students the flora, fauna, and natural history in Yosemite and Joshua Tree National Parks, the high Sierras, and Big Bear.

*Seasonal Environmental Services Contract; Turnstone Environmental Consulting; Klamath County, Oregon. Role: Biologist. Navigated off-trail in marbled murrelet habitat. Observed gaps in forest canopy for marbled murrelet presence or absence in Astoria, Oregon. Conducted Northern Goshawk presence/absence surveys in Klamath County, Oregon.

*Environmental Services Contract for Davey Resource Group; Pacific Gas and Electric; San Luis Obispo County, California. Role: Utility Forester. Monitored powerlines throughout San Luis Obispo County for dead or dying trees proximal to powerlines. Ms. Kramer identified tree species and ensured compliance with all applicable tree ordinances. Once a tree was deemed potentially hazardous, the tree was identified, distance to power line and circumference were measured, and the owner was notified that trimming would take place. Utility forester covered a new area each week. All data were collected using ESRI's ArcGIS and Collector.

Carlsbad/Carroll Canyon Habitat Restoration; Kinder Morgan Contracting Services LLC; San Diego County, California. SWCA has provided habitat assessments, natural resource constraints surveys, wetlands permitting, habitat restoration planning, and cultural resource studies for pipeline anomaly testing and repair projects throughout San Diego County, including in the Penasquitos Lagoon Watershed. These projects have included work in sensitive riparian habitats in jurisdictional wetlands, within uplands within the Multi-Habitat Planning Area of the City of San Diego and other preserves, and adjacent to nesting bird habitat. *Role: Biological Technician. Monitored for nesting bird species within the proposed construction area. Noted any observed activity. Summarized work activities observed during project monitoring for submittal to client.*

SCE EC 025 Construction Support Intake; Southern California Edison Company; County, California. Role: Biological Technician. Intake calls on construction emergencies and jobs taking place throughout SCE's territory. Utilize GIS for review of work locations in order to determine whether the area is clear of biological and waters resources. Inform construction of ability to proceed and precautions to take with work according to resources determined. SCE Vegetation Management; Southern California Edison Company; California. Role: Biological Technician. Intake calls on construction emergencies and jobs taking place throughout SCE's territory. Utilize GIS for review of work locations in order to determine whether the area is clear of biological and waters resources. Inform construction of ability to proceed and precautions to take with work according to resources determined. Role: Biological Technician.

SCE ES 004 Small Emergencies: All Disciplines; Southern California Edison Company; Menifee, Riverside County, California. SWCA is under a three-year on-call contract, to provide environmental consulting services (biological, cultural and paleontological, water quality/wetland permitting, licensing), for moderate to large scale utility system upgrades and improvements (~\$300,000-\$3M) for SCE's Transmission and Distribution Organizational Unit. Projects include but are not limited to: support for CPUC licensed projects, PEA development, National Environmental Policy Act (NEPA) projects, renewable interconnections, execution of environmental mitigation, and environmental oversight during construction. *Role: Biological Technician. Assess each location for presence of any resources present onsite. Inform construction of ability to proceed with work.*

SDG&E Natural Resources Consultant Support; San Diego Gas & Electric; California. *Role: Biological Technician. Conduct nesting bird surveys at poles scheduled for maintenance. Determine presence or absence of nesting birds. Report findings. Conduct PSRs (Preconstruction surveys) at specified poles designated for maintenance and report on resulting resources and habitats found within each location.*

Kinder Morgan Product Pipelines Seam Weld Metal Loss Integrity Dig; Kinder Morgan Product Pipelines; Texas. Replace and conduct maintenance on pipelines scheduled for maintenance throughout California. *Role: Biological Technician. Conduct desktop reviews to determine presence of biological, cultural, or waters resources within the vicinity of the project area.*

Suncrest Overhead to Underground Conversion Project; Confidential Client; Alpine, San Mateo County, California. Mainenance and construction on new substation and riser pole. *Role: Biological Technician. Conduct sweeps of work area to determine presence of nesting birds and determine level of compliance with environmental regulations. Document construction, and communicate needs with the client.*

