

Matthew Thomas Fountain

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PROFESSIONAL SUMMARY:

GIS leader and conservation scientist with over 10 years of experience in delivering spatial data systems, analysis, and decision-support products focused on wildlife, climate resilience, and community planning. Skilled in developing GIS strategies and roadmaps, managing ArcGIS Online (AGOL) and enterprise geodatabase environments, and creating scalable web GIS applications such as Dashboards, Experience Builder, and StoryMaps. A collaborative manager and educator, I excel at translating complex stakeholder needs into secure, high-quality geospatial solutions and guiding teams through successful project delivery in fast-paced, multi-project environments.

CORE COMPETENCIES:

ArcGIS Online (AGOL) administration • Enterprise geodatabases & data standards • Geospatial product development • Conservation planning, spatial prioritization & geoprocessing statistical analysis (ArcGIS Pro, Python, R) • Field data workflows (Survey123, Field Maps) • Web GIS apps (Dashboards, Experience Builder, Hub, StoryMaps) • Data QA/QC, metadata & documentation • Automation (Python, ModelBuilder, Arcade) • Remote sensing & imagery analysis (Google Earth Engine, eCognition) • Stakeholder enablement & training • Project and portfolio management

EDUCATION:

M.S., Spatial Data Science | Pennsylvania State University (World Campus) | May 2023

Certificates: Geographic Information Systems; Remote Sensing and Earth Observation

B.S., Wildlife Conservation Biology (Applied Vertebrate Ecology) | Humboldt State University | May 2016 | Minor: **Geospatial Analysis**

PROFESSIONAL EXPERIENCE

GIS Director | Planning Communities, LLC (Certified B Corporation)

Loveland, CO (Remote) | November 2024 – Present

- Lead firmwide GIS strategy and roadmap, delivery standards, and reusable templates supporting climate & resilience planning, conservation, equity prioritization, and parks/trails initiatives.
- Administer ArcGIS Online (AGOL) and enterprise geodatabase environments for internal and client organizations (users/roles, content governance, secure sharing). Managed cloud data storage/sharing for internal and client use on RDS, SharePoint, and Google Drive.
- Translate stakeholder needs into high-value maps, spatial analyses, decision-support tools, and public-facing geospatial products; led data gathering, modeling, and visualization for projects including [Greensboro Tree Canopy Assessment](#), [Appalachian Trail Conservancy Community Assessments](#), [Massachusetts Flood Vulnerability Assessment](#), and Chattanooga, TN, multi-modal trail connection prioritization.
- Develop interactive web GIS products (Dashboards, Experience Builder, StoryMaps) for executive and public audiences.
- Design and deliver GIS training programs for staff and clients; mentor and strengthen data stewardship practices.

- Lead in the design and submittal of proposals to secure more environmental GIS contracts and employed kanban framework project management tools (Scoro, Basecamp) for organization, tracking, and workflows.

GIS Specialist | Colorado State University – Center for Environmental Management of Military Lands (CEMML)

Fort Collins, CO | June 2024 – February 2025

- Managed 20+ concurrent GIS projects across the U.S., supporting natural resource conservation on federal lands.
- Built field data collection workflows (Survey123, Field Maps, AGOL), performed QA/QC, migrated data into DoD SDSFIE enterprise databases using Esri ETL tools, improved operational efficiency, and managed cloud data storage and engineering workflows with SQL on RDS.
- Produced spatial analyses, maps, tables, and reporting deliverables for technical and non-technical stakeholders.

Project Manager / GIS Analyst / Instructor | AllPoints GIS

Denver, CO | February 2022 – June 2024

- Managed a GIS project portfolio as the primary project manager and technical advisor for federal, local government, nonprofit, and private clients. Oversaw Esri and client relationships through contract negotiation, budget management, resource planning, and strategic collaboration. Managed two full-time employees and 15 contractors, applying technical coordination tools and project management best practices (SharePoint).
- Managed client ArcGIS Online (AGOL) organizations and ArcGIS Enterprise database accounts, supporting secure access, data governance, and high-integrity deliverables. Managed cloud data storage/sharing for internal and client use on RDS, AWS, SharePoint, and GitHub.
- Developed custom geoprocessing and automation tools (ModelBuilder, Python, Arcade) and performed spatial/statistical analysis in ArcGIS Pro, R, and Python.
- Built effective remote sensing workflows, including object-based image analysis and Google Earth Engine models for classification and monitoring.
- Designed and delivered GIS curriculum and training in ArcGIS Pro, field data capture (Survey 123, Field Maps, Quick Capture), AGOL applications (Experience Builder, StoryMaps, Dashboards, Hub), and AGOL administration; coached client teams to adoption.

