

JUSTIN CULMAN

FIRE GIS SPECIALIST



Denver, CO



(303) 815-7190



Jculman62@gmail.com



Justin-culman.com

EDUCATION

BACHELOR'S DEGREE
University of Oregon
Environmental Science &
Geography Double Major
2013 – 2017

MASTER'S DEGREE
University of Colorado at
Denver
MA in Applied Geography
and Geospatial Sciences
Graduate GIS Certificate
2018 – 2020

FIRE QUALIFICATIONS

- ❖ GIS Specialist
- ❖ Infrared Interpreter
(Cadre Member)

PROFESSIONAL REFERENCES

Craig Gallagher
303-319-5530
Craig_gallagher@nps.gov

Doug Wilder
720-930-9150
Doug_wilder@nps.gov

Heidi Ogle
720-884-6873
Heidi_ogle@nps.gov

PROFESSIONAL PROFILE

Dynamic GIS Specialist with extensive experience supporting wildfire preparedness, emergency response, and reporting across multiple agencies. Background in natural and cultural resource GIS data management and map production. Skilled in delivering authoritative geospatial data, customized map products, and real-time web mapping applications to enhance operational coordination and situational awareness. Proven leader in training and mentoring GIS staff, facilitating multi-day workshops on ArcGIS Pro, ArcGIS Online, Field Maps, Survey123, and GNSS workflows. Adept at managing large-scale geospatial datasets, conducting QA/QC for federal reporting, and driving modernization efforts through national GIS initiatives. Combines technical expertise in advanced spatial analysis, LiDAR scanning, and mobile data collection with strong collaboration skills to support mission-critical resource management and conservation goals. Interdisciplinary educational background in wildlife biology, terrestrial ecology, marine ecology, wildfire behavior, and environmental sciences.

PROFESSIONAL EXPERIENCE (40HR/WK, 52 WK/YR)

FIRE GIS SPECIALIST

APRIL 2024 - PRESENT

National Park Service/Wildland Fire Service – Intermountain Region

- Provided critical geospatial support for wildfire and fuels preparedness, response, and reporting during non-emergency and emergency response.
- Collaborated with park staff, interagency partners, and resource managers to deliver authoritative GIS data, customized map products, and mobile field data collection support.
- Delivered GIS support for fire operations across multiple national parks, ensuring mission-critical data accuracy and operational coordination.
- Produced and maintained annual digital and print map products for 41 NPS park units tailored to park-specific fire management needs.
- Conducted QA/QC on national and regional fire datasets, certifying wildfire polygons and fuels treatment data for federal reporting systems.
- Remotely embedded into park fire management teams through weekly virtual meetings, enabling seamless GIS support, project updates, and response to emerging fire incidents across geographically dispersed units.
- Deploy as emergency response for active wildfires for two-week shifts.

GIS SPECIALIST

MAY 2022 – APRIL 2024

National Park Service – Intermountain Region Geographic Resource Division

- Led onboarding, training, and mentorship for three cohorts of NPS GIS interns, supporting over 45 interns through project development, project management, and geospatial analysis.
- Facilitated and co-led multi-day GIS trainings covering ArcGIS Pro, ArcGIS Online, Field Maps, Survey123, GNSS receivers, and NPS Portal workflows for interns and staff across parks and regional offices.
- Maintained and updated authoritative regional geospatial datasets in SDE geodatabases for 86 park units, including roads, trails, buildings, and parking lots, ensuring accuracy and data integrity using Branch Versioning.
- Contributed to national GIS modernization efforts and improved public-facing spatial data systems by co-chairing the GIS Council Cartography and Web Mapping Subcommittee.
- Conducted 3D LiDAR scanning of two cliff dwelling sites at Mesa Verde NP and Navajo NM using Trimble SX12 and R12i, supporting millimeter-scale change detection and spatial documentation of cliff dwellings.