Titan II and III Solar Projects; ZGlobal; Imperial County, California. Proposed project to construct a solar field providing energy to San Diego County. *Role: Biological Technician. Conduct a habitat assessment prior to construction in order to determine status of land proposed for development. Map vegetation and document all species present onsite-including endangered and sensitive plant and wildlife species.*

Victorville Pipeline Project MMRP Implementation; Meridian Consultants, LLC; Victorville, San Bernardino County, California. Planned project to conduct maintenance on Victorville pipeline. *Role: Biological Technician. Recorded vegetation communities, conducted a Western Joshua Tree Census, and surveyed for all burrowing mammals potentially present within the area including burrowing owl, kit fox, Mojave ground squirrel, and desert tortoise.*

MEBO Lakeshore Town Center; MEBO Properties; Lake Elsinore, California. Proposed project to utilize proposed location as a borrow site for grading of nearby Town Center project. *Role: Biological Technician. Conduct a habitat assessment prior to construction in order to determine status of land proposed for development. Map vegetation and document all species present onsite-including endangered and sensitive plant and wildlife species. Summarize results in habitat assessment.*



HAYLEY MILNER

ASSISTANT BIOLOGIST

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Trainings & Permits:

• Flat-tailed horned lizard handling (CDFW)

Skills and Proficiencies

- Data organization and analysis
- Laboratory research

Education

BS, Biology, 2015 University of Oregon

MS, Conservation Biology, 2018 Macquarire University, Sydney, NWS, AUS

BACKGROUND:

Hayley Milner is an Assistant Biologist with field experience and a Master of Science degree in Conservation Biology from Macquarie University in Sydney, NWS, Australia. She has a diverse background of experience including conducting bird count surveys, vegetation transect surveys and biological monitoring.

PROJECT EXPERIENCE:

Energy

San Diego Gas & Electric (SDG&E) SWPL Peninsular Bighorn Sheep Monitoring, San Diego County, CA. Ms. Milner conducted daily preconstruction clearance surveys and onsite Operations & Maintenance monitoring for drone inspection work and helicopter access in Peninsular Bighorn Sheep habitat during lambing season. Surveys included awareness and coordination of applicable buffer zones based on work plans, timely communications with Aviation Services staff to coordinate clearances, and navigating rugged terrain.

State

California Department of Resources Recycling and Recovery (CalRecycle) Consolidated Debris Removal Program, Bay Branch, Santa Cruz, Santa Clara, Stanislaus & Monterey Counties, CA – sub to WSP. Project Biologist. The California Governor's Office of Emergency Services (Cal OES) has tasked the California Department of Resources Recycling and Recovery to operate the statewide Consolidated Debris Removal Program, in support of local governments, to remove debris resulting from disasters. As a part of Phase II operations (remove remaining asbestos, assess and document properties, and clear contaminated soil, ash, metal, concrete, hazard trees and other debris to restore properties to pre-fire conditions), conducted biological site assessments prior to debris and hazardous tree removal. Site were assessed for proximity to sensitive habitats and presence/absence of federally and state-listed species, and special-status species that include (but are not limited to) California Red-Legged Frog, Foothill Yellow-Legged Frog, California Tiger Salamander, Marbled Murrelet, and Tricolored Blackbird. In addition to documenting all wildlife observed, aquatic resources were classified and flagged for avoidance, and sites were assessed for nesting bird suitability. Served as a biological monitor during debris removal that occurred adjacent to sensitive habitats and/or aquatic resources.

California State Parks Ocotillo Wells District, Imperial County, CA. Ms. Milner conducted herpetological field studies in an Environmental Services Internship targeting flat-tailed horned lizard surveys. Field work included handling, toe-tagging, and trapping techniques under the supervision of a Permitted Biologist.

Academía and Research

Imperial Irrigation District Burrowing Owl Population Study Project, Imperial Valley, CA. Ms. Milner contributed to regular crepuscular field surveys that occurred during the burrowing owl breeding season to provide data for occupancy and abundance modeling for a multi-year analysis. Ms. Milner is well-versed in utilizing ArcGIS Collector's mobile GIS form to submit mapping data and attributes.



