

ASCENT

**PROPOSAL FOR**

# Humboldt Natural and Working Lands Carbon Stock and Management Study

RFP NO. PLN2026-01

**PREPARED FOR:**

Humboldt County Department of Planning & Building  
2015 H Street  
Eureka, CA 95501

**ATTENTION:**

Suzanne Lippre  
Administrative Analyst

5-15-2026

May 15, 2026

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

via email: [planningclerk@co.humboldt.ca.us](mailto:planningclerk@co.humboldt.ca.us)

**Subject: RFP No. PLN2026-01**  
**Humboldt Natural and Working Lands Carbon Stock and Management Study**

Dear Ms. Lippre,

Humboldt County's natural and working lands are one of its greatest assets, already functioning as a powerful carbon sink and providing a wide array of additional benefits. However, the magnitude and distribution of carbon stock in these lands are not yet well understood, and there is considerable opportunity to maximize present and future carbon sequestration potential through sustainable management practices. With our proven and award-winning experience in this space, Ascent is excited to submit this proposal to support the County in developing the Humboldt Natural and Working Lands Carbon Stock and Management Study under a Sustainable Agricultural Lands Conservation (SALC) Program planning grant from the California Department of Conservation.

The County is seeking a consultant to deliver two integrated products: (1) a Humboldt Countywide Natural and Working Lands Carbon Stock Inventory that establishes a robust, spatially explicit baseline from which future changes can be evaluated over time; and (2) a Carbon Sequestration Feasibility Study, which will identify best management practices to maximize carbon sequestration potential in the region. This work will play a critical role in implementing the Humboldt County Regional Climate Action Plan, informing its 2030 update and greenhouse gas emissions inventory, and supporting the County's pathway to carbon neutrality by 2045. In addition, it is essential that this work be prepared in a manner that is transparent, repeatable, and usable across a variety of future/subsequent applications, including California Environmental Quality Act (CEQA) analysis and conservation planning and prioritization, among others. Ascent is prepared to meet these needs through a collaborative, rigorous, and locally grounded approach.

Our proposal to assist the County with the development of this project includes the integration of multiple datasets, advanced geospatial analysis, carbon accounting methodologies, and various modeling approaches. We are uniquely positioned to deliver this project based on our experience leading similar efforts across California—including the Monterey Bay Natural and Working Lands Climate Mitigation and Resiliency Study, which was recognized with awards from both the American Planning Association's Northern California section and the California Association of Environmental Professionals—along with our deep North Coast experience and our comprehensive in-house expertise spanning an array of topics that are directly applicable to the project (e.g., forestry, biology, wildfire resilience, stakeholder engagement). We understand that this work is complex and requires a firm with a deep understanding of carbon sequestration accounting methodologies and experience in GIS and data analysis. Ascent is that firm.

With offices in Sacramento, San Diego, Berkeley, Irvine, and Lake Tahoe, Ascent's core services are directly aligned with the intent and scope of this project. We offer a broad spectrum of planning and environmental services, including climate action, climate adaptation, sustainability, land use planning, urban design, transportation, and CEQA. We have carefully selected staff whose experience and expertise match well with the County's needs.

Poonam Boparai will oversee Ascent's work for this project as the principal-in-charge. Poonam is a recognized expert in carbon accounting and natural and working lands planning and is well versed in state guidance, regulations, and legislation. Hannah Kornfeld, AICP, will be the project director, leading the technical team and ensuring scientific rigor with practical applicability. Hannah brings a thorough understanding of natural and working lands planning, including evolving state guidance, data sources, and methodologies. Poonam and Hannah will be supported by Brenda Hom, who will serve as the project manager and the day-to-day contact for project needs. Brenda has served as a senior technical specialist and project manager on many carbon stock inventories throughout California.

For the purposes of this proposal, Poonam will be your primary point of contact. Please do not hesitate to contact her if you have any questions or require further information. As an Ascent principal, Poonam is authorized to negotiate and execute a contract. We look forward to the opportunity to work with the County and appreciate your consideration of our submittal.

Sincerely,



Poonam Boparai  
Principal

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p: 619.795.0113



Hannah Kornfeld, AICP  
Project Director

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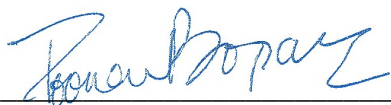
p: 916.930.3199

<b>SIGNATURE AFFIDAVIT</b>	
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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**

Poonam Boparai

**Name (type or print)**

Principal

**Title**

May 15, 2026

**Date**

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

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# 1 / COMPANY EXPERIENCE

## ABOUT ASCENT

Ascent's expertise includes:

- carbon stock and sequestration analyses,
- natural and working lands strategy development,
- integrating carbon sequestration into CAPs,
- wildfire resilience planning,
- forestry and biological resources services,
- community and stakeholder engagement, and
- CEQA review.

Ascent is an innovative full-service climate change, urban design and planning, environmental, and natural resources consultancy with a staff of approximately 150 professionals. The firm is headquartered in Sacramento, with offices in Berkeley, Lake Tahoe, Irvine, and San Diego. We offer the nimble responsiveness of a small business along with a depth of expertise and resources well beyond the size of the firm. Primarily working with public sector clients, our broad spectrum of planning and environmental services, including climate action, climate adaptation, sustainability, land use planning, urban design, transportation, and the California Environmental Quality Act (CEQA), allows us to take a comprehensive and interdisciplinary approach to current challenges. Using the latest analysis tools and techniques is also central to our practices, resulting in efficiency, clear presentation of data and results, and effective, feasible, and defensible solutions.

## NATURAL AND WORKING LANDS EXPERTISE

Ascent's multidisciplinary team brings deep experience supporting natural and working lands through carbon stock and sequestration analysis, wildfire resilience planning, forestry, and biological resources services. This integrated skill set allows us to evaluate carbon storage and sequestration in a way that reflects real-world land management conditions, ecological constraints, and regulatory expectations. Our experience has also provided us with a strong understanding of the regulatory landscape that governs this work in California. We are well versed in the California Air Resources Board's (CARB's) 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), Assembly Bill (AB) 1757 (Garcia, 2022) and California's Nature-Based Solutions Climate Targets, and related guidance like the Natural and Working Lands Climate Smart Strategy, among other relevant laws, rules, and regulations.

### Carbon Stock and Sequestration Analyses

Ascent has extensive experience preparing land-based carbon stock and sequestration analyses for communities with substantial natural and working lands. Our work has evaluated carbon stock and sequestration across forests, grasslands, agricultural lands, vineyards, oak woodlands, and open space, as well as the impacts of land use change, vegetation removal, and wildfire on carbon stock.

We regularly support agencies with comprehensive carbon stock assessments under existing and future scenarios and evaluate the effectiveness of land management and restoration strategies to maintain or enhance sequestration over time. Our experience includes developing baseline carbon stock estimates, assessing changes in carbon stock over time, and quantifying potential losses or gains associated with land management approaches.

Carbon stock refers to the total amount of carbon stored in vegetation and soils at a specific point in time.

Carbon sequestration refers to the rate at which carbon is removed from the atmosphere and added to the carbon stock.

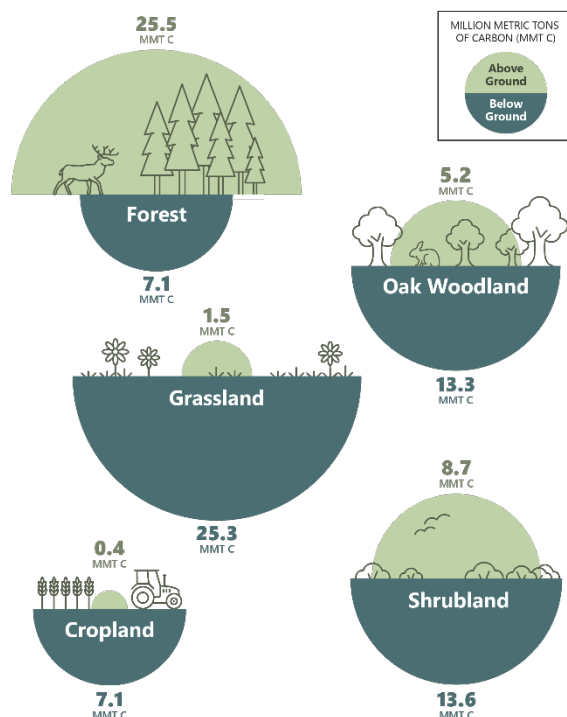
Across these efforts, we focus on transparency, repeatability, and clear communication—ensuring that methods, assumptions, and results can be understood by interested parties and used confidently by agencies over time. We also stay current with evolving science, CARB guidance, and state policy related to natural and working lands, carbon sequestration, and climate planning. For the past 11 years, Ascent has been assisting CARB with preparation of environmental documents for cornerstone regulations, which gives us an in-depth understanding of climate-related regulations and programs in the state and how they translate to local agencies.

Members of our team serve on a variety of committees related to natural and working lands, including UC Berkeley’s Advisory Group for Understanding the Economic and Workforce Benefits of Scaling Nature-Based Solutions and the AEP Climate Change Committee, a group of professionals that collaborates on evolving climate planning challenges related to the regulatory landscape, legislative changes, judicial decisions, and expert agency guidance.

## Integrating Carbon Sequestration into Climate Action Planning

Ascent’s work integrating carbon sequestration into climate action and adaptation planning reflects a cohesive practice developed across regional studies, county climate action plans, and implementation-focused feasibility analyses. For these efforts, Ascent has applied a consistent, defensible approach grounded in spatial analysis, carbon stock accounting, scenario-based forecasting, and collaboration with land managers and agencies at various scales (e.g., state, regional, local). This experience positions Ascent to support Humboldt County with an approach that is rigorous, locally grounded, and aligned with California guidance on nature-based climate solutions.

At the regional scale, Ascent led the award-winning [Monterey Bay Natural and Working Lands Climate Mitigation and Resiliency Study](#) for the Association of Monterey Bay Area Governments (AMBAG), covering Monterey, Santa Cruz, and San Benito Counties. Designed as a foundational planning study, this work established a shared, spatially explicit understanding of existing carbon stock and future



Example of a carbon stock inventory prepared by Ascent

sequestration potential across diverse landscapes. We prepared a GIS-based carbon stock inventory quantifying aboveground and belowground carbon across forests, oak woodlands, grasslands, shrublands, agricultural lands, wetlands, and urban areas, paired with 2045 forecasts aligned with CARB’s 2022 Scoping Plan scenarios.

The AMBAG study evaluated land management strategies, including forest health and prescribed fire, agricultural soil health practices, conservation easements, wetland restoration, and urban forestry. These strategies were assessed for feasibility, costs, co-benefits, and implementation barriers through extensive engagement with regional stakeholders and technical experts. The result is a regional carbon and land-based framework that has been directly used to inform local climate action plans, general plans, conservation initiatives, grant applications, and legislative action.

Ascent applied this framework at the county scale through development of the [Napa County Regional](#)

[Climate Action and Adaptation Plan](#) (RCAAP) and the [Monterey County Community Climate Action and Adaptation Plan](#) (CCAAP), tailoring methods to each county's landscapes, governance structures, and policy goals. In both plans, natural and working lands were integrated as a core component of the long-term climate strategy, rather than treated as a standalone or qualitative topic. This approach was particularly important in unincorporated and rural counties where land use development in minimal and natural and working lands represents a significant driver of the local economies.

In Napa County, Ascent linked a regional carbon stock inventory to the county's carbon neutrality pathway, identifying natural sequestration as the primary mechanism for addressing residual emissions after reductions from emissions sectors like transportation, building energy, and solid waste. Strategies such as carbon farming, forest and woodland restoration, vineyard sustainability practices, urban forestry, and avoidance of land conversion were clearly articulated, with sequestration benefits quantified where methodologically appropriate and co-benefits identified related to wildfire resilience, agricultural viability, and ecosystem health.

In Monterey County, agricultural lands, grasslands, forests, wetlands, and open space were similarly embedded into the mitigation framework, recognizing that long-term climate goals depend on both emissions reductions and protection or enhancement of existing carbon stock. The quantitative approach for Monterey County was derived from the AMBAG study, demonstrating the importance of a regional study on local climate action planning. Strategies in the county were closely tied to implementation partners such as the resource conservation district, land trusts, and agricultural operators, and emphasized co-benefits including groundwater recharge, flood resilience, habitat conservation, soil health, and heat mitigation.

Ascent has also applied this expertise in implementation-oriented settings, including the Sacramento Municipal Utility District (SMUD) Nature-Based Carbon Solutions and Biodiversity Program Feasibility Study. For this effort, we developed a spatial baseline of carbon stock across SMUD's service territory (Sacramento County), quantified future carbon stock trajectories, and identified sequestration potential associated with specific land management practices. Results were translated into an interactive spatial database to support decision-making and program development.

Collectively, these efforts demonstrate Ascent's ability to integrate natural and working lands into climate strategies across multiple scales and planning contexts—from regional studies to climate action plans and feasibility analyses—while maintaining a consistent, defensible approach.

## **Wildfire Resilience Planning**

Ascent is at the forefront of wildfire and forest resilience planning in California, supporting public agencies and partners in addressing wildfire risk while improving ecosystem health and carbon stability. We have prepared and implemented some of the state's most significant programmatic environmental reviews and planning frameworks to increase the pace and scale of vegetation management, fuel reduction, and restoration.



complex regulatory programs affecting natural and working lands, and site-specific CEQA analysis in sensitive coastal and forested environments. This combination demonstrates our familiarity with the region's landscapes, land use pressures, regulatory context, and stakeholder dynamics. The following representative projects demonstrate Ascent's experience delivering a diverse range of work in the region.

