AECOM

PROPOSAL FOR

Humboldt Natural and Working Lands Carbon Stock and Management Study

COUNTY OF HUMBOLDT

PLANNING AND BUILDING DEPARTMENT

DELIVERING A BETTER WORLD.

MAY 15, 2026

A. Cover Letter

AECOM
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May 15, 2026

Suzanne Lippre, Administrative Analyst
Planning & Building Department
County of Humboldt
3105 H Street
Eureka, CA 95501

SUBJECT: AECOM Response to RFP No. PLN2026-01 Humboldt Natural and Working Lands Carbon Stock and Management Study

Dear Ms. Lippre:

AECOM Technical Services, Inc. (AECOM) is pleased to respond to the County of Humboldt (County) regarding the Request for Proposal (RFP) for professional planning and technical support services to assist with the Humboldt Natural and Working Lands Carbon Stock and Management Study (Study). We are a global infrastructure consulting firm with more than 48,000 professionals, with a strong northern California presence anchored by our Oakland (340+ staff), San Jose, and Sacramento (285+ staff) offices. Our northern California natural resources and environmental planning team brings together environmental planners; wildlife and fisheries biologists; botanists; wetland scientists; regulatory specialists; conservation and restoration ecologists; Geographic Information Systems (GIS) analysts; and cultural resources experts experienced working with tribal groups.

The following proposal presents our company experience, references, staff experience, rates, timeline, proof of insurance, technical approach, and project team resumes.

We are excited about this opportunity to support the County and have the relevant qualifications and experience with professional planning and technical support services to execute an innovative Study.

Our key areas of qualification and experience we can offer in collaboration with the County include:

1. **Local Expertise in CEQA Climate Planning and Carbon Analysis**. Our team has direct experience with California's climate policies, California Environmental Quality Act (CEQA) requirements, statewide GIS data layers and analyses, and local land management practices. Our extensive work in northern California—including Humboldt County—means we understand the region's unique ecosystems, regulatory landscape, and community priorities. This ensures our solutions are practical, locally relevant, and can be implemented smoothly, reducing the risk of delays or misalignment. We are composed entirely of US-based professionals, with most working locally in northern California regions—including Marin, Sacramento, and the San Francisco Bay Area. AECOM's fully in-house team includes climate planners, GIS and regulatory specialists, and carbon inventory experts supported by access to global technical resources and standards. Our team's experience spans work with local governments, state and federal agencies, utilities, and nonprofits throughout California, demonstrating our readiness to serve the County as a trusted partner for climate action and land management.
2. **Proven Track Record of Relevant Experience.** Having delivered successful carbon inventories, feasibility studies, and climate action plans, we bring proven methods and lessons learned. This minimizes trial-and-error and accelerates progress for Humboldt County, ensuring high-quality, defensible results. Our proposal provides documented evidence and client references highlighting our accomplishments and project histories working in northern California with public agencies and counties including CEQA climate

planning, carbon stock and sequestration analysis, and land management. Our expertise is further supported by our extensive portfolio providing large-scale GIS analyses, carbon inventories, ecosystem services, climate action planning, stakeholder engagement, and transparent reporting including adhering to Americans with Disabilities Act (Section 508) and Web Content Accessibility Guidelines (WCAG) standards.

3. **Unique, Innovative, Science-Backed Methodology.** We deliver scientifically rigorous projects that follow the latest peer-reviewed protocols and state-of-the-art methodologies, providing substantial evidence under CEQA and supporting the County's climate goals. Led by Dr. Holly Stover, a recognized ecosystem ecologist with expertise in carbon sequestration on natural and working lands in northern California, our team brings proven experience to complete the Study. Our approach is uniquely tailored to the County's landscape, leveraging local stakeholder engagement, advanced GIS and spatial analysis, and transparent documentation. This approach facilitates results that are repeatable, defensible, and easily integrated into the County's Regional Climate Action Plan (RCAP) and future updates.

AECOM offers local expertise, a science-based approach, and a fully integrated team, positioning us to deliver practical, transparent results tailored to the County's climate and carbon management goals. We are also highly committed to safety and quality. AECOM's global leadership in quality management is demonstrated by our ISO 9001:2015 certification, ensuring consistent, high-quality service across all operations. **We offer efficiency and cost effectiveness** compared to our competitors by providing a diverse team of experienced and early-career professionals, streamlining technical work with advanced digital tools, and our preexisting familiarity with Humboldt County.

AECOM has reviewed the County's General Professional Services Agreement and can sign the agreement without exceptions.

We appreciate the opportunity to partner with the County on this important initiative. Our team is committed to delivering proven, forward-looking solutions that support the County's climate goals and provide lasting value to the community. We look forward to the possibility of collaborating with you to advance sustainable land management and carbon stewardship in northern California.

Please let us know if you have any questions regarding our proposal.

Sincerely,
AECOM Technical Services, Inc.

Holly Stover, PhD
Project Manager
(510) 600-9920
Holly.Stover@aecom.com

Steve Leach
Vice President/Authorized Signatory
(925) 262-3680
Steve.Leach@aecom.com

B. Authorized Signature Affidavit

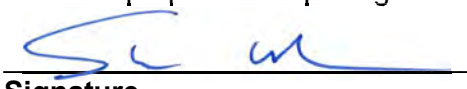
SIGNATURE AFFIDAVIT

NAME OF FIRM:	AECOM Technical Services, Inc.
STREET ADDRESS:	300 Lakeside Drive, Suite 400
CITY, STATE, ZIP	Oakland, CA 94612
CONTACT PERSON:	Steve Leach
PHONE #:	(925) 262-3680
FAX #:	(510) 874-3268
EMAIL:	Steve.Leach@aecom.com

Government Code Section 6250 *et.seq*., the "Public Records Act", define a public record as any writing containing information relating to the conduct of public business. The Public Records Act provides that public records shall be disclosed upon written request, and that any citizen has a right to inspect any public record, unless the document is exempted from disclosure.

In signing this proposal, I certify that this firm has not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition; that no attempt has been made to induce any other person or firm to submit or not to submit a proposal; that this proposal has been independently arrived at without collusion with any other proposer, competitor or potential competitor; that this proposal has not been knowingly disclosed prior to the opening of proposals to any other proposer or competitor; that the above statement is accurate under penalty of perjury.

The undersigned is an authorized representative of the above named firm and hereby agrees to all the terms, conditions, and specifications required by the County in this Invitation to Bid and declares that the attached proposal and pricing are in conformity therewith.



Signature

Vice President

Title

Steve Leach

Name (type or print)

5/15/2026

Date

This firm herby acknowledges receipt / review of the following addendum(s) (If any)
Addendum # Addendum # Addendum # Addendum #

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C. Company Experience

Humboldt County seeks to establish a defensible, comprehensive baseline of carbon stocks and sequestration potential across its vast natural and working lands, evaluate management strategies, and inform climate action planning through robust stakeholder engagement and accessible deliverables. The County's goal is to answer critical questions about current and future carbon dynamics, wildfire impacts, and practical pathways to carbon neutrality. Our project team's proven expertise in carbon assessment, wildfire impact analysis, climate action planning, and GIS-driven land cover mapping directly addresses these needs. By applying advanced, transparent methodologies and leveraging local knowledge with global best practices, we deliver efficient, credible, and actionable results—ensuring the County's objectives are met through a process that is both scientifically rigorous and responsive to stakeholder priorities.

- Our project team brings deep technical experience in assessing carbon stocks and the carbon sequestration potential of landscapes under varying land use, climate, and policy scenarios. Our analyses encompass both above-ground and below-ground carbon pools, temporal change, and projected future conditions. We have particular experience evaluating the impacts of wildfire on carbon stocks and ecosystem function such as for the Soil Carbon Sequestration Potential of California Rangeland treated with Organic Matter Amendment: Interactions with Fire and Drought project as described below. We also have experience supporting ecological assessment and recovery planning following recent wildfire events such as the Palisades and Eaton Wildfires.
- AECOM has demonstrable experience developing high-quality carbon stock inventory and management strategies for public- and private-sector organizations, such as for the Soil Carbon Feasibility and Sequestration Potential of Biochar and Compost Amendments to Grassland, La Honda, California and Massachusetts Decarbonization Investment and Benefits Analysis: Natural and Working Lands Sector Analysis, Commonwealth of Massachusetts. We understand the defining characteristics of credible carbon assets and the diverse objectives that organizations pursue in reducing their carbon footprints. Our teams support the full lifecycle of carbon reduction programs, from defining objectives, evaluating tradeoffs, and stakeholder engagement, to developing offset strategies, procurement frameworks, and evaluation criteria aligned with organizational values to assist in action planning and implementation.
- AECOM has supported over 50 Climate Action Plans in California, including award-winning plans for Yolo County, the City of Union City, and the City of West Hollywood. We have also developed innovative climate planning tools, such as a carbon abatement and scenario analysis platform for the World Bank, that supports innovation in emissions inventory development, reduction strategy evaluation, and progress tracking.
- Our GIS team brings extensive experience with large, complex datasets, specifically land cover classification using remote sensing data and the land cover dataset in California for the Federal Emergency Management Agency (FEMA) Programmatic Biological Assessment to map state land cover change over the last 20 years and in Alaska for University of Alaska to map state Boreal forests. Both projects implemented advanced analyses including image classification for land cover datasets, and establishing baseline health and conditions. AECOM GIS provides local familiarity with Humboldt County and authoritative datasets for northern California demonstrated with experience in local projects with Viridon and California Independent System Operator (CAISO) proposals.

Innovative, Practical Solutions for Humboldt County

AECOM brings an integrated global perspective that is always grounded in local realities—an approach especially valuable for relatively remote, primarily rural counties like Humboldt. Our award-winning Sustainable Legacies Strategy, recognized by the Verdantix Innovation Excellence Award, demonstrates our ability to deliver sustainability solutions that are both effective and practical. We understand that rural communities may face unique challenges around the adoption and cost of new strategies, as well as the need for solutions that fit local values and dynamics. By leveraging our international expertise and deep experience in rural and resource-

based communities, we identify innovative carbon management and sequestration strategies that are not only effective, but also feasible and scalable for Humboldt County's context.

Our team works closely with local stakeholders to ensure recommendations are understandable, actionable, and sensitive to rural community needs—whether that means prioritizing cost-effective nature-based solutions, supporting voluntary and incentive-based programs, or tailoring outreach to build trust and buy-in. Our Biodiversity and Environmental, Social, and Governance (ESG) policies, aligned with the Global Biodiversity Framework, guide us in designing climate resilience and nature-positive outcomes that reflect Humboldt's unique landscape and community priorities. We draw on a broad toolkit of policy, market-based, and nature-based mechanisms, helping the County navigate trade-offs and select approaches that maximize benefits while minimizing barriers to adoption. Through transparent, collaborative processes and accessible deliverables, we will empower Humboldt County to make informed decisions and achieve its climate and sustainability goals in a way that works for its people and places.

Experience in Humboldt County

Our northern California-based team has a portfolio of work in Humboldt County which gives us strong familiarity with local landscapes and stakeholders. Some of the projects include supporting the California Department of General Services (DGS) with CEQA documentation related to the California Department of Forestry and Fire Protection (CALFIRE) Humboldt – Del Norte Unit Headquarters Facility Relocation Project in Rio Dell, and preparation of the Environmental Impact Report to construct and operate the Humboldt Wind Energy Project, a renewable wind energy generation development. AECOM supported Save the Redwoods League's integrated visitor center and Prairie Creek restoration project in Redwood National and State Parks within Humboldt County and their Socioeconomic Impact Study. AECOM has familiarity with tribal groups in the region and assisted with tribal consultation for the Klamath Dam Project. We are currently providing environmental review and technical studies for Virdon on several long transmission line projects traversing several northern California counties, including corridors through Humboldt County. All of AECOM's experience in Humboldt County provides a solid foundational knowledge of the landscape and GIS resources that will streamline work for this project.

Project Descriptions

In this section, we provide a selection of case studies that show our diverse experience using the skills needed to complete the Study for the County, along with client references. Our proven track record with carbon management studies, stakeholder engagement, and climate action planning positions us as a strong partner for the County's ambitious carbon neutrality and land stewardship objectives.

Soil Carbon Feasibility and Sequestration Potential of Biochar and Compost Amendments to Grassland, La Honda, California

Client: **Midpeninsula Regional Open Space District**

AECOM and Creekside Science are studying the utility and ecological safety of applying biochar and other organic amendments such as compost on California grassland and rangeland ecosystems undergoing

restoration. Biochar amendment is being evaluated for its potential to sequester carbon as well as provide other ecosystem co-benefits such as improvement of native plant reestablishment. While still ongoing, this long-term study will monitor the influence of biochar amendment on native seeded and resident grassland species as well as soil chemical and physical properties over time. Soil carbon sequestration potential of biochar application will be assessed as a natural carbon removal technology. This project also helps the client find solutions to more sustainable waste management pathways for forest management practices.

In this project, AECOM provided the scientific study design and long-term monitoring plan to evaluate the ecological impacts of biochar and compost amendments on grassland carbon storage, soil health, and native plant communities.

Highlights of the project completed thus far in Phase I and to be completed in Phase II include:

- Developing robust experimental designs and monitoring protocols for above-ground and below-ground carbon, soil nutrients, and plant community responses.
- Planning and providing ideas for stakeholder engagement and public outreach, including demonstration events and interpretive education.
- Applying advanced statistical and data management tools to ensure rigorous, transparent, and repeatable results.
- Collaborating with local agencies, resource conservation districts, and suppliers to ensure project success and knowledge transfer.
- Producing detailed reports and supporting the translation of findings into policy and land management recommendations.
- Quantifying carbon stocks and model sequestration under various management scenarios.
- Designing and implementing a long-term monitoring and adaptive management plan.
- Communicating complex scientific findings to both technical and public audiences.

Relevance to Humboldt County

- ✓ Rigorous scientific study and development of carbon sequestration strategies and projects
- ✓ Quantifying carbon stocks and modeling sequestration
- ✓ Stakeholder engagement and public outreach

Massachusetts Decarbonization Investment and Benefits Analysis: Natural and Working Lands Sector Analysis, Commonwealth of Massachusetts

Client: **State of Massachusetts Department of Transportation (MassDOT)**

AECOM conducted a detailed economywide analysis to estimate the benefits and potential investment for greenhouse gas (GHG) reduction measures across seven sectors, sufficient to achieve the Commonwealth's statutorily mandated GHG emissions limit of Net Zero by 2050 and consistent with the Clean Energy and Climate Plans. AECOM supported MassDOT in developing the Natural and Working Lands sector (NWL) decarbonization strategy, supporting a credible, actionable pathway for net emissions reductions and enhanced carbon sequestration across forests, wetlands, soils, and urban landscapes. Our work identified highest-value sequestration and avoided-emission opportunities, and produced a prioritized pipeline of implementable, cost-effective measures with measurable co-benefits for resilience, habitat, and equity. We aligned the NWL strategy with state climate policies and agency programs, integrating practical delivery pathways, governance, and funding mechanisms to accelerate implementation.

Highlights of the project include:

- Developed a statewide NWL baseline using best-available landcover, biomass, and soils data, leveraging the Massachusetts Executive Office of Energy and Environmental Affairs Forest Carbon Study, to quantify existing stocks, annual fluxes, and historical trends.
- Assessed opportunities in MassDOT rights-of-way adjacent lands for sequestration and avoided emissions, including tree canopy expansion, strategic reforestation, native meadow establishment, and soil

health improvements.

- Identified coastal wetland restoration, salt marsh migration corridors, and living shoreline concepts that sequester carbon while reducing flood risk and protecting critical transportation assets, integrating co-benefit metrics.
- Modeled NWL pathways (afforestation, reforestation, avoided conversion, urban forestry, wetland restoration, soil carbon) to estimate sequestration potential, timing, and uncertainty. We developed investment-per-ton reduced metrics for the NWL actions, for total investments through 2050 compared to cumulative GHG reduction through 2050, using implementation assumptions from scenario modeling and estimated upfront capital investment through 2024-2050. Scenario analysis also included a qualitative assessment of benefits related to ecosystem services, resilience, job creation, public well-being, and resident/business affordability.
- Established a transparent accounting framework consistent with recognized guidance (e.g., Intergovernmental Panel on Climate Change [IPCC] aligned methods), enabling consistent quantification, tracking, and disclosure of NWL benefits over time. We provided assumptions libraries, emission/sequestration factors, and Quality Assurance (QA)/Quality Control (QC) protocols for repeatable analyses.
- Created an action prioritization tool that weighs GHG reduction potential, capital investment, quantified benefits, and equity considerations for each GHG reduction/sequestration measure.
- Embedded equity criteria to prioritize investments that deliver shade, air quality, and heat-island mitigation in environmental justice communities and neighborhoods with limited canopy.

Relevance to Humboldt County

- ✓ Statewide baseline carbon assessment of natural and working lands
- ✓ GHG accounting framework
- ✓ Action prioritization tool
- ✓ Equity and community benefits

Humboldt Wind Project Environmental Impact Report, Humboldt County, California

Client: County of Humboldt

AECOM prepared an Environmental Impact Report (EIR) to construct and operate the Humboldt Wind Energy Project, a wind energy generation development consisting of between 45 and 70 wind turbines and a generating capacity of up to 135 megawatt (MW). The approximately 1,780-acre project site is located on privately owned lands 20 miles south of Eureka near the community of Scotia. Proposed project components included permanent and temporary access roads, lay-down areas, temporary batch plants), underground collector lines, meteorological towers, an operations and maintenance facility, substation components, and a 30-mile transmission line.

Key issues on this high-profile and controversial project involved effects on sensitive cultural resources, visual resources, and impacts of construction and operation on marbled murrelet, Northern spotted owl, migratory birds, and bats.

Highlights of the project include:

- AECOM completed the EIR for this fast-paced project within 15 months of Notice of Preparation to Final EIR on time and within budget. This expedited schedule was met through strict adherence to an integrated team schedule for the development and environmental compliance documents, and frequent (weekly at

times) meetings with the project applicant and lead agency.

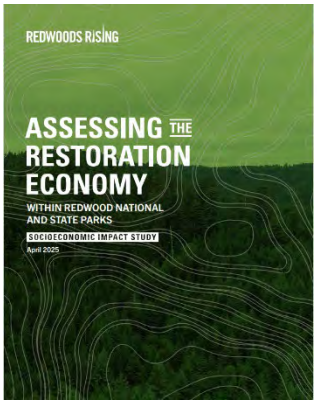
- AECOM played a crucial role in maintaining the schedule, facilitating the meetings, and advancing technical work between working sessions. AECOM also provided additional staff resources, as needed, to accommodate the expedited schedule.