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Trainings & Permits

- CDFW Scientific Collecting Permit #SC-192970001 -2020-present
- **3-Day GIS Training Workshop** Geomorph Information Systems, LLC
- OSHA CareerSafe Certified 10-hour General Industry Training, 2010
- Desert Tortoise Council Survey Techniques Workshop – Certified, 2016
- **Board of Directors, Wildlife Research Institute** 2020-Present

Skills and Proficiencies

- Environmental compliance management, monitoring, and coordination
- General nesting bird and raptor surveys
- Habitat assessments and mapping
- Biological assessment and technical reporting
- Trail camera installation and photo data management

Education

BS, Zoology; Minor, Psychology May 2010 North Carolina State University

BACKGROUND

Katie Quint is a Project Biologist and Field Lead for Blackhawk Environmental and has over 9 years of experience conducting focused biological surveys in Southern California, Nevada, and Montana. She is skilled in avian studies with a specialty in raptor biology and has performed nesting bird surveys, migration counts, point counts, presence/absence surveys, construction monitoring, nest monitoring, camera trap installation, as well as aerial and ground occupancy & productivity surveys most notably for burrowing owls (CDFW Species of Special Concern) and golden eggles (CDFW Threatened). Ms. Quint has conducted surveys for and prepared Biological Technical Reports used for developers' U.S. Fish & Wildlife Service (USFWS) Eagle Permits, NEPA, and CEQA compliance while consistently receiving high evaluations from supervisors in technical field skills, data analysis, problem solving, and scientific writing & editing. Additionally, Ms. Quint has participated as Field Survey Lead for a burrowing owl population study.

PROJECT EXPERIENCE

Energy

San Diego Gas & Electric (SDG&E) Cleveland National Forest Power Line Replacement Project, San Diego County, CA - Environmental Compliance

Coordinator (ECC), Coordinated daily environmental compliance and mitigation for multi-disciplinary environmental resources including Nesting Birds, Cultural Resources, and SWPPP while acting as a liaison between construction crews and environmental staff from 2016-2020. San Diego Gas & Electric (SDG&E) is undergoing the replacement of several existing 12-kilovolt(kV) and 69kV electric facilities spread throughout an approximately 880-square-mile area in eastern San Diego County. As the ECC working on behalf of Crux (and its subcontractors), Ms. Quint was responsible for coordinating the dissemination of environmental information from the office to the field appropriately for overhead and underground alignment projects. Ms. Quint attended daily tailboard meetings and construction/environmental meetings as necessary to coordinate the implementation of mitigation measures as required and necessary in the field. This involved direct field coordination with SDG&E-contracted environmental inspectors (Els) and the lead environmental inspector (LEI), as well as superintendents and foremen working for the contractor, Crux (and its subcontractors). Daily tasks include but are not limited to, reviewing daily/weekly construction schedules for work site approval, addressing concerns from LEI or Els, roving project lines for potential issues with signage, staking, BMP inspections and writing internal daily compliance reports. Ms. Johnson also coordinates with Crux (and its subcontractors) for mitigation materials, schedule changes, work activity changes, and general environmental questions. For ultimate guidance, Ms. Quint utilized Blackhawk's, Environmental Compliance Manager (ECM) as a resource for all internal environmental compliance-related questions and appropriate direction with LEI and Els, on behalf of Crux and its subcontractors.

C357 Apollo Underground Conversion Project, Alpine, San Diego County, CA – San Diego Gas & Electric, sub to AECOM. Staff Biologist. Performed and managed pre-construction nesting bird surveys ahead of underground distribution work within residential neighborhood in Alpine, CA. Performed overall environmental compliance checks on a weekly basis and conducted nest survey daily activity and compliance reports/summaries.

Pacific Gas & Electric (PG&E), Kings County, CA - Environmental Monitor. Conducted pipeline construction monitoring for an anomaly dig in blunt-nosed leopard lizard habitat and ensured that no impacts occurred to biological resources under her supervision.



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SDG&E Sunrise Powerlink HATS Project, San Diego County, CA - Avian Biologist. Conducted weekly surveys for nesting birds at locations accessed by helicopter and by ground, and assisted permitted Biologists in surveying for California gnatcatcher nesting as well.

