
James Carney

DEVELOPMENT, DESIGN, ANALYSIS

jcarney.mail@gmail.com | portfolio.thecarney.com

◆ EDUCATION

MS, DEVELOPMENT FOR GIS AND CARTOGRAPHY

U. WISCONSIN-MADISON (2017-2019)◆

- Full-stack, responsive development, user-driven design, and geospatial analysis and visualization.

BA, ENVIRONMENTAL ECONOMICS

U. WASHINGTON (2008)◆

- Natural resource economics, environmental planning, GIS, technical communication.

MBA, FINANCE CONCENTRATION

CSU STANISLAUS (2019-ONGOING)◆

- Understanding business needs to develop intelligent solutions.

◆ SKILLS

FULL-STACK DEVELOPMENT ◆

- JavaScript, SQL, Python, HTML/CSS, Java, and command line scripting.
- Frontend frameworks and libraries including jQuery, React 16.8+, Gatsby, Apollo, Leaflet/MapBoxGL, Turf.js, D3, ESRI JS API.
- Hosted services such as Heroku Postgres, Netlify, Github Pages.
- Databases and application backends using Node.js, Postgres, and GraphQL for data access.

GEOGRAPHIC INFORMATION SYSTEMS AND CARTOGRAPHIC DEVELOPMENT ◆

- ESRI GIS fluency, including development of relational geodatabases, custom analysis tools using ArcPy and model builder, and the ArcGIS Online web mapping platform.
- Cartographic design, including design and styling of interfaces and maps using the Adobe Creative suite, to provide high-quality visuals and user experiences.

ECONOMIC CONSEQUENCE MODELING AND RISK ANALYSIS ◆

- Experienced analyst and modeler, expertise in natural hazard risk analyses.
- Probabilistic modeling of financial and economic damage potential from natural hazard events and benefit-cost analysis for evaluation and comparison of proposed mitigation strategies.

PROJECT MANAGEMENT AND FINANCIAL ANALYSIS ◆

- Experienced with a range of project management activities, including business development and proposals, sub-consultant management, project technical execution, and project financial management. Proficiency with standard MS Office Suite, and additionally including experience with SharePoint, Power BI, and Excel VBA.

TECHNICAL WRITING AND COMMUNICATION ◆

- Strong technical writing and public communication skills. Experienced catering communication tools and reports to the intended audience, whether for the public or a panel of technical experts.

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◆ EMPLOYMENT

WATER RESOURCES ECONOMIST AND PLANNER

Tetra Tech, Inc. (Seattle, WA and San Francisco, CA)

2008 – present◆

- Advanced knowledge of technical analyses required for economic benefit evaluations and hazard risk assessments for municipal, state, and federal planning studies, including emphasis on coastal and riverine flood hazards, riverine ecosystem restoration studies, and complementary recreation benefit analyses.
- Performs regional economic analyses using input-output modeling software to estimate impacts from changes in final demand due to existing hazard conditions and changes in final demand that would occur by implementation of a mitigation project.
- For unique studies, develops project-specific probabilistic damage models to estimate equivalent annual impacts and benefit-cost ratios inclusive of risk and uncertainty parameters.
- Proficient in quantitative non-monetary ecosystem restoration project benefit analyses including cost-effectiveness and incremental cost analysis. Working knowledge of ecosystem services valuation analyses.
- Strong understanding of federal planning policies and procedures. Key author on large-scale feasibility and programmatic environmental planning documents such as Environmental Assessments and Impact Statements, as required under the National Environmental Policy Act and other state environmental policy acts, including the California Environmental Quality Act.
- As a GIS analyst, develops and implements database frameworks and workflows to transition collection of field data related to flood risk modeling to a spatial database, streamlining acquisition and processing of data. Performs a range of spatial analyses for floodplain delineation, asset risk exposure mapping, and maps and graphic production for public reports.
- As a project manager, manages multiple projects for Federal clients, including management of sub-consultants and review of technical products prior to final submittal. Participates in the development of monthly and annual client reports to summarize cost, revenue, profit, backlog, and other metrics by business line and client.

THANK YOU