### **Amendments to Humboldt County Code Regulating Commercial Cannabis Activities EIR**

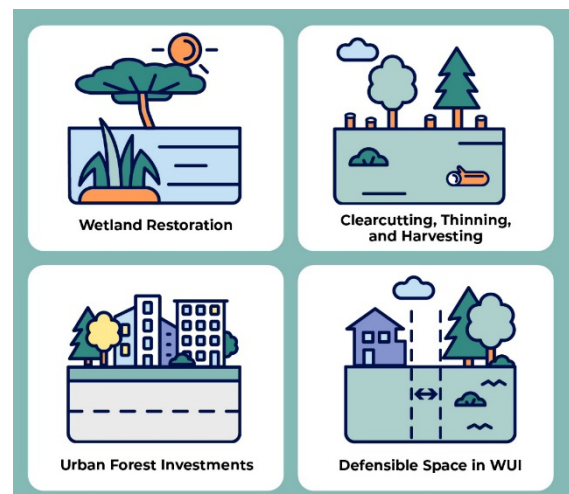
This project involved the repeal of Humboldt County's existing Commercial Medical Marijuana Land Use and Medical Cannabis Testing and Research Laboratories ordinances. These regulations were to be replaced by the provisions of the proposed ordinances (one addressed inland areas and the other addressed the coastal area), which would establish land use regulations for the commercial cultivation, processing, manufacturing, distribution, testing, and sale of cannabis in the county. The changes would allow and regulate commercial cannabis facilities for both medical uses and adult recreational uses. Ascent prepared the EIR for the proposed ordinances, which the County adopted in April 2018.

The EIR analyzed impacts to biological resources, forestry, water quality, surface water diversions, odors, and land use compatibility, with particular focus on sensitive watersheds and areas affected by illegal cultivation. Ascent coordinated closely with the California Department of Fish and Wildlife (CDFW) to refine mitigation measures and performance standards addressing watershed protection, habitat loss, erosion, and pesticide use.

The project also required careful alternatives analysis, including evaluation of a potential prohibition scenario, to provide the County with clear policy choices grounded in CEQA. Schedule certainty and defensibility were critical, and Ascent worked closely with County staff to resolve technical issues and maintain progress toward adoption within the targeted Board's hearing timeline.

### **McKinleyville Vegetation Treatment Project**

Ascent prepared a Project-Specific Analysis and Addendum to the CalVTP Program EIR for the [McKinleyville Vegetation Treatment Project](#) on behalf of the Humboldt County Resource Conservation District. The project consisted of vegetation treatments for wildfire risk reduction and forest health improvement on approximately 3,600 acres between McKinleyville and Fieldbrook; the land had previously been managed for timber production by Green Diamond Resources Company. Ascent evaluated the project for consistency with the CalVTP Program EIR to conduct mechanical and manual vegetation treatment activities, ensuring the project could benefit from streamlined environmental review to implement treatment activities quickly.



Example nature-based solutions on natural lands

### **Cal Poly Humboldt CEQA Review**

Complementing our countywide policy experience, Ascent has also prepared CEQA documents for development projects at California State Polytechnic University, Humboldt, including the preparation of an EIR for new student housing that involved redevelopment of a former industrial site, development of a parking lot on a former demolished lumber mill site, and modifications to the Central Cal Poly Humboldt campus. Ascent also prepared a campuswide historic evaluation for the university.

Our experience working directly with Cal Poly Humboldt strengthens our understanding of land use, infrastructure constraints, and environmental review processes in Humboldt County, as well as coordination with local agencies and stakeholders.

### Mendocino County Experience

Ascent prepared the Mendocino County Cannabis Licensing Program EIR under contract with the California Department of Cannabis Control and prepared over 500 addendums using this EIR for subsequent licensing actions by the state.

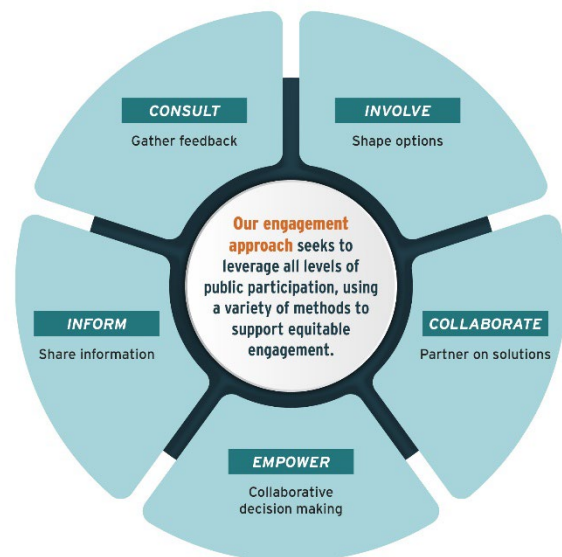
In addition, Ascent prepared an agriculture-focused greenhouse gas (GHG) inventory for the county that evaluated baseline emissions, future projections, and the carbon sequestration value of agricultural lands at risk of conversion. This work quantitatively compared emissions from development against continued agricultural use, providing insight directly relevant to natural and working lands carbon planning. Mendocino County plans to use this work to help inform the agricultural component of its future countywide climate action plan.

### Regional Education and Professional Leadership

Ascent principals are active contributors to CEQA practice statewide and have taught advanced CEQA workshops in Eureka through the Association of Environmental Professionals, reflecting our long-standing engagement with North Coast practitioners and agencies.

## COMMUNITY AND STAKEHOLDER ENGAGEMENT

Robust public engagement is a core component of our work, and we can be responsive and innovative for any need—large or small, in person or online. Ascent designs meaningful public engagement programs to share information and gather input from the public, stakeholders, community groups, commissions/committees, and decision-makers. Our staff are experienced in designing and implementing inclusive community engagement programs structured to quickly obtain meaningful input from a broad segment of the community. Ascent staff have designed and facilitated hundreds of community workshops, design charrettes, focus group meetings, and online engagement activities, working in diverse communities and adapting to different cultures, languages, and political environments.



## PROJECT UNDERSTANDING

Humboldt County's Natural and Working Lands Carbon Stock and Management Study (hereinafter referred to as the study) represents a critical next step in implementing the recently adopted Humboldt



Co-benefits for natural and working lands planning

Source: Tahoe Conservancy

County Regional Climate Action Plan (RCAP). As described in the RCAP, Humboldt County's extensive natural and working lands—which comprise approximately 93 percent of the county's almost 2.3 million acres—play a foundational role in achieving regional and state climate goals by serving as significant carbon sinks and supporting a wide range of related co-benefits, including resource efficiency, green jobs, and increased resilience. Through Measure CS-3, the RCAP explicitly calls for the development of a comprehensive, countywide carbon stock inventory and sequestration analysis to establish a defensible baseline, quantify sequestration potential, and ultimately guide future land management and policy decisions. This study, and any subsequent work that is conducted as a result of it, will operationalize many of the carbon sequestration components of the RCAP and position the County to pursue funding opportunities tied to natural and working lands.

In addition, Humboldt County is facing increasing exposure to climate change that underscores the urgency of this study. Climate hazards like extreme heat, drought, flooding and sea level rise, and—most critically pertaining to natural and working lands—wildfire are already shifting in frequency, duration, and/or intensity as a result of climate change. According to [Cal-Adapt](#), compared to the historic timescale of 1961–1990 and depending on current and future global GHG emissions:

- ▶ Average annual maximum temperature in Humboldt County is projected to rise between 3.4 and 4.2 degrees Fahrenheit (°F) by mid-century (2035–2064) and by up to 7.5°F by late-century (2070–2099).
- ▶ The average annual number of extreme heat days (i.e., days above 83.2°F) in Humboldt County is projected to rise from 4 days to as many as 31 days by late-century (2070–2099).
- ▶ A notable increase is projected across all drought-related indicators (e.g., Keetch-Byram Drought Index, Standardized Precipitation-Evaporation Index) through the mid-century (2035–2064) and late-century (2070–2099) timescales.
- ▶ The average annual area burned by wildfire may more than double by late-century (2070–2099) in Humboldt County.

Inland areas of the county (e.g., in and around the Six Rivers National Forest) are particularly vulnerable to potentially large, high-intensity wildfires due to high concentrations of accumulated vegetation/fuels, coupled with conditions that are becoming more suitable for wildfire ignition and spread as a result of climate change. Wildfire, and climate hazards in general, jeopardize the long-term stability of Humboldt County's carbon stock as widespread damage across the county's natural and working lands could release stored carbon and degrade ecological systems that enable ongoing sequestration. In this context, understanding where carbon is stored, how it may change over time, and which management strategies best enhance long-term sustainability and resilience of natural and working lands is essential.

The need for this study is further heightened by an existing data and planning gap (which is also identified in the RCAP). The County currently lacks a consistent, spatially explicit, and locally calibrated understanding of its carbon stock and sequestration potential. The study will fill that gap through two integrated components: (1) a carbon stock inventory, which will establish a countywide baseline of existing carbon stocks across natural and working lands and evaluate changes over time, and (2) a carbon sequestration feasibility study, which will build on the inventory results to identify land management strategies and best practices that can maintain or enhance carbon sequestration capacity and stability under future conditions. These two components, and the study as a whole, are intended to inform the forthcoming 2030 update of the RCAP, enabling the County to incorporate carbon sequestration estimates into its GHG accounting framework. The study will support the County's pathway toward carbon neutrality by 2045, where the sequestration taking place in natural and working lands plays a critical role in addressing remaining emissions beyond traditional GHG reduction efforts. In addition to supporting the County's climate objectives, the study will serve as a decision-support tool that advances other related County objectives.

Ascent recognizes that doing this work is inherently complex and highly technical, requiring the integration of multiple datasets, advanced geospatial analysis, carbon accounting methodologies, and various modeling approaches. The study must balance scientific rigor with practical applicability, and it requires careful alignment with evolving state guidance, legislation, etc. Successfully delivering this study demands a consultant team with demonstrated expertise in this space, which is something we can proudly provide (see our experience detailed above). Ascent also brings direct experience supporting projects funded through the Sustainable Agricultural Lands Conservation (SALC) Program, by which this study is being supported. Our familiarity with SALC Program requirements will further support project delivery that is compliant and timely.

## PROJECT APPROACH AND SCOPE OF WORK

The following presents our proposed approach for the Humboldt Natural and Working Lands Carbon Stock and Management Study. We have added subtasks and scope refinements to clarify and align tasks for successful project completion.

### TASK 1. Project Planning Framework

#### Task 1.1. Kickoff Meeting

A kickoff meeting is key to establishing a strong foundation for project success. Ascent will hold a virtual kickoff meeting with County staff to confirm project expectations and establish a clear, shared understanding of the scope, objectives, and desired outcomes for the project. The meeting will focus on scope refinements and clarifications, roles and responsibilities, communication protocols, and data sources and potential gaps, among other items. We will also work with the County to confirm key stakeholders and coordination needs, ensuring alignment with subsequent tasks (see Task 1.3 for our understanding of key stakeholders).

Following the kickoff meeting, Ascent will prepare a finalized and refined project work plan within 30 days that reflects mutually agreed upon objectives, methodologies, and assumptions. This work plan will be delivered as a Word document and will also include an updated list of guiding questions and non-narrative outputs to assess existing and potential carbon sequestration in Humboldt County, incorporating input from County staff. Ascent will prepare a detailed agenda for the kickoff meeting and distribute meeting notes following the meeting.

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**Task 1.1 Deliverables**

- ✓ Agenda and meeting notes for kickoff meeting (electronic)
- ✓ Finalized/refined project work plan (electronic)

**Task 1.1 Responsibilities**

- ✓ Schedule and facilitate kickoff meeting (Ascent)
  - ✓ Participate in kickoff meeting (County)
  - ✓ Provide relevant literature and data (County)
- 

**Task 1.2. Ongoing Project Management**

Ascent understands that strong project management is fundamental to any planning effort. We envision our working relationship with the County as highly collaborative, which requires consistent coordination throughout the duration of the project to ensure timely, organized, and high-quality delivery of all work products. The Ascent project management team will organize and facilitate regular (e.g., virtual coordination meetings every two weeks) to discuss project status, which may include the following discussion items: deliverables, upcoming tasks or milestones, project schedule, and any other critical path items that are crucial to the project, like assumptions and data needs. To support these meetings, we will prepare agendas in advance and distribute meeting notes documenting key decision points and action items.

In addition to regular coordination meetings, Ascent will establish and maintain a shared online workspace (i.e., a SharePoint folder) for document exchange, deliverable submittals and reviews, and overall project coordination. This task will also include preparation of monthly progress reports summarizing completed work, ongoing and upcoming activities, and budget status (submitted with invoices consistent with County requirements), as well as support for any administrative needs and internal project management needs that arise over the course of the project. We have worked on several projects funded by SALC grants and are familiar with the grant reporting and invoicing requirements.

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**Task 1.2 Deliverables**

- ✓ Agendas and meeting notes for regular coordination meetings (electronic)
- ✓ Monthly invoices and progress reports (electronic)

**Task 1.2 Responsibilities**

- ✓ Schedule and facilitate regular coordination meetings (Ascent)
  - ✓ Develop and maintain project schedule and shared online workspace (Ascent)
  - ✓ Manage ongoing administrative and project management needs (Ascent)
  - ✓ Participate in regular coordination meetings (County)
- 

**Task 1.3. Stakeholder Engagement**

Stakeholder engagement will be a critical component of this project. Based on our experience supporting similar natural and working lands studies throughout California, we have found that extensive and robust stakeholder engagement is essential to ensuring project success and that all analyses/deliverables are technically sound and locally grounded. While the Request for Proposals (RFP) requests a public kickoff meeting with local landowners on existing land management practices (reflected in Task 1.3.1), we recommend a more comprehensive and iterative approach (reflected in optional Tasks 1.3.2 through 1.3.5) to support data validation, refine assumptions, and develop strategies that can meaningfully support natural and working lands and carbon sequestration in Humboldt County.

We approach natural and working lands planning in a highly collaborative way, allowing us to blend our technical expertise with the community's goals, needs, and knowledge. We can provide the County with expanded stakeholder engagement to solicit and obtain input on land management practices, barriers, opportunities, partnerships, and near-term actions to be included in the study.

Ascent will work with the County to engage a wide range of stakeholders and groups representing natural and working land interests, which may include local landowners, Humboldt County Resource Conservation District (HCRCD), Humboldt County Farm Bureau, Northcoast Regional Land Trust, North Coast Resource Partnership, Humboldt County Fire Safe Council, academic partners (e.g., University of California Cooperative Extension, Cal Poly Humboldt), utilities (e.g., Pacific Gas & Electric Company, Redwood Coast Energy Authority, Humboldt Community Services District), Tribes (e.g., Hoopa Valley Tribe, Yurok Tribe, Blue Lake Rancheria, Wiyot Tribe, Bear River Band of the Rohnerville Rancheria), local organizations (e.g., Save the Redwoods League, Mattole Restoration Council, Baduwa't Watershed Council), incorporated cities in Humboldt County, and relevant state and federal agencies (e.g., California Department of Forestry and Fire Protection [CAL FIRE], CARB, California Natural Resources Agency, US Forest Service, Bureau of Land Management). Generally, engagement activities identified in the following subtasks will be designed to gather input at key stages throughout the project.