SDG&E Sunrise Powerlink Peninsular Bighorn Sheep Monitoring, San Diego and Imperial Counties, CA - Biologist / Bighorn Sheep Monitor. Conducted several pre-activity surveys for Peninsular bighorn sheep as well as monitoring during routine maintenance as well as aerial light replacement work.

SDG&E C520 Section F Pre-Construction Survey Report, San Diego County, CA - Project Biologist. Conducted an initial assessment of biological resources for a powerline replacement project for nearly 70 work sites.

SDG&E SCADA Job Walk, San Diego County, CA - Biologist. Provided environmental mitigation input during a multi-disciplinary SCADA installation design and planning field assessment.

SDG&E Sunrise Powerlink Raven Control Plan, San Diego and Imperial Counties, CA - Biologist. Conducted post-construction breeding and non-breeding season surveys for raven nesting/roosting along 23 miles of newly-constructed transmission line within flat-tailed horned lizard habitat. Her raptor biology skills have proven to be instrumental in documenting year-to-year nest site occupancy between ravens and red-tailed hawks without adults present.

SDG&E Operations and Maintenance (Widget Projects), San Diego County, CA - Avian Biologist / Project Biologist. Conducted surveys for various Operations & Maintenance activities throughout San Diego County. Surveys include avian and plant focused pre-activity survey reporting and verification reports in compliance with SDG&E's Natural Communities Conservation Plan (NCCP). She also has experience with special reporting for Bureau of Indian Affairs standards.

SDG&E Tie-line 6914 Wood-to-Steel Project, San Diego County, CA - Biological Monitor. Performed daily construction monitoring, nesting bird surveys, and nest monitoring to maintain compliance with NCCP guidelines and the Migratory Bird Treaty Act. She addressed standard daily operations problems with creativity and a client focus to mitigate impacts to avian and plant species without compromising work scheduling and safety. As an on-site field biologist, Ms. Quint was a point of contact for the project's lead biologist to coordinate new workspaces of least possible impact as well as to train new team members.

SDG&E Tie-line 637 Wood-to-Steel Project, San Diego County, CA - Biological Monitor. Performed daily construction monitoring, nesting bird surveys, and nest monitoring to maintain compliance with NCCP guidelines and the Migratory Bird Treaty Act. She trained new team members on this project and diligently maintained daily monitoring reports with pertinent and necessary information for management goals.

SDG&E Sunrise Powerlink, San Diego and Imperial Counties, CA - Eagle Specialist/Biological Monitor. Conducted transmission line line-strike surveys as well as pair monitoring, nest monitoring, and compliance monitoring during the construction of select transmission towers in critically-sensitive areas of nesting golden eagle habitat. Ms. Quint also performed golden eagle occupancy & productivity surveys in direct accordance with USFWS Interim Golden Eagle Technical Guidelines. She assisted in ground-in-lieu-of-aerial surveys. Ms. Quint was the primary technical editor for the Biological Technical Report on survey findings.

Centinela Solar Transmission Line Project, Imperial County, CA - Avian Biologist. Conducted a multi-year post-construction avian line- strike surveys for a Bird and Bat Conservation Strategy related to the transmission line connection to Centinela Solar Energy Project. Ms. Quint also conducted breeding & non-breeding season raven surveys for a Raven Control Plan implemented in flat-tailed homed lizard habitat. She contributed to the annual report of survey findings and has been formally described as "instrumental to the team field operations" by her direct manager on this project.

Red Bluff Substation and Adjoining Infrastructures, Riverside County, CA - Eagle Specialist. Conducted golden eagle occupancy and productivity surveys on BLM land over a three-year period of the approximately 647-square-mile survey area in the Colorado Desert. Phase 1 occupancy surveys were conducted by ground in lieu of aerial surveys as recommended by CDFW due to potential concomitant bighorn sheep lambing in the area. Acted as primary observer and navigator for Phase 2 aerial productivity surveys. Prepared the annual Biological Technical Reports for which she also generated GIS maps of golden eagle nests and survey routes in relation to the Project. Surveying and reporting protocols were in direct accordance with USFWS Interim Golden Eagle Technical Guidelines.