GIS Contractor | Fountain GIS

Remote | February 2022 – Current

- Self-employed GIS contractor for organizations such as Integral Ecology Research Center (IERC), AllPoints GIS, Planning Communities, and other small firms.
- Built customized web applications (IERC [Beneath the Canopy: The Hidden Impacts of Illegal Cannabis](#)), delivered comprehensive in-person and online training, and organized/managed geodatabase and AGOL accounts.

Assistant Professor (GIS Certificate Program) | University of Richmond

Remote | August 2023 – June 2024

- Developed curriculum and taught courses in spatial analysis, geoprocessing workflows, and cartography for an online GIS Certificate program.

- Provided technical coaching and assessed student projects using ArcGIS Pro, ArcGIS Online, and Blackboard.

ECOLOGY EXPERIENCE

Environmental Technician / GIS Technician | SWCA Environmental Consultants

Salt Lake City, UT | April 2020 – September 2020

- Monitored for ecological habitats and presences of species in accordance with protocols set by the BLM and USFW.
- Demonstrated knowledge of endangered, threatened, endemic, and introduced species to effectively implement inventory and monitoring programs. Conducted habitat assessment and presence-absence surveys for rare and sensitive plants, White-Tailed prairie dogs, Mountain Plovers, Mexican Spotted Owls.
- Quality assured and quality controlled my data and data from other field technicians. Data was collected using ESRI's Survey 123 and Collector and entered into ArcGIS online database. Coordinated and planned scheduling with supervisors and field technicians.
- Assisted in drafting and editing survey reports by analyzing the data.
- Applied advanced technology with handheld tablets to enter digital data in the field to increase accuracy and efficiency.

Biological Contractor / GIS Technician | North Coast Field Biologist

Eureka, CA | March 2018 – September 2018

- Completed point transect calling surveys for Northern Spotted Owls (NSO) on BLM lands in Southern Oregon.
- Located NSO through mousing to determine nesting success and monitored for Barred Owl presence.
- Traversed steep, densely vegetated terrain and navigated to call points.
- Effectively managed my time and reacted to rapid schedule changes due to fire restrictions.
- Maintained legible, accurate and concise field data, communicated clearly and effectively with coworkers, updated a database with survey information, and mapped NSO results using GIS.

Biological Technician (Wildlife) | USDOI Bureau of Land Management

Arcata, CA | May 2017 – October 2017 / May 2015 – August 2015

- Completed point transect calling surveys for Northern Spotted Owls on BLM lands in Northwestern California.
- Surveyed deer and elk abundance through the collection of scat in set grids.
- Conducted point counts for songbird and shorebird species identification and abundance.
- Monitored Snowy Plover nest and installed educational signs and fencing to redirect human traffic.
- Monitored Elephant Seals through tag identification. Collected samples from Baird's Beaked whale carcass.
- Coordinated surveys for small mammal trapping and ear tagged for capture/recapture in coastal dune habitat.
- Surveyed streams for sensitive fish species through snorkeling, eDNA, and electro-fishing.
- Assisted with monitoring of species presence before and during construction monitoring.
- Drafted tentative professional opinions to assist in determining wildlife resource needs, habitat requirements and remedies.
- Assisted in analytical assignments that included researching and analyzing data, issues, and information that supported our projects.
- Assisted with planning wildlife habitat management programs, with emphasis on maintaining and enhancing biodiversity, movement corridors, and critical habitat.