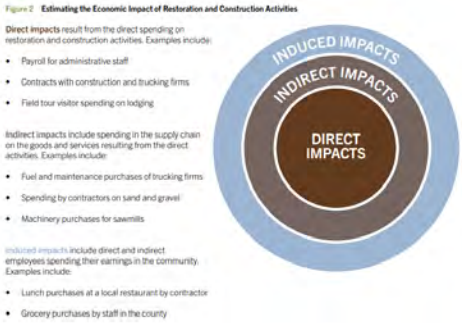
Relevance to Humboldt County

- ✓ Familiarity with environmental planning and large-scale projects in Humboldt County
- ✓ Successful delivery of fast-paced project
- ✓ Experience navigating sensitive and high-profile issues

Assessing the Restoration Economy within Redwood National and State Parks, Humboldt and Del Norte Counties, CA

Client: Save the Redwoods League





AECOM worked with the Save the Redwoods League, the National Park Service, the California Department of Parks and Recreation, and the Redwood Parks Conservancy to evaluate the restoration economy of Redwood National and State Parks gateway communities and the surrounding region in Humboldt and Del Norte Counties. This area has a legacy of extraction-based industries and boom-bust cycles of economic growth and contraction. In this setting, Redwoods Rising creates ongoing opportunities for economic activity that is restorative rather than exploitative. The analysis focused on the restoration activities in the Greater Prairie Creek and Greater Mill Creek project areas and the restoration and construction of the 'O Rew Redwoods Gateway, located in the Prairie Creek project area. AECOM evaluated social and ecosystem service benefits from restoration activities through literature review and case studies, insights from project experts, and interviews with key collaborators, including representatives from Tribal organizations, local academia, government, nonprofit and public organizations involved in restoration activities, and the private sector.

Highlights of the project include:

- Successful completion of a Socioeconomic Impact Study which provides an evaluation of how funding impacts local communities with specific data collected on grant funds.
- Identification of opportunities to expand the role of Redwoods Rising as a driver of economic and equitable growth.

Relevance to Humboldt County

- ✓ Local knowledge of redwood ecosystem and restoration projects
- ✓ Integration of interviews with key collaborators and partners into project analysis
- ✓ Social and ecosystem service benefits of restoration

Alameda Watershed Rangeland Management Plan, Sunol, California

Client: San Francisco Public Utilities Commission


AECOM supported the San Francisco Public Utilities Commission (SFPUC) in developing and implementing the Alameda Watershed Rangeland Management Plan (RMP) for nearly 40,000 acres of rangeland in the Alameda Creek Watershed. The primary objectives were to protect water quality, reduce fire risk, and ensure ecological and economic sustainability through adaptive grazing management on natural and working lands. The RMP balances water quality protection with ecological and economic goals, integrating grazing management with protection of sensitive habitats and species, and invasive species management. For over a decade, AECOM has provided comprehensive rangeland management services to SFPUC, including field monitoring, GIS-based mapping and modeling, and plan authorship.

Highlights of the project include:

- Designed and implemented monitoring protocols (e.g., residual dry matter [RDM] monitoring and targets), determined optimal stocking rates using GIS modeling.
- Supported SFPUC with regulatory compliance efforts, including CEQA review, and ensured the RMP met all environmental and permitting requirements.
- Focused on actionable, cost-saving measures and strategies that are practical for local ranchers, ensuring long-term program sustainability.
- As part of the Sunol Rangeland Resiliency Project, AECOM helped SFPUC implement climate-resilient land management practices across 6,260 acres in partnership with the East Bay Regional Park District and Alameda County Resource Conservation District.
- AECOM conducted interviews with ranchers and leaseholders to gather information and feedback for the RMP. AECOM also assisted with the public release of the RMP and related documents, and ensured all materials met WCAG and Americans with Disabilities Act (ADA)/508 accessibility standards for web publication, supporting SFPUC's grazing leases program.

Relevance to Humboldt County:

- ✓ Practical, cost-effective solutions for land managers and ranchers
- ✓ Science-based land management plan
- ✓ Advanced GIS data analysis and modeling to inform management
- ✓ Navigation of complex regulatory processes, including CEQA
- ✓ Engagement with diverse stakeholders
- ✓ AECOM provided accessibility standards (WCAG and ADA/508 compliance) for online publication of final deliverables

Soil Carbon Sequestration Potential of California Rangeland treated with Organic Matter Amendment: Interactions with Fire and Drought, University of California Sierra Foothill Research and Extension Center (SFREC), Browns Valley, California

Funding Agencies: University of California, California Department of Food and Agriculture & United States Department of Agriculture




Dr. Holly Stover was selected as a Postdoctoral Fellow at University of California, Berkeley to lead a Healthy Soils Demonstration Project funded by the California Department of Food and Agriculture Healthy Soils Program and the University of California Carbon Neutrality Initiative. The project investigated the effects of food waste and green waste composts on rangeland ecosystems part of California's natural and working lands, including their role in promoting carbon sequestration. Compost applied on rangeland has the potential to increase forage quality and quantity and improve soil fertility through enhanced soil organic matter and nutrients. Holly worked with Jeremy James, SFREC Center Director, and Whendee Silver, UC Berkeley Professor (Marin Carbon Project) to monitor GHGs, soil carbon, and vegetation at nine half-acre experimental plots.

Highlights of the project include:

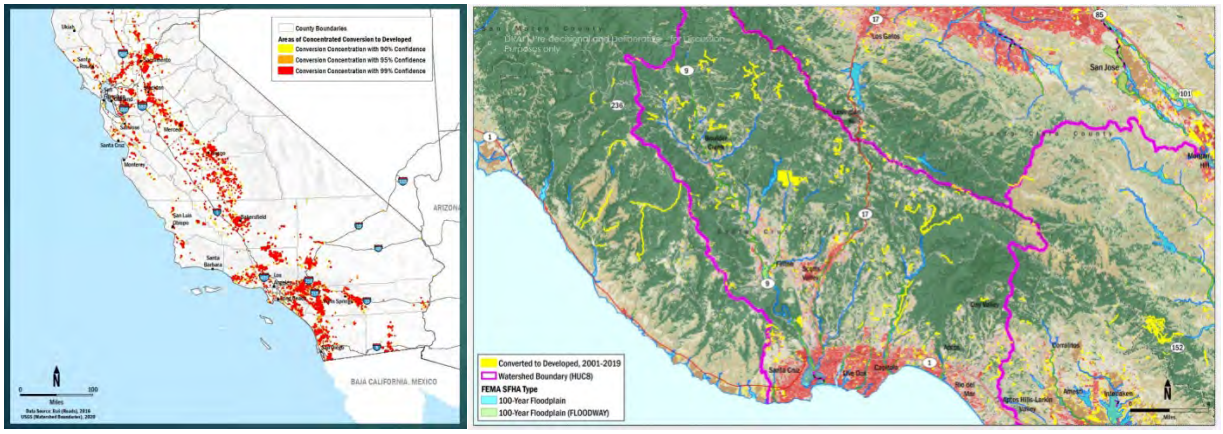
- Outreach with the local community, including ranchers and key representatives of government and non-governmental organizations involved in composting initiatives. A key group of stakeholders joined the project advisory committee to help see this research best utilized by practitioners. Holly helped organize several outreach events including a webinar and field day workshop.
- Incorporation an evaluation of the impacts of wildfire and drought on soil carbon sequestration following an accidental wildfire in 2019.

Relevance to Humboldt County

- ✓ Rigorous scientific study
- ✓ Quantifying carbon stocks and modeling sequestration
- ✓ Fire and drought impacts on soil carbon sequestration
- ✓ Community stakeholder engagement including a stakeholder advisory committee, field day workshop, fact sheet, social media posts, online blog, and webinar

FEMA Programmatic Biological Assessment, CA

Client: Federal Emergency Management Agency Region 9



AECOM provided regulatory and technical support for the Programmatic Biological Assessment – Section 7 Consultation for the National Flood Insurance Program (NFIP) Implementation in California for the FEMA Region 9. The AECOM team delivered regulatory and statewide GIS-based spatial and statistical analyses to support FEMA's Programmatic Biological Assessment and NFIP evaluations in California. Using the National Land Cover Database (NLCD, 2001–2023), soils, flood hazard data (including 2022 Special Flood Hazard Area [SFHA] boundaries), jurisdictional boundaries, and hydrologic units, we identified and mapped land conversions from natural to developed conditions at 30-meter resolution and modeled habitat for more than 200 listed species. We classified development intensity (Developed Open Space; Low, Medium, and High Intensity) and summarized patterns inside versus outside SFHAs, critical habitat, counties, and Hydrologic Unit Code (HUC)-8 watersheds.

Highlights of the project include:

- Defensible, data-driven conclusions via paired spatial mapping with statistical testing (including logistic regression) to evaluate whether conversion likelihood differed across geographies and initial land cover types.
- Demonstrated ability to integrate large, multi-source datasets; apply consistent statewide classifications; and produce clear summary tables and statistically robust findings. These capabilities are directly transferable to statewide carbon inventory analyses.

Relevance to Humboldt County

- ✓ Proven skills managing large-scale GIS datasets in California
- ✓ Experience conducting in-depth GIS and statistical analysis of landcover change which can be directly applied to carbon inventory and sequestration studies
- ✓ Example of successful execution of a complex, challenging project with an integrated project team combining environmental regulatory and GIS experts

D. References

Midpeninsula Regional Open Space District, Natural Resources Department
5050 El Camino Real
Los Altos, CA 94022
Sophie Christel, CIP, Management Analyst and Climate Specialist **E:** schristel@openspace.org
P: (650) 625-6588
Description of services rendered: AECOM prepared a study design and monitoring plan for the Soil Carbon Feasibility and Sequestration Potential of Biochar and Compost Amendments to Grassland, La Honda, California project described in Section C. Company Experience (Project Descriptions). AECOM is also co-leading implementation of the study including amendment application and long-term monitoring and analysis of carbon sequestration.

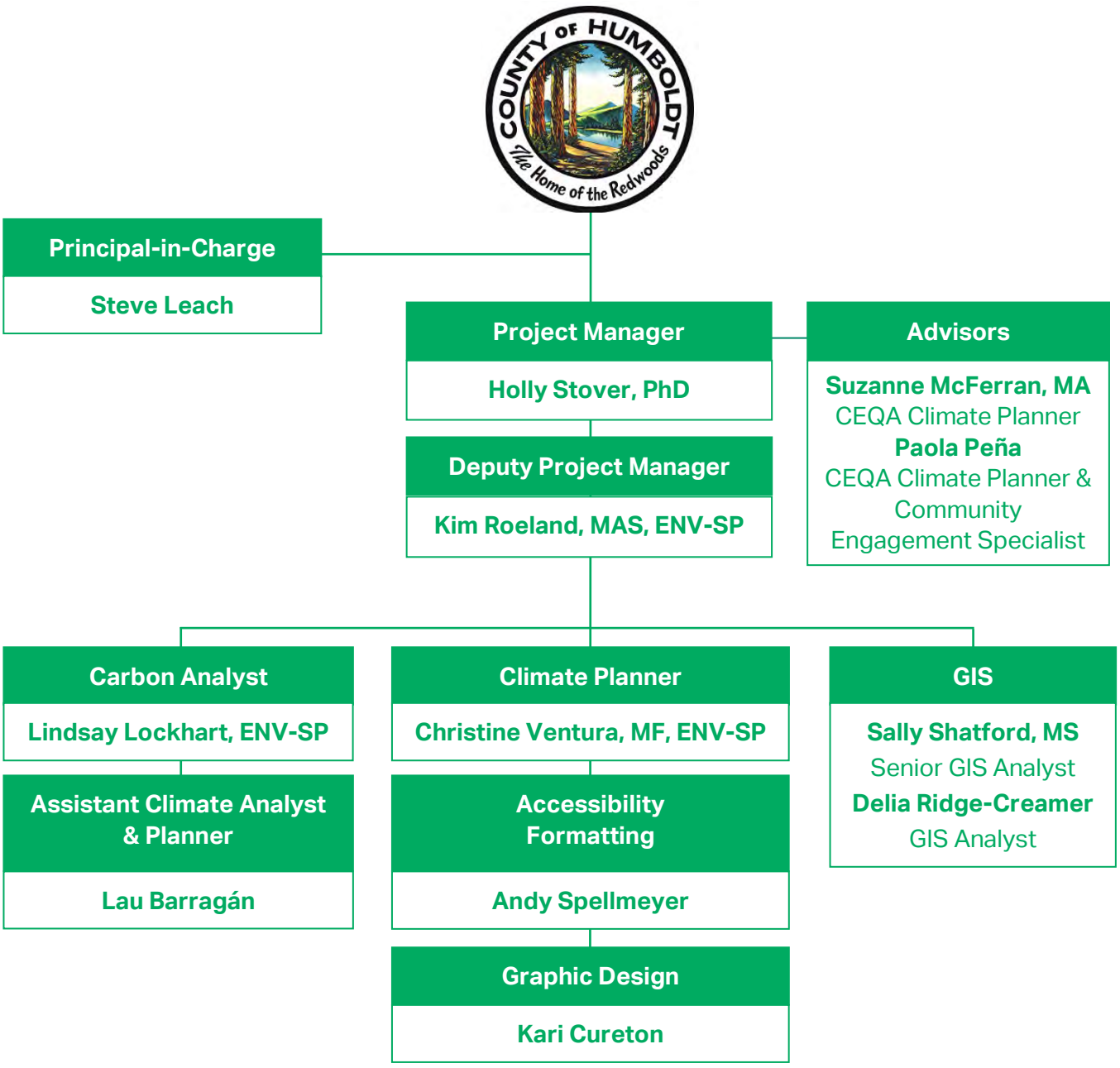
San Francisco Public Utilities Commission, Water Enterprise
Natural Resources and Lands Management Division
505 Paloma Way
Sunol, CA 94586
Miranda Maupin, Tuolumne and Alameda Watershed Resources Manager E: mmaupin@sfwater.org
P: (415) 654-3907
Description of services rendered: AECOM assisted with preparation of the Alameda Watershed Rangeland Management Plan, Sunol, California. This project and services rendered are further described in Section C. Company Experience (Project Descriptions).

CA Department of General Services, Project Management and Development Branch
707 Third Street, 4th Floor, West Sacramento, CA 95605
Stephanie Coleman, Senior Environmental Planner **E:** Stephanie.Coleman@dgs.ca.gov
P: (916) 376-1602
Description of services rendered: AECOM assisted with preparation of the CALFIRE Humboldt-Del Norte Unit Headquarters Facility Relocation Project EIR, in Rio Dell, California. This project and services rendered are further described in Section C. Company Experience (Project Descriptions).

E. Staff Experience

AECOM has assembled the right team for the Humboldt County Carbon Inventory and Sequestration Potential Study. The project team includes climate planners, GIS specialists, and carbon inventory analysts who understand the unique challenges and opportunities for this type of project in Humboldt County. Many of the team members are based in and have relevant experience working throughout northern California. The northern California GIS team has the necessary expertise required for the Study, including work on complex landcover modeling, analyses, and management of large-scale datasets. Our diverse staff experience, coupled with our collaboration with local governments, tribal organizations, state and federal agencies, utilities, and nonprofits across California, establishes us as a reliable partner for effective climate action and land management. Resumes are provided in the **Appendix**.

AECOM Team Organization

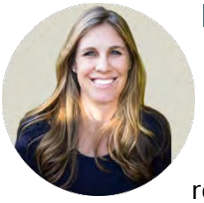


Holly Stover, PhD, Project Manager

Holly is a senior ecologist and project manager working for AECOM's Oakland, California office. She will serve as the Project Manager and primary client contact, overseeing staff assignments, budget, schedule, and quality assurance/quality control. She will lead the project team and collaborate with the County to ensure a scientifically rigorous study that adheres to the latest peer-reviewed protocols. She is the Project Manager for the Soil Carbon Feasibility and Sequestration Potential of Biochar and Compost Amendments to Grassland, La Honda, California. Holly is a certified project manager and has served as project manager on several large and complex client projects in northern California. She will manage technical tasks, including data analyses and recommendations to optimize the County's carbon sequestration potential. Holly has worked as a project manager and scientist on several large-scale planning studies for the SFPUC, FEMA for the state of California, and Pacific Gas & Electric Company. She has authored 12 peer-reviewed publications, is a leading expert in climate ecology and data analysis, and has a solid background in carbon sequestration and inventory studies in California.

Steve Leach, Principal-in-Charge

Steve is a Senior Project Manager based out of AECOM's Oakland office in northern California with more than 30 years of experience throughout California. He will support the project team, ensuring that appropriate resources are dedicated to completing tasks on time and within budget, as well as providing strategy and input as needed. Steve has signature authority for contracts and modifications and will work with Holly to ensure that the project team has the necessary resources, monitor compliance with the QA/QC procedures, and monitor your satisfaction with AECOM team performance. Steve's areas of expertise include managing large programs, coordinating deliverables, and organizing project teams to meet client needs. He has managed the permitting and resource agency coordination for major infrastructure projects that include carbon sequestration, low carbon fuels, power generation, and other infrastructure projects. Steve will be dedicated to the successful delivery of this project.



Kim Roeland, MAS, ENV-SP, Deputy Project Manager

Kim will co-lead the consultant team as the Deputy Project Manager and is also a certified and experienced project manager. She will support effective communication with the County and coordinate project resources, ensuring that staffing, budgeting, timelines, and quality standards are consistently met. Kim will facilitate teamwork and partner with County representatives to drive a thorough and well-documented study process. Drawing on a strong background in managing complex sustainability and planning projects, she will be responsible for overseeing technical components, such as evaluating options and providing strategic guidance to enhance the County's carbon sequestration outcomes. Kim has over 20 years' experience as an ecologist, natural resources planner, and climate resiliency professional with expertise in program management and technical support for a wide variety of projects. Kim's experience includes natural resource management plans, climate change vulnerability assessments, conservation and biodiversity plans, hazard mitigation planning, and sustainability planning. Through her prior role with the City of San Diego, Kim developed a strong understanding of local government departments and processes, which she applies to understanding client needs and delivering successful projects.

Suzanne McFerran, CEQA Climate Planner, Advisor

Suzanne will serve as technical advisor to apply her direct experience with County projects and leading the development of numerous CEQA documents, including climate action plans and developing project-specific GHG thresholds. Suzanne is based out of Sacramento in AECOM's northern California office. She is currently the project manager for the CALFIRE Headquarters project in Rio Dell and previously led air quality and GHG work on a wind energy project in Humboldt County. Suzanne has 17 years of experience in the field of environmental science and management, including work on CEQA/ National Environmental Policy Act (NEPA), air quality and greenhouse gas analyses, and program and project management. Her diverse academic and professional background allows her to provide a multidisciplinary approach in developing solutions for and providing services to federal,

state, and local agencies and private sector clients. As an environmental scientist and planner at AECOM, Suzanne works on a variety of project types, including private and public sector development, renewable energy, general plans, specific plans, and climate action plans, flood control, environmental restoration, and linear energy transmission and transportation.