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Renewable Energy

Harvill Project Site Riverside County, CA - Avian Biologist. Conducted focused surveys for a 30-Day Pre-Construction Burrowing Owl Survey Report within a project site located within the Western Riverside HCP area.

SunEdison Rancho Mirage Solar Project, Riverside County, CA - Avian Biologist/ Biologist. Conducted focused surveys for sensitive biological resources including burrowing owls as well as a habitat assessment survey within the project site located in the Coachella Valley.

Shoener Environmental, Inc. Golden Sun Wind Farm, Riverside and Imperial Counties, CA - Eagle Specialist. Conducted annual Phase 1 ground-in-lieu-of-aerial golden eagle occupancy surveys and Phase 2 aerial productivity surveys of mountainous terrain and transmission towers in the Colorado Desert over two years. Performed data QA/QC and prepared the annual Biological Technical Reports for the 550-square-mile survey area. Coordinated time-sensitive deadlines and client reviews as the point of contact for the reports. Surveying and reporting protocols were in direct accordance with USFWS Interim Golden Eagle Technical Guidelines.

Iberdrola Renewables Tule Wind Energy, San Diego County, CA - Raptor Specialist. Ms. Quint conducted avian migration count and point count surveys of golden eagles and other raptors in a multi-year project for a 670- square-mile area including part of the Cleveland National Forest, the Anza-Borrego State Park, BLM land, and several Indian reservations. Monitored eagle satellite telemetry data pertinent to the Project. Assisted in aerial occupancy surveys and the preparation of a Biological Technical Report in direct accordance with USFWS Interim Golden Eagle Technical Guidelines.

NaturEner Rim Rock Wind Project, Toole and Glacier Counties, MT - Eagle Specialist. Utilized available golden eagle satellite telemetry data to assess golden eagle spatial use in relation to specific Project components. Compiled all available details to the client in a summary of findings and accompanying map.

Restoration

SALK Vernal Pools Project, San Diego County, CA - Assistant Biologist. Assists permitted biologists as a trainee assisting with protocollevel large vernal pool branchiopod surveys in a multi-year ongoing vernal pool restoration and enhancement project at San Diego Unified School District including over 50 vernal pools. Ms. Quint gained experience observing the endangered for San Diego fairy shrimp as well as identifying other invertebrates and vernal pool indicator plant species while taking quantitative and qualitative data after significant rain events and while pools remained saturated.

San Elijo Lagoon Restoration Project, AECOM, Encinitas, San Diego County, CA - Assistant Biologist. Assisted permitted Biologists in focused marsh bird monitoring surveys for target species including light-footed Ridgway's rail, Virginia rail, sora, least bittern, American bittern, and pied-billed grebe.

Habitat Assessment for Phase 2 of the Managed Marsh Complex, Imperial Irrigation District, Niland, Imperial County, CA - Project Biologist. Collected habitat data and conducted habitat mapping in order to model habitat suitability for Yuma Ridgway's rail, California black rail, and southwestern willow flycatcher.

Los Peñasquitos Canyon Preserve Wetland Enhancement Project, City of San Diego, Sorrento Valley, San Diego County CA - Sub to ESA. Completed rare plant and jurisdictional delineation surveys, results for which were incorporation into a Biological Survey Report in support of a project that will be among the largest marshland restoration efforts ever conducted in California. Thirteen rare plant species were documented, accounting for over 2,000 individuals, and approximately 160 acres of jurisdictional wetlands were mapped. Twenty-four vegetation communities were mapped in great detail to aid in project design.

Grunion Monitoring, Orange County Parks, Orange County, CA - Biologist. Conducted nocturnal beach monitoring during grunion runs at the Aliso Beach Project Site at the outlet of Aliso Creek to document grunion nesting activity ahead of sediment control maintenance activities. Orange County Parks is required to limit disturbance to grunion eggs in order to maintain compliance with project regulatory permits, including the Section 404 permit from the U.S. Army Corps of Engineers (USACE), Section 401 permit from Regional Water Quality Control Board (RWQCB), and the Section 1602 Streambed Alteration Agreement from California Department of Fish and Wildlife (CDFW).