Crew Lead / Project Manager / Biological Technician (Wildlife) | USDA Forest Service

Porterville, CA | May 2016 – November 2016

- Led a crew of 12 technicians on the Sierra Nevada Carnivore Monitoring Program. Collected data on fishers, martens, and other mammalian species through non-invasive survey methods (track-plates, remote cameras, and hair snares) and sample collection for isotopic analysis on diet composition.
- Trained technicians in species inventory protocol, inventory field forms, inputting data into Microsoft Access database, and off-trail navigation. Handled personality and housing conflicts.
- Lead safety meetings, scheduled team group locations/driving routes, and communicated with dispatch about crew locations and safety updates.
- Conducted quality control on field sites, data sheets, and database.
- Processed genetic samples for laboratory work.
- Assisted in analytical assignments by performing qualitative and quantitative analysis, analyzing data, issues, and information that support wildlife project recommendations.
- Communicated clearly and effectively, writing reports and project updates to the supervisor and drafted tentative professional opinions to assist in determining resource needs and remedies.
- Inventoried, maintained, and ordered supplies and equipment.
- Maintained a rapid work pace without sacrificing accuracy. Handled high workloads, competing demands, interruptions, and distractions with self-control.

Project Manager / Field Crew Supervisor / Biological Technician (Wildlife) | USDOI Bureau of Land Management

Arcata, CA | August 2015 – May 2016

- Designed and implemented a spatially explicit capture-recapture population density through individual identification of bobcats using pelage patterns and employed a new remote camera-based protocol.
- Hired, supervised, and led five student technicians in wildlife habitat assessment procedures to determine population. Trained all crew members in remote camera operation, gathering and preparing equipment for field days, orienteering, and navigating in densely forested habitat, and hiking in arduous terrain and adverse weather conditions.
- Oversaw scheduling, logistical planning, data proofing/processing, obtaining/maintaining equipment, quality control of field work, adherence to protocols and standard operating procedures, and ensured data collection was appropriate and relevant to the study design.
- Created database and retrieved, analyzed, and manipulated data by performing qualitative and quantitative analyses of the data.
- Researched scientific papers to implement inventory and monitoring strategies. Analyzed data using scientific principles, methods, and processes.
- Monitored and fixed issues in the field with data that supported my project.
- Produced reports with graphics, maps, and spreadsheets; used statistical processing software and spreadsheet programs (Microsoft Excel and R) to run statistical evaluation; and used GIS software to further analyze and produce meaningful graphics.
- Produced a manuscript with results and presented findings before large groups at The Wildlife Society conference in New Mexico in 2017.

Management Technician | Montana Fish Wildlife and Parks

Missula, MT | May 2014 – August 2014

- Conducted population surveys of gray wolves using radio telemetry, tracks, scats, and howling.
- Took a major part in safely setting traps, darting/sedating, monitoring vitals, and VHF/GPS collaring wolves. This included making assessments of animal health based on visual inspections sometimes brief observations through spotting scopes. Followed strict protocols where inattention to detail meant the difference between life and death for animals or humans. Learned to safely operate ATVs.
- Made clear, convincing presentations before small groups in order to convey information and explain

MFWP's position on wildlife and habitat management.

- Negotiated with individuals to resolve conflicts and gain support in management practices.

Wildlife Technician | USDOJ Bureau of Land Management

Headwaters Forest Reserve, CA | September 2013 – May 2014

- Took part in a non-invasive inventory of the fisher population within Headwaters Forest Reserve.
- Set up and monitored hair collection stations with remote sensor cameras and collected fisher hair samples for genetic analysis.

Wildlife Technician | USDA Forest Service, Redwood Sciences Lab

Arcata, CA | July 2013 – August 2013

- Investigated the use of artificial denning structures by forest carnivores and the effect of artificial denning structures on species' occupancy of second-growth forests.
- Conducted track-plate surveys for forest carnivores. Identified all tracks collected, including ~15 mammalian species.

PROFESSIONAL PUBLICATIONS AND PRESENTATIONS

- Master's Thesis Publication, **Fountain M. T.** 2023. "Examining Landscape-Scale Movement of Snowshoe Hare (*Lepus americanus*) in a Managed Forest." The Pennsylvania State University, Electronic Thesis and Dissertations for Graduate School.
- Poster presentation, **Fountain M.T.**, M.S. Gunther. 2017. "A Novel Method for Individual Identification of Bobcats (*Lynx rufus*) Using Remote Sensor Cameras." The Wildlife Society conference, Albuquerque, NM.

PROFESSIONAL REFERENCES

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