James Carney

RISK ANALYSIS AND COMMUNICATION FOR
ENVIRONMENTAL AND NATURAL RESOURCE PLANNING

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◆ EDUCATION

ENVIRONMENTAL ECONOMICS, B.A.   U. WASHINGTON, SEATTLE (2008)◆

- ▪ Focused coursework in natural resource economics, environmental science, and planning for employment in the environmental consulting industry.

CARTOGRAPHY/GIS, M.S.   U. WISCONSIN, MADISON (2017-ONGOING)◆

- ▪ Development of customized geospatial analysis and cartographic communication tools.
- ▪ Full-stack development and visualization design for mobile and web GIS solutions

MBA, FINANCE CONCENTRATION   CSU STANISLAUS, TURLOCK (2017-ONGOING)◆

- ▪ Bringing financial industry business analytics tools to natural resource management planning.
- ▪ Quantifying and communicating risk of natural hazard event occurrence and the consequences of inaction.

◆ 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.

◆ KEY SKILLS, TRAININGS, AND INTERESTS

Geographic Information Systems and Development ◆

▪ ESRI GIS fluency, including development of relational geodatabases, custom analysis tools using ArcPy and model builder, and the ArcGIS Online web mapping platform. Ongoing graduate education provides a growing skillset in programming and development, including using of multiple languages to develop custom web and mobile applications from the ground up, such as SQL, Python, Java, JavaScript, HTML, and CSS. A growing cartographic design skillset, including design and styling of maps using the Adobe Creative suite, to provide high-quality visuals. Training and experienced using the FEMA HAZUS software for mitigation planning.

Economic Consequence Modeling and Risk Analysis ◆

▪ Experienced modeler, having developed models and delivered products using a range of tools, with expertise in flood risk analyses. Analyses include probabilistic modeling of financial and economic damage potential from natural hazard events, including development of error parameters for engineering and economic variables, and amortization of resultant costs and benefits to develop annualized estimates of hazard risk. Development of risk-informed outputs to assist decision-makers in understanding the likelihood of natural hazard occurrence and the probability that a given mitigation action will prevent or contain an event of a certain magnitude. To develop a strong foundation in policies and procedures for federal agency planning projects, attended additional industry-specific courses on environmental planning, economic consequence analysis, and natural hazard risk analysis.

Project Management and Financial Analysis ◆

▪ Experienced with a range of project management activities, including fee proposal development, sub-consultant oversight and product review, organizing and running presentation of deliverables to clients, invoicing, and project closeout. Strong organizational skills and adherence to schedule provides for timely delivery of products. Experience developing task budgets for project staff, and monitoring task completion versus budget remaining, and working in teams to identify critical path project tasks and delegate workload. Proficiency with Excel, Access, DesktopBI. Ongoing graduate education provides a growing knowledge of financial planning and project risk evaluation.

Technical Writing ◆

▪ Strong technical writing and narrative development skills for resource characterizations and consequence analyses, as well as technical proposals. Depth and breadth of experience with socioeconomics, recreation, and environmental justice resource categories. Experienced authoring of technical appendices as well as summary narratives for public documents. Proficiency in MS Office products and increasing experience in the Adobe Creative Suite for document production.

REFERENCES AVAILABLE UPON REQUEST