

ANDREW MACIAS

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Project Portfolio and Website: <http://andrewmacias.com>

SUMMARY

A highly skilled and dedicated geographic information systems professional with demonstrated expertise in geospatial data analysis, geospatial database management, flood hazard mapping, natural hazard risk assessment, data validation, quality control, continuous improvement, and documentation. Proven aptitude for analyzing complex data to deliver high-quality geospatial products and actionable insights. Excels at prioritizing multiple competing tasks in dynamic environments. Driven to achieve results and exceed expectations to ensure the long-term success of an enterprise.

EXPERIENCE

ABS GROUP CONSULTING INC.

Washington, D.C. (Remote)

GIS Analyst and Consultant

2023-2026

- Participated in development and release of NRI v1.20, national-level FEMA geospatial product that assessed risk (loss, exposure, frequency) for 14 natural hazards (e.g., wildfires, earthquakes, heatwaves, hail) across the continental U.S., Alaska, Hawaii, and U.S. territories.
- Performed data validation and quality control using Tableau, ArcGIS Pro, and SQL Server, supporting iterative beta versions and ongoing methodological refinements.
- Created and updated geospatial datasets, including revised county and tract boundaries, to align with post-2023 census and boundary changes.
- Designed and produced final hazard map series for each of 14 hazard codes and their respective risk ratings, losses, and frequencies for inclusion in documentation and public release materials.
- Managed and tracked all public inquiries related to NRI using Excel and email, ensuring timely and accurate responses in coordination with subject matter experts as needed.
- Served on coordinated needs management strategy team, focusing on validating and updating flood hazard geodatabases across multiple states and FEMA regions.
- Completed detailed analysis of hydrological and imagery data to update and validate FEMA's flood hazard database using ArcMap and ArcGIS Pro, along with custom QC tools.
- Ensured accuracy, reliability, and validity of waterways prone to flooding, contributing to long-term maintenance of flood hazard data integrity.
- Participated in FEMA's federal flood risk management standard joint venture project, collaborating with partners such as AECOM, CDM Smith, and T&M Associates.
- Worked on federal flood risk management standard joint venture project in both raster production and quality control.
- Produced predicted flood hazard maps for various flood probabilities (50-, 100-, and 500-year floods) for counties in Texas using ArcGIS Pro.
- Utilized proprietary flood mapping tools and hydrological analysis of state waterways to develop raster-based flood boundaries derived from national flood hazard studies.
- Contributed to quality control team to ensure compliance with FEMA standards and delivery of high-quality flood hazard products.
- Executed Hazus loss estimation models for hurricane and earthquake scenarios across United States using ArcMap and Hazus 6.1, ensuring accurate and reliable outputs.
- Supported continuous improvement of Hazus Loss Library by providing feedback on scenario performance and recommending enhancements.

NORTH STATE PLANNING & DEVELOPMENT COLLECTIVE
GIS Assistant II

Chico, California (Remote)
2022-2023

- Analyzed, edited, and maintained spatial data for National Hydrography Dataset (NHD) in compliance with USGS standards.
- Used ArcMap and latest imagery for integration, manipulation, and quality control of geospatial data related to national hydrography and watershed boundaries.
- Assisted in development and updating of metadata to ensure proper documentation of datasets.
- Conducted quality assurance and data validation to ensure the accuracy, consistency, and completeness of hydrographic datasets.
- Provided technical support and guidance to team members on GIS procedures and database management.

EDUCATION

CALIFORNIA STATE UNIVERSITY, CHICO, Chico, California
B.A., Human Geography and Planning, Minor in Geospatial Literacy

CERTIFICATIONS

Public Trust Background Investigation, Department of Homeland Security, 2025
Certified Floodplain Manager, Association of State Floodplain Managers, 2024
Certificate in Geospatial Technology, California State University, Chico, 2023

TECHNICAL SKILLS

C++ | Python | HTML | CSS | SQL | ArcGIS Pro | QGIS | Microsoft Office Suite | Google Workspace | Tableau Desktop
Certificate in Geospatial Technology, California State University, Chico, 2023