#### **Task 1.3.1. Public Workshop**

Ascent will prepare for and facilitate an in-person public workshop to engage local landowners and stakeholders and gather input on existing land management practices to inform the Feasibility Study Report (which will be prepared as part of Task 3.1). The workshop will be designed to clearly communicate the project's purpose, approach, and preliminary findings (as appropriate, based on timing), while also creating opportunities for participants to provide input on current practices, challenges, and opportunities for carbon sequestration. Ascent will work with County staff to determine the most effective workshop format (i.e., virtual, in-person, or hybrid) and logistics to encourage participation and constructive dialogue. Ascent will prepare all workshop materials, support outreach and coordination with the County, facilitate the workshop, and prepare a workshop summary that documents key themes, insights, and feedback to inform subsequent tasks.

#### **Task 1.3.2. Additional Public Workshop (optional)**

To further enhance stakeholder input and support transparency throughout the project, Ascent can prepare for and facilitate an additional virtual public workshop. This workshop will offer opportunities to share interim findings, demonstrate how prior stakeholder input has been incorporated, and gather additional feedback to refine analyses or recommendations. We will prepare all workshop materials, support outreach and coordination with the County, facilitate the workshop, and prepare a workshop summary that documents key themes, insights, and feedback to inform subsequent tasks.

#### **Task 1.3.3. Stakeholder Working Group (optional)**

To reflect the evolving nature of carbon stock and sequestration quantification, if desired, we will convene a working group of stakeholders throughout the development of the study to provide technical assistance and feedback, which would consist of representatives from relevant regional, state, and federal agencies, Tribes, conservation groups, academia, and other technical experts. The working group would meet up to three times during the project to provide key insights into data gaps, metrics for the inventory, considerations for the forecast scenarios, and/or development of carbon sequestration strategies. The stakeholder working group would also provide high-level feedback on the key project issues and guiding questions and provide feedback or coordination on land management practices.

#### Task 1.3.4. Focus Groups (optional)

We can hold focus groups with organizations and stakeholders that represent specific types of carbon stock and sequestration potentials. Possible focus groups include Open Space and Conservation, Rangelands and Croplands, and Forests. These focus groups could provide feedback on challenges and opportunities related to maintaining and enhancing carbon stock. Each focus group would be held independently with at least two members of the Ascent team, with support from County staff. A total of up to four focus group meetings could be held at key project milestones.

Example feedback received from a focus group:

##### Barriers

- Challenges coordinating across agencies
- Limited funding and public agency staff capacity
- Lack of incentives
- Limited ecologically appropriate methods

##### Opportunities

- Apply soil regenerative techniques
- Promote carbon farming practices
- Use prescribed grazing
- Develop a carbon credit program

#### Task 1.3.5. Online Engagement (optional)

To facilitate additional transparency and feedback throughout the study development process, Ascent can develop and host a project website using Esri's ArcGIS Hub to serve as the central portal/platform for information, engagement, and feedback (an expanded version of the Hub site that will share spatial data, discussed further in Task 1.4). The site will bring together interactive features in a single user-friendly interface, allowing the public to access materials, track progress, and provide input through simple surveys or map-based activities. Ascent will update the site regularly to support timely communication and participation.

The project website will host interactive mapping of lands in Humboldt County with the attributes available for viewing and exporting. This can include land cover, owner, and the aboveground and belowground carbon stock inventory. The website will include informational components based on the study and include narrative, photos, and background on the importance of nature-based carbon solutions such that the website would present as an interactive version of the feasibility study, available for public consumption. Ascent will work with the County to ensure the website matches the County's branding for the theme, color scheme, and fonts.

#### Task 1.3 Deliverables

- ✓ Materials (i.e., presentation, flyers, agenda, summary) for one public workshop (electronic)
- ✓ Materials for one additional public workshop (electronic) (if optional Task 1.3.2 is selected)
- ✓ Materials for up to three stakeholder working group meetings (electronic) (if optional Task 1.3.3 is selected)
- ✓ Materials for up to four focus group meetings (electronic) (if optional Task 1.3.4 is selected)
- ✓ ArcGIS Hub development and management (electronic) (if optional Task 1.3.5 is selected)

#### Task 1.3 Responsibilities

- ✓ Schedule and facilitate one public workshop (Ascent and County)
- ✓ Schedule and facilitate one additional public workshop (Ascent and County) (if optional Task 1.3.2 is selected)
- ✓ Schedule and facilitate up to three working group meetings (Ascent and County) (if optional Task 1.3.3 is selected)
- ✓ Schedule and facilitate up to four focus group meetings (Ascent and County) (if optional Task 1.3.4 is selected)
- ✓ Public noticing for one public workshop (County)
- ✓ Public noticing for one additional public workshop (County) (if optional Task 1.3.2 is selected)
- ✓ Review ArcGIS content (County) (if optional Task 1.3.5 is selected)

#### Task 1.4. Literature and Data Review

Ascent will conduct a comprehensive review of existing literature, datasets, tools, policies, laws, regulations, and other related studies and projects to establish the technical foundation for the study. Our

approach will evaluate the applicability, strengths, and limitations of each resource, especially as it pertains to estimating carbon stock and sequestration opportunities in Humboldt County. Drawing on our experience, we will assess consistency across datasets, identify preferred methodologies, and highlight key assumptions that will shape the technical work under subsequent tasks. This effort will also include identifying critical data gaps, uncertainties, assumptions, and opportunities to leverage or refine available information to support study analyses. Resources that will be reviewed include the following:

- ▶ [CARB Natural and Working Lands Carbon Inventory, 2025 Edition](#)
- ▶ [California’s Natural and Working Lands Climate Smart Strategy](#)
- ▶ [California’s Nature-Based Solutions Climate Targets](#)
- ▶ [CARB 2022 Scoping Plan for Achieving Carbon Neutrality, Natural and Working Lands documents](#)
- ▶ [Carbon Inventory Estimates for the North Coast Resource Partnership](#)
- ▶ [2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories](#)
- ▶ [HCRCD Technical Assistance for Carbon Farm Planning](#)
- ▶ [Humboldt County Regional Climate Action Plan](#)
- ▶ [Humboldt County Web GIS Data Layers](#)
- ▶ [CAL FIRE Fire and Resource Assessment Program \[FRAP\] GIS Mapping and Data Analytics](#)
- ▶ [California Department of Water Resources Statewide Crop Mapping](#)
- ▶ [North Coast Resource Partnership Spatial Data and Assessments](#)
- ▶ [California Protected Areas Database and California Conservation Easement Database](#)
- ▶ [USDA Soil Survey Geographic Database](#)
- ▶ [US Forest Service Wildfire Risk to Communities](#)
- ▶ [US Fish and Wildlife Service National Wetlands Inventory](#)
- ▶ Relevant legislation (e.g., AB 32 [Nunez, 2006], Senate Bill [SB] 32 [Pavley, 2016], SB 27 [2021, Skinner], AB 1279 [Muratsuchi, 2022], AB 1757 [Garcia, 2022])
- ▶ Peer-reviewed scientific literature with carbon stock density values specific to Humboldt County ecosystems

We will develop three complementary deliverables to document this effort: (1) A “Library of Resource Materials” spreadsheet (via Microsoft Excel) that catalogs all reviewed resources and provides key details (e.g., resource type, link, author/organization, date of publication); (2) an ArcGIS Hub site that serves as a repository for all spatial data; and (3) a “Literature and Data Review Summary” (via Microsoft Word) that synthesizes findings and clearly describes how each resource will be leveraged to inform the study.

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#### **Task 1.4 Deliverables**

- ✓ Library of Resource Materials spreadsheet (electronic)
- ✓ ArcGIS Hub site for spatial data (electronic)
- ✓ Literature and Data Review Summary (electronic)

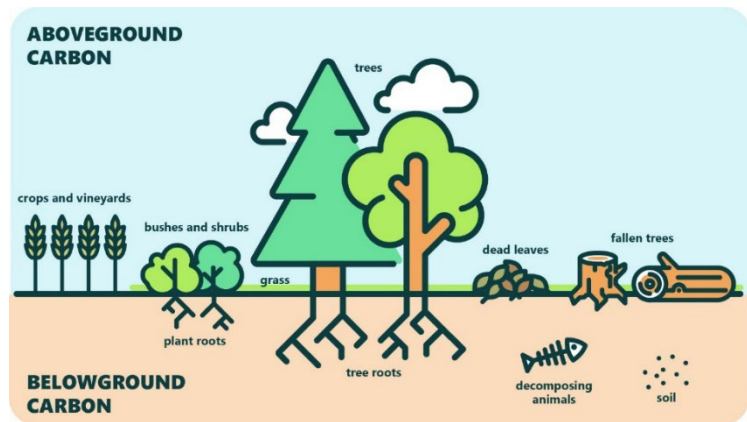
#### **Task 1.4 Responsibilities**

- ✓ Conduct literature and data review (Ascent)
  - ✓ Provide ArcGIS Hub site (Ascent)
  - ✓ Provide GIS and spatial data library (County)
-

## TASK 2. Carbon Stock Inventory and Summary Report

### Task 2.1. Determine Best Methodology

Ascent will evaluate the datasets and other resources compiled in Task 1.4 to develop a defensible and transparent, yet locally calibrated methodology for quantifying carbon stock and sequestration potential in Humboldt County (which will be utilized in Tasks 2.2 and 3.1). This task will begin with a structured evaluation of available datasets assessed against criteria like spatial resolution, data completeness, sensitivity to land management practices, consistency with state guidance, and replicability over time.



As part of this effort, Ascent will define a land cover classification approach tailored to Humboldt County that groups lands into relevant categories (e.g., forests, grasslands, croplands, wetlands) and aligns each category with key carbon pools, including aboveground biomass, belowground biomass, and soil organic carbon. We will also incorporate land ownership data and conservation status using the California Protected Areas Database and the California Conservation Easement Database.

Consistent with best practices used in comparable analyses (and based on our experience conducting such analyses), Ascent will integrate geospatial land cover data with carbon stock density factors (e.g., metric tons of carbon per acre) and soil carbon datasets, allowing for spatially explicit estimation of carbon stock across the countywide landscape. In addition, we will evaluate approaches for estimating carbon sequestration potential over time, including methods that apply scenario-based (e.g., business-as-usual vs. enhanced management scenarios) changes in carbon stock by land cover type derived from state modeling conducted under the 2022 Scoping Plan. These approaches will be assessed for their ability to reflect local land management conditions, incorporate both biomass and soil organic carbon dynamics, account for climate change impacts, and align with CARB's modeling.

We will establish the key assumptions, data inputs, and calculation approaches that will be used to estimate carbon stock and sequestration potential. This effort will include identifying appropriate datasets, defining how they will be applied, and outlining steps to ensure consistency across geographies and land types. Where data gaps or uncertainties exist, we will apply reasonable and well-documented assumptions published in peer-reviewed literature and clearly describe any limitations. All work under this task will be documented in a technical memorandum. The methodology, which will be designed to support CEQA defensibility for the next update to the RCAP and align with state climate and natural and working lands goals, will be applied to subsequent tasks. The technical memorandum will be reviewed by County staff before being finalized and will be attached as an appendix to the Carbon Stock Inventory and Summary Report, prepared under Task 2.3.

#### Task 2.1 Deliverables

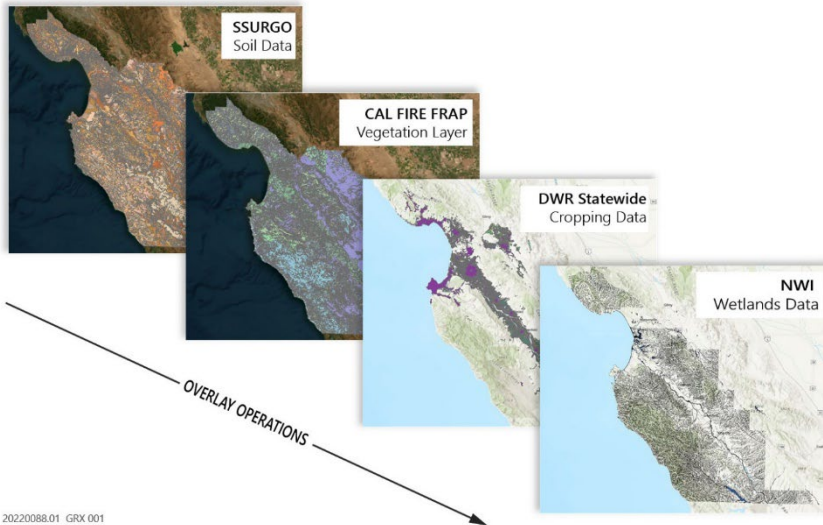
- ✓ Draft and final technical memorandum describing methodology (electronic)

#### Task 2.1 Responsibilities

- ✓ Produce draft and final technical memorandum describing methodology (electronic)
- ✓ Provide one consolidated, nonconflicting set of comments on draft technical memorandum describing methodology in strikethrough/underline (County)

## Task 2.2. Calculate Carbon Stock of Land/Carbon Types

Using the methodology developed and approved under Task 2.1, Ascent will quantify carbon stock across Humboldt County. We will develop two inventories that estimate countywide carbon stock for both a recent year (e.g., 2025) and a prior comparison year (e.g., approximately 10 years prior to the baseline year) using consistent or equivalent methods, datasets, and assumptions. We will evaluate the findings



20220088.01 GRX 001

GIS data layers intersected for carbon stock inventory prepared by Ascent

from the state's 2025 Natural and Working Lands Carbon Inventory to determine years of significant carbon stock loss (often associated with large wildfires) or gain (often associated with regrowth post-fire) to help determine which two years should be evaluated. After determining the inventory years, we will conduct the analysis for both biomass (aboveground and belowground) carbon and soil carbon, using a GIS-based approach supported by Python-based data processing and Excel-based aggregation.