Paola Peña, CEQA Climate Planner & Community Engagement Specialist, Advisor

Paola will serve as technical advisor to integrate her experience in northern California developing air quality and GHG emissions analyses and community engagement programs. Paola is based out of northern California in AECOM's Sacramento office. She is an Air Quality/GHG Emissions Analyst with experience in preparing project- and program-level air emissions inventories of criteria air pollutants and greenhouse gases. She provides climate change impact analysis for incorporation into environmental impact assessments in CEQA- and NEPA-related projects, including wetland and natural resource restoration, mixed use, residential, renewable energy, industrial, transportation, and public infrastructure projects. She is also a Public Engagement Specialist and has experience in public and stakeholder engagement and facilitation for a range of projects, including climate change adaptation and resilience, mobility, land use, transportation planning, and CEQA projects.

Lindsay Lockhart, ENV SP, Carbon Analyst

Lindsay Lockhart is a sustainability and decarbonization consultant in the California Bay Area with 12 years of experience specializing in GHG accounting, emissions modeling, and data-driven climate strategy. She will serve as the carbon analyst using her extensive experience calculating Scope 1, 2, and 3 emissions across complex, multi-site organizations, including emissions factor selection, large-scale data aggregation, and quality control to support accurate, verification-ready inventories. Lindsay is highly proficient in Excel-based modeling and data management, with experience building calculation tools, developing data tracking systems, and translating raw operational data into actionable emissions insights. Her work supports GHG inventories, decarbonization planning, and disclosure frameworks such as the Carbon Disclosure Project and Science Based Targets initiative. In addition to her technical expertise, Lindsay brings experience in sustainable procurement, circular economy, and waste reduction strategies, integrating these areas into broader decarbonization roadmaps. She combines strong analytical capabilities with clear technical communication to deliver practical, implementation-ready solutions across public and private sector clients.

Christine Ventura, MF, ENV SP, Climate Planner

Christine will serve as a climate planner. Christine is a Resilience and Climate Change Specialist at AECOM, where she supports public and private sector clients in developing data-driven climate mitigation, land management, and carbon strategy solutions. She brings deep experience in forest ecology, carbon sequestration, and nature-based climate adaptation, with experience spanning carbon accounting, climate action planning, and post-disturbance ecological assessment. Christine holds a Master of Forestry and completed advanced studies in forest ecology at the Yale School of the Environment, with additional academic training at the Arnold Arboretum of Harvard University. Before joining AECOM, her work focused on understanding ecosystem function, landscape connectivity, and the role of forests in climate resilience. At AECOM, she applies this foundation to support defensible, high-quality analyses that inform climate policy, conservation planning, and post-wildfire recovery efforts, including assessment of wildfire impacts on carbon stocks and long-term landscape resilience.

Sally Shatford, Senior GIS Specialist

Sally will serve as the Senior GIS Specialist for the project with a background in geospatial software platforms, land classification, web map development, and techniques for automation. Sally holds a Master of Science in Geographic Information Systems and leads digital and GIS solutions for complex environmental and large-scale programs. She specializes in building centralized, scalable spatial data platforms and automated workflows to support analysis of hydrology, vegetation, land use, and climate datasets across California.

Delia Ridge Creamer, GIS Specialist

Delia will support Sally as a GIS Specialist for the project. She is based in AECOM's Oakland, California office and holds a Bachelor of Science in Environmental Geoscience. Her background includes managing demographic, environmental, and right-of-way data on large-scale projects for nonprofit and corporate entities and creating compelling deliverables for stakeholders. Delia has local experience leveraging available data sources for complex analysis and modeling. She delivers high quality, readable cartographic products aligned with ADA compliance requirements.

Accessibility Standards

Our team members have strong expertise and knowledge of accessibility standards. We will work together with the County on meeting accessibility needs for study deliverables. The Final Humboldt Natural and Working Lands Carbon Stock and Management Study Report and the Presentation to the Board of Supervisors including all figures, diagrams, maps, tables and attachments within the deliverables (Word, PDF, Excel and PowerPoint) will comply with WCAG 2.2 AA standards to ensure usability by people with disabilities. Our technical project staff, including Project Manager Holly, also have in-depth experience working with accessibility specialists in preparing large-scale documents to meet the latest ADA and WCAG standards. Our accessibility compliance team is led by technical writer and 508/Accessibility Compliance Officer, Andy Spellmeyer, who has training from the U.S. Department of the Interior in 508 Compliance and extensive experience formatting major client deliverables with the most current WCAG accessibility standards. Our staff run programmatic checks using tools such as the Adobe Acrobat Accessibility Checker, PAC-3 Checker, and Color Contrast Analyzer. The team's final document review includes manual verification and remediation to ensure compliance with all necessary accessibility standards.

F. Rates

In addition to our rate schedule, AECOM has developed a preliminary cost proposal for the Study. The final cost proposal will be developed in collaboration with our team members from the County. The final cost proposal will be based upon a confirmed and finalized scope, including any necessary updates after the literature review, and upon the final contract. The preliminary cost proposal is based on assumptions discussed in Section I. Technical Approach.

AECOM Rate Schedule

Staff Classification	Rate Range
Principal Environmental Professional 3	$290-$370
Principal Environmental Professional 2	$270-$295
Principal Environmental Professional 1	$220-$275
Senior Environmental Professional 4	$190-$250
Senior Environmental Professional 3	$170-$195
Senior Environmental Professional 2	$145-$175
Senior Environmental Professional 1	$130-$155
Project Environmental Professional 3	$115-$135
Project Environmental Professional 2	$105-$120
Project Environmental Professional 1	$ 95-$110
Staff Environmental Professional	$ 80-$100
Project Assistant 3	$120-$165
Project Assistant 2	$ 95-$125
Project Assistant 1	$ 65-$ 95

Quoted rates are valid through June 30, 2027. Thereafter, AECOM would request an annual escalation to keep up with salary increases. Classifications have been assigned based on the current level of experience. Select staff may change categories over the course of the contract as a result of increased expertise and responsibilities over time. Overtime for exempt staff is charged at straight time rate. Overtime for non-exempt staff is charged at 1.5x regular rate. We are not currently including any subcontractors, but are open to adding them with the County's approval, if needed for specialized studies. We typically request a 5% mark up on subconsultants, unless not allowed by contract terms.

Other Direct Costs

Other direct costs (ODCs) would be charged without markup. The only ODCs anticipated at this time are travel to attend one in-person kick-off meeting that would be attended by two AECOM staff.

Detailed Cost Estimate

Task No.	TASKS	Project Manager	Depty Proj Mgr	Carbon Analyst	Climate Planner	Assistant Climate Analyst & Planner	Community Engagement Specialist	CEQA Climate Planner	Principal-in-Charge	Sr GIS	Staff GIS	Graphics	Accessibility Formatting	Technical Editor	Sr PM Mgr	Proj Controls	Total Hours	Total Dollars
	Rate Category	Sr Prof 3	Sr Prof 2	Sr Prof 2	Sr Prof 3	Proj Prof 2	Sr Prof 3	Sr Prof 3	Princ 3	Sr Prof 3	Proj Prof 3	Sr Prof 1	Sr Prof 2	Proj Prof 3	Sr Prof 4	PA 2		
	July 2028-Jan 2029 Rate/Hour	$180	$159	$159	$186	$117	$180	$191	$370	$186	$127	$138	$159	$133	$208	$122		
	July 2027-June 2028 Rate/Hour	$175	$155	$155	$180	$113	$175	$185	$361	$180	$124	$134	$155	$129	$202	$118		
	July 2026-June 2027 Rate/Hour	$170	$150	$150	$175	$110	$170	$180	$350	$175	$120	$130	$150	$125	$196	$115		
1	**Project Planning Framework**																	
1.1	Kick-Off Meeting	20	6		6	4		4	2								42	$7,210
1.2	Stakeholder Engagement	40				50	20					20					130	$18,294
1.3	Literature and Data Review	20	10	60	30	20		10		45	60			8			263	$39,225
1.4	Project Management	130	90												5	50	275	$43,352
	Subtotal for Task 1	210	106	60	36	74	20	14	2	45	60	20	0	8	5	50	710	$108,080
2	**Carbon Stock Inventory and Report**																	
2.1	Inventory of Biomass Carbon	20		80	40	35				25	100						300	$43,265
2.2	Inventory of Soil Carbon	20		80	20	35				30	50						235	$34,510
2.3	GIS Data Library	20		75		20				55	210						380	$52,450
2.4	Draft Carbon Stock Inventory Report	10	60	20	60	10	5	5	2	10	20	20		8	8		238	$37,615
	Subtotal for Task 2	70	60	255	120	100	5	5	2	120	380	20	0	8	8	0	1153	$167,840
3	**Carbon Sequestration Study and Final Report**																	
3.1	Draft Carbon Sequestration Feasibility Study Report	50	100	20	100					20	50			8	8		356	$58,701
3.2	Final Study Report for Public Review	30	40		40		20	20		20		20	30	16	16		252	$42,744
3.3	Board of Supervisors Meeting	40	8				20	10					8				86	$15,078
	Subtotal for Task 3	120	148	20	140	0	40	30	0	40	50	20	38	24	24	0	694	$116,523
	Total Labor Hours	**400**	**314**	**335**	**296**	**174**	**65**	**49**	**4**	**205**	**490**	**60**	**38**	**40**	**37**	**50**	**2,557**	
	Total Direct Labor Dollars	**$69,672**	**$48,603**	**$50,967**	**$53,266**	**$19,305**	**$11,380**	**$9,093**	**$1,411**	**$36,519**	**$59,768**	**$7,942**	**$5,968**	**$5,155**	**$7,505**	**$5,889**		**$392,442**

OTHER DIRECT COSTS

	Travel	$3,324
	Total Other Direct Costs	**$3,324**
	TOTAL ESTIMATED COST	**$395,766**

G. Timeline

AECOM would be able to start work immediately upon receipt of executed agreement. Project Manager Holly Stover, Deputy Project Manager Kim Roeland, and technical staff have been selected for this project not only for their experience and skills, but also for their availability to conduct this work for the County. All AECOM staff identified in this proposal are available for this project and any as needed/on-call work.

	2026							2027												2028											2029
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
Tasks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1 Project Planning Framework																																
1.1 Kick-Off Meeting		A/B																														
1.2 Stakeholder Engagement					C																											
1.3 Literature and Data Review						D/E																										
1.4 Project Management	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G
2. Natural and Working Lands Carbon Stock Inventroy and Summary Report																																
2.1 Inventory of Biomass Carbon																			H / I / J													
2.2 Inventory of Soil Carbon																			H / I / J													
2.3 GIS Data Library																			H / I / J													
2.4 Draft Carbon Stock Inventory Report																			H / I / J													
3. Carbon Sequestration Feasibility Study and Final Natural and Working Lands																																
3.1 Analysis of Carbon Sequestration Potential																							K									
3.2 Draft & Final Carbon Stock & Management Study Report for Public Review																												L			M	
3.3 Board of Supervisors Meeting																																O

LEGEND: Deliverables

A	Kick-off Meeting Notes
B	Final Project Scope and General Approach Table
C	Stakeholder Engagement Summary Memorandum
D	Library of Resource Materials
E	Literature and Data Review Summary
F	Monthly Progress Report
G	Monthly Meeting Notes
H	Spatial Dataset
I	Draft Carbon Stock Inventory Report
J	Documentation Package
K	Draft Carbon Sequestration Feasibility Study Report
L	Draft Humboldt Natural and Working Lands Carbon Stock and Management Study Report
M	Final Humboldt Natural and Working Lands Carbon Stock and Management Study Report
O	Materials for Board of Supervisors Presentation

H. Insurance Requirements

AECOM has provided a sample ACORD insurance certificate showing that we can meet the County's insurance requirements.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 05/07/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Marsh Risk & Insurance Services CA License #0437153 633 W. Fifth Street, Suite 1200 Los Angeles, CA 90071 Attn: LosAngeles.CertRequest@Marsh.Com CN101348564-STND-GAUE-26-27 05 2026	**CONTACT NAME:** Marsh | U.S. Operations **PHONE (A/C, No, Ext):** 866-966-4664 **FAX (A/C, No):** 212-948-0533 **E-MAIL ADDRESS:** LosAngeles.CertRequest@marsh.com
INSURED AECOM AECOM Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** ACE American Insurance Company — 22667 **INSURER B :** N/A — N/A **INSURER C :** Illinois Union Insurance Co — 27960 **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** LOS-002872336-01 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:			HDO G48947852	04/01/2026	04/01/2027	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 2,000,000 $ 2,000,000 $ 5,000 $ 2,000,000 $ 4,000,000 $ 4,000,000 $
A	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			ISA H11370445	04/01/2026	04/01/2027	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $ $
	UMBRELLA LIAB OCCUR **EXCESS LIAB** CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE	$ $ $
A A	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N N / A **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below			WLR C72619973 (AOS) SCF C7262001A (PA & WI Retro)	04/01/2026 04/01/2026	04/01/2027 04/01/2027	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 2,000,000 $ 2,000,000 $ 2,000,000
C	ARCHITECTS & ENG. PROFESSIONAL LIAB.			EON G21654693 005 "CLAIMS MADE"	04/01/2026	04/01/2027	Per Claim/Agg Defense Included	4,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Re: OPP-1478580 Humboldt Carbon Stock and Management Study – for Proposal purposes only

County of Humboldt,and its agents, officers, officials, employees and volunteers, are named as additional insured for GL coverage, but only as respects work performed by or on behalf of the named insured and where required by written contract. This insurance is primary and non-contributory over any existing insurance and limited to liability arising out of the operations of the named insured and where required by written contract with respect to the GL coverage.

CERTIFICATE HOLDER	**CANCELLATION**
County of Humboldt Attention: Risk Management 825 Fifth Street, Room 131 Eureka, CA 95501	**SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.** AUTHORIZED REPRESENTATIVE *Marsh Risk & Insurance Services*

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I. Technical Approach

Project Approach and Work Schedule

AECOM's approach is designed to build on Humboldt County's strong foundation of existing data, stakeholder networks, and climate action leadership, ensuring the Study delivers trusted, actionable insights for local decision-makers. We will work closely with County staff and stakeholders to co-develop a project planning framework, leveraging the County's extensive spatial datasets and prior planning efforts. Our process will quantify and evaluate current and potential carbon sequestration across all land types, analyze changes over the past decade, and assess the resilience of carbon stocks to climate hazards and land use shifts.

By integrating advanced carbon accounting tools and best practices from our global portfolio with local expertise, we will identify management strategies that are both innovative and practical for Humboldt's unique landscape and rural context. Our team will facilitate stakeholder engagement at each project phase, ensuring the study's methods and findings are transparent, accessible, and aligned with community values.

Key objectives include:

- Co-creating a robust project framework informed by stakeholder input and comprehensive data review.
- Establishing a defensible baseline for biomass and soil carbon, with analysis of trends and influencing factors.
- Evaluating best management practices to enhance sequestration and ensure long-term stability of carbon stocks.
- Delivering clear, actionable evidence to support the County's RCAP update and inform policy, conservation, and land management.
- Preparing accessible reports, addressing public feedback, and supporting presentation to the Board of Supervisors.
- Aligning recommendations with Humboldt's climate action goals, including carbon neutrality by 2045.

AECOM is committed to a flexible and iterative process, uniquely responsive to Humboldt County's evolving needs and the distinct challenges of this project. We will adapt our approach as new information emerges, incorporate stakeholder and County feedback at every stage, and refine the scope and methods to ensure practical, effective, and locally relevant outcomes. County personnel will be engaged at key decision points, ensuring the project remains on track and the results are both useful and implementable. Our approach will also focus on the County's specific climate planning goals and nuances in local conditions, ecosystems, and communities. The draft schedule included in our proposal is summarized graphically in Section G. Timeline and contains estimated milestones and dates of completion.

Reproducibility Statement

The AECOM team will provide a transparent process, including clear communication of any proprietary information, stakeholder engagement outcomes, a public review period for the final draft Study report, and comprehensive documentation of all methodologies, data, and quality controls used. AECOM will ensure that information on processes and findings is presented with sufficient detail and is understandable to a general audience, so that Study methods and results are open and reproducible to support accountability and public trust throughout the project.

Compliance with Laws, Rules, and Regulations in Scope of Work

AECOM understands that the scope of work for the Study must comply with all applicable laws, rules, and regulations as outlined in the RFP. This includes adherence to the California Public Records Act for transparency and disclosure, alignment with the requirements of Assembly Bill 1279 to achieve carbon neutrality, and compliance with state and local environmental and climate action policies. The project also requires rigorous documentation of methodologies and data to ensure reproducibility and public accountability, as well as meaningful stakeholder engagement and public review. AECOM recognizes the

importance of these legal and regulatory frameworks in guiding the Study's approach, ensuring that all deliverables are credible, defensible, and suitable for incorporation into the Humboldt RCAP update.

AECOM's delivery of the County's General Approach (Table 1) from the RFP – with suggested additions

Table 1 is presented below with AECOM's suggested additions and guiding questions.

Table 1. General Approach Table With AECOM Recommendations

Guiding Questions	Non-Narrative Outputs	AECOM Recommendations
1. What is the existing landscape above-ground, root carbon, and soil organic carbon stock and sequestration rate (per year)? How does this vary across land uses, land cover types, public vs private, and within County-owned land?	Map(s), GIS data layer(s), and charts showing existing carbon stock countywide and by different land uses, land cover types, public vs. private, and within County-owned land.	To the extent feasible within the available time and budget focus on the main landcover of the County and assess terrestrially-based carbon stocks but also consider how these variations occur between coastal and inland areas and in wetland areas to gain a better understanding of blue carbon.
2. How have carbon stocks changed over the past 10 years?	Map(s), GIS data layer(s), and charts showing changes in carbon countywide, and by land uses, land cover types, public vs private, and within County-owned land.	If desired by the County, AECOM could also help the County explore the possibility of modeling other historic trends (changes in landcover) over the past twenty years using the National Land Cover database, as time, budget, and County priorities allow. Consider hotspot analysis to identify which areas are experiencing the greatest rates of change and/or if County-wide policy changes may be influencing certain landcover types more than others and what the impacts could be on carbon stocks and sequestration.
3. Where have carbon stocks *increased*? What land use/land cover changes have contributed to this increase, and to what extent?	Map(s), GIS data layer(s), and charts showing increase in carbon countywide, and by land uses, land cover types, public vs private, and within County-owned land.	See above suggestion on hotspot analysis.
4. Where have carbon stocks *decreased*? What land use/land cover changes have contributed to this decrease, and to what extent?	Map(s), GIS data layer(s), and charts showing decrease in carbon countywide, and by land uses, land cover types, public vs private, and within County-owned land.	See above suggestion on hotspot analysis.