TECHNICAL SKILLS

- ❖ ArcGIS Pro
- ❖ ArcGIS Online
- ❖ ArcGIS Enterprise
- ❖ Field Maps
- ❖ Survey123
- ❖ Quick Capture
- ❖ Story Maps
- ❖ Experience Builder
- ❖ Dashboards
- ❖ Spatial Analysis
- ❖ LiDAR - Trimble
- ❖ Data Management
- ❖ Data QA/QC
- ❖ Cartographic Print Layouts
- ❖ Model Builder
- ❖ Microsoft Office
- ❖ Adobe Suite
- ❖ QGIS
- ❖ GNSS Receivers

PROFESSIONAL SKILLS

- ❖ Project Management
- ❖ Training
- ❖ Resource Management
- ❖ Mentorship
- ❖ Situational Awareness
- ❖ QA/QC
- ❖ Problem Solving
- ❖ Detail Oriented
- ❖ Stakeholder Engagement
- ❖ Emergency Response
- ❖ Communication
- ❖ Time Management
- ❖ Adaptability
- ❖ Attention to Detail
- ❖ Innovation
- ❖ Remote Coordination
- ❖ Virtual Engagement

PROFESSIONAL EXPERIENCE CONTINUED

RESEARCH ASSOCIATE II

JAN. 2022 – MAY 2022

National Park Service – Intermountain Region Geographic Resource Division

- Managed onboarding for NPS GIS interns, including application review, interviews, orientation coordination, and mentoring.
- Designed and delivered a five-day field data collection and GIS data management training for interns.
- Helped migrate the NPS Park Atlas web maps and applications from Geocortex system to ESRI Experience Builder.
- Gather campsite and campground location data from parks to input into Recreation.gov for spatially accurate support for reservations by public.

CARTOGRAPHIC TECHNICIAN

MAY 2021 – NOV. 2021

National Park Service – Grand Teton National Park

- Planned and implemented workflows for managing cultural resource spatial data, applied FGDC-compliant metadata standards, and maintained file geodatabases with core attribute standards for sites, surveys, and historic structures.
- Developed a spatial data aggregation system for park projects, built ArcGIS Online dashboards to track budgets and timelines, and automated updates from Excel to feature services using ModelBuilder and geoprocessing workflows.
- Configured and maintained 20+ mobile devices and GNSS receivers (Trimble, Leica, Eos), trained staff on high-accuracy data collection workflows, and provided technical support for field operations.
- Field data collection of riverbank erosion and glacier monitoring projects, collected and modeled high-accuracy elevation data, supervised remote field workflows, and produced spatial analyses and visualizations to inform resource management decisions.

GIS INTERN

SEPT. 2020 – MARCH 2021

National Park Service – Capitol Reef National Park

- Designed and maintained geodatabases for cultural resource datasets based on decades of previously collected data, applied FGDC-compliant metadata standards, and ensured data quality through evaluation and organization of spatial and attribute information. Resulted in online feature service data management and allowed for use of data in field for updating and new data collection.
- Developed and deployed Survey123 forms for graffiti monitoring and rare plant species surveys, trained staff and volunteers, integrated data into ArcGIS Portal, and created documentation for broader NPS adoption.
- Partnered with law enforcement, facilities, and resource divisions to support data-driven decision-making; disseminated workflows and datasets to stakeholders across public, private, and governmental sectors.
- Conducted air quality monitoring, stream flow measurements, and water quality sampling following established protocols; analyzed and reported findings to inform resource management and conservation efforts.

ADDITIONAL PROFESSIONAL EXPERIENCE (PART TIME)

GIS INTERN

APRIL 2019 – JUNE 2020

National Park Service – Intermountain Region Geographic Resource Division

GIS FIELD TECHNICIAN

MARCH 2018 – MARCH 2019

Encompass Energy Services, LLC

CARTOGRAPHIC RESEARCHER

SEPT. 2016 – SEPT. 2017

University of Oregon Cartographic Lab, Atlas of Wildlife Migration: Wyoming's Ungulates