To incorporate soil organic carbon, we anticipate using USDA's Soil Survey Geographic database, which provides statewide soil organic carbon density data.

To incorporate biomass carbon, we will perform a GIS-based analysis to determine the land cover classifications (e.g., redwood forest, montane chaparral) and, with help from Ascent biologists through efforts under Task 1.4, match them to published biomass carbon densities based on plant community characteristics and regional ecology. This approach will both identify the land cover areas and help quantify biomass stock, which requires combining and intersecting several GIS layers with the identified biomass densities.

To assess the land cover classifications, we anticipate using CAL FIRE's FRAP vegetation layer as a basis, supplemented by additional datasets as needed to develop the most refined and accurate classifications possible. The FRAP vegetation layer includes the spatial distribution of habitat types in California, which was created in coordination with the CDFW VegCAMP Program and the USDA Forest Service Remote Sensing Laboratory data. Next, given the prevalence of wetlands in Humboldt County, we will intersect the FRAP vegetation layer with the US Fish and Wildlife Service National Wetlands Inventory (NWI) layer. While the FRAP layer provides comprehensive vegetation coverage for the county, the NWI dataset provides more detailed, specialized mapping of wetlands and deepwater habitats. NWI contains more than 35 million wetlands and deepwater features across the United States and identifies wetlands using aerial imagery based on vegetation, visible hydrology, and geography. Incorporating the NWI layer allows the analysis to more accurately identify and classify wetland areas considering the significant wetland areas in Humboldt County.

Finally, we will intersect the FRAP and NWI layers with the California Department of Water Resources' (DWR's) statewide crop mapping. The DWR dataset provides detailed information on specific crop types, which are not consistently distinguished in the FRAP or NWI layers. To assess biomass carbon stock

values, the resulting total acreages for each detailed land cover classification from analyses will be linked to identified biomass carbon densities. Based on our experience conducting these types of analyses, we can foresee potential challenges with intersecting datasets and recommend practical solutions that support locally explicit results while providing a comprehensive assessment of carbon stock.

In addition, in coordination with the County and relevant stakeholders, we will characterize the soil and biomass carbon stock results by land ownership (e.g., private, easement, city/county), jurisdiction, and other relevant spatial and planning features (e.g., transmission corridors, renewable energy facilities, wildfire risk zones, priority conservation areas). This detail will enable the County to assess and prioritize carbon storage and sequestration opportunity areas.

We will present the results of the two carbon stock inventories in an Excel-based carbon stock tool. The tool will allow the County to sort and filter aboveground and belowground carbon stock results by land cover type, ownership, jurisdiction, and any other important spatial data features. Upon receiving comments from the County on the draft carbon stock tool, we will prepare a final version.

Task 2.2 will answer Guiding Questions 1, 2, 3, 4, and 5 outlined in the RFP:

- Existing carbon stock
- Carbon stock by land cover, ownership, jurisdiction
- Carbon stock change over 10-year period
- Areas of carbon stock increase
- Areas of carbon stock decrease
- Stability of carbon stock through forecasting

**SMUD Study Area Carbon Storage Inventory Dashboard**

**SELECT FILTER**

**County**

- Contra Costa
- El Dorado County
- Placer
- Sacramento
- San Joaquin
- Solano
- Yolo

**PROJECT\_AREA**

- Delta
- Renewable Facilities
- Service Area
- Transmission Corridors

**Soil/Biomass**

- Biomass
- Soil

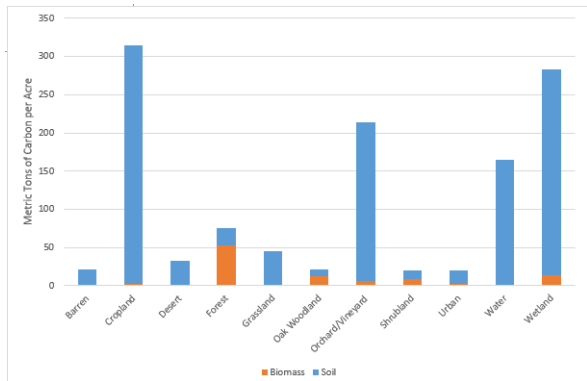
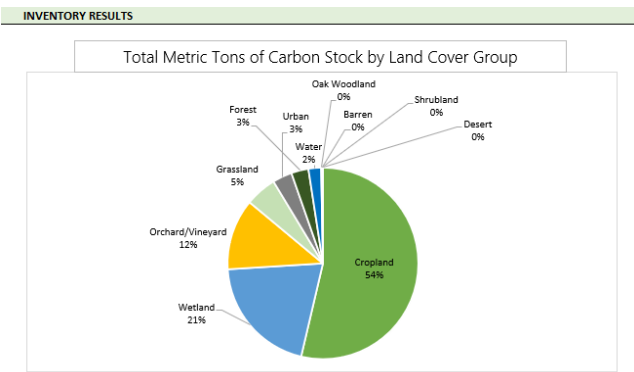
**SFEI/SSURGO**

- Biomass
- SFEI
- SSURGO
- (blank)

**OWNERSHIP**

- City/County
- Easement
- Non-Profit Conservanci...
- Other Federal
- Other State
- Private
- SMUD
- Special Districts
- State Parks
- US Forest Service

Sum of total_MT_C		Column Label	
Row Labels	Biomass	Soil	Grand Total
Barren	-	62,332	62,332
Cropland	497,731	74,225,383	74,723,114
Desert	69	1,753	1,823
Forest	2,836,579	1,229,447	4,066,026
Grassland	231,753	7,150,295	7,382,048
Oak Woodland	164,661	125,542	290,202
Orchard/Vineyard	460,769	16,247,707	16,708,476
Shrubland	25,781	32,932	58,714
Urban	450,848	4,160,013	4,610,861
Water	2	2,987,866	2,987,868
Wetland	1,418,866	26,893,252	28,312,118
<b>Grand Total</b>	<b>6,087,058</b>	<b>133,116,524</b>	<b>139,203,582</b>



Carbon stock Excel tool prepared by Ascent

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**Task 2.2 Deliverables**

- ✓ Draft and final carbon stock Excel tool (electronic)

**Task 2.2 Responsibilities**

- ✓ Prepare carbon stock inventories (for two different years) and carbon stock tool (Ascent)
- 

**Task 2.3. Draft and Final Inventory and Summary Report**

Ascent will prepare a Carbon Stock Inventory and Summary Report that synthesizes the methodology developed in Task 2.1 and the analytical results from Task 2.2 into a clear and accessible document. This report, which will summarize findings in text, tables, maps, and graphics, will also speak directly to the relevant guiding questions established in Task 1.1. A draft of the report will be prepared for County staff review, and comments/feedback from County staff will be incorporated into the final report.

In addition to the report itself, Ascent will develop a clear and concise set of instructions to support future updates to the carbon stock inventory, which will be attached as an appendix to the report. These instructions will outline step-by-step procedures to update estimates, identify required datasets and inputs, and describe key assumptions, methodologies, and potential challenges associated with future updates. We will also provide complete documentation of all underlying data, calculations, and methods used throughout Task 2 to ensure that County staff or future consultants can readily understand, replicate, and build upon the work completed here.

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**Task 2.3 Deliverables**

- ✓ Draft and final Carbon Stock Inventory and Summary Report (electronic)
- ✓ Set of instructions to support future carbon stock inventory updates (electronic)

**Task 2.3 Responsibilities**

- ✓ Prepare Carbon Stock Inventory and Summary Report (Ascent)
  - ✓ Provide one consolidated, nonconflicting set of comments on Carbon Stock Inventory and Summary Report in strikethrough/underline (County)
- 

**TASK 3. Carbon Sequestration Feasibility Study + Natural and Working Lands Carbon Stock and Management Study Report****Task 3.1. Feasibility Study Report**

Informed by the methodology developed in Task 2.1 and the carbon stock inventory results from Tasks 2.2 and 2.3, Ascent will prepare a Carbon Sequestration Feasibility Study Report. The report will evaluate the future carbon stock of natural and working lands and will detail strategies and best management practices to sustain and enhance carbon sequestration across Humboldt County. This report will quantify the county's potential to function as a carbon sink and identify opportunities to increase carbon storage while maintaining long-term stability of existing carbon stock.

We will conduct a carbon stock forecast using CARB's 2022 Scoping Plan, which contains the state's natural and working lands carbon stock projections through the year 2045. These projections are consistent with the assumptions used in the 2022 Scoping Plan's strategy to achieve statewide carbon neutrality no later than 2045 and to not lose more than 4 percent of the statewide carbon stock. Two projection scenarios from the 2022 Scoping Plan will be used to understand the impact of significant investment in land management activities on future carbon stock in the study: a business-as-usual (BAU) scenario and the Scoping Plan scenario. The BAU scenario assumes that land management practices from 2001–2014 continue through 2045. The Scoping Plan scenario assumes that the creation of climate-resilient carbon stock is heavily prioritized, resulting in approximately 2.3 million acres treated for fuels management statewide per year. We will apply the percentage changes anticipated for each land cover

type for each scenario to the corresponding land cover classification in the study to estimate which land covers are projected to increase or decrease carbon stock.

After determining future carbon stock by land cover classification, we will work with the County to identify and evaluate land management strategies and restoration actions across key land cover types. This work will be informed by stakeholder input gathered in Task 1.3 and a review of applicable resources compiled in Task 1.4 (along with other resources, as needed). Strategies will be evaluated for their applicability to local conditions, consistency with existing land uses, and implementation feasibility (considering factors like cost, co-benefits, risks, land ownership, and other potential barriers).

Task 3.1 will answer Guiding Question 6 from the RFP:

- Locations for carbon sequestration opportunities
- Land management scenarios
- Land management practices for increased sequestration

Ascent will quantify the potential carbon sequestration benefits associated with selected strategies. We will employ tools such as CDHSP/USDA's COMET Planner tool and scientific literature review to both inform the types of strategies best suited to the county (e.g., carbon farming practices, vegetation management for wildfire mitigation, biomass utilization, wetland restoration) and estimate the potential sequestration benefits. Where possible, this analysis will estimate the magnitude, timing, and distribution of additional carbon sequestration attributable to different strategies, considering both biomass and soil organic carbon. All findings for this task, including the relevant methodological pieces from Task 2.1 and responses to the guiding questions established in Task 1.1, will be summarized in a draft report that will be provided to County staff for review and feedback before finalizing.

### Task 3.1 Deliverables

- ✓ Prepare two carbon stock forecast scenarios aligned with 2022 Scoping Plan (Ascent)
- ✓ Draft and final Carbon Sequestration Feasibility Study Report (electronic)

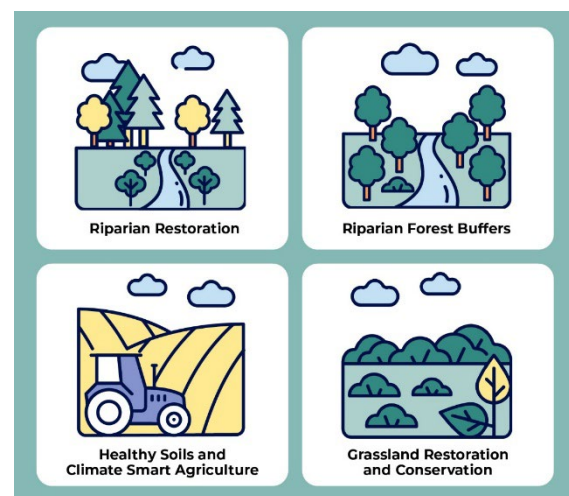
### Task 3.1 Responsibilities

- ✓ Prepare Carbon Sequestration Feasibility Study Report (Ascent)
- ✓ Provide one consolidated, nonconflicting set of comments on Carbon Sequestration Feasibility Study Report in strikethrough/underline (County)

## Task 3.2. NWL Carbon Stock and Management Study

Ascent will prepare the Natural and Working Lands Carbon Stock and Management Study for review by County staff. This effort will include assembly and integration of the work and products of all prior tasks into the report, most notably the Carbon Stock Inventory and Summary Report from Task 2.3 and the Feasibility Study Report from Task 3.1. Prior to initiating preparation of the administrative draft, we will prepare a template for County staff review, identifying the organizational framework and locations where key topics will be addressed. The organization and format of the administrative draft is anticipated to include the following chapters:

- ▶ Executive Summary
- ▶ Chapter 1: Introduction
- ▶ Chapter 2: Background and Key Concepts



Example nature-based solutions on working lands

- ▶ Chapter 3: Carbon Stock Inventory
- ▶ Chapter 4: Carbon Sequestration Potential
- ▶ Chapter 5: Implementation and Next Steps
- ▶ Appendices

This outline is one example of how information could be presented. We will work with County staff to understand expectations, tailor this outline, and confirm tone and format, balance between information presented in chapters and appendices, and overall design of the document. Upon approval of the study outline, we will prepare administrative and screencheck draft study documents and submit them to County staff for review and feedback. Following receipt of County staff comments on the screencheck draft, we will prepare a public draft that will be released for a 30-day public review period. Following this public review period, we will assess comments received, revise as needed, and prepare a final version of the study. We will be responsible for tracking and organizing all comments received on the public draft and will prepare written responses to public comments.

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#### **Task 3.2 Deliverables**

- ✓ Outline, administrative draft, screencheck draft, and public draft Natural and Working Lands Carbon Stock and Management Study (electronic)
- ✓ List of feedback, comments, and responses on public draft Natural and Working Lands Carbon Stock and Management Study (electronic)
- ✓ Final Natural and Working Lands Carbon Stock and Management Study (electronic)

#### **Task 3.2 Responsibilities**

- ✓ Prepare template, outline, administrative draft, screencheck draft, and public draft Natural and Working Lands Carbon Stock and Management Study (Ascent)
  - ✓ Prepare responses to public comments and prepare final Natural and Working Lands Carbon Stock and Management Study (Ascent)
  - ✓ Provide one consolidated, nonconflicting set of comments on the outline, administrative draft, and screencheck draft Natural and Working Lands Carbon Stock and Management Study in strikethrough/underline (County)
  - ✓ Conduct noticing for public draft Natural and Working Lands Carbon Stock and Management Study (County)
  - ✓ Assist with responses to public comments received (County)
- 

#### **Task 3.3. Board of Supervisors Meeting**

Ascent will support the County in preparation for and in-person participation at the Board of Supervisors meeting presenting the final study. Prior to the meeting, we will coordinate with County staff to review presentation materials, provide technical input and supporting content as needed, and ensure key findings and methodologies are clearly and accurately communicated. During the meeting, we will be available to present key technical components and respond to questions as they arise.