Guiding Questions	Non-Narrative Outputs	AECOM Recommendations
5. How stable are the existing carbon stocks against localized impacts such as wildfires and other climate hazards? What factors, both human-driven and not, influence this stability?	Map(s), GIS data layer(s), and charts showing changes in carbon stocks by impacts such as wildfires; data tables, charts and graphics illustrating carbon stock stability.	Suggest more targeted questions regarding specific recent fires (e.g. 2024 Hill Fire, ~3,000 acres, Eastern Humboldt County (Six Rivers National Forest [NF]); 2020 Red Salmon Complex, ~144,000 acres, Northeastern Humboldt County (Six Rivers NF; Salmon & Trinity river headwaters); 2024 Boise Fire, ~11,400 acres, Orleans area, eastern Humboldt County (Six Rivers NF)): What were the specific changes in carbon above- and below-ground carbon storage due to specific fires? How did the severity of the fire, fire return interval, habitat types that burned, etc. factor into those changes? Other climatic hazards that may be useful to explore include the impacts of severe storm events, heatwaves, and drought.
6. Where and through what active restoration, land use, and/or land management activities is there the greatest opportunity to optimize the carbon sequestration potential of the landscape while maintaining long-term stability of such stocks? Examples may include an assessment of forest management practices, agricultural practices, wetland restoration, native grassland restoration, and reforestation, and analyses should include feasibility considerations such as cost or other likely barriers to implementation.	Data tables summarizing carbon sequestration potential change under different restoration and land management scenarios. Maps and descriptions of regions and/or property types where specific activities may have the greatest carbon sequestration benefit.	Suggest targeted questions specific to large restoration projects undertaken in Humboldt County (Redwoods Rising, Redwood National and State Parks; Salt River Ecosystem Restoration Project, Ferndale, Humboldt County Resource Conservation District; Jacoby Creek Floodplain and Habitat Restoration (Planning & Feasibility), County of Humboldt, City of Arcata, Jacoby Creek Land Trust, State Coastal Conservancy; Elk River Ecosystem-Wide Restoration Project, California Trout): How have major restoration projects undertaken in Humboldt County provided increases in carbon stocks? Suggest targeted questions related to techniques related to compost, biochar, or other regenerative practices. What is the soil carbon sequestration potential of different land management strategies, such as compost or other amendment application, on Humboldt County working lands?

Scope of Work

AECOM will provide professional planning, analytical, and technical support services to assist the County in completing the Study. Our approach is designed to be collaborative, data-driven, and responsive to County priorities, while maintaining flexibility to reflect evolving project needs. The methodology outlined below describes how AECOM will be completing each task. A detailed budget corresponding to this scope is provided in the cost proposal in Section F. Rates and the timeline for completion of each task is presented in Section G. Timeline.

Task 1: Project Planning Framework

Task 1 will establish the foundation for the project through early coordination, stakeholder engagement, and review of relevant plans, data, and regulatory context. This task will culminate in a refined Project Planning Framework that defines the project scope, guiding questions, and methodological direction for subsequent tasks.

AECOM will work closely with the County to develop a strategic, implementable planning framework that is grounded in local conditions, informed by stakeholders, and aligned with applicable policies and regulations. Our team will support the County by conducting research, facilitating discussions, reviewing background materials, and documenting agreed-upon project direction.

During Task 1, AECOM will develop a methodology to consistently classify land cover types throughout the County, quantify carbon stocks both above- and below-ground, and assess temporal changes along with key factors like wildfire and land use changes. All assumptions, conversion factors, and data sources will be thoroughly documented for transparency. Tools that will be utilized include, but are not limited to, literature review, advanced GIS analysis techniques (confirmation of techniques to be employed in Task 2), remote sensing data, and peer-reviewed carbon estimation methods.

Task 1.1 – Kick-Off Meeting & Project Scoping

AECOM will facilitate a project kick-off meeting with County staff to confirm project objectives, roles, expectations, and timelines. The meeting will also serve to refine the scope of work and establish procedures for communication, data sharing, and deliverable development.

Key discussion topics will include:

- Confirmation of project goals, scope, deliverables, schedule and milestones, and success criteria.
- Identification of key stakeholders and communication protocols.
- Review of available data sources and identification of data gaps.
- Agreement on documentation standards, file formats, and software programs.

Based on the County's final decision and what best meets the County's needs, AECOM is prepared to have an in-person kick-off meeting at County offices with two key consultant staff present. The kick-off meeting is anticipated to occur shortly after contract execution. Following the meeting, AECOM will prepare a Final Project Scope, including an updated General Approach Table and refined guiding questions for County review and concurrence.

Task 1.2 – Stakeholder Engagement

AECOM will assist the County in conducting meaningful stakeholder engagement to gather input from local landowners, partners, agencies, and other interested parties. Engagement activities will focus on understanding existing land management practices and local considerations relevant to the feasibility analysis.

Under the direction of the County and subject to final decision by the County, AECOM's approach will emphasize inclusive, accessible engagement methods, which will include the following three pillars:

- **Pillar 1:** Form a Stakeholder Advisory Group with representatives from partner agencies, organizations, and local community leaders. The purpose of the group is to gather feedback from local experts who can provide key information to guide the Study. Meetings would occur approximately bi-monthly at the beginning of the Project during the stakeholder engagement phase and then periodically as needed (mid-

Project and in the final stages). The group should be kept small to allow productive discussion and input from all members and include about 6-8 key representatives maximum.

- It would be ideal to have representation from the following organizations, at minimum, in addition to a diverse group of key landowners (pending discussion with the County): RCAP partners recommended by the County, Humboldt County Resource Conservation District (HCRCD), North Coast Resource Partnership (NCRP), North Coast Growers' Association (NCGA), key representatives from Tribes, and Save the Redwoods League – who can provide valuable input on the Study from their Redwoods and Climate Change Initiative (RCCI) research in State Parks overlapping Humboldt County.
- **Pillar 2: Community Engagement Tools**. To provide the furthest reach and an accessible means for all community members to provide feedback for the Study, AECOM will work with the County to implement an **online blog** and **stakeholder feedback form** for the Project which can be disseminated through the County's social media platforms, website, and by reaching out to key community members. AECOM will also coordinate with the County to interview landowners to supplement information gathered via the online form and provide an alternative mechanism for seeking feedback.
- **Pillar 3: Public Hearing.** AECOM will assist the County with conducting a public meeting to meet with the community to share details about the project, gather their feedback, and answer questions. The meeting could be held virtually to allow maximum attendance and input from across the County.
- Each of the three pillars will focus on gathering information on current land use practices and feedback on the feasibility of implementing climate smart practices that sequester and maintain carbon stocks.

Our Project team members with Spanish language proficiency will support bilingual engagement as appropriate. Engagement activities will be structured to efficiently inform the study while minimizing stakeholder burden. AECOM also recommends hosting a field-based meeting or workshop at County offices for the general public at the conclusion of the project to share Study results and highlight climate smart land management practices that provide multiple co-benefits for natural and working lands.

Task 1.3 – Literature and Data Review of Related Plans, Studies, Policies, Laws and Regulations

AECOM has a well-qualified team that will complete a desktop research exercise to compile and review relevant plans, studies, datasets, policies, laws, and regulations to inform the technical approach and identify opportunities for alignment with State and County initiatives. This effort will build upon the County's preliminary list of resources and be expanded through AECOM's independent knowledge and research of industry standards and proven strategies. AECOM will also compile a Request for Information (RFI) for any additional relevant County plans, studies and other information that has not already been identified.

Reviewed materials may include:

- State and regional carbon inventories and climate action plans
- Applicable legislation and regulatory frameworks
- Scientific guidance from IPCC and other recognized authorities
- Availability and coverage of state and county GIS datasets, including vegetation, hazard and Light Detection and Ranging [LiDAR] data

As part of this review, AECOM will prepare a library of resource materials, as well as a Literature and Data Review summary describing how each resource will inform the Study. This review will support the development of consistent assumptions, data inputs, and methodological decisions for Tasks 2 and 3. We have the team needed to distill the available literature and data into a user-friendly resource.

Task 1.4 – Project Management

AECOM will provide ongoing project management throughout the Study to provide effective coordination, quality control, and schedule adherence. Project management activities will include:

- Project initiation and administration
- Budget and schedule management
- Progress reporting with invoices

- Client coordination meetings
- Oversight of deliverables, file organization and management

Throughout the project, AECOM will apply a structured project management approach to ensure effective coordination, clear communication, and high-quality delivery. This approach is designed to maintain alignment with the County's goals, risk tolerance, and project expectations while managing scope, schedule, and resources efficiently. It is structured to minimize communication demands and allow the County's project delivery objectives to be targeted in a comprehensive and adaptive manner. AECOM's Project Manager Holly will oversee project delivery and ensure that appropriate personnel, processes, and systems are in place to effectively manage scope, schedule, budget, and quality in alignment with contract requirements and the County's expectations.

Task 1 Deliverables

- Kick-Off Meeting Notes
- Final Project Scope and General Approach Table
- Stakeholder Engagement Summary Memorandum
- Library of Resource Materials
- Literature and Data Review Summary Memorandum
- Progress report with each invoice
- Meeting notes from client check in meetings

Task 2: Humboldt Countywide Natural and Working Lands Carbon Stock Inventory and Summary Report

AECOM will prepare a comprehensive Countywide Natural and Working Lands Carbon Stock Inventory and Summary Report. The inventory will quantify existing biomass and soil carbon stocks using the best available science and data, consistent with CEQA requirements and relevant State guidance.

AECOM will use the Final Project Scope methodology developed and refined during Task 1 to:

- Classify land cover types consistently across the County
- Quantify above- and below-ground carbon stocks
- Evaluate changes over time and key drivers such as wildfire and land use change

All assumptions, conversion factors, and data sources will be fully documented and transparent. Task 2 will be informed by the literature review findings and supported by advanced GIS analysis, remote sensing data, and peer-reviewed carbon estimation methods.

Task 2.1 – Inventory of Biomass Carbon

AECOM will develop a countywide biomass carbon inventory using the best available geospatial data, including land cover maps, high-resolution aerial imagery, and LiDAR, enabling calculation of biomass, carbon, and carbon dioxide equivalents (CO_2e). An updated land cover layer will be produced leveraging deep learning packages and object-based image analysis with the support of National Agriculture Imagery Program (NAIP) imagery and Normalized Difference Vegetation Index (NDVI) to classify existing conditions into polygons using the National Vegetation Classification System (NVC) and validated through quality checks against existing datasets.

Biomass values by vegetation class for different natural and working landcover types such as forests, timberlands, wetlands, grasslands, agricultural lands, as well as public and private lands will be compiled and stored in a relational geodatabase, with conversion factors to carbon and CO_2e derived from established scientific sources (e.g., United States Department of Agriculture [USDA], Environmental Protection Agency [EPA], IPCC). Above- and below-ground biomass will be estimated using accepted ratios and applied across mapped land cover types to quantify total carbon stocks. Wildfire datasets will be incorporated to account for disturbance effects on biomass and associated GHG emissions. Emissions from burned biomass (CO_2, methane [CH_4] and nitrous oxide [N_2O]) will be calculated using IPCC methodologies and converted to CO_2e.

The inventory of biomass carbon will also consider unique aspects of the landcover in Humboldt County, being 80% forested, which will require special consideration of estimation of forest carbon values. Forest carbon estimation and modeling will be performed by assessing different stand types and timberland management (including restoration) and by using allometric equations based on a functional diameter at breast height, diameter at top of buttress, and crown volume to quantify aboveground biomass, which can be converted to aboveground stored carbon. We will also work with the County to address data gaps to the best of our ability for lands where limited data are available such as Native Tribal lands.

Task 2.2 – Inventory of Soil Carbon

AECOM will develop a Soil Carbon Inventory using available datasets, NRCS and USDA soils data, SoilGrids, and IPCC guidance. Soil carbon stocks will be mapped consistently with the land cover layer developed in Task 2.1 to support integrated analysis. The inventory will assess current soil carbon conditions and evaluate changes associated with land use dynamics, including agriculture, wildfire, urban development, and restoration. Methods will be aligned with IPCC Good Practice Guidance and other relevant standards identified during the literature review.

Task 2.3 – GIS Data Library

AECOM will compile all spatial data, reference tables, and outputs into a structured ESRI file geodatabase (GDB). The GDB will support efficient querying, summarization, and future updates using SQL- and Python-based workflows. All carbon estimates will be provided in metric tons of CO_2e, with flexibility to generate additional units as requested. Metadata will be developed for all datasets to support transparency and reproducibility. The GDB will be delivered in a standard State Plane coordinate system and include map documents and associated files.

Task 2.4 – Draft Carbon Stock Inventory Report

AECOM will prepare a Draft Carbon Stock Inventory Report summarizing methods, datasets, assumptions, and results in a clear and accessible format. The report will include maps, tables, and graphics to effectively communicate key findings. The report will include a Best Methodology Determination section documenting the rationale for the selected approaches, including alignment with CEQA requirements and California climate policy objectives. This section will demonstrate how the methodology provides defensible, science-based estimates of above-and below-ground carbon stocks.

Task 2 Deliverables Carbon Sequestration Calculations

- Spatial dataset with metadata indicating source download in file geodatabase (.gdb) format
- Draft Carbon Stock Inventory Report
- Documentation Package

Task 3: Carbon Sequestration Feasibility Study and Final Humboldt Natural and Working Lands Carbon Stock and Management Study Report

AECOM will prepare a Carbon Sequestration Feasibility Study identifying land management strategies and best management practices that support sustained and enhanced carbon sequestration. The Feasibility Study will be combined with the Inventory to produce the Final Humboldt Natural and Working Lands Carbon Stock and Management Study Report. This task will include public review and presentation to the Board of Supervisors.

Task 3.1 – Analysis of Carbon Sequestration Potential

AECOM will evaluate future carbon sequestration potential using GIS-based spatial analysis and datasets developed in Task 2. Future sequestration potential will be assessed through scenario-based analysis that considers key drivers of land use change, including reforestation, wildfire impacts, restoration activities, and development patterns. The scenario-based analysis will be informed by stakeholders and input will be gathered for this task during the stakeholder engagement phase. The analysis will also evaluate opportunities to increase soil carbon through management practices such as compost and biochar application. Results will be used to identify priority strategies and locations where land management actions can most effectively enhance carbon storage.

AECOM will collaborate with the County to address the unique challenges facing Humboldt County including data gaps, scaling across the County's large land base, barriers to adoption of climate smart practices, wildfire and climate hazard risks such as drought and flooding, sustainability of local farming and forestry operations, and maintenance and enhancement of carbon sinks. We will help identify solutions to these challenges such as practical, cost-effective climate smart land management tools for landowners, leveraging collaboration and expertise of tribes in land management practices, job creation, identifying funding opportunities, and ecological restoration.

Task 3.2 – Draft and Final Humboldt Natural and Working Lands Carbon Stock and Management Study Report for Public Review

AECOM will prepare a Draft Humboldt Natural and Working Lands Carbon Stock and Management Study Report that integrates findings from the Inventory and Feasibility Study. The report will present methods, results, and recommended strategies in a clear and accessible format, supported by maps, tables, and graphics. The Draft Report will be released for a 30-day public review period. AECOM will support the County in responding to comments by incorporating revisions into the Final Report. The Final Report will provide a comprehensive and technically defensible summary of all Study components and recommendations.

Task 3.3 – Board of Supervisors Meeting

AECOM will support the County in preparation for presentation of the Final Report to the Boad of Supervisors. This will include development of supporting materials, such as presentation graphics and summary content, and, if desired by the County, attendance at the Board meeting to respond to technical questions.

Task 3 Deliverables

- Draft Carbon Sequestration Feasibility Study Report
- Draft and Final Versions of the Humboldt Natural and Working Lands Carbon Stock and Management Study Report
- Materials for Board of Supervisors Presentation

Assumptions

The following assumptions apply to AECOM's entire proposal, including the budget:

- Fine-scale land cover analysis will use only publicly accessible or County datasets. NAIP imagery from 2022 may supplement missing information, with no fieldwork anticipated. Stakeholder input may help verify land classification.
- All project data will be in a user-ready format, requiring minimal processing. A two-week turnaround for data requests from the County is included; additional time may necessitate schedule adjustments.
- The County will maintain its own ArcGIS Online accounts.
- The 2022 vegetation data for Humboldt County will not require ground-truthing.
- Native Tribal Lands are outside of the County's jurisdictional authority and information provided in the Study is anticipated to be limited or unavailable.
- Only WCAG accessibility formatting for the Final Humboldt Natural and Working Lands Carbon Stock and Management Study Report and the Presentation to the Board of Supervisors (including figures, diagrams, maps, tables and attachments within the deliverables) is included. File formats include Word, PDF, Excel and PowerPoint only.
- Methods and content in this proposal may change based on literature and data review, finalizing during project implementation. Preliminary suggestions are provided in draft form.
- The budget includes one in-person meeting at Humboldt County offices with two AECOM staff; all other meetings will be virtual. Additional in-person visits will require a revised budget.
- Project check-in meetings with the County are estimated at 30 hours total, including preparation and follow-up. Only the Project Manager and one other team member will attend.
- Printed materials are not included, only digital deliverables. If printed materials are required for any public meetings, they will be provided by the County.

- Only digital deliverables are included; printed materials for public meetings will be provided by the County.
- One public hearing meeting will be hosted virtually or in-person by the County, with stakeholder engagement via online blog and feedback forms distributed through the County's platforms.
- Only one round of review/comments by the County followed by one round of revisions by AECOM is included for all deliverables.

Methodology References

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Sillett, S. C., Antoine, M. E., Carroll, A. L., Graham, M. E., Chin, A. R. O., & Van Pelt, R. (2022). *Rangewide climatic sensitivities and non-timber values of tall* Sequoia sempervirens *forests.* Forest Ecology and Management, 526, 120573. https://doi.org/10.1016/j.foreco.2022.120573

Silver, W.L., Vergara, S.E., and Mayer, A. 2018. *Carbon sequestration and greenhouse gas mitigation potential of composting and soil amendments on California's rangelands.* California's Fourth Climate Change Assessment, California Natural Resources Agency, Sacramento, CA. https://naturebasedclimate.solutions/resource-database/carbon-sequestration-and-greenhouse-gas-mitigation-potential-of-composting-and-soil-amendments-on-californias-rangelands

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Van Mantgem, P. J., Wright, M. C., & Teraoka, J. (2025). Effects of restoration thinning on live tree carbon in northern secondary coastal redwood forests. *Forest Ecology and Management*, 566, 122817. https://doi.org/10.1016/j.foreco.2025.122817

AECOM

Appendix
Resumes

Holly Stover, PhD

Project Manager

Education
PhD, Biology, Western University, 2018
MSc, Land Reclamation & Remediation, University of Alberta, 2013
Hon BSc, Environmental Science, Western University, 2010

Years of Experience
With AECOM: 4.5
With Other Firms: 12

Training/Certifications
AECOM Project Management
CEQA, NEPA
Statistical data analysis
Soil carbon and greenhouse gas emissions monitoring
Plant nitrogen and diversity analyses
Biodiversity and ecological restoration

Professional Affiliations
Ecology Society of America (2014–2018)
Field Botanists of Ontario (2009–2018)

Summary

Dr. Holly Stover is a certified and experienced project manager and expert technical scientist on several client projects, including the San Francisco Public Utilities Commission (SFPUC). Prior to joining AECOM, Holly was a scientist in academia and completed a postdoctoral fellowship at UC Berkeley. She has 12 peer reviewed publications and is a leading expert in climate ecology as well as statistics, botany, and soil science. Holly has a wide variety of experience working on grassland management, prescribed fire, ecological restoration, invasive plant management, native plant conservation, and land management. Holly has worked as a project manager and lead scientist on several large-scale planning studies for the SFPUC, Federal Emergency Management Agency for the state of California, and Pacific Gas & Electric Company. Before joining AECOM, Holly led research on carbon sequestration potential of compost on California rangeland. Prior to that, she completed a PhD on grassland restoration investigating ecosystem ecology and biodiversity of soil-plant interactions.

