

Economic Analysis



Economic analysis and plan formulation solutions for water resources projects

Our economics team is available to assist in all phases of planning for wide variety of water resource projects.

Tetra Tech provides a wide range of economic analyses, from the execution of specific elements of studies to the complete development of turnkey feasibility-level economic appendices. Our economists participate in all phases of project planning. Skills include evaluation of without-project conditions (future and existing conditions), field data collection and database inventory development, benefit-cost analysis, risk-based analysis, cost effectiveness and incremental cost analyses, and tradeoff analysis.

Tetra Tech has extensive experience in conducting and managing complex federal economic analyses for the US Army Corps of Engineers, US Bureau of Reclamation, and Natural Resources Conservation Service. We understand and have applied experience with plan formulation and economic analysis procedures consistent with the Principles and Guidelines for Water Resources and Related Land Implementation Studies and the associated implementation guidance, regulations, and procedures of the different federal water resource agencies. Tetra Tech has also supported state and local government agencies with economic analysis including regional economic impact modeling and assessment.



Economic analysis for wide variety of projects

- Urban and agricultural flood risk management (structural and non-structural)
- Ecosystem restoration