SDG&E Murphy Canyon Weed Abatement Project, San Diego County, CA - Biological Monitor / Avian Biologist. Conducts ongoing annual pre-construction assessments and construction monitoring for a weed abatement crew targeting invasive weeds in a Vernal

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Pool Preserve area associated with the Murphy Canyon Navy Housing development for plant species identification as well as avoidance of nesting birds including the Federally endangered coastal California gnatcatcher (CAGN) for which she has assisted Permitted CAGN Biologists with focused pre-activity surveys.

Fairview Park Mitigation Site, Orange County, CA - Biologist. Conducted hand-weeding where she utilized her plant identification skills for targeted removal of non-native weeds in a southern tarplant (*Centromadia parryi ssp. australis*) mitigation area.

USFS Seed Balls for San Diego Wildlife: The San Diego River Valley Restoration Project, San Diego County, CA - Biologist (Wildlife Research Institute). Distributed seed balls in the San Diego River Valley as part of a post-fire coastal sage scrub restoration project to enhance California gnatcatcher habitat. She was also the primary technical editor on the Biological Technical Report detailing the project in its entirety to the United States Forest Service.

Development

Rancho Highlands Subdivision Project, Riverside County, CA - Biologist. Conducted focused surveys for burrowing owl to contribute to MSHCP requirements in the City of Temecula.

Car Pros Kia Dealership Project, Riverside County, CA - Biologist. Conducted focused surveys for sensitive biological resources including burrowing owls as well as a habitat assessment survey within the project site located within the Western Riverside MSHCP area.

Lions Tigers and Bears Expansion Project, Descanso, San Diego County, CA - Biologist. Conducted general and focused wildlife surveys as part of County Permitting requirements for a proposed expansion project at an existing facility that provides captive habitat areas for big cats and other exotic animals.

Temecula Library Project, Riverside County, CA. - Biologist. Conducted a reconnaissance habitat assessment and nesting bird survey for a parking lot addition. She evaluated potential for occurrence of sensitive plant and animal species and contributed to a MSHCP Consistency Analysis report.

Warner Springs Ranch Resort, San Diego County, CA - Eagle Specialist. Ms. Quint was a co-contributor, primary writer and editor of a Biological Opinion Report for community development in golden and bald eagle habitat. Working with the developer to include eagle-friendly project components, she successfully identified potential impacts and recommendations to enhance and protect eagle habitat.

Gregory Mountain Landfill, San Diego County, CA - Eagle Specialist. Ms. Quint was the primary writer and editor of a Biological Opinion Report including potential impacts and recommended mitigation strategies. Ms. Quint organized an 81-year historical productivity assessment using available data archives. She subsequently conducted pair monitoring of a golden eagle nest site and assisted in large-scale remote camera data review to assist in making impact assessments and mitigation recommendations. Ms. Quint also conducts field visits with stakeholders and USFWS representatives.

Rough Acres Foundation Ranch, San Diego County, CA - Eagle Specialist. Ms. Quint assisted in composing a detailed golden eagle Biological Opinion Report by utilizing archival data including annual activity, productivity, satellite telemetry data, and remote camera data for two established golden eagle territories overlapping the development's footprint and spatial buffer.

Alvarado Creek Housing Project, San Diego County, CA - Biologist. Conducted a habitat assessment survey and jurisdictional delineation within the Project site.



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Communications

AT&T Fiber Optic Cable Installation Project, San Bernardino County, CA to Clark County, NV - Avian Biologist / Assistant Desert Tortoise Monitor. Conducted surveys for desert tortoise as well as nesting birds to support construction mitigation requirements.

Water Resources

City of San Diego Storm Water, San Diego and Ramona, San Diego County, CA - Assistant Biologist. Acts as a storm water collection assistant from multiple in-field automated collection facilities to aid in ongoing storm water monitoring. Assists with stormwater sampling along the Peñasquitos Creek and Famosa Slough for the City of San Diego. Stream flow measurements that include water velocity and pebble-counting, as well as photo documentation and data entry are completed.