Project Experience

Midpeninsula Regional Open Space District (Midpen), Biochar Impacts on California Rangeland, La Honda, CA. Lead Scientist/Subconsultant Project Manager. Wrote study design and monitoring plan with Creekside Center for Earth Observation LLC on a biochar study at Rancho San Antonio County Park and Open Space Preserve. This five-year study, currently in phase I, will monitor biochar's impact on native and resident grassland species and soil properties over time. It will also assess biochar's potential for soil carbon sequestration as a natural carbon removal technology.

California Department of Food & Agriculture, Climate change mitigation potential of organic matter amendment on California rangeland: Interactions with grazing, wildfire, and drought, Browns Valley, CA. Postdoctoral Investigator. Co-led a field study on soil carbon sequestration and greenhouse gas emissions in compost-amended rangelands. She held advisory meetings with government, NGOs, and ranchers to implement land management practices. Conducted lab and statistical analyses of plant, soil, and gas samples to assess carbon and nitrogen pools, and evaluated global warming potential of compost types in relation to grazing, wildfire, and drought.

East Bay Regional Park District (EBRPD) and SFPUC, Sunol Rangeland Resiliency Project (SRRP), Alameda Watershed, Sunol, CA. Senior Ecologist. The SRRP aims to implement climate-resilient land management across 6,260 acres owned by EBRPD and SFPUC in Sunol and Ohlone Regional Wilderness areas, in partnership with the Alameda County Resource Conservation District. Lead author and mentor/co-author of the annual Post-Rangeland Infrastructure Improvement Vegetation Monitoring Report, synthesizing data on cattle use intensity, plant diversity and composition, woody species recruitment, and vegetative cover at wetland and riparian sites to assess rangeland health. Led field monitoring and data analysis.

SFPUC, Alameda Watershed Rangeland Management Plan (RMP), Sunol, CA. Lead Ecologist/Deputy Project Manager. Lead for SFPUC's RMP designed to manage SFPUC grazing land in the east bay including vegetation management, grazing management (e.g. stocking rates with GIS modelling), rare and sensitive species, and invasive plant management. Led AECOM team to assist SFPUC with final editing and evaluation of management decisions with CEQA backed evidence including setting residual dry matter targets and stocking rates. Also conducted interviews with ranchers and lease holders to gather information for the RMP and facilitated 508/ADA and WCAG standards for preparation of final deliverables.

SFPUC, California Coastal Grassland Prescribed Fire Monitoring, San Francisco Peninsula Watershed, San Francisco, CA. Lead Ecologist/Project Manager. Led vegetation monitoring (shrub mortality and plant cover surveys) for pre- and post-burn sites on the SF

Peninsula. Collaborated with SFPUC Biologist Christina Crooker on study design and methods. Used prescribed fire to manage scrub encroachment and invasive species in native grasslands. Led reporting, data management and statistical analysis comparing plant cover and shrub mortality pre- and post-burn.

Federal Emergency Management Agency (FEMA), Programmatic Biological Analysis, Oakland, CA. Statistician/Ecologist. Collaborated with AECOM's GIS team and another statistician colleague to analyze 20 years of land use changes using the National Land Cover Database to support FEMA's Programmatic Biological Analysis (PBA) for the state of California. The AECOM team identified areas where future land use may impact species and habitats. The PBA requires estimating potential impacts to Threatened and Endangered species and their habitats under both current and projected future conditions.

Client, Polar Bear Distance from Disturbance Analysis, Hilcorp, AK. Ecologist. Collaborated with two ecologists to analyze 11 years (2009–2019) of polar bear behavioral data from Alaska Oil & Gas Association's sighting reports for the state of Alaska. The project assessed polar bear responses to industry activities by distance, season, location, group composition (e.g., presence of cubs), and proximity to activity. Supporting the 2021 ITR petition, used generalized linear modeling in R to evaluate potential impacts of oil and gas operations on polar bear behavior.

San Francisco Peninsula Watershed, Population Trend Analysis, San Francisco, CA. Project Manager/Statistician. The San Francisco Public Utilities Commission has collected over twenty years of environmental monitoring data at over 100 sites in the San Francisco Peninsula Watershed. Along with the AECOM staff, they compiled and developed a historical database for these data. Working with AECOM's GIS team conducting spatial and temporal modeling on the twenty-year dataset using the R package {unmarked} as well as other geospatial analysis tools. Final results will be used to develop management plans for the San Francisco Peninsula Watershed.

Pacific Gas & Electric Company, High Volume Quick Turnaround Planning & Permitting, CA. Senior Reviewer. AECOM is providing planning and permitting services for undergrounding projects in the Bay Area and throughout northern California including Amador and Calaveras counties. Currently helping lead the biology staff team overseeing Biological Constraints Analyses and providing training, senior review, and feedback on deliverables.

Power Analysis, Pend Oreille Mine Biodiversity Plan, Metaline Falls, WA. Statistician. Conducted power analyses using pilot data and the R package {pwr} to determine vegetation monitoring sample sizes at Teck American Inc.'s Pend Oreille Mine, supporting biodiversity restoration targets. She collaborated with Dr. Aaron Wells to access and manage data via AECOM's Oakland PostgreSQL server. Together, they continue building integrated data management and version control capacity through AECOM initiatives, including the Digital AECOM GitHub repository.

SFPUC, Natural Resources Services 2019-2029 - Peninsula Bioregional Habitat Restoration. San Mateo County, San Francisco, CA. Project Manager. AECOM is providing natural resources services for the Peninsula Bioregional Habitat Restoration (BHR) sites in support of annual performance monitoring and reporting. Performance monitoring includes surveys to assess site vegetation, wildlife, hydrology, and geomorphology as well as photo monitoring and general site assessments. AECOM prepares annual monitoring reports and supporting technical memoranda to summarize monitoring results and assess progress toward meeting project goals and success criteria. Stover has led the project since March 2024.

SFPUC, Santa Clara Unit (SCU) Rangeland Fence Line Repairs, Alameda Watershed, Sunol, CA. Project Manager. The SCU Lightning Complex fires were wildfires that burned in the Diablo Range in California in August and September 2020 as part of the 2020 California wildfire season. The fire complex consisted of fires in Santa Clara, Alameda, Contra Costa, San Joaquin, Merced, and Stanislaus counties. A total area of 396,624 acres (160,508 ha) was burned in the fires, covering a vast extent of land owned and managed as rangeland by the SFPUC. This project was undertaken to provide biological monitoring support for the ongoing repair and construction of the damaged fencing used to manage cattle on rangeland.

Selected Publications

2025 Stover, Holly, Lead Author. Mitigation and Monitoring Plan annual performance monitoring (year 10) reports for Adobe Gulch Grassland, Adobe Gulch Creek, and Homestead Pond Bioregional Habitat Restoration sites. Prepared for the SFPUC. AECOM Technical Services Inc.

2024 Anthony, Tyler, Stover, Holly, Silver, Whendee, and James, Jeremy, Impacts of compost amendment type and application frequency on a fire-impacted grassland ecosystem, Ecosystems

2024 Stover, Holly, Lead Technical Author. SFPUC Alameda Creek Watershed Rangeland Management Plan. Prepared for SFPUC. AECOM Technical Services Inc.

Steve Leach
Principal-in-Charge

Education
MA, Vegetation Ecology, University of California, Davis, 1995
BS, Physical Geography, University of California, Davis, 1990

Years of Experience
With AECOM: 34
With Other Firms: 2

Training/Certifications
1999, Dry Season Survey Techniques for Identification of California Large Branchiopods
1997, Wetland Training Institute, Federal Wetland Regulations
1996, California Inland Invertebrate Work Group, Fairy Shrimp Identification (USFWS Recovery Permit TE-820301)
1995, Trimble GPS Training, Advanced Data Capture and Mapping Techniques
1993, Wetland Training Institute, Identification of Wetland Soils and Hydrology
1993, Wetland Training Institute, Advanced Wetland Delineation
1993, University of California, Davis, Threatened and Endangered Species Laws and Regulations

Professional Affiliations
California Botanical Society
Society of Wetland Scientists
California Native Plant Society

Summary
Steve is a Principal Environmental Project Manager with more than 30 years of experience throughout California. His areas of expertise include managing multidisciplinary teams that integrate environmental and design solutions for complex projects. His recent focus is environmental permitting and compliance for projects that will produce low carbon fuels from renewable sources or other sources combined with carbon capture with permanent carbon sequestration. Steve has managed the permitting efforts for major infrastructure projects that include carbon sequestration facilities, reduced carbon hydrogen production, dams, power generation, highways, and transmission lines. He works frequently with agency personnel from the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Wildlife (CDFW), the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and the Regional Water Quality Control Boards (RWQCBs). He possesses an in-depth understanding of State and federal laws pertaining to special-status species and wetlands.

Project Experience

California Department of Water Resources (DWR), CEQA and Incidental Take Permit for the State Water Project Long Term Operations, Sacramento, CA. Project Manager. Managed expedited CEQA and endangered species permitting efforts for proposed changes to long term operation of the State Water Project. Coordinated the preparation of the CEQA review documents and the Incidental Take Permit application submitted to the California Department of Fish and Wildlife. Key issues included potential impacts to aquatic biological resources, including Delta smelt, longfin smelt, winter-run Chinook salmon, and spring-run Chinook salmon. DWR needed to complete the CEQA review on an expedited schedule due to the impending expiration of the existing endangered species permits. Coordinated a team of biologists, water quality experts, and CEQA experts to evaluate impacts to hydrology, water quality, and aquatic biological resources. Potential impacts were evaluated based on detailed, quantitative modeling of hydrology, water quality, fish passage, and fish entrainment. Coordinated exchanges of information with the State Water Contractors and CDFW and worked closely with DWR and outside legal counsel to develop comprehensive responses to thousands of comments on the draft environmental document. DWR approved the Final Environmental Impact Report (EIR) on schedule and CDFW issued the Incidental Take Permit two days later.

Confidential Client, Carbon Capture and Sequestration Project, Contra Costa, Solano, and Sacramento Counties, CA. Project Manager. Managed the development of a project permitting strategy and schedule for a confidential project to capture, transport and sequester carbon in the Sacramento-San Joaquin Delta area. Worked closely with the client to evaluate alternatives for CO2 transport, injection, and storage at various locations in the southern Delta and Suisun Bay areas of Contra Costa, Solano, and Sacramento counties. Worked with landowners and resource agencies including DWR, California State Lands Commission, the USACE, the RWQCB, and the San Francisco Bay Conservation and Development Commission to identify environmental constraints for injection wells, carbon capture and liquefication

facilities, carbon storage facilities, and a combination of pipelines, marine terminals, and barge transport options. Coordinated focused surveys for wetlands, endangered species, and cultural resources at several locations including Sherman Island and the Suisun Marsh. Managed the development of permit applications for geotechnical investigations.

Confidential Client, Louisiana Clean Energy Project, Ascension, Livingston, St. James, Tangipahoa, and St. John Parishes, LA. Principal and Permitting Specialist for a $4.5B low carbon fuel production facility that includes carbon sequestration and associated CO2 and hydrogen pipelines in southern Louisiana. Led the development of a comprehensive permitting strategy and extensive biological, cultural and air quality studies to support environmental permitting for the facility. Key permits include the USACE Section 404 Individual Permit, the Louisiana Department of Natural Resources Coastal Use Permit, the Louisiana Department Environmental Quality Minor Source Air Permit, and associated NEPA and Section 106 Cultural Resource compliance efforts. Managed the development of a comprehensive Alternatives Evaluation to support the Clean Water Act 404(b)(1) evaluation and the Louisiana Public Trust Doctrine documentation (IT Questions). Contributed to the development of a comprehensive permittee responsible wetland mitigation plan for more than 300 acres of forested wetland impacts that included restoration, rehabilitation, and preservation of more than 1,000 acres of high value cypress-tupelo forested wetlands.

HECA, LLC, Integrated Gasification Combined-Cycle Polygeneration Project, Kern County, CA. Biology Task Manager of biological resource permitting for the project, expected to generate approximately 300 megawatts of low-carbon baseload electrical power. Coordinated the California Energy Commission review of the application for certification evaluation of biological resources. Managed preparation of the USFWS Biological Assessment, the USACE 404 permit application, the RWQCB 401 application, and the CDFW Streambed Alteration Agreement notification. Key species included San Joaquin kit fox, blunt-nosed leopard lizard, Tipton's kangaroo rat, and giant kangaroo rat. Developed mitigation plans for potential biological resource impacts of the project.

Confidential Client, Hydrogen Refuelling Stations, California. Principal. Led the development of a permitting matrix for a state-wide network of hydrogen refuelling stations in California. The permitting matrix identifies applicable local, state, and federal permits, CEQA/NEPA compliance pathways, and associated survey and study requirements for the proposed facilities. Supported due diligence studies required for property acquisition, including Phase I and Phase II environmental site assessments and ALTA surveys.

Napa County Planning and Development Department, Lower Napa River Watershed Biological Resource Inventory, Napa County, CA. Project Manager. Responsible for development of a GIS database of existing biological and land use/access data for the lower Napa River watershed. Data from CDFW, USFWS, Napa County, and the San Francisco Estuary Institute were collected and synthesized into a unified database. Potential sites for future restoration and enhancement were identified using selection criteria that were developed in coordination with the County, CDFW, the California Conservation Corps, and the Napa Resources Conservation District.

Sonoma County Permit & Resource Management Department, Carneros Ranch Fill Environmental Impact Report Preparation, Sonoma County, CA. Environmental Scientist for preparation of an EIR as part of use permitting for agricultural enhancement to elevate existing agricultural fields located behind 10-foot-high levees from one foot below sea level to approximately seven feet above sea level, and 11 feet above sea level for future building pad areas. AECOM (contracted as URS) prepared an EIR for the Carneros Ranch fill project. The ranch owners requested a use permit for their 528-acre Carneros River Ranch property, at the mouth of the Petaluma River. The client prepared an initial study for the property, and following a series of public hearings, the county Board of Zoning Adjustment adopted a mitigated negative declaration and approved the project. The project was subsequently appealed to the Board of Supervisors over a number of potential environmental and policy concerns, and the applicant requested an EIR be prepared. The board accepted the request, and URS was contracted to peer review the existing material and develop additional information as needed to fully analyze the environmental impacts of the proposal and develop appropriate mitigation measures. The scope of work included project familiarization and consultation, preparation of an administrative draft EIR, preparation of a draft EIR, attendance at public hearings, responses to public comments and preparation of administrative final EIR, development of a final EIR, attendance at planning commission hearings on final EIR, and preparation of first draft of planning commission resolution findings exhibits.

Kim Roeland

Deputy Project Manager

Education
MAS, Marine Biodiversity and Conservation, U.C. San Diego, Scripps Institution of Oceanography, 2009
BS, Ecology, Behavior, and Evolution, U.C. San Diego, 2005

Years of Experience
With AECOM: 5
With Other Firms: 18

Training/Certifications
AECOM Project Manager

Licenses/Registrations
Envision Sustainability Professional, ENV-SP

Professional Affiliations
National Association of Environmental Professionals

Summary

Kim Roeland is a climate resilience specialist with professional experience working on a range projects relating to sustainability, climate resilience, hazard mitigation, and conservation of species and habitats. Kim's experience in writing technical and planning documents includes climate change vulnerability assessments, hazard mitigation plans, natural areas habitat management plans, biological reports, and California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) documents. Before joining AECOM, Kim was senior biologist and planner for the City of San Diego's climate resilience and conservation programs where she performed initial programmatic tasks related to the City's Climate Resilient SD plan, led monitoring and management of Multiple Species Conservation Program (MSCP) covered species on conserved lands, coordinated acquisitions of properties to be added to the City's conservation program, and developed a protocol for incorporating climate-smart conservation into land management plans.

Project Experience

Midpeninsula Regional Open Space District, Highway 17 Wildlife and Regional Trail Crossings and Trail Connections Project, Santa Clara County, CA. Deputy Project Manager and Senior Biologist/Planner for project including leading effort to develop innovative advance mitigation opportunity in coordination with wildlife agencies under the Regional Conservation Investment Strategy (RCIS). Additionally, was co-author of Natural Environmental Study and lead author of Biological Assessment for California red-legged frog (Rana draytonii).

State of Alaska, Homeland Security and Emergency Management, Pre-Disaster Mitigation, Anchorage, AK. Senior Planner for seven Local and Multi-Jurisdictional Hazard Mitigation Plans in accordance with FEMA. Communicated with community and tribal members across Alaska, provided materials for public outreach, researched hazards, and mitigation strategies for plans.

U.S Army Corps of Engineers and Denali Commission, Statewide Threats Assessment Update, Anchorage, AK. Senior Environmental Scientist for the update which evaluates the relative risk from hazards of nearly 200 remote communities in Alaska. This update expands the number of hazards from the previous assessment from three to seven. Responsible for research and development of methodology to be applied to new hazards (including wildfire, landslide, and others), review of methodology to include changing conditions, and scoring communities.

City of Santa Cruz, CA, Local Hazard Mitigation Plan and Climate Adaptation Plan Update, Santa Cruz, CA. Project Manager and Climate Adaptation Lead. Led a local hazard mitigation plan update supporting the incorporation of climate adaptation strategies in the FEMA-certified LHMP.

Washington State Parks and Recreation Council, Vulnerability and Adaptation Planning Toolkit, Washington. Project Manager. Managed effort to develop a methodology for completing climate change vulnerability assessments for state parks. Project also includes development of an adaptation toolkit and completing a risk and economic assessment.

Confidential Client, Biodiversity Plan, Washington. Conservation Planner. Assisting with development of offsets related to a biodiversity management plan for a client in northeast Washington.

National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Manchester Research Station Facility Upgrade Project, Manchester, WA. Senior Planner and Lead Author for climate change section of the Environmental Assessment.

City of Lake Oswego, Parks & Recreation. Natural Areas Habitat Management Plan, Lake Oswego, OR. Senior Planner and Primary Author of the document including an overview of the City and its natural areas,

habitat descriptions, climate resiliency, management objectives and actions for each habitat type and natural area.