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#### **Task 3.3 Deliverables**

- ✓ None

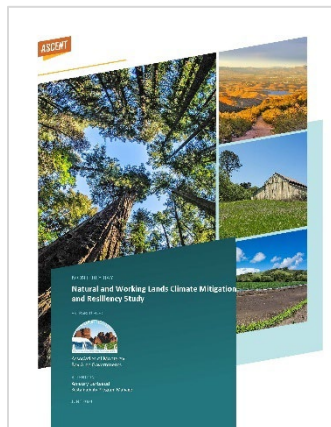
#### **Task 3.3 Responsibilities**

- ✓ Attend meeting and answer questions from Board of Supervisors (Ascent)
  - ✓ Prepare presentation materials and give presentation to Board of Supervisors (County)
-

## 2 / REFERENCES

Clients for whom we have worked in the past provide the best testimony about our dedication to their projects. Our team at Ascent has successfully managed and directed numerous climate action and adaptation projects throughout California. Examples of relevant projects on which Ascent's key staff have worked recently are summarized below. These projects are anticipated to be similar to the types of activities for which Humboldt County may require topical experts under this project. Our team is trusted by clients to deliver tailored climate solutions based on the local context, community input, stakeholder priorities, and agency capacity.

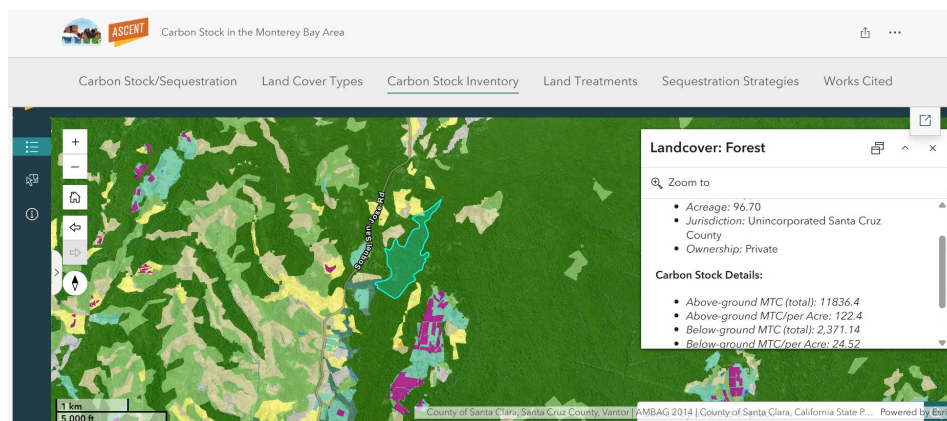
### Monterey Bay Natural and Working Lands Climate Mitigation and Resiliency Study ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS



Ascent assisted AMBAG with the development of its [Monterey Bay Natural and Working Lands Climate Mitigation and Resiliency Study](#). The study included estimating the carbon storage and sequestration potential of various land uses and developing strategies to enhance carbon storage through nature-based solutions. The study created a carbon model that calculates the carbon stored in the natural and working lands of the Monterey Bay Area. Other integral parts of the project included conducting stakeholder engagement, as implementation of the strategies identified in the study will be carried out by many natural and working lands stakeholders to create a more resilient Monterey Bay Area. A StoryMap and spatial version of the carbon inventory can be found [here](#).

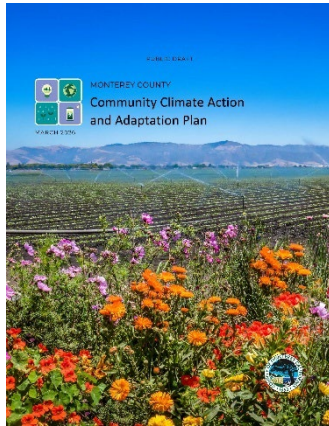
#### REFERENCE

**Amaury Berteaud**, Director  
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AMBAG  
24580 Silver Cloud Court  
Monterey, CA 93940  
p: 831.264.5089  
e: [aberteaud@ambag.org](mailto:aberteaud@ambag.org)



## Monterey County Community Climate Action and Adaptation Plan

### COUNTY OF MONTEREY



Ascent is assisting the County of Monterey with the development of a [Community Climate Action and Adaptation Plan](#), which will serve as a resource for the County to mitigate emissions and adapt to climate change. The CCAAP embeds natural and working lands considerations across both mitigation and adaptation, recognizing their dual role as carbon sinks and frontline systems for climate resilience.

The CCAAP incorporates carbon stock held in agricultural lands, rangelands, forests, wetlands, and open space into the mitigation framework and recognizes that achieving long-term climate goals will require both reductions from built-environment sectors and enhanced sequestration from managed landscapes. Sequestration measures are positioned to complement—not substitute for—emissions reductions.

A significant part of the CCAAP development process has been community and stakeholder engagement. Ascent has led technical discussions with sector working groups, representing various industries throughout the unincorporated county. We have conducted community workshops, given presentations to county committees, and hosted an online website for virtual engagement.

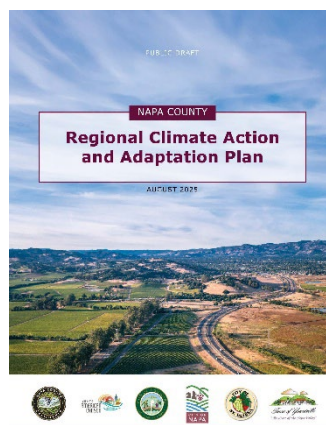
#### REFERENCE

**Cora Panturad**, Sustainability Program Manager  
County of Monterey  
1441 Schilling Place  
Salinas, CA 93901  
p: 831.755.5338  
e: PanturadC@co.monterey.ca.us

## Napa County Regional Climate Action and Adaptation Plan

### COUNTY OF NAPA

Ascent is leading the preparation of the [Napa County Regional Climate Action and Adaptation Plan](#) on behalf of the County of Napa and the incorporated communities in the county. The RCAAP establishes a clear and defensible framework for achieving carbon neutrality by 2045, with natural carbon sequestration identified as the primary pathway for addressing residual emissions after aggressive reductions from energy, transportation, solid waste, and other sectors. Key elements include a carbon stock analysis, sequestration-focused mitigation strategies, quantification of sequestration benefits, and alignment of carbon sequestration strategies with climate adaptation and resilience goals.



#### REFERENCE

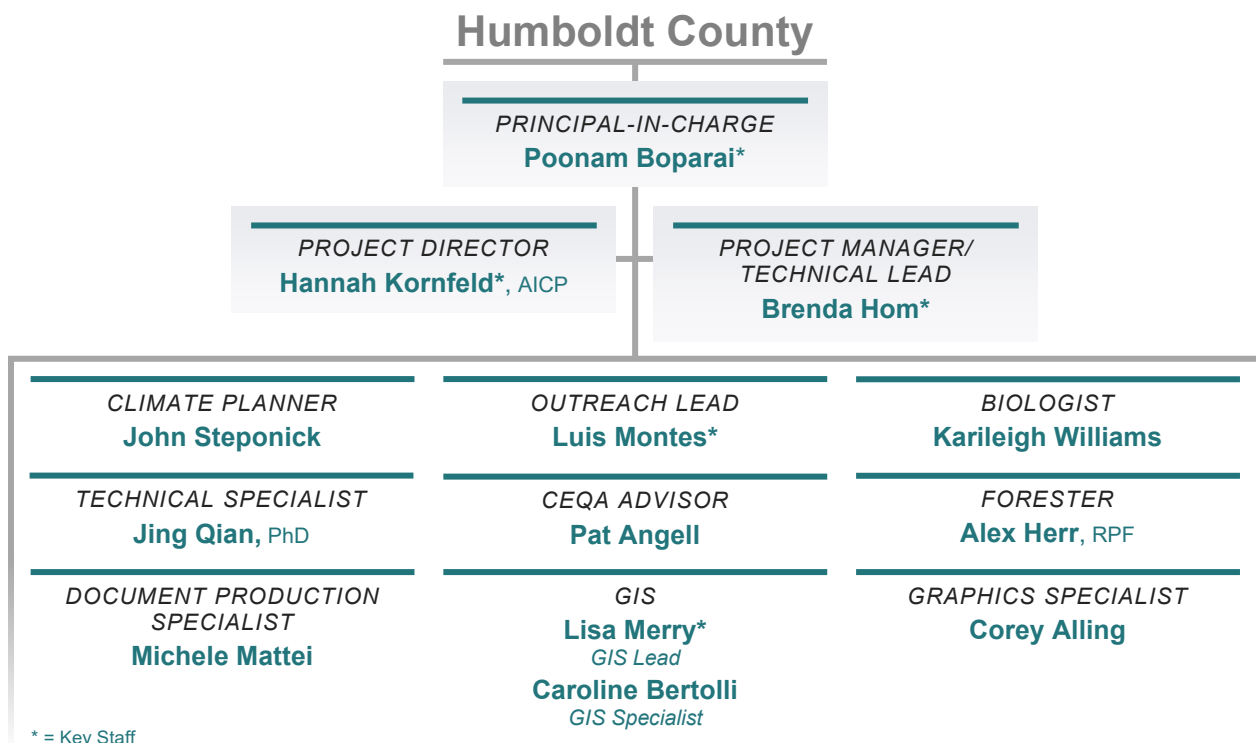
**Brian Bordona**, Director of Planning, Building, and Environmental Services  
County of Napa  
1195 Third Street, Second Floor  
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p: 707.259.5935  
e: Brian.Bordona@countyofnapa.org

## 3 / STAFF EXPERIENCE

We have assembled a team to provide the County of Humboldt with access to the most qualified professionals to assist with the project. The team will be led by Poonam Boparai, who will serve as the principal-in-charge and provide overall quality assurance and strategic guidance. Overseeing the Ascent team's efforts will be Hannah Kornfeld, AICP, as the project director. Brenda Hom will serve as the project manager, managing the team of Ascent staff, leading the coordination of the work, and serving as the day-to-day point of contact for County staff. This management team will be supported by other technical experts from Ascent.

An organizational chart depicting the structure of the team is presented below, followed by brief biographies of team members. Resumes detailing the relevant experience of key staff are included in the appendix.

### Organizational Chart



## Team Members

### Poonam Boparai, Principal-in-Charge



*Education: MS, Environmental Engineering (focus: Air Quality Engineering and Science), University of Illinois Urbana-Champaign; BE, Chemical Engineering, Birla Institute of Technology and Science, Pilani, India*

*Certification: ClearPath 2.0 Trained Professional*

Poonam has over 19 years of experience in the public and private sectors conducting climate action and adaptation planning and natural and working lands analyses. With an educational background in air quality and climate science, she possesses a unique skillset that balances technical expertise with a keen understanding of planning and environmental policy. Poonam leads planning processes informed by robust technical analysis, and inclusive, meaningful engagement to develop effective and locally appropriate climate mitigation, adaptation, and sequestration policies and plans. She has successfully applied her expertise in assisting agencies such as AMBAG, Bakersfield, Monterey County, and San Diego County with natural and working lands analyses and integrating carbon sequestration into planning efforts. Poonam serves on the AEP Climate Change Committee, a group of leaders of climate action planning practices from consulting firms and agencies that have led many of the local climate planning efforts across California.

### Hannah Kornfeld, AICP, Project Director



*Education: Master of City and Regional Planning, Cal Poly San Luis Obispo; BA, Political Science, Environment, University of Michigan, Ann Arbor*

*Certifications: ClearPath 2.0 Trained Professional; American Institute of Certified Planners*

Hannah is the Climate Practice Leader at Ascent. She is focused on meaningful climate action and equitable advancement of clean energy solutions, working to advance Ascent's ability to assist local agencies with their most challenging climate change projects. Hannah specializes in natural and working lands planning and carbon sequestration analyses. She led the preparation of natural and working lands studies for AMBAG and SMUD and has developed methodologies to incorporate carbon sequestration into climate action plans, demonstrated most notably in the Monterey County CCAAP. Hannah also excels at crafting meaningful community and stakeholder engagement activities around natural and working lands topics. She frequently speaks at professional conferences about carbon sequestration analyses, supporting the industry with gaining familiarity with the tools, data, and methods available for conducting natural and working lands analyses.

### Brenda Hom, Project Manager/Technical Lead



*Education: MS, Transportation Technology and Policy, UC Davis; BS, Mechanical Engineering, UCLA*

*Certification: ClearPath 2.0 Trained Professional*

Brenda is a project manager and senior climate action specialist, serving as the Climate Mitigation Manager in Ascent's Climate Action and Adaptation Planning Practice. With experience on over 20 climate action, GHG reduction, and sustainability plans across California, she specializes in GHG quantification, evolving climate policies, and developing quantification templates for GHG inventories and reduction measures. Her experience combines the technical requisites of GHG quantification and the constant evolution of climate change policies, including zero-emission vehicle mandates, building decarbonization, and state strategies to achieve carbon neutrality. Brenda excels in organizing and processing complex sets of data into public-ready summaries through her development of carbon storage inventories and forecasts for Napa County, San Diego County, and SMUD, as well as sequestration strategies such as carbon farming and biomass utilization in the counties of Napa, Mendocino, Monterey, Tuolumne, and San Diego.

### John Steponick, Climate Planner

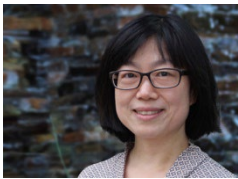


*Education: MS, Disaster Science and Management, University of Delaware; BS, Atmospheric Sciences, The Ohio State University*

*Certification: ClearPath 2.0 Trained Professional*

John is a climate adaptation planner whose education, interests, expertise, and prior experience lie at the intersection of climate change, disasters, environment, and society. He has direct working experience in the fields of disaster recovery, climate change communication, and climate action and adaptation planning. In the context of his role with Ascent, John has led the analysis and development of several climate change vulnerability assessments for city and county clients, evaluating their levels of exposure, sensitivity, adaptive capacity, and vulnerability to various climate hazards. He has also developed robust, locally specific climate change mitigation and adaptation strategies to help clients reduce GHG emissions and build resilience for their assets and surrounding communities in which they serve. In addition, John is experienced in supporting public outreach and community engagement efforts, conducting policy research and interpretation, synthesizing and translating complex information, and writing in an array of styles for different target audiences.