Preserve Management & Mitigation Banking

Dave Bittner Ecological Preserve/Hobbs Parcel Management, Ramona Grasslands, San Diego County, CA - Preserve Manager / Biologist. Assists San Diego Botanist Fred Sproul in yearly rare plant surveys on 40 acres of Preserve lands contiguous with the Ramona Grasslands Preserve in a historical population of federally endangered San Diego thommint (*Acanthomintha ilicifolia*) where state rare plants including small-flowered bindweed (*Convolvulus simulans*), round-leaved filaree (*California macrophylla*), and graceful tarplant (*Holocarpha virgata ssp. elongata*) are identified annually in this multi-year effort. Additionally, conducts presence/absence surveys for wildlife and bird activity, manages a trail camera documenting trespasser access and wildlife activity onsite, coordinates with Ramona Municipal Water District to regulate unauthorized activity outside of their 20-foot easement, and writes and submits annual reports to San Diego County on Preserve management activities. Trained by Certified Applicator, Mike Kelly, in artichoke thistle (*Cynara cardunculus*) Capstone herbicide application and has contributed to successful control of over thousands of artichoke thistle plants into a small population of under 200 so far. Coordinated on-site soil sampling for the San Diego Zoo Global Native Seed Bank in 2020.

Academia and Research

Imperial Irrigation District Burrowing Owl Population Study Project, Imperial Valley, CA - Field Lead / Avian Biologist. Successfully coordinated a total of 220 surveys that occurred during two consecutive burrowing owl breeding seasons to provide data for occupancy and abundance modeling for a multi-year analysis. Data quality reviews were also completed by Ms. Quint as was scientific reporting and submission to California Department of Fish and Wildlife BIOS database.

Satellite Telemetry Tracking of Juvenile Dispersal and Migratory of Golden Eagles, San Diego County, CA and Washoe County, NV -Eagle Specialist. Telemetry program manager for the satellite telemetry tracking of 38 golden eagles from nesting locations to their various inter-state and international dispersal flight locations. Presented preliminary results and details of this tracking program at the 2012 Raptor Research Foundation Annual Conference and is also in the process of publishing these results as they relate to Baja California, Mexico in a cooperative publication with CIBNOR, La Paz, Baja California Sur.

Satellite Telemetry Tracking of Migratory Golden Eagles, Lewis & Clark County, MT - Eagle Specialist. Telemetry program manager for the trapping and satellite telemetry tracking of 24 golden eagles along their various inter-state and international migratory flight paths and breeding locations. This project is ongoing.

Golden Eagle Ground and Aerial Productivity Surveys, San Diego County, CA - Research Director / Eagle Specialist. Has conducted over 100 hours of helicopter-based aerial surveys according to U.S. Fish and Wildlife Service's Interim Golden Eagle Inventory Protocol in an ongoing multi-year survey effort of San Diego County's golden eagle population. Serves as primary observer and navigator for aerial surveys after mastering note-taker role to monitor annual productivity in known golden eagle territories. Has discovered several new nest sites in known golden eagle territories and has confirmed all stages of golden eagle nesting from the ground and air.

Golden Eagle Nest Site Usage and Chronology Camera Trap Project, San Diego County, CA and Lewis & Clark County, MT - Eagle Specialist / Field Lead / Project Manager. Provides trail camera field installation, in-field maintenance, equipment inventory, and data analysis for an ongoing camera trap project detailing golden eagle nesting, young-rearing, and alternate nest site usage. Coordinates and executes annual data collection and data processing. This project is ongoing.



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Mountain Lion Corridor Camera Trap Project, San Diego County, CA - Research Director / Project Manager. Manages a small team of volunteers and provides training and coordination for trail camera field installation, in-field maintenance, equipment inventory, and data analysis for a 15-site project in San Diego's backcountry. This Project tracks mountain lion and other wildlife land use patterns in an effort to identify essential habitat linkage corridors on private lands. This project is an ongoing multi-year effort in which multiple mountain lions have been identified as well as an American badger.