State of Alaska, Homeland Security and Emergency Management. Pre-Disaster Mitigation, Anchorage, AK. Senior Planner for new and updates to Local and Multi-Jurisdictional Hazard Mitigation Plans in accordance with FEMA. Communicated with community and tribal members, provided materials for public outreach, researched hazards, and mitigation strategies for plans.

Texas General Land Office, Coastal Resiliency Master Plan, General Land Office, TX. Lead Author. Authored section of 2023 Texas Coastal Resiliency Master Plan focusing on implementation, adaptive management, and innovative ideas for future updates of the plan.

Lau Barragan

Assistant Climate Analyst & Planner

Education
BS, Conservation & Resource Studies, University of California, Berkeley, 2024

Years of Experience
With AECOM: 2
With Other Firms: 0

Training/Certifications
CPR/AED/First-Aid Certification, 2024
OSHA 10-Hour Construction Program, 2025
Rare Pond Species Survey Techniques, Laguna de Santa Rosa Foundation, 2025

Professional Affiliations
The Wildlife Society – Western Section and San Francisco Bay Area Chapter

Summary

Lau Barragan is a biologist based in the Oakland office, specializing in wildlife and plant surveys and habitat mapping for special-status species. She skillfully analyzes field survey data to assess environmental and biological resource impacts, contributing to comprehensive survey reports. Lau's multifaceted experience and meticulous approach make her a valuable asset in delivering precise ecological insights and advancing project objectives.

Project Experience

National Aeronautics and Space Administration, On-Call Biological, Santa Clara County, CA. Biologist. Conducts protocol-level burrowing owl (Athene cunicularia) surveys and maps suitable habitat.

LS Power, Power Santa Clara Valley Project, Santa Clara County, CA. Biologist. Conducts pre-clearance surveys and active nest monitoring during tree removal activities. Updates nest status and marks buffers on project map. Completed daily monitoring reports to document construction crew compliance.

Naval Air Station Alameda, Alameda Point Phase II PFAS Investigation, Alameda County, CA. Biologist. Conducts worker environmental awareness training (WEAT), nesting bird and bee surveys around all borings, and marks nest buffers on project map.

Midpeninsula Regional Open Space District, Rancho San Antonio Mountain Lion Study, Santa Clara County, CA. Biologist. Assist with tagging of images taken through camera traps at Rancho San Antonio Preserve to monitor mountain lion (Puma concolor) activity, overall biodiversity in the preserve, and how human recreation may influence wildlife activity.

Pacific Gas & Electric Company, Short Cycle High Volume Quick Turnaround System Hardening & Undergrounding Program, CA. Biologist. Prepares biological constraints reports (BCR) covering project area alignments. Maps environmentally sensitive areas and aquatic resources and determines special status species' potential to occur in alignment based on desktop habitat analysis. Produces species-specific avoidance and minimization measures and best management practices for construction activities in reports.

San Francisco Public Utilities Commission, Peninsula Fish Monitoring Program, San Mateo County, CA. Biologist. AECOM is providing fisheries monitoring support for the SFPUC Peninsula Watershed. The monitoring program adheres to strict and established protocols that are similar to those discussed in California Coastal Salmonid Population Monitoring: Strategy, Design, and Methods (Adams et al. 2011). AECOM supports the SFPUC through electrofishing, redd surveys, and fyke trap studies within San Mateo and Pilarcitos Creeks. Work activities are associated with Stone Dam, Pilarcitos Reservoir, and Crystal Springs Reservoir. Use electrofishing surveys to assess populations of steelhead above and below anadromous reaches. Responsibilities include PIT tagging fish, weighing fish, measuring fork length, and collecting scale and tissue samples. Work also includes PIT tag array maintenance, spawning surveys, and fyke trap checks along San Mateo Creek.

San Francisco Public Utilities Commission, Peninsula Bioregional Habitat Restoration Program Monitoring, San Mateo County, CA. Biologist. Directs, monitors, and documents restoration crew activities for habitat restoration projects. Maps non-native and invasive plant species and records all vegetation management work in ArcGIS. Coordinates with project team to plan and prioritize projects, using adaptive management strategies.

Central Valley Independent Network, Fiber Optic Installation Environmental Support, Yuba, Modoc, and Alpine Counties, CA. Biologist. Conduct pre-construction surveys and NEM screenings for potential special-status plant and wildlife habitat suitability along fiber optic line alignments throughout California. Maps

suitable habitat, aquatic resources, and vegetation communities.

California American Water, Western Burrowing Owl & Loggerhead Shrike Surveys, Monterey County, CA. Biologist. Sunrise and sunset surveys for western burrowing owl (Athene cunicularia) and loggerhead shrike (Lanius ludovicianus) at the proposed desalination plant site and along the associated pipeline. Surveys are both linear point count and walking site surveys. Surveys document all bird species encountered, create CNDDB forms for sensitive species, and note changes in site conditions and habitat.

Sacramento Municipal Utility District, Bird and Bat Mortality Monitoring, Solano County, CA. Field Lead/Biologist. Perform monthly bird and bat mortality searches for the Solano Wind Farm in compliance with the Mitigation and Monitoring Reporting Program. Focal species included golden eagle (Aquila chrysaetos) and Swainson's hawk (Buteo swainsoni).

Caltrans, El Camino Real Roadway Rehabilitation Project, San Mateo County, CA. Biologist. Monitors tree removal and potholing activities by construction crews and ensures work is not conducted in avoidance buffers. Conducts nesting bird surveys and bat clearance surveys ahead of tree removal work.

San Mateo County Transportation Authority, Moss Beach State Route 1 Congestion and Safety Improvement Project, San Mateo County, CA. Biologist. Prepared biological assessment, providing technical information and determining the extent of project impacts on threatened, endangered, and proposed species under USFWS jurisdiction. Focal species included California red-legged frog (Rana draytonii), northwestern pond turtle (Actinemys marmorata), San Francisco garter snake (Thamnophis sirtalis tetrataenia), monarch butterfly (Danaus plexippus), and San Bruno elfin butterfly (Callophrys mossii bayensis).

Department of Water Resources, Deferred Maintenance Project, Merced County, CA. Biologist. Prepared biological assessmen, providing technical information and determining the extent of levee repair project impacts on threatened species under USFWS jurisdiction. Focal species include giant garter snake (Thamnophis gigas) and steelhead – CCV DPS (Oncorhynchus mykiss irideus).

Sacramento Municipal Utility District, Curry Creek Solar Project, Placer County, CA. Biologist. Prepared biological resources section of environmental impact report adhering to CEQA thresholds of significance guidelines.

East Bay Regional Park District, Fuels Management Monitoring Project, Alameda & Contra Costa Counties, CA. Biologist. Conducts bird surveys, biological monitoring, and site assessments following fuels management work. Assesses vegetation communities for changes in canopy density and non-native invasive plant species composition. Monitors changes in Alameda whipsnake (Maticophis lateralis euryxanthus) habitat in core scrub communities and California red-legged frog (Rana draytonii) habitat in riparian corridors. Maps special status plant populations and non-native plant species.

Country Acres Solar, Bess Yard Monitoring, Placer County, CA. Biologist. Monitored construction crews while trenching and installing medium voltage/fiber optic cables adjacent to reduced wetland buffers. Conducted pre-construction surveys and monitored for compliance with avoidance and minimization measures applicable to western spadefoot (Spea hammondii) and western burrowing owl (Athene cunicularia). Completed daily monitoring reports with hourly monitoring activity updates and compliance issues.

Caltrans, West Union Creek Bridge Replacement, Aquatic Resources Delineation, San Mateo County, CA. Biologist. Assisted with delineation of Ordinary High-Water Mark and top of bank along the segment of the creek within Caltrans right-of-way. Used an EOS Arrow unit to accurately map aquatic resource components.

Caltrans, State Route 1 and State Route 84 Structures and Scour Mitigation Project, Fish Rescue and Relocation, San Mateo County, CA. Biologist. Conducts fish capture and relocation at Pilarcitos Creek and San Gregorio Creek to minimize the impacts of temporary creek diversions and dewatering activities on juvenile CCC steelhead (Oncorhynchus mykiss irideus), coho salmon (Oncorhynchus kisutch), and other native aquatic species. Techniques employed include electrofishing, seining, and dip netting followed by relocation to suitable anadromous habitat outside of project areas.

Imperial Irrigation District, Burrowing Owl Surveys, Imperial Valley, CA. Biologist. Conducted protocol-level burrowing owl (Athene cunicularia) surveys in 3-kilometer by 3-kilometer grids along IID canals, drains, lands, easements, public roads, and public lands at civil sunrise and sunset. Mapped individual observations and burrows in ArcGIS.

Kari Cureton

Graphic Designer

Education
AA, Graphic Design, Platt College, 2005

Years of Experience
With AECOM: 18
With Other Firms: 3

Summary

Kari Cureton is a graphic designer with over 21 years of experience transforming ideas and data into visually captivating and informative graphics. Her expertise spans a diverse range of projects, where she excels in crafting engaging visuals for outreach events, technical reports, and marketing materials. From designing impactful maps and presentations to creating illustrations and ArcGIS Story Maps, her designs have helped inform and engage audiences.

Project Experience

Viridon, California Gateway Connector Projects, Humboldt County, CA. Graphic Designer. Graphics support for stakeholder and public outreach presentations, report submittal design, and infographics.

Department of General Services (DGS), Calfire Regional Headquarters, Sonoma, CA. Graphic Designer. Created and designed multiple poster boards for local outreach event, branded to the client. Boards included the Site Plan, Site Requirements, Planning and Review Process, Project Objectives, California Environmental Quality Act (CEQA) Process and Equipment Needs. Also designed sign-in sheets, comment form, welcome board, and navigational arrows for visitors.

Minnesota Pollution Control Agency, Project 1007 Storymap, Minnesota. Graphic Designer. Created an ArcGIS Story Map about Project 1007 to help inform the public about the history of PFAs in that area, background, source assessments, feasibility study results, and options for PFAs removal from the impacted communities.

City of Santa Cruz, Resilient Coast Project, California. Graphic Designer. Designed existing and future conditions poster boards for public outreach event. Each of the 12 boards included an aerial site map of pertinent coastal areas that indicated coastal flooding, climate change predictions, and groundwater/stormwater impacts and the kelp forests, beaches, tidepools, and surf spots were also labelled.

San Juan Unified School Distict, Rio American High School, California. Graphic Designer. Designed CEQA Review Process boards for Rio American High School's Public Outreach event. The boards described the step-by-step CEQA process for their stadium improvements.

San Diego Gas & Electric (SDGE), Habitat Restoration Plan, San Diego, CA. Graphic Designer. Supported the Habitat Restoration Conservation Plan submittal with graphics which included figure edits, and designing the cover, dividers, and binder. Created event poster board for the Amendment Celebration for all stakeholders involved in the project.

Rockford Public Library, Architectural History, Illinois. Graphic Designer. Designed three large-scale interpretive panels which hang in the library, highlighting the architectural history of the library. Also, designed a presentation with the client's branding for the panel reveal which educated the public on the history of the library and showcased the new panels.

MidPeninsula Regional Open Space District, Alma Bridge Road Wildlife Connectivity Project, Santa Clara County, CA. Graphic Designer. Designed project logo, cover and dividers for letter submission, and presentation design for stakeholder meetings.

National Solid Waste Benchmarking Initiative, Annual Solid Waste Reports, Canada. Graphic Designer. Designed, created, and populated the Solid Waste Report for three years. This 250+ page document included solid waste data collected throughout the year for 6-10 communities in Canada. Each report shared statistics, solid waste summaries for each community, goals, surveys, resources, definitions, and a change log. These reports were shared with the public.

NAVFAC Southwest, Planning and Site Assessments. Graphic Designer. Created 90+ page full-color booklet branded to the client and showcased NAVFAC's military personnel, their sites, and the findings of the assessments.

Brightsource, Ivanpah Solar Power Facility, California. Graphic Designer. Designed field guides for biological permitting studies to help distinguish species and how to track them. Enhanced maps and

designed project submittal binder covers, CD labels, and dividers.

Port of Los Angeles, Architectural History of Heim Bridge, California. Graphic Designer. Created and designed an environmentally sustainable submittal binder and document for the Library of Congress which documented the Heim Bridge before it was decommissioned. Designed infographical maps that highlighted the locations of the photographer when they took the referenced photos**.**

Lindsay Lockhart

Carbon Analyst

Education
MA, Economics and Energy & Environmental Policy, Johns Hopkins University, Washington D.C., 2017
BA, International Relations and Economics, University of Southern California, Los Angeles, CA, 2011

Years of Experience
With AECOM: 4
With Other Firms: 8

Training/Certifications
TRUE Zero Waste Advisor, 2023
ENV SP, 2023

Summary

Lindsay Lockhart is a sustainability and decarbonization consultant who lives in Marin, California, with 12 years of experience specializing in greenhouse gas (GHG) accounting, emissions modeling, and data-driven climate strategy. She has extensive experience calculating Scope 1, 2, and 3 emissions across complex, multi-site organizations, including emissions factor selection, large-scale data aggregation, and quality control to support accurate, verification-ready inventories. Lindsay is highly proficient in Excel-based modeling and data management, with experience building calculation tools, developing data tracking systems, and translating raw operational data into actionable emissions insights. Her work supports GHG inventories, decarbonization planning, and disclosure frameworks such as CDP and SBTi. In addition to her technical expertise, Lindsay brings experience in sustainable procurement, circular economy, and waste reduction strategies, integrating these areas into broader decarbonization roadmaps. She combines strong analytical capabilities with clear technical communication to deliver practical, implementation-ready solutions across public and private sector clients.

Project Experience

Leeward Renewable Energy, Carbon Avoidance Calculator, Illinois. Designed and developed an Excel-based carbon avoidance calculator to estimate emissions avoided through renewable energy generation. Identified key emissions drivers and input parameters, established baseline emissions assumptions, and built calculation logic to quantify avoided emissions. Integrated GHG equivalency metrics to support internal analysis and external communication.

Lakeshore Recycling Systems (LRS) – GHG Inventory, Scope 3 Assessment & Net Zero Planning, Illinois. Developed and validated the company's Scope 1 and 2 GHG inventory, including identifying data gaps, supporting internal data collection, and improving calculation methodologies. Built a calculation tool and data tracking workbook to streamline ongoing inventory development and support verification readiness. Conducted a Scope 3 screening assessment to identify relevant categories and prioritize future data tracking efforts. Supported development of a Net Zero Business Plan aligned with projected company growth and SBTi guidance, including evaluation of emissions reduction strategies such as fleet electrification, alternative fuels, and landfill gas capture. Contributed to broader ESG strategy development through peer benchmarking, materiality assessment, disclosure readiness assessment, and climate risk analysis.

Constellation Brands, Inc. (CBI), GHG Inventory and Sustainability Support, New York. Annually calculate Scope 1, 2, and 3 emissions across approximately 160 global sites, including emissions factor research, large-scale data aggregation, and outlier analysis to ensure consistency and accuracy across reporting units. Supported annual CDP Climate Change and Water disclosures by drafting and refining responses aligned with CDP guidance, consolidating inputs from internal stakeholders, and identifying opportunities to improve scoring performance based on CDP methodology.

GHG Inventory Calculations, Bluebird, Georgia. Annually calculated and evaluated Scope 1, 2, and 3 emissions, including identifying year-over-year trends and data anomalies. Supported third-party verification by preparing documentation and resolving data gaps. Prepared energy and emissions data in required formats (e.g., MWh) for GRESB reporting.

Swire Water, GHG Inventory Development & Decarbonization Planning, Utah. Annually calculate or update Scope 1, 2, and 3 GHG inventory, identifying gaps in activity data, emission factors, and calculation methodologies. Integrated missing data and corrected calculation inconsistencies to improve overall inventory accuracy. Developed business-as-usual emissions

projections to support long-term planning and contributed to evaluation of emissions reduction scenarios. Supported development of decarbonization strategies and preparation of materials for SBTi target validation.

Donnelley Financial Solutions (DFIN), Global Carbon Footprint, Nationwide. Developed Scope 1 and 2 GHG inventory for 20 facilities across seven countries, including data collection, emissions calculations, and validation. Conducted a qualitative Scope 3 screening to identify relevant categories and guided the client in gathering required data for quantification. Completed Scope 3 emissions calculations and developed a GHG Inventory Management Plan documenting methodologies, assumptions, and data gaps. Supported development of a Carbon Footprint Summary Report outlining key findings and recommendations.

Athens Services, GHG Inventory & Sustainability Reporting, California. Supported development of Scope 1 and 2 GHG inventory, including data collection, emissions calculations, and documentation of methodologies. Developed a GHG Inventory Management Plan outlining assumptions, data gaps, and improvement opportunities for future reporting cycles. Additionally, contributed to development of the client's inaugural sustainability report, including content drafting, data integration, and technical review.

Pilot Chemical Company, Product Carbon Footprint and Training Program, Nationwide. Developed cradle-to-gate product carbon footprints using raw material, packaging, and energy data, applying life cycle assessment (LCA) methodologies. Also designed and delivered a training program for internal staff, including both high-level and detailed modules covering PCF methodology, data requirements, process timelines, and roles/responsibilities. Developed supporting materials to enable internal replication of PCF and LCA processes.

Confidential Utility, GHG Inventory Management Plan & Emissions Calculations. Supported development of a corporate GHG Inventory Management Plan, with a focus on Scope 1 and 2 emissions methodologies, data management processes, and QA/QC procedures to support regulatory reporting and third-party verification. Reviewed prior inventory data to identify gaps and inconsistencies and performed Scope 1, 2, and 3 emissions calculations, including emissions factor research, data aggregation, and validation.

Covanta, CARB and USEPA GHG Reporting, California. Calculated and reported GHG emissions for facilities in compliance with CARB and USEPA reporting requirements, including Cal e-GGRT and e-GGRT. Supported annual data preparation, reporting submissions, and verification processes for facilities in California.

Suzanne McFerran

CEQA Climate Planner, Advisor

Education
MA, Environmental Science and Management, University of California, Santa Barbara, 2012
BS, Integrative Biology, University of California, Berkeley, 2006

Years of Experience
With AECOM: 14
With Other Firms: 5

Training/Certifications
AECOM Project Management Training and Annual Refreshers since 2015
AEP State Conferences, CEQA Workshops and Presentations
University of California, Davis, Land Use and Environmental Planning Certificate (in-progress)
Leadership Strategies' (leadstrat.com) The Facilitative Leader Workshop Series (2018)
Project Management Professional (PMP) Bootcamp (2019)

Professional Affiliations
American Planning Association
Association of Environmental Professionals

Summary

Suzanne McFerran has 18 years of experience in the field of environmental science and management. She serves as both a senior technical lead and project manager, supporting planning and environmental review throughout California. As a project manager and deputy project manager, Suzanne has led and supported multi-disciplinary teams across multiple regions. To ensure project success, she regularly interfaces with a diverse team including lead agencies, project proponents, government and public stakeholders, project design and engineering teams, and technical subject matter experts. She is a strong analytical writer with a diverse academic and professional background in environmental science, management, and planning, as well as not-for profit services, which has allowed her to bring a multidisciplinary approach in developing solutions for and providing services to federal, State, and local agencies and private sector clients. Her project work has included General Plan Updates, Specific Plans, and Climate Action Plans with associated technical studies and California Environmental Quality Act (CEQA) documentation; infill, mixed-use, and greenfield development; renewable energy; linear energy transmission; transportation and other infrastructure improvements; among many other project types. With respect to technical expertise, Suzanne specializes in project- and planning-level air pollutant and greenhouse gas emissions estimating, using both modeling software and off-model quantification. She conducts analyses to address regulatory requirements, short-term construction impacts, and long-term operational emissions with local and regional impacts, and works with clients to develop mitigation as well as future streamlining strategies to minimize impacts and comply with the evolving regulatory framework.