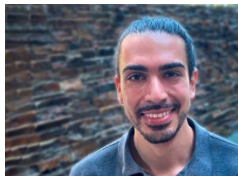
### Jing Qian, PhD, Technical Specialist



*Education: PhD and MS, Civil and Environmental Engineering, Clarkson University, Potsdam, New York; BS, Civil Engineering, Zhejiang University, Hangzhou, Zhejiang, China*

Jing has more than 14 years of experience in environmental engineering. Her expertise is in technical modeling and analysis of carbon sequestration, air quality, greenhouse gas emissions, and energy. Jing is well versed in processing large datasets and geospatial data outputs through Python scripts. She has supported the technical modeling for carbon stock analyses for Alameda County, AMBAG, Bakersfield, and SMUD.

### Luis Montes, Outreach Lead



*Education: MS, Environmental Management, USF; BS, Environmental Policy Analysis and Planning, UC Davis*

*Certification: ClearPath 2.0 Trained Professional*

Luis is a dedicated and enthusiastic professional specializing in public engagement. He is skilled in public speaking and delivering oral presentations and is effective at developing engagement events, outreach materials, community surveys, presentations, reports, visually appealing graphics, and white papers. Luis also works as a climate action planner. Understanding that successful climate initiatives require strong community buy-in and participation, he leverages his expertise to design comprehensive plans that support climate mitigation, carbon sequestration, and climate resilience, helping local jurisdictions achieve their sustainability goals while fostering community health and economic benefits.

### Pat Angell, CEQA Advisor



*Education: BA, Environmental Science, CSU Sacramento; Land Use and Environmental Planning Certificate Program, UC Davis Extension*

An Ascent principal, Pat has more than 30 years of experience serving as a project director and manager and technical analyst for a variety of projects. He specializes in environmental and urban land use planning and has performed tasks for projects such as water and wastewater facilities, energy facilities, flood control, residential subdivisions, mixed-use urban developments, general plans, redevelopment plans, and climate change and sustainability. Pat has overseen the preparation of CEQA compliance documents for climate action plans for counties and cities throughout the state.

### Karleigh Williams, Biologist



*Education: BA, Sustainability Studies, University of Florida; Certificate of Achievement, Field Ecology, Sacramento City College*

Karleigh is a biologist with a strong background in plant ecology and 6 years of experience conducting biological and ecological fieldwork and data analysis in both the public and private sectors. She prepares biological resource analyses for a wide range of projects. Karleigh also conducts field and technical studies such as rare plant surveys, biological reconnaissance surveys, floristic inventories, habitat assessments, invasive weed assessments, and vegetation classification and mapping, and she assists with aquatic resource delineations. Her field experiences have covered many regional areas, including the California coast, and habitat types such as oak woodland, chaparral, riparian, desert, forest, and grassland.

### Alex Herr, RPF, Forester



*Education: BA, English Literature, UC Berkeley*  
*Certifications: Registered Professional Forester (3274), CAL FIRE Certified Archaeological Surveyor, US Forest Service Qualified Timber Cruiser*

Alex is a Registered Professional Forester, providing comprehensive forestry and natural resource consulting services to public agencies, utilities, private landowners, and nongovernmental organizations. His expertise spans forest health grants (CAL FIRE, National Forest Foundation, CFIP, EQIP), fuels treatment, carbon and timber inventories, timber salvage and reforestation, hydropower vegetation management, water rights permitting, and regulatory compliance. Alex's prior roles with previous employers honed his skills in post-fire restoration, mitigation projects, CEQA compliance, and conservation planning. Additional project experience includes conducting baseline assessments for conservation easement planning and assisting with appraisals for both timber and carbon project valuation. With early experience in recreation management, river management, construction, and guiding, Alex brings a diverse background, strong leadership, and a practical understanding of both natural resource stewardship and the communities it serves.

### Lisa Merry, GIS Lead



*Education: MS, Environmental Science and Management, Conservation Planning Specialization, UC Santa Barbara; BS, Environmental Biology and Management, UC Davis*

Lisa is Ascent's GIS Practice Leader with 19 years of professional experience. She has a strong educational background in GIS and database management. Her experience includes resource mapping and preparing the geospatial datasets to support carbon stock inventories. She has experience evaluating wildlife habitats, botanical surveys, and watersheds for purposes of resources management planning and environmental impact analysis. Lisa served as the GIS lead on Ascent's carbon stock inventories for AMBAG, SMUD, Kern County, Alameda County, Napa County, and San Diego County.

### Caroline Bertolli, GIS Specialist



*Education: MS, Geographic Information Systems Technology, University of Arizona; BS, Environmental and Ecosystem Sciences, Washington State University*

Caroline is a GIS specialist with experience delivering geospatial insights to support data-driven decision-making. She brings a strong foundation in remote sensing and spatial data science from her work in precision viticulture research. Her expertise includes geospatial analysis, data visualization, and cartographic design, and she excels at working with complex, large-scale datasets to produce clear, actionable outputs for technical and non-technical audiences alike.

### Michele Mattei, Document Production Specialist



*Education: Heald Business College*

Michele, Ascent's publishing manager, has 18 years of experience in CEQA and environmental planning document publishing. As an emerging expert in document accessibility, she has played a pivotal role in ensuring that Ascent's documents meet the highest standards of accessibility, including compliance with Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act, and WCAG 2.1 Level AA standards. Michele has developed best practices for creating accessible documents, including the use of heading styles, table and figure parameters, logical structure, and other formatting specifications to ensure e-readers can effectively navigate the content. Her leadership of the publishing and editorial team at Ascent has made a substantial impact on the quality and usability of published documents at Ascent.

### Corey Alling, Graphics Specialist



*Education: BA, Communication, Saint Mary's College of California*

Corey is a graphic designer and communications specialist with extensive experience in the climate planning, environmental, and urban design fields. He conducts data and information investigations related to carbon sequestration and natural and working lands planning, climate action and adaptation planning, outdoor recreation planning, and habitat conservation planning. Corey also assists with internet applications for public outreach, such as creating and designing email newsletters, preparing public meeting materials, and producing visually engaging fact sheets, social media graphics, and project-specific branding packages.

## PROJECT EXECUTION AND QUALITY ASSURANCE

Ascent understands that the availability of team members working on the Humboldt Natural and Working Lands Carbon Stock and Management Study is critical to project success. Therefore, only staff with the requisite availability, as well as experience with natural and working planning projects, have been assigned to this project. The Ascent management team, consisting of Poonam Boparai, Hannah Kornfeld, and Brenda Hom, is ultimately responsible for schedule compliance and the quality of work products and takes that responsibility very seriously.

Our philosophy of a "no surprises" approach and the extensive involvement of our most experienced staff enable us to fully achieve project objectives, satisfy government requirements, and fulfill client needs.

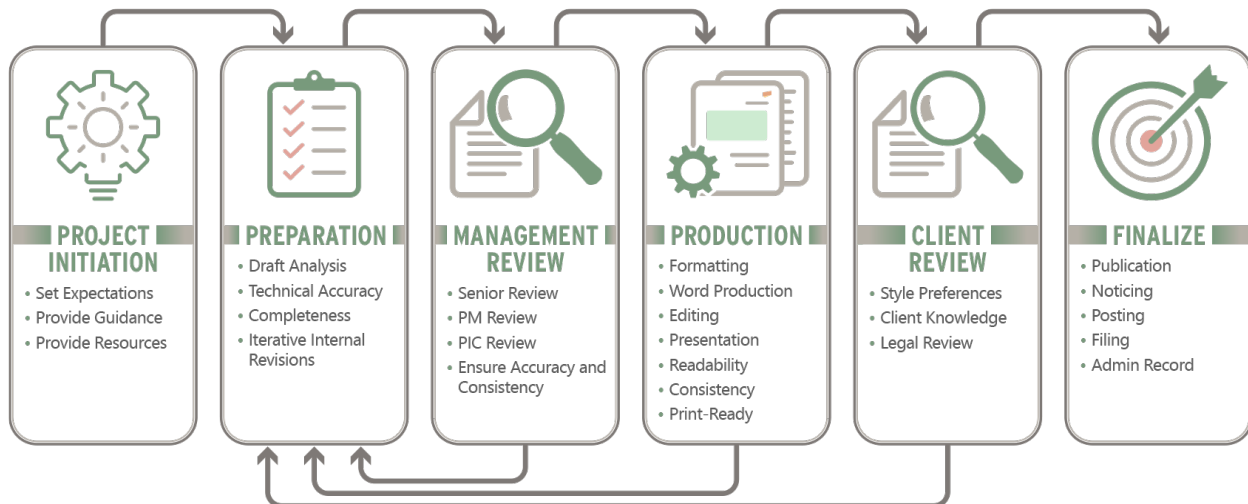
### Schedule and Staffing Controls

We understand the need to perform within fixed and challenging schedules and effectively use time and staff resource management tools to optimize efficiency. Scheduling and workload management systems at Ascent are designed to allocate resources to meet all client due dates, regardless of timing or the number of deadlines in a given period. Tools and systems utilized include project/staff management software (Deltak Vantagepoint), weekly schedule and workload monitoring of technical, graphics, and document production staff; long-range (3 to 6 months) staffing projections to secure availability; and critical-path method and timeline scheduling for tasks and milestones (e.g., Microsoft Planner). Using these proven strategies, Ascent has completed numerous complex projects with demanding schedules that required attentive project management, coordination, and communication.

## Work Product Quality

Ascent understands it is our responsibility to produce high-quality work products that are technically accurate, complete, clear, supported by substantial evidence, and professionally presented. Quality is the cornerstone of what we do, and we achieve this through rigorous attention to our quality management process. From start to finish, every document undergoes multiple reviews to ensure Ascent deliverables exceed industry standards. We will apply these principles to reviews of documents submitted to the County.

Strategies to achieve high quality are embedded throughout our projects, from contract execution and preparation of the deliverable to production of the final work product. For documents prepared by Ascent on behalf of a client, authors use an established Ascent Style Guide to ensure consistency and quality of all documents from the outset of document preparation. We coordinate early in the process to review style and format expectations for each project and provide guidance to the team on these expectations that work best for the client. Every document is reviewed by senior staff and the project principal. This approach ensures that the document's style and content are accurate and that the document's approach, tone, and usefulness meet client expectations.



# 4 / RATES

## FEE SCHEDULE

Professional Staff	Billing Rate
Planner/Biologist/Designer/Analyst I	\$125 to \$165
Planner/Biologist/Designer/Analyst II	\$150 to \$180
Planner/Biologist/Designer/Analyst III	\$160 to \$215
Senior Planner/Biologist/Designer/Analyst I	\$180 to \$230
Senior Planner/Biologist/Designer/Analyst II	\$205 to \$265
Senior Planner/Biologist/Designer/Analyst III	\$245 to \$305
Field Biologist/Monitor	\$125 to \$165
Intern	\$100 to \$115
Director	\$240 to \$330
Principal	\$285 to \$360
Senior Principal	\$350 to \$435
GIS + Graphics	Billing Rate
GIS/Graphics Specialist I	\$130 to \$150
GIS/Graphics Specialist II	\$135 to \$165
Senior GIS/Graphics Specialist	\$150 to \$205
Project + Administrative Support	Billing Rate
Document Production/Publication Specialist	\$130 to \$165
Senior Editor/Project Coordinator	\$145 to \$175
Contracts Coordinator	\$145 to \$170
Contracts Manager	\$155 to \$175
Finance/Accounting Specialist	\$110 to \$165
Senior Finance/Accounting Specialist	\$150 to \$195
Administrative Assistant	\$100 to \$125

Direct Costs	Rates
Reproduction: 8½" by 11"	\$0.07/page (black and white); \$0.26/page (color)
Reproduction: 11" by 17"	\$0.14/page B&W; \$0.52/page color
Reproduction: Plotter	\$5/square foot
Automobile Mileage (IRS rate in effect)	72.5 cents per mile
GPS Unit	\$150/full day, \$500/week
Spotting Scope	\$50/day, \$200/week
Lodging and/or Per Diem	As negotiated
Other Direct Costs	As incurred

Ascent's proposed price for the Humboldt Natural and Working Lands Carbon Stock and Management Study is shown in the spreadsheet that follows the assumptions listed below. We have prepared a budget we believe provides adequate resources based on our past experience. We welcome the opportunity to discuss this budget with the County to ensure our proposal aligns with the County's expectations.

To promote clarity, the following assumptions explain the basis of the proposed price. The price is estimated based on a good-faith, current understanding of the project's needs.

1. **Proposed Price Validity.** The price proposed to carry out the scope of work is valid for 90 days from the date of submittal, after which it may be subject to revision.
2. **Time and Materials.** Work is authorized on a time-and-materials basis and will be billed monthly.
3. **Schedule.** The price is based on the proposed schedule. If the schedule is protracted significantly (more than 60 days) for reasons beyond Ascent's control, a budget amendment may apply to the remaining work. Ascent will consult with the County about a course of action.
4. **Completion of Work.** The scope of work is complete upon the acceptance by County staff of the final deliverable.
5. **Price and Staff Allocation to Tasks.** The proposed price has been allocated to tasks. Work has been assigned to the identified staff or labor category. Ascent may reallocate budget or staff among tasks, as needed, as long as the total contract price is not exceeded.
6. **Meetings and Conference Calls.** The number and duration of proposed meetings and conference calls are specified. If they are exceeded, a budget augmentation would be warranted.
7. **Billing Rates.** Costs were determined based on the proposed scope of work and Ascent's 2026 billing rates. Any budget augmentations or contract amendments in subsequent years will be calculated using updated billing rates, unless precluded by contract terms.
8. **Scope of Analysis.** The price is based on the proposed scope of analysis. If new technical issues, modeling, or analysis is identified after contract execution, a budget amendment would be warranted.
9. **Preliminary Draft Review Cycles and Reviewers.** Preliminary draft review cycles are specified in the scope of work. Preliminary drafts will be reviewed by County staff and not by other agencies or entities.
10. **Consolidated Comments.** The County will provide Ascent with one consolidated set of reconciled, nonconflicting comments on preliminary drafts.