Project Experience

Humboldt County Planning and Building Department, Humboldt Wind Project Environmental Impact Report (EIR), Humboldt County, CA. Technical Lead. Prepared the air quality, greenhouse gas, and energy technical analyses and modeling to analyze the proposed renewable wind energy generation development in Humboldt County. In addition to the wind turbines, the proposed project included ancillary facilities and a transmission line for project interconnection at the Pacific Gas & Electric Bridgeville Substation, located several miles northeast of the Project site's eastern boundary.

California Department of General Services, Humboldt Del Norte Unit Headquarters Facility Relocation EIR, Rio Dell, Humboldt County, CA. Project Manager. Leading environmental services, including the preparation of EIR and supporting technical studies, related to the proposed relocation of the California Department of Forestry & Fire Protection's (CALFIRE) Humboldt Del Norte Unit Headquarters at 410 4th Avenue in Rio Dell, Humboldt County, California. The proposed project includes the demolition of the existing two structures and construction of a new Region Unit Headquarters.

City of Davis, Climate Action and Adaptation Plan Update Initial Study, Davis, CA. CEQA Author for the Initial Study and Mitigated Negative Declaration for the City's Climate Action and Adaptation Plan (CAAP) Update. Significance thresholds for future development projects were evaluated as part of the Initial Study, providing evidence that the thresholds, if achieved, avoid a cumulatively considerable contribution to the significant cumulative impact of climate change. Rather than project-by-project analysis and mitigation for GHG emissions, the CAAP and CEQA document provided a citywide approach, pursuant to CEQA Guidelines Section 15183 for streamlining of environmental review, increasing cost effectiveness of emissions reduction strategies, and optimizing co-benefits related to air quality, VMT, and other actions.

City of Burbank, Golden State Specific Plan and EIR, Burbank, CA. Senior Environmental Analyst. Served as the senior air quality analyst for the Specific Plan EIR. Her work included advising and providing senior review of the detailed emissions calculations and impact analyses, as well as collaborating with the City and planning team to develop policy recommendations and land use planning strategies for the Specific Plan to address existing adverse air quality conditions and related health effects in the Plan Area.

City of Marysville General Plan Update, Downtown Specific Plan, Zoning Code Update, and Environmental Review and Streamlining, Marysville, CA. Senior Environmental Analyst. Oversaw the air quality and greenhouse gas technical analyses to support the environmental review for the City's General Plan Update and new zoning code, as well as supporting the planning efforts for these actions for the streamlining of future development consistent with the City's plans. Her work includes close collaboration with the travel demand modeler and SACOG to incorporate project-specific travel demand forecasts into the air quality and greenhouse gas analyses.

City and County of San Francisco, Gateway Industrial Center EIR, San Francisco, CA. Interim Deputy Project Manager and Senior Air Quality Analyst. Served as the Interim Deputy Project Manager and is a senior air quality analyst for the project's EIR. Her work includes off-model emissions calculations for the proposed development in the PDR-Industrial land use designated zone, developing emissions inputs to inform the project's Health Risk Assessment, and co-authoring the EIR, supporting technical memoranda, and extensive response to comments for this high-profile project. Worked closely with the city, project sponsor, project design team, and noise and transportation analysts to develop and refine project-specific modeling inputs, identify opportunities to minimize project-related emissions, and present the technical analysis and mitigation to the California Air Resources Board. The project site is within an AB 617 community.

Town of Loomis, General Plan Update and EIR, Loomis, CA. Deputy Project Manager and Technical Lead. The Town updated its General Plan to reflect changes in regulations, the economy, technology, and community expectations since the prior General Plan adoption in 2001. Provided coordination of stakeholder engagement; review and revision of the General Plan Technical Background Reports; preparation of open house and committee meeting materials; review and revision of several General Plan elements; and preparation of the General Plan Update EIR.

City of Woodland, Woodland Research and Technology Park Specific Plan EIR, Woodland, CA. Deputy Project Manager and Technical Lead. Managed the environmental work for the EIR and led the air quality, greenhouse gas, and energy analyses and modeling. The analyses evaluated buildout of the Specific Plan Area and were informed by project-specific traffic analysis, to provide for future CEQA streamlining where applicable.

City of West Sacramento, General Plan Update and EIR, West Sacramento, CA. Technical Lead for air quality and GHG analyses of the EIR. AECOM is updating the City's General Plan, with a focus on the Housing Element, Safety Element, Mobility Element, and environmental justice. AECOM is integrating this General Plan work with our ongoing work to prepare a Resiliency and Climate Action Plan, with coordinated environmental review and public engagement for the two planning efforts.

City of Elk Grove, Elk Grove Crossing Specific Plan EIR, Elk Grove, CA. Air Quality, GHG, and Energy Technical Analyst and Deputy Project Manager for the Air Quality Management Plan. Leading the air quality and GHG analysis and also the separate Air Quality Management Plan that is required for the Specific Plan and subject to review by the Sacramento Metropolitan Air Quality Management District. AECOM is preparing an EIR analyzing a specific plan for approximately 320 acres of land within the City's Sphere of Influence.

City of Roseville, General Plan 2035 EIR, Roseville, CA. Technical Analyst. Performed the air quality, greenhouse gas, and energy technical analyses and modeling, and authored the respective sections for the project's EIR. The analysis was a detailed evaluation of the existing and proposed future land use within the planning area, using travel demand forecasts and related VMT to estimate mobile-source emissions, and taking into account the extent to which the General Plan policies promote infill development and improved bicycle, pedestrian, and transit mobility options.

Paola Peña

CEQA Climate Planner & Community Engagement Specialist, Advisor

Education
BS, Environmental Science, University of California-San Diego, 2016

Years of Experience
With AECOM: 10
With Other Firms: 2

Summary

Paola Peña is an Air Quality/Greenhouse Gas Emissions Analyst with experience in preparing project- and program-level air emissions inventories of criteria air pollutants and greenhouse gases. She provides climate change impact analysis for incorporation into environmental impact assessments in California Environmental Quality Act (CEQA)- and National Environmental Policy Act (NEPA)-related projects, including wetland and natural resource restoration, mixed use, residential, renewable energy, industrial, transportation, and public infrastructure projects. Her work with evaluating environmental impacts in relation to local, regional, and federal regulations, allows her to understand air quality and climate change impacts for new development projects, and ensure development projects have assessed the associated air quality and greenhouse gas issues. Paola is also a Public Engagement Specialist and has experience in public and stakeholder engagement and facilitation for a range of projects, including climate change adaptation and resilience, mobility, land use, and transportation planning, and CEQA projects. Paola's stakeholder engagement and public facilitation work has included outreach and communications strategy development, public meeting planning and facilitation, development and implementation of educational materials, public participation training and risk communication training for agencies, interactive website content development, online surveys, fact sheets, and newsletter development.

Project Experience

San Diego County Water Authority, GHG Emissions Accounting & Reporting Protocol Technical Review Memo, San Diego, CA. GHG Specialist. Led preparation of a technical review memorandum summarizing GHG emissions accounting and reporting protocols, including the ICLEI U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, Global Protocol for Community-Scale Greenhouse Gas Emissions, and ICLEI Local Government Operations Protocol. The memorandum also included a peer review and summary of municipal climate action planning and emissions accounting methodologies with respect to water supply and distribution systems.

El Dorado Irrigation District, Modification of Water Right Permit 21112, El Dorado County, CA. Air Quality/GHG/Energy Specialist. Lead preparer of the air quality, GHG emissions, and energy analyses for the CEQA Environmental Impact Report (EIR) analyzing a water right change petition to add an additional authorized upstream point of diversion and an additional place of storage and point of re-diversion to storage to more effectively and efficiently manage water in the system and meet future water demands within El Dorado County.

Southern California Gas Company, California Desert Conservation Area Incidental Take Permit Project, Desert Region, CA. Air Quality/GHG Specialist. Developed emissions estimates and CEQA analysis strategy support related to air quality and greenhouse gas emissions in their efforts to obtain an Incidental Take Permit (ITP) for their operation and maintenance activities in the Californica Desert Conservation Area (CDCA) and develop information to support the California Department of Fish and Wildlife (CDFW) prepared EIR.

San Dieguito River Park Joint Powers Authority, San Dieguito Lagoon W-19 Restoration Plan, San Diego County, CA. Air Quality/GHG Specialist. Developed the criteria for air pollutant and greenhouse gas emissions estimates and drafted the air quality and greenhouse gas technical reports of the CEQA document associated with restoration and maintenance of approximately 141 acres to a functional mix of tidal salt marsh, brackish marsh, and transitional/upland habitats. The analysis included emission estimates from dredging activities and infrastructure improvements.

San Diego County Regional Water Authority, San Luis Rey Habitat Management Area Restoration Project, San Diego, CA. Air Quality/GHG Specialist. Developed the criteria air pollutant and greenhouse gas emissions estimates associated with restoration of existing agricultural land and drafted the air quality and greenhouse gas sections for an Initial Study/Mitigated Negative Declaration.

California Department of Parks and Recreation, Los Peñasquitos Lagoon Enhancement Plan EIR, San Diego, CA. Developed the criteria air pollutant and

greenhouse gas emissions estimates and drafted the air quality and greenhouse gas CEQA EIR sections associated with implementation of the programmatic actions developed to restore and enhance the lagoon's habitats, protect listed species, and reduce threats to public health.

Santa Margarita Ranch Mass Excavation Project Grading Permit, Phillips 66, San Luis Obispo County, CA. Air Quality/GHG Specialist. Developed the technical approach, organized and led meetings with San Luis Obispo County Air Pollution Control District, and estimated criteria air pollutant and greenhouse gas emissions for multiple equipment and trucking scenarios associated with excavation of hydrocarbon-impacted soils and restoration of the site to current grade.

City of Healdsburg, Wastewater Treatment Plant Upgrade Project EIR, Healdsburg, CA. Air Quality/GHG Specialist. Developed the air quality and greenhouse gas emission estimates associated with construction and operation of the City's proposed expansion of the recycled water program including proposed recycled water facilities and operations. Drafted the air quality, greenhouse gas, and energy analyses sections for the Subsequent EIR.

Antelope Valley-East Kern Water Agency, Enterprise Water Bank Environmental Compliance, Lancaster, CA. Air Quality/GHG Specialist. Developed the air quality and greenhouse gas emissions estimates and drafted the air quality and greenhouse gas technical memorandum associated with the construction and operation of a 1,400-acre groundwater recharge and recovery program.

University of California - San Diego, 2018 Long Range Development Plan - Environmental Impact Report, San Diego, CA. Air Quality/GHG Specialist. Developed the criteria for air pollutant emissions inventory and climate change analysis, which includes a greenhouse gas reduction strategy for the UC San Diego La Jolla campus. Prepared the air quality and greenhouse gas technical reports and EIR sections.

OneWater Nevada, Environmental Checklists, State of Nevada Division of Environmental Protection, Reno, NV. Air Quality Specialist. Assisted in the preparation of the air quality technical study analyzing air quality and climate change impacts from construction and operation of a groundwater recharge demonstration program.

Otay Mesa Conveyance and Disinfection System Project, Otay Mesa, CA. GHG Specialist. Developed response to comments for greenhouse gas specific comments on the Draft EIR/EIS. Assisted in writing and finalizing the greenhouse gas section for the Final EIR/EIS and the associated Finding Regarding Significant Effects document. Researched and translated the relevant Mexican Environmental documents on the project and provided translation services for response to comments and notice to commenters.

San Diego Association of Governments, I-8 Comprehensive Multimodal Corridor Plan and Mission Valley Revitalization, San Diego, CA. Community engagement specialist assisted with public participation and stakeholder outreach, including preparation of public outreach materials for social equity and public meetings along the Interstate-8 corridor in San Diego County to inform the development of the Comprehensive Multimodal Corridor Plan. This multimodal transportation planning document recognized that transportation needs are based on the complex geographic, demographic, economic, and social characteristics of communities.

California State Parks, Sea Level Rise Vulnerability Assessments and Adaptation Pathways Outreach and Engagement, San Diego, CA. Assisted in the development and facilitation of outreach and engagement activities to inform Sea Level Rise Vulnerability Assessments and Adaptation Pathways Reports for coastal park units in the San Diego Coast District of California State Parks. Ms. Peña was a bilingual facilitator at the 16 pop-up and community events and assisted with logistics and preparation of bilingual public outreach materials, including display boards and fact sheets for an online mapping activity and community events.

Florence-Firestone Transit-Oriented District Specific Plan and PEIR, County of Los Angeles, CA. Assisted in the production of outreach materials, virtual workshop and community meetings, and report summaries for the scoping and public review period of the PEIR associated with the Florence-Firestone Transit Oriented District Specific Plan (FFTODSP). The FFTODSP is focused on creating a land use and zoning policy tool for the unincorporated community of Florence-Firestone. The community engagement program carried out during the COVID-19 pandemic included a stakeholder assessment, collaboration with Community-Based Organizations, focus groups with organizations representing vulnerable populations, and an online mapping activity. Additionally, the program included distribution of hardcopy educational booklets to build capacity in the community to understand the planning process and land use concepts, ensuring inclusive and accessible engagement.

Delia Ridge Creamer

GIS Analyst

Education
BS, Environmental Geoscience, Boston College, 2016
Minor, Film Studies, Boston College, 2016

Years of Experience
With AECOM: 2
With Other Firms: 4

Summary

Delia Ridge Creamer is a GIS Specialist in the Oakland office holding a Bachelor of Science in Environmental Geoscience. Her academic and professional experience includes collecting and managing tabular and geospatial data, field work, and creating cartographic deliverables. Her passion for cartography is complimented by years on multidisciplinary teams managing people and projects in fast paced environments.

Project Experience

Pacific Gas & Electric, Salinas Siting and Routing, California. GIS Program Lead. Oversee GIS and digital solutions for multiple routing and siting projects in the Salinas Valley. Work with team members to identify constraints with GIS tools. Collaborate with all team members to centralize and standardize project data.

Pacific Gas & Electric, Cultural Resource Program, California. GIS Task Lead. Oversee GIS and digital solutions for cultural resource efforts. Collaborate with all team members to centralize and standardize project data. Develop AGOL Dashboards for team members to improve cultural review process. Work closely with project management team to implement task tracking system in Smartsheet. Manage team of junior GIS staff to support day to day cultural review GIS deliverables.

East Bay Regional Parks District, Fuels Management Program, California. GIS Task Lead. Oversee GIS and digital solutions for biological monitoring efforts. Provides field data collection and management using ArcGIS Online and ArcGIS Field Maps. Delivers GIS figures and data exports to support recommended treatment area assessment surveys and long-term monitoring efforts.

San Mateo County Transportation Authority/Caltrans, 101 Managed Lanes, San Mateo, CA. GIS Specialist. Provides GIS support to maintain and update geospatial data and cartographic products. Consults with project planners, biologists, and engineers to provide technological support in web mapping, impact calculations, and digitizing project components.

Caltrans, 0Q010 Highway 1 Bridge Restoration Project, San Gregorio Creek Bridge, San Mateo, CA. GIS Specialist. Provides GIS support to maintain and update geospatial data and cartographic products. Consults with project planners, biologists, and engineers to provide technological support in web mapping, impact calculations, and digitizing project components.

SFPUC, On-Call Environmental Cherry Lake Dam Spillway Project, Tuolumne County, CA. GIS Specialist. Provides GIS support to maintain and update geospatial data and cartographic products. Develop cartographic figures and tables supporting technical reports for California Environmental Quality Act (CEQA) permitting efforts, wetland delineation, biological resources technical reports, and archaeological survey reports.

Center for Biological Diversity, Break Free from Plastic Campaign, Oakland, CA. Petrochemical Working Group Lead. Developed databases to track federal and state permitting stages of proposed petrochemical projects in the Appalachia and Gulf South regions. Worked with GIS specialists to digitize the databases for coalition resource use and to inform legal strategy.

Center for Biological Diversity, Break Free from Plastic Campaign, Oakland, CA. Oceans Campaigner. Georeferenced and digitized petrochemical projects to support section 404 and coastal use permit litigation. Compiled two years of research and co-authored a report on regulatory and environmental violations by petrochemical production corporations. Developed federal legislation with congressional staffers and coalition stakeholders.

Boston College, Geoscience Department, Chestnut Hill, MA. Research Assistant. Completed field surveys of New England watersheds using GPS software to perform data collection. Used ArcGIS to perform data analysis, digitize field data, and construct maps, including analysis using remote public sensing data.

Boston College, Environmental Geoscience, Chestnut Hill, MA. Undergraduate Student. Completed classes and projects focused on river restoration management, hydrology, and geomorphology.

Completed a senior thesis project analyzing stream complexity using LiDAR data. Took first place in a GIS mapping competition where she analyzed the demographic factors of voters in the 2016 Republican Primary in Massachusetts.

Sally Shatford, MS

Senior GIS Analyst

Education
MS, Geographic Information Systems, San Francisco State University
BA, Geology, Colorado College
Minor, Mathematical Modeling, Colorado College

Years of Experience
With AECOM: 7
With Other Firms: 4

Training/Certifications
Post baccalaureate Certificate, Geographic Information Systems, Pennsylvania State University

Summary

Sally Shatford holds a Master of Science in Geographic Information Systems (GIS) and leads digital and GIS solutions for complex environmental and large-scale programs. She specializes in building centralized, scalable spatial data platforms and automated workflows to support analysis of hydrology, vegetation, land use, and climate datasets across California.

Project Experience

Federal Emergency Management Agency (FEMA), Programmatic Biological Assessment, California. GIS Lead. AECOM provided broad technical support to FEMA related to its consultation from trainings to agency meeting support to development of the Programmatic Biological Assessment. Specific to utilization of AECOM's GIS capabilities, AECOM performed a GIS-based spatial analysis to identify and map areas throughout California that have been converted from natural lands to developed lands by evaluating the National Land Cover Raster datasets between 2001 and 2023. These identified areas of new development were then summarized and quantified by their distribution inside vs outside the established FEMA flood hazard zone, within critical fish habitat, and by county and watershed. A series of statistical analyses were then performed in GIS to determine whether there is a statistically significant relationship between conversion to Developed lands and location inside or outside jurisdictional areas throughout the state.

San Francisco Peninsula Watershed, California Coastal Grassland Prescribed Fire Monitoring, San Francisco, CA. GIS Lead. Provided GIS support for vegetation monitoring for pre and post burn sites on the San Francisco Peninsula. Collaborated with team ecologists to support data approach and analysis for plant cover and shrub mortality.

Viridon, Humboldt-Fern High Voltage Transmission Line, Northern California Counties, CA. GIS Program Lead. Oversee GIS and digital solutions for a multi-county permitting and construction of A 500-mile-high voltage transmission line. Collaborate with all team members and external GIS teams to centralize and standardize project data and constraints. Work closely with project management team to implement task tracking system in Smartsheet.

East Bay Regional Parks District, Fuels Management Lead, California. GIS Lead**.** Oversees GIS data analysis for pre and post vegetation analysis for prescribed burning for wildfire prevention. Provides field data collection and management using ArcGIS Online and ArcGIS Field Maps. Delivers GIS figures and data exports to support RTA assessment surveys and long-term monitoring efforts to maintain work areas.

Pacific Gas & Electric (PG&E), Wildfire Mitigation, Bay Area, CA. GIS Lead. Coordinates GIS tasks and team for wildfire mitigation support across PG&Es service area. Tasks include, survey set up for biological monitoring, figures to support area of fire maintenance.

Pacific Gas & Electric, PG&E Service Area, California. GIS Program Lead. Undergrounding Program. Oversees GIS and digital solutions primarily in ArcGIS Online and Smartsheet. Developed AGOL Dashboards and Experience Builder Web Mapping Applications that show the distribution of projects overtime to improve planning and identify constraints. Works with developer to integrate Smartsheet with client project tracking system to identify changes in status and projects. Manage team of junior GIS staff to support day to day permitting deliverables.

Viridon, CAISO 2025, South Bay, CA. GIS Manager. Supported GIS platforms used across multiple organizations and business lines. Authored and distributed GIS best-practice guidance, including PLSS and CAD-to-GIS workflows, and provided ongoing GIS support for analysis, mapping, and stakeholder coordination.

Horizon West Transmission, Next Era Energy, CAISO, Northern California Counties, CA. GIS Manager. Created and maintained a web-based GIS platform for desktop review and analysis of hazards, biological resources, and land-use constraints associated with proposed transmission routes. Supported route evaluation through spatial analysis and visualization and designed and deployed field survey tools to support data collection and validation.

Horizon West Transmission, Next Era Energy, Santa CAISO, Clara County, CA. GIS Task Lead. Created and maintained web map for desktop review and analysis of hazard, biological, and land use constraints for a proposed route. Set up survey for field survey. Delineated landcover for approximately 9,600 acres with accurate topology.

Andrew Spellmeyer

Accessibility Formatting

Education
MS, Biology, Wichita State University, 2014
BS, Biology, Wichita State University, 2011

Years of Experience
With AECOM: 9
With Other Firms: 8

Training/Certifications
508 Compliance (ADA Compliance for Documents)

Summary

Andy Spellmeyer is a biologist, environmental planner, and technical editor with expertise in 508 Compliance (ADA Compliance for Documents) as well as in biological resources and grazing and other uses of public lands. He is an expert field biologist that has designed, conducted, and managed several ecological field surveys and experiments in Tallgrass Prairie, shrub-steppe, and riparian ecosystems. His most noteworthy experiments include designing and deploying very high frequency (VHF) radio transmitters on songbirds. When not in the field, he is an environmental planner, technical writer, and MS Office specialist with experience authoring Environmental Impact Statement sections, Specialist Reports, Environmental Assessments, Biological Assessments, and Species of Conservation Concern assessments. Additionally, he has acted as a Public Engagement specialist, providing support for scoping reports, scoping materials, and meeting coordination.

Project Experience

DOI, USDA, BOR, USACE, and Various State and Local Agencies. ADA/508 Compliance Editor. Technical Writer and 508 compliance officer with experience authoring and editing over 100 planning documents. Completes 508 compliance for an array of federal, state, and local agencies.

Bureau of Land Management - Arcata and Redding Field Offices, F-0241 Wild and Scenic River Eligibility and Suitability Studies, CA. Technical Editor. Conducted a data verification for the WSR eligibility and suitability studies and reports associated with the Northwest California Integrated Resource Management Plan.

Bureau of Land Management (BLM), Grazing Flexibilities, Rangeland Improvements, and Restoration to Improve Lahontan Cutthroat Habitat in Nevada, Reno, NV. Project Manager for a programmatic EA that provides the roadmap to restore wetland and riparian ecosystems in occupied Lahontan cutthroat trout (LCT) habitat on approximately 5,000,000 acres of active BLM-administered grazing allotments. Key responsibilities include facilitating meetings with the core team and an interdisciplinary team of subject matter experts, organizing and facilitating public meetings with local stakeholders, managing ongoing collaboration with cooperating agencies, and overseeing production of the EA and Biological Assessment.

Forest Service, F-0253 Sequoia and Sierra National Forests Plan Revision and Supplemental Environmental Impact Statement, CA. Technical Writer. Sequoia and Sierra National Forests Plan Revision Project. Identified and drafted an alternatives issue topics matrix for Ecological Integrity – Wildlife. Also served as NEPA Technical Editor. Provided technical editing for the supplemental EIS and revised forest plan in accordance with the 2012 Planning Rule. Key issues include ecological resilience, wildlife habitats, wildfire, forest resilience and forest density, fuels treatments and fire management, watershed restoration, aquatic diversity, recommended wilderness, smoke, and forest products.

San Francisco Public Utilities Commission (SFPUC), Alameda Watershed Rangeland Management Plan (RMP), Sunol, CA. ADA/508/WCAG Compliance Editor. Provided accessibility formatting adhering to ADA/508/WCAG standards for SFPUC's RMP and a large set of related, public facing documents being published on the web. The RMP was designed to manage SFPUC grazing land in the east bay including vegetation management, grazing management (e.g. stocking rates with GIS modelling), rare and sensitive species, and invasive plant management.

NPS, Theodore Roosevelt National Park Livestock Plan and EA, Medora, ND. Deputy Project Manager for an EA that evaluated impacts from a proposed livestock plan in Theodore Roosevelt National Park removing approximately 300 feral horses and 12 longhorn steer. This highly controversial project received attention from national media and state and federal lawmakers. Over the life of the project, NPS received over 45,000 public comments. Utilized the NPS PEPC database for analyzing public comments and maintaining project documents and mailing list.

Bureau of Land Management - Tucson Field Office, F-0177 San Pedro Riparian National Conservation Area Resource Management Plan and Environmental Impact Statement, AZ. Technical Writer/Editor. Edited and standardized sections for the San Pedro Riparian National Conservation Area (SPRNCA) RMP/EIS. Addressed technical edits and comments made by client on RMP/EIS document. RMP revision and associated EIS for 57,000 acres of BLM-administered lands. The RMP/EIS is analyzing a range of management alternatives and key resource issues such as water resources, land health, riparian areas, floodplains, wetlands, aquatic habitats, special designations, recreation, livestock grazing, cultural resources, travel and transportation management, visual resources, lands and realty, and urban interface.

BLM, North Powderhorn Fuels Project, Gunnison Field Office, Montrose, CO. Project Manager for programmatic vegetation management program to improve forest health and to promote ecosystem diversity. Fuels treatments are proposed in both lands inside and outside the Powderhorn Wilderness and the Powderhorn Wilderness Study Area.

BLM, Alaska State Office, Coastal Plain Oil and Gas Program Environmental Impact Statement (EIS) Public Scoping, Anchorage, AK. Public Engagement Specialist. The 2017 Tax Cuts and Jobs Act opened 1.6 million acres of the Arctic Wildlife National Refuge (ANWR) to lease sales and oil and gas development in the 1002 area. Key issues include subsistence Assisted in coordinating several highly contentious public meetings in an expedited timeframe. Assisted in the facilitation of public scoping meetings, created meeting materials, organized meeting venues, and managed public comments.

BLM, Burning Man Special Recreation Permit EIS, Winnemucca Field Office – Reno, NV. Biologist and Comment Analysis Specialist for the EIS. Provided key assistance for comment analysis during scoping and after EA publication. Assisted in the preparation of the EIS including Fish and Wildlife, Threatened and Endangered Species, and Migratory Birds. Provided NEPA support and analysis for the streamlined EIS. This EIS evaluates the re-issuing of a special recreation permit for a large recreation event in Northern Nevada. Key issues included noise, air quality, access, recreation, and soils.

HiLine District, BLM, American Prairie Reserve Bison Change in Use EA, MT. Technical Writer and Public Involvement Specialist for the EA scoping period. Responsible for managing public scoping comments and production of the subsequent Scoping Comment Analysis Report for the EA. This EA assesses the impacts on several BLM grazing allotments from changing livestock type from cattle to bison, as well as changes to standard operating procedures and range improvements, such as removal or improvement of fencing. This change of use to bison on BLM lands in Montana is part of a larger effort to assemble private landholdings in Montana with the goal of creating a nature reserve for the purpose of wildlife conservation and public access.

BLM, NV Energy Greenlink North Project EIS, Reno, NV. Biologist and Rangeland Specialist for an EIS that analyzes construction, operation, and maintenance of an approximately 235-mile system of new electric transmission lines, substations, and associated facilities in White Pine, Eureka, Lander, Churchill, and Lyon Counties, Nevada. Conducted raptor and vegetation surveys along 50+ miles of the transmission route. Authored the Rangelands and Livestock Grazing section of the EIS.

USDA Forest Service, Humboldt-Toiyabe National Forest Monitor Valley Grazing Allotment EA, Winnemucca, NV. Deputy Project Manager for an environmental assessment evaluating the re-establishment of six grazing allotments in the Monitor Valley of the Humboldt-Toiyabe National Forest after 30 years of vacancy. Project involved the development and distribution of a Notice of Proposed Action to the public prior to drafting the EA. Issues involved in the project included Wilderness, Wild Horses and Burros, Special Status Species, Recreation, and Cultural Resources.

USDA Forest Service, Salmon-Challis National Forest, Potential Species of Conservation Concern Assessments, Boise, ID. Biologist. Prepared over 25 potential species of conservation concern (PSCC) assessments as well as the project Administrative Record. PSCC assessments analyzed various plant and animal species to determine whether the best available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area. The Salmon-Challis National Forest is 4.3 million acres and contains the largest wilderness area south of Alaska.

Bureau of Reclamation - Phoenix Area Office, F-0258 New Mexico Unit of the Central Arizona Project Environmental Impact Statement. Grant, Catron, and Hidalgo Counties, New Mexico, Az. Technical Writer/Editor. Assisted in the preparation of the Scoping Report which outlined issues that arose during public outreach and scoping meetings for the proposed construction and operation of infrastructure for diverting water from the Gila and San Francisco rivers in southwestern New Mexico. This controversial project would allow New Mexico irrigators to access and beneficially use water rights resulting from an interstate settlement agreement with Arizona.

Christine Ventura, PM, WEDG, ENV SP

Climate Planner

Education
Master of Forestry, Yale School of The Environment, 2019
Bachelor of Science in Biology, University of Rhode Island, 2012

Years of Experience
With AECOM: 5
With Other Firms: 10

Professional Affiliations
Forest Stewards Guild,
American Society of Adaptation Professionals,
Project Management Institute
Institute for Sustainable Infrastructure,
Society for Ecological Restoration,
Waterfront Alliance

Summary

Christine brings over 15 years of experience in the development and implementation of sustainability, resilience, and climate adaptation programs, with a focus on nature-based solutions. She also brings a strong history of helping clients to address complex policy, management, and regulatory challenges with a background in ecological restoration and natural resource management. She is passionate about helping clients evolve toward multiple bottom-line objectives. Her current work at AECOM encompasses directing initiatives across sustainability, climate adaptation, natural capital assessment, biodiversity conservation, and the promotion of natural climate solutions.

Project Experience

Confidential Client, Global Sustainability Regulatory Analysis and Dashboard Development, Mountain View, CA. Led the development of a framework and analysis of regulations and other policy across multiple sustainability categories, including an assessment of risks across the data center lifecycle for global teams of subject matter specialists. Created job aids for specialists to identify and record applicable policy, performed quality reviews of dashboard content, and conducted risk assessments for US federal and state policy. Led client trainings on the use of the dashboard.

Massachusetts Department of Transportation Office of Transportation Planning, Decarbonization Investment and Benefits Analysis, Boston, MA. Subject Matter Specialist. Providing guidance to the carbon accounting team on greenhouse gas reduction potential, potential co-benefits of mitigation measures and guidance to the economics team on capital costs of decarbonization strategies involving natural and working lands (NWLs). Provided quality review of work products related to NWL measures.

Confidential Technology and Logistics Client, Biodiversity Impact Reduction Pilot, Chambersburg, PA. Biodiversity Lead. Piloting a novel framework to reduce biodiversity loss during infrastructure development. The initiative integrates biodiversity net gain principles and nature-based solutions into site design and construction, with real-time testing of biodiversity metrics and ROI analysis. Responsibilities include developing baseline biodiversity values, assessing business-as-usual impacts, and developing and evaluating biodiversity uplift strategies, coordinating on-site implementation, and contributing to the creation of a scalable, cost-effective model for biodiversity integration across future projects.

Sacramento CCAP, Workforce Planning Analysis. Sacramento County, California. Subject Matter Specialist. Providing guidance on industry impacts of proposed natural climate solutions projects for carbon sequestration and carbon farming components of the the plan.

Massachusetts Office of Environmental Justice and Equity, Environmental Justice Action Plan, Boston, MA. Deputy Project Manager. Supporting the development of a comprehensive strategy to advance environmental justice throughout all the Massachusetts Executive Office of Energy and Environmental Affairs. The strategy incorporates findings from a review of agency permitting processes, grants, and programs, as well as engagement with environmental justice liaison, and stakeholders within OEJE to identify targets, metrics, and implementation strategies to equitably serve environmental justice communities in the state.

Washington State Parks, Washington State Parks Climate Vulnerability and Adaptation Strategy, Olympia, WA. Subject Matter Specialist. Providing resources and advising on best practices to evaluate the economic impacts of adaptation strategy measures including park revenue, avoided damages, recreational value to communities, ecosystem services, and the value of rare species and high-quality ecosystems.

Texas A&M Green Infrastructure for Texas (GIFT), Ecosystem Services BCA Tool Development, College Station, TX. Subject Matter Specialist. Providing scholarly resources and advising on best practices for an ecosystem services valuation study informing the development of the Texas Benefit Cost Analysis (BCA) Ecosystem Tool.

Confidential Data Center Developer, Physical Climate Risk Assessment for US Data Center Development, Sydney, Australia. This analysis leveraged The OCEAN 2 portfolio climate risk tool, a sophisticated solution designed to perform comprehensive climate risk assessments. This analysis enabled the organization to evaluate climate risks across their portfolio systematically and to formulate strategic adaptation measures.

AECOM, AECOM Taskforce on Nature-related Financial Disclosures (TNFD) Assessment, Dallas, TX. Supported the AECOM Sustainable Legacies Global Council in developing a TNFD assessment for FY 25 to better understand AECOM's reliance and impact on nature. As a key ESG reporting and nature advisor, participated in workshops to initiate this disclosure process. Collaborated with corporate net zero/ESG reporting team and AECOM nature advisors in a high-level LEAP assessment, focused on identifying risks, dependencies, and opportunities across the value chain and operations. Contributed to the development of disclosure materials and assisted in drafting and reviewing text for the Sustainability Report.

Confidential Client, 30 Percent Design Planning and Documentation. Confidential, NJ. Technical Lead for the creation of a 30% design document for ten projects spanning 1200 acres, as part of a Natural Resources Damages (NRD) settlement action. She led a team of subject matter experts to capture the social and ecological design criteria and planning of project components including site hydrology improvements, ecological restoration, landscape architecture, architecture, and environmental education.

Metropolitan Atlanta Rapid Transit Authority (MARTA), United Nations Sustainable Development Guidelines (UN SDG) Implementation Guidance, Atlanta, GA. Led a multidisciplinary team to create an implementation guide and framework for localizing the UN SDGs at the organization's scale. The guidance incorporated MARTA stakeholder feedback, sustainability, operational, and capital investment plans, to develop targets, indicators, and implementation actions aligned with UN SDGs. This guidance will be used to inform training for MARTA staff, and to support agency goals for fleet and facility decarbonization, natural infrastructure development, renewable energy transition across MARTA's operations and services.

Confidential Client, Basis of Design Planning and Documentation, New Jersey. Technical Lead for the creation of a basis of design document for ten projects spanning 1200 acres, as part of a Natural Resources Damages (NRD) settlement action. She led a team of subject matter experts to capture the social and ecological objectives of project components including site hydrology improvements, ecological restoration, landscape architecture, architecture, and environmental education.

West Virginia State Resiliency Office, West Virginia Management of Federal Grant Services, Charleston, WV. Resilience Subject Matter Specialist. Responsible for providing support to the State Resiliency Office for their 2024 Flood Resilience Plan. Identified and developed resiliency projects in collaboration with other state agencies to pursue funding through the Bipartisan Infrastructure Law and the Inflation Reduction Act. Lead workshops with agency stakeholders to ensure equitable access to funding.

Dubai Economy and Tourism, Dubai Reef – Blue Carbon, Dubai, UAE. Subject Matter Specialist and Task Lead. Facilitating a multidisciplinary team to develop revenue streams from the world's largest artificial reef project, including blue carbon, biodiversity, and restoration of the systemic functions of the marine areas surrounding Dubai.

Confidential Client, Estimation of Project Carbon Sequestration Benefits, New Jersey. Conducted an analysis of the potential carbon benefits of a planned tree planting program as part of a larger restoration project. Used the i-Tree planting calculator to estimate the carbon dioxide sequestration and other benefits of the project.

Masdar COP28 Event Sustainability and Consulting Services. Dubai, UAE. Led the development of a framework for carbon offset criteria evaluation, then provided guidance on the event's offsetting strategy and credit selection. Facilitated the RFI and negotiation process to build a portfolio of high-integrity credits for the event, which reflected COP28 presidential priorities, UAE policy, COP28 event sustainability principles and best practice guidelines to support ISO20121 and PAS 2060 certification. Prepared and presented documentation and of the event offsetting strategy for certification under the event sustainability and net zero standards.

About AECOM
AECOM is the global infrastructure leader, committed to delivering a better world. As a trusted professional services firm powered by deep technical abilities, we solve our clients' complex challenges in water, environment, energy, transportation and buildings. Our teams partner with public- and private-sector clients to create innovative, sustainable and resilient solutions throughout the project lifecycle — from advisory, planning, design and engineering to program and construction management. AECOM is a *Fortune 500* firm that had revenue of $16.1 billion in fiscal year 2025. Learn more at aecom.com.

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