**PRICE PROPOSAL**

**COUNTY OF HUMBOLDT  
Humboldt Natural and Working Lands Carbon Stock and  
Management Study**

May 15, 2026

hourly rate:

	Boparai	Kornfeld	Hom	Steponick	Gian	Montes	Williams	Herr	Angell	Mery	Bertolli	Mattei	Alling
	Principal-in-Charge	Project Director	Project Manager/Technical Lead	Climate Planner	Technical Specialist	Outreach Lead	Biologist	Forester	CEQA Advisor	GIS Lead	GIS Specialist	Document Production Specialist	Graphics Specialist
	\$330	\$250	\$200	\$155	\$185	\$175	\$135	\$160	\$365	\$195	\$130	\$155	\$135

Task 1: PROJECT PLANNING FRAMEWORK	Price	Hours
1.1 Kickoff Meeting	\$ 4,360	20
1.2 Ongoing Project Management (up to 30 check-in meetings, 30 min each)	\$ 29,320	134
1.3.1 Public Workshop (in person)	\$ 21,490	112
1.4 Literature and Data Review	\$ 25,580	154
<b>Subtotal, Task 1</b>	<b>\$ 80,750</b>	<b>420</b>

Task 2: CARBON STOCK INVENTORY AND SUMMARY REPORT	Price	Hours
2.1 Determine Best Methodology	\$ 22,070	124
2.2 Calculate Carbon Stock of Land/Carbon Types	\$ 65,670	374
2.3 Draft and Final Inventory and Summary Report	\$ 20,090	112
<b>Subtotal, Task 2</b>	<b>\$ 107,830</b>	<b>610</b>

Task 3: CARBON SEQUESTRATION FEASIBILITY STUDY + NATURAL AND WORKING LANDS CARBON STOCK AND MANAGEMENT STUDY REPORT	Price	Hours
3.1 Feasibility Study Report	\$ 53,390	308
3.2 NWL Carbon Stock and Management Study	\$ 38,970	214
3.3 Board of Supervisors Meeting	\$ 10,860	50
<b>Subtotal, Task 3</b>	<b>\$ 103,220</b>	<b>572</b>

<b>LABOR SUBTOTAL</b>	<b>\$ 291,800</b>	<b>1,602</b>
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	4	8	24	40					2	16	30		
	4	20	80	120	60					30	60		
	4	8	30	60								6	4
	<b>12</b>	<b>36</b>	<b>134</b>	<b>220</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>46</b>	<b>90</b>	<b>6</b>	<b>4</b>
	6	12	80	100		24	20	12		12	24	10	8
	8	20	60	100								16	10
	4	12	30										4
	<b>18</b>	<b>44</b>	<b>170</b>	<b>200</b>	<b>0</b>	<b>24</b>	<b>20</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>24</b>	<b>26</b>	<b>22</b>
	<b>48</b>	<b>138</b>	<b>454</b>	<b>500</b>	<b>60</b>	<b>68</b>	<b>30</b>	<b>12</b>	<b>2</b>	<b>74</b>	<b>154</b>	<b>32</b>	<b>30</b>
	<b>\$ 15,840</b>	<b>\$ 34,500</b>	<b>\$ 90,800</b>	<b>\$ 77,500</b>	<b>\$ 11,100</b>	<b>\$ 11,900</b>	<b>\$ 4,050</b>	<b>\$ 1,920</b>	<b>\$ 730</b>	<b>\$ 14,430</b>	<b>\$ 20,020</b>	<b>\$ 4,960</b>	<b>\$ 4,050</b>

<b>REIMBURSABLE EXPENSES</b>	<b>\$ 3,500</b>
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Printing	\$ 500
Mileage/Parking/Travel	\$ 3,000
Postage	\$ -
Field Equipment	\$ -
Other (please specify)	\$ -

**ASSUMPTIONS**

Assumptions that explain the basis of the proposed price are enclosed and are an integral part of this proposed scope for work for services.

<b>TOTAL PRICE</b>	<b>\$ 295,300</b>
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**OPTIONAL TASKS**

The following tasks are presented as optional services and are contingent upon authorization of the client.

Task 1: PROJECT PLANNING FRAMEWORK	Price	Hours
1.3.2 Additional Public Workshop (1 workshop, virtual)	\$ 14,080	74
1.3.3 Stakeholder Working Group (up to 3 meetings)	\$ 22,455	116
1.3.4 Focus Groups (up to 4 meetings)	\$ 28,410	146
1.3.5 Online Engagement	\$ 39,630	234
<b>Subtotal, Optional Task 1</b>	<b>\$ 104,575</b>	<b>570</b>

<b>LABOR SUBTOTAL (Optional Tasks)</b>	<b>\$ 104,575</b>	<b>570</b>
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	2	8	20	10									
	6	12	32	20		32				3	3		2
	8	16	40	24		40				4	4		
	4	10	26	40	24	50				12	60		8
	<b>20</b>	<b>46</b>	<b>118</b>	<b>94</b>	<b>24</b>	<b>172</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>67</b>	<b>0</b>	<b>10</b>
	<b>20</b>	<b>46</b>	<b>118</b>	<b>94</b>	<b>24</b>	<b>172</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>67</b>	<b>0</b>	<b>10</b>
	<b>\$ 6,600</b>	<b>\$ 11,500</b>	<b>\$ 23,600</b>	<b>\$ 14,570</b>	<b>\$ 4,440</b>	<b>\$ 30,100</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 3,705</b>	<b>\$ 8,710</b>	<b>\$ -</b>	<b>\$ 1,350</b>

## 5 / TIMELINE

Ascent can begin work immediately. We will strive to exceed your expectations by serving as an extension of County staff. Our management style is proactive, and we look for opportunities to streamline the process, where feasible.

The Ascent team will manage the project so that the schedule established at the beginning is maintained to the degree it is under our control. The table on the next page presents our proposed schedule for the Humboldt Natural and Working Lands Carbon Stock and Management Study with duration and estimated due date by task. Based on our prior experience, we are fully capable of meeting this schedule.

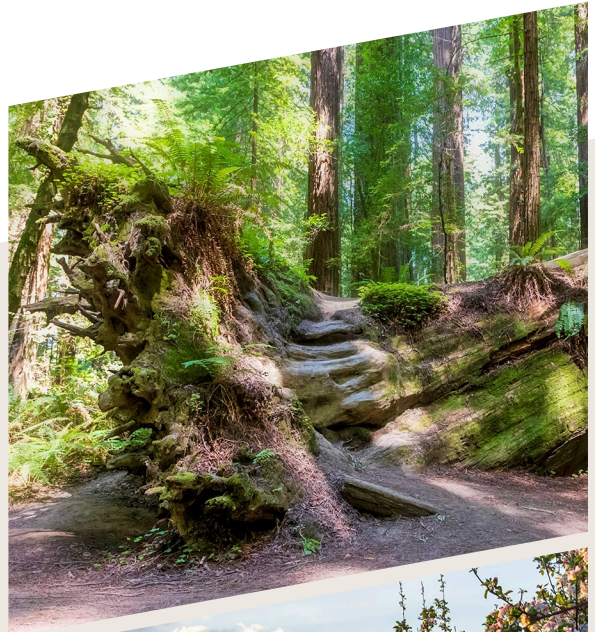
The schedule for the requested scope of work is up to 25 months, which would allow the County to complete the project and expend funds from its grant well before the deadline of January 2029. The timeline reflects that some tasks and deliverables should begin prior to the completion of previous tasks.

Work Product/Milestone	Jul-26	Aug-26	Sept-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sept-27	Oct-27	Nov-27	Dec-27	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28
Receive Notice to Proceed	█																								
Task 1.1: Kickoff Meeting	█																								
Task 1.2: Ongoing Project Management	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Task 1.3.1: Public Workshop				█																					
Task 1.3.2: Additional Public Workshop (optional)																█									
Task 1.3.3: Stakeholder Working Group (optional)						█					█					█					█				
Task 1.3.4: Focus Groups (optional)							█										█	█							
Task 1.3.5: Online Engagement (optional)						█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Task 1.4: Literature and Data Review		█	█	█	█																				
Task 2.1: Determine Best Methodology					█	█	█	█																	
Task 2.2: Calculate Carbon Stock								█	█	█	█	█	█												
Task 2.3: Draft and Final Inventory and Summary Report													█	█	█	█									
Task 3.1: Feasibility Study Report																█	█	█	█	█	█	█			
Task 3.2: NWL Carbon Stock and Management Study																						█	█	█	█
Task 3.3: Board of Supervisors Meeting																									█

## 6 / INSURANCE REQUIREMENTS

Ascent has reviewed the County of Humboldt Professional Services Agreement and agrees with the terms and conditions, including the insurance and indemnification provisions. We have included a copy (image) of Ascent's Certificate of Liability Insurance on the next page.





# Appendix

## Resumes



# Poonam Boparai

PRINCIPAL-IN-CHARGE

YEARS OF EXPERIENCE 19

## EDUCATION

MS, Environmental Engineering (focus: Air Quality Engineering and Science), University of Illinois Urbana-Champaign

BE, Chemical Engineering, Birla Institute of Technology and Science, Pilani, India

## CERTIFICATIONS

ClearPath 2.0 Trained Professional

Poonam Boparai is an Ascent principal and the firm's Southern California regional director. She has over 19 years of experience in the public and private sectors conducting climate action and adaptation planning and natural and working lands analyses. She has a unique skillset that combines technical expertise with a keen understanding of planning and environmental policy. Poonam leads planning processes that are informed by robust technical analysis and by inclusive, meaningful engagement of agency and community stakeholders to develop effective and locally appropriate and effective climate mitigation, adaptation, and sequestration policies and plans. She has successfully applied her expertise in assisting agencies such as the County of Monterey, Association of Monterey Bay Area Governments, County of San Diego, and City of Bakersfield with natural and working lands analyses and integrating carbon sequestration into planning efforts.

## SELECTED PROJECT EXPERIENCE

### Monterey Bay Natural and Working Lands Climate Mitigation and Resiliency Study

Association of Monterey Bay Area Governments

Principal-in-Charge

Ascent assisted AMBAG with the development of its Natural and Working Lands Climate Mitigation and Resiliency Study. The study included estimating the carbon storage and sequestration potential of various land uses and developing strategies to enhance carbon storage through nature-based solutions. The study created a carbon model that calculates the carbon stored in the natural and working lands of the Monterey Bay Area. Other integral parts of the project included conducting stakeholder engagement, as implementation of the strategies identified in the study will be carried out by many natural and working lands stakeholders to create a more resilient Monterey Bay Area. Poonam served as the principal-in-charge, overseeing Ascent's work on the project and providing quality assurance and technical oversight.

### Monterey County Community Climate Action and Adaptation Plan

County of Monterey

Principal-in-Charge

Ascent is assisting the County of Monterey with its effort to develop a Community Climate Action and Adaptation Plan (CCAAP) for 2030 and update its Municipal Climate Action Plan. The CCAAP will focus on developing strategies and programs to meet stringent GHG reduction targets through carbon-free electricity, building decarbonization, transportation decarbonization, zero waste, and carbon sequestration from working lands and urban forestry. Poonam serves as the principal-in-charge, overseeing Ascent's work on the project and providing quality assurance and technical oversight.

### On-Call Sustainable Communities Consulting Services

San Diego Association of Governments

Principal-in-Charge

Poonam is serving as principal-in-charge, managing the Category 5. Sustainable and Resilient Communities team. Ascent supports SANDAG in integrating land use and transportation strategies to adapt to and mitigate climate change impacts; conserve natural and working lands, and reduce GHG emissions from all sectors, but particularly from the transportation sector; and focus growth on mobility hubs and away from areas with high natural resource value and/or vulnerability to risk.

## OTHER RELEVANT PROJECT EXPERIENCE

- ▶ Bakersfield Comprehensive Climate Action Plan, Principal-in-Charge
- ▶ Carlsbad Climate Action Plan Update, Principal-in-Charge
- ▶ Encinitas Climate Action Plan, Principal-in-Charge
- ▶ Escondido Climate Action Plan, Principal-in-Charge
- ▶ Imperial Valley Regional Climate Action Plan, Principal-in-Charge
- ▶ Irvine Climate Action and Adaptation Plan, Principal-in-Charge
- ▶ Lake Elsinore Climate Action and Adaptation Plan, Principal-in-Charge
- ▶ San Diego County Climate Action Plan, Principal-in-Charge
- ▶ San Diego Climate Action Implementation Plan, Principal-in-Charge



# Hannah Kornfeld, AICP

PROJECT DIRECTOR

YEARS OF EXPERIENCE 11

## EDUCATION

Master of City and Regional Planning,  
California Polytechnic State University,  
San Luis Obispo

BA, Political Science, Environment,  
University of Michigan, Ann Arbor

## CERTIFICATIONS

ClearPath 2.0 Trained Professional

American Institute of Certified Planners  
(No. 31389)

Hannah is the Climate Practice Leader at Ascent, where she oversees the Climate Action and Adaptation Planning Practice. She is focused on meaningful climate action and equitable advancement of clean energy solutions, working to advance Ascent's ability to assist local agencies with their most challenging climate change projects. Hannah specializes in natural and working lands planning and carbon sequestration analyses. She led the preparation of natural and working lands studies for AMBAG and SMUD and has developed methodologies to incorporate carbon sequestration into climate action plans, demonstrated most notably in the Monterey County CCAAP. Hannah also excels at crafting meaningful community and stakeholder engagement activities around natural and working lands topics. Hannah frequently speaks at professional conferences about carbon sequestration analyses, supporting the industry with gaining familiarity with the tools, data, and methods available for conducting natural and working lands analyses. Hannah serves on ICLEI USA's ClearPath 2.0 Technical Working Group to support ongoing development of the innovative climate planning platform and ensure it meets local agency needs.

## SELECTED PROJECT EXPERIENCE

### Monterey Bay Natural and Working Lands Climate Mitigation and Resiliency Study

Association of Monterey Bay Area Governments

Project Manager

Ascent assisted AMBAG with the development of its Natural and Working Lands Climate Mitigation and Resiliency Study. The study included estimating the carbon storage and sequestration potential of various land uses and developing strategies to enhance carbon storage through nature-based solutions. The study created a carbon model that calculates the carbon stored in the natural and working lands of the Monterey Bay Area. Other integral parts of the project included conducting stakeholder engagement, as implementation of the strategies identified in the study will be carried out by many natural and working lands stakeholders to create a more resilient Monterey Bay Area. Hannah served as the project manager and oversaw all aspects of the project.

### SMUD Nature-Based Carbon Solutions and Biodiversity Program Feasibility Study

Sacramento Municipal Utility District

Project Manager

As a subcontractor to GEI Consultants, Ascent supported the technical analysis for SMUD's Nature-Based Carbon Solutions and Biodiversity Program Feasibility Study. Ascent developed a spatial baseline of carbon stock within SMUD's service territory and surrounding areas of energy generation, quantifying the future carbon stock over the coming decades, and identifying carbon sequestration potential for land management practices to support SMUD's climate mitigation and resilience goals. In addition, Ascent used the results of the spatial analysis to build an ArcGIS StoryMap to include interactive mapping of lands in the study area with the attributes available for viewing and exporting. Hannah served as the project manager, overseeing the technical team and leading the strategy to develop the study.

### Monterey County Community Climate Action and Adaptation Plan

County of Monterey

Project Manager

Ascent is assisting the County of Monterey with its effort to develop a Community Climate Action and Adaptation Plan (CCAAP) for 2030 and update its Municipal Climate Action Plan. The CCAAP will focus on developing strategies and programs to meet stringent GHG reduction targets through carbon-free electricity, building decarbonization, transportation decarbonization, zero waste, and carbon sequestration from working lands and urban forestry. Hannah is serving as the project manager and conducting extensive outreach to stakeholder groups to ensure effective climate solutions are incorporated in the CCAAP.

## OTHER RELEVANT PROJECT EXPERIENCE

- ▶ Amendments to Humboldt County Code Regulating Commercial Cannabis Activities EIR, Air Quality and Climate Change Specialist
- ▶ Alameda County Community Climate Action Plan and Safety Element Update, Project Manager
- ▶ Bakersfield Comprehensive Climate Action Plan, Project Director
- ▶ California Vegetation Treatment Program Update EIR, Senior Technical Expert
- ▶ Trinity County Cannabis Program Environmental Review, Air Quality and Climate Change Specialist
- ▶ Tuolumne County Climate Action Plan, Project Manager/GHG Lead
- ▶ Walt Ranch Erosion Control Plan Carbon Sequestration Report, Napa County, Project Manager



# Brenda Hom

PROJECT MANAGER/TECHNICAL LEAD

YEARS OF EXPERIENCE 16

## EDUCATION

MS, Transportation Technology and Policy, University of California, Davis  
BS, Mechanical Engineering, University of California, Los Angeles

## CERTIFICATIONS

ClearPath 2.0 Trained Professional

Brenda Hom is a project manager and senior climate action specialist, serving as the Climate Mitigation Manager in Ascent's Climate Action and Adaptation Planning Practice. With experience on over 20 climate action, GHG reduction, and sustainability plans across California, she specializes in GHG quantification, evolving climate policies, and developing quantification templates for GHG inventories and reduction measures. Her experience combines the technical requisites of GHG quantification and the constant evolution of climate change policies, including zero-emission vehicle mandates, building decarbonization, and the state strategies to achieve carbon neutrality. Brenda excels in organizing and processing complex sets of data into public-ready summaries through her development of the carbon storage inventories and forecasts and sequestration strategies for several counties in California.

## SELECTED PROJECT EXPERIENCE

### Monterey County Community Climate Action and Adaptation Plan

County of Monterey

Senior Climate Change Analyst

Ascent is assisting the County of Monterey in developing a Community Climate Action and Adaptation Plan for 2030 and update its Municipal Climate Action Plan. The CCAAP focuses on developing strategies and programs to meet stringent GHG reduction targets through carbon-free electricity, building decarbonization, transportation decarbonization, zero waste, and carbon sequestration from working lands and urban forestry. Brenda serves as the senior climate change analyst, providing senior technical reviews of the GHG inventory and reduction measure quantification.

### SMUD Nature-Based Carbon Solutions and Biodiversity Program Feasibility Study

Sacramento Municipal Utility District

Technical Lead

As a subcontractor to GEI Consultants, Ascent supported the technical analysis for SMUD's Nature-Based Carbon Solutions and Biodiversity Program Feasibility Study. Ascent developed a spatial baseline of carbon stock within SMUD's service territory and surrounding areas of energy generation, quantifying the future carbon stock over the coming decades, and identifying carbon sequestration potential for land management practices to support SMUD's climate mitigation and resilience goals. In addition, Ascent used the results of the spatial analysis to build an ArcGIS StoryMap to include interactive mapping of lands in the study area with the attributes available for viewing and exporting. Brenda served as the technical lead and main product designer working with Ascent's GIS team and Python coders to research and build the consolidated database, workbook, and dashboard to quantify the study area's carbon storage values and forecasts, aligning with the state's Natural and Working Lands inventory.

### Napa County Regional Climate Action and Adaptation Plan

County of Napa

Senior Climate Change Analyst

Ascent is leading the preparation of the Napa County Regional Climate Action and Adaptation Plan on behalf of the County of Napa and the incorporated communities in the county. The RCAAP will provide a comprehensive suite of GHG emission reduction and climate adaptation strategies. Prior to kicking off the RCAAP in early 2024, Ascent previously assisted the County in preparing a draft climate action plan, along with technical analyses of regional GHG emissions and carbon storage and sequestration potential. Brenda is the senior climate change analysis and technical lead for the RCAAP, overseeing the development of updated forecast and GHG reduction measure language and quantification, while streamlining these efforts due to her past experience with Napa County's previous GHG Inventory and Forecast update and Climate Action Plan.

## OTHER RELEVANT PROJECT EXPERIENCE

- ▶ Marin County Climate Action Plan, Climate Change Analyst
- ▶ Mendocino County Agricultural Sector GHG Emissions Inventory, Forecasts, and Measures, Project Manager
- ▶ Sacramento County Climate Action Plan, Senior Climate Change Specialist
- ▶ San Diego County Climate Action Plan Update, Senior Climate Change Analyst
- ▶ Santa Clara Valley Water District Qualified GHG Reduction Plan, Project Manager/Technical Lead
- ▶ Sonoma County Climate Action Plan, Climate Change Analyst
- ▶ Tuolumne Biomass Utilization Fund, Senior Climate Change Analyst
- ▶ Tuolumne County Climate Action Plan, Senior Climate Change Analyst
- ▶ Walt Ranch Erosion Control Plan Carbon Sequestration Report, Senior Climate Change Analyst



# Luis Montes

## OUTREACH SPECIALIST

YEARS OF EXPERIENCE 9

### EDUCATION

MS, Environmental Management,  
University of San Francisco

BS, Environmental Policy Analysis and  
Planning (minor in Spanish), University  
of California, Davis

### CERTIFICATIONS

ClearPath 2.0 Trained Professional

Luis Montes is a dedicated and enthusiastic professional specializing in public engagement. With his master's degree from the University of San Francisco and background in local government, he brings a strong academic foundation in environmental studies and a deep passion for community outreach and education. Luis is skilled in public speaking and delivering oral presentations and effective at drafting blog posts, talking points, presentations, letters of recommendation, briefings, and white papers. Driven by a commitment to environmental stewardship and public safety, he is eager to apply his knowledge and skills to develop effective climate action and adaptation plans that prioritize public engagement.

## SELECTED PROJECT EXPERIENCE

### Monterey Bay Natural and Working Lands Climate Mitigation and Resiliency Study

Association of Monterey Bay Area Governments

Climate Action Planner/Outreach Specialist

Ascent assisted AMBAG with the development of its Natural and Working Lands Climate Mitigation and Resiliency Study. The study included estimating the carbon storage and sequestration potential of various land uses and developing strategies to enhance carbon storage through nature-based solutions. Other integral parts of the project included conducting stakeholder engagement, as implementation of the strategies identified in the study will be carried out by many natural and working lands stakeholders to create a more resilient Monterey Bay Area. Luis served as a climate action planner on the project, developed strategies for the study, and supported stakeholder engagement.

### Monterey County Community Climate Action and Adaptation Plan

County of Monterey

Outreach Specialist/Climate Action Planner

Luis served as one of the lead authors for the Monterey County CCAAP, playing a crucial role in developing content that explains the County's approach to reducing GHG emissions. He translated complex technical information into accessible content, developed compelling infographics, and documented the CCAAP development process. Luis prioritized accessibility and meaningful participation and engagement. He created outreach materials for partner organizations, developed a strategic social media plan, and coordinated with Spanish interpreters to ensure language access was integrated into the engagement process. As one of the lead authors of the plan, Luis translated technical topics such as carbon sequestration and GHG mitigation into clear language and supported them with customized infographics.

### Napa County Regional Climate Action and Adaptation Plan

County of Napa

Outreach Specialist

Luis is spearheading engagement and outreach efforts for the Napa Regional Climate and Adaptation Plan in collaboration with the Napa Regional Conservation District and multiple jurisdictions, including the County of Napa, the Cities of American Canyon, Calistoga, Napa, and St. Helena, and the Town of Yountville. He played an important role in synthesizing feedback to formulate an outreach and engagement plan to guide activities throughout the project. Luis contributed to the design of external-facing materials, such as the project website and avenues for gathering feedback by preparing a comprehensive survey. Luis is also key in designing public community meetings and ensuring engagement deliverables adhere to the project schedule.

## OTHER RELEVANT PROJECT EXPERIENCE

- ▶ Bakersfield Comprehensive Climate Action Plan, Outreach Specialist
- ▶ California State Parks General Plan Updates, Outreach Specialist
- ▶ Elk Grove Climate Compass, Assistant Project Manager/Outreach Specialist
- ▶ Encinitas Climate Action Plan Update, Outreach Specialist
- ▶ Fire-Adapted Communities Roadmap and Dashboard, Outreach Specialist
- ▶ Lake Elsinore Climate Action and Adaptation Plan, Outreach Specialist
- ▶ Newark Climate Action Plan Update, Community Outreach Specialist
- ▶ Rincon Band of Luiseño Indians PCAP and CCAP, Outreach Specialist
- ▶ San Diego Inclusive Public Engagement Guide, Outreach Specialist



# Lisa Merry

GIS LEAD

## YEARS OF EXPERIENCE

19

## EDUCATION

MS, Environmental Science and Management, Conservation Planning Specialization, University of California, Santa Barbara

BS, Environmental Biology and Management, Minors in Geographic Information Systems (GIS) and Psychology, University of California, Davis

Lisa Merry is Ascent’s GIS Practice Leader. She has a graduate degree in environmental science and management and has 19 years of professional experience. Lisa possesses a strong educational background in GIS and database management. Her experience includes resource mapping and preparing the geospatial datasets to support carbon stock inventories. Lisa has experience evaluating wildlife habitats, botanical surveys, and watersheds for purposes of resources management planning and environmental impact analysis. She coordinates all GIS projects and the installation and configuration of all software that is GIS-related and is building and maintaining the GIS system. Her skills include GPS field data recording, GIS resources analysis and mapping, natural resources assessments and management planning, and environmental impact assessment.

## SELECTED PROJECT EXPERIENCE

### Monterey Bay Natural and Working Lands Climate Mitigation and Resiliency Study

Association of Monterey Bay Area Governments

GIS Lead

Ascent assisted AMBAG with the development of its Natural and Working Lands Climate Mitigation and Resiliency Study. The study included estimating the carbon storage and sequestration potential of various land uses and developing strategies to enhance carbon storage through nature-based solutions. The study created a carbon model that calculates the carbon stored in the natural and working lands of the Monterey Bay Area. Other integral parts of the project included conducting stakeholder engagement, as implementation of the strategies identified in the study will be carried out by many natural and working lands stakeholders to create a more resilient Monterey Bay Area. Lisa was the GIS lead on the project, managing all spatial datasets and conducting the analysis of the carbon stock inventory and geodatabase of carbon values.

### SMUD Nature-Based Carbon Solutions and Biodiversity Program Feasibility Study

Sacramento Municipal Utility District

GIS Lead

As a subcontractor to GEI Consultants, Ascent supported the technical analysis for SMUD’s Nature-Based Carbon Solutions and Biodiversity Program Feasibility Study. Ascent developed a spatial baseline of carbon stock within SMUD’s service territory and surrounding areas of energy generation, quantifying the future carbon stock over the coming decades, and identifying carbon sequestration potential for land management practices to support SMUD’s climate mitigation and resilience goals. In addition, Ascent used the results of the spatial analysis to build an ArcGIS StoryMap to include interactive mapping of lands in the study area with the attributes available for viewing and exporting. Lisa was the GIS lead on the project, managing all spatial datasets and directing the analysis of the carbon stock inventory and geodatabase of carbon values.

### California Vegetation Treatment Program Update EIR

California Board of Forestry and Fire Protection

GIS Lead

In 2025, the CalVTP was identified by the Governor’s office as the cornerstone of the State’s strategy for efficiency CEQA compliance to increase the pace and scale of treatment. Updates to the CalVTP have been directed by the Governor’s Emergency Proclamation to further increase its usefulness and efficiency, and to identify impediments to increasing the pace and scale of vegetation treatment and develop solutions to increase compliance efficiency and regulatory alignment. Lisa managed the GIS data, performed spatial analysis, and prepared maps for the project.

## OTHER RELEVANT PROJECT EXPERIENCE

- ▶ Alameda County Community Climate Action Plan and Safety Element Update, GIS Lead
- ▶ Auburn State Recreation Area General Plan and Resource Management Plan, GIS Specialist
- ▶ California Vegetation Treatment Program PEIR, GIS Lead
- ▶ Landscaping Inventory and Vegetation Management Database, Project Manager
- ▶ Mid Klamath Watershed Council Vegetation Treatment Project Project-Specific Analysis, GIS Lead
- ▶ Monterey County Community Climate Action and Adaptation Plan, GIS Lead
- ▶ Yuba Foothills Healthy Forests Project, GIS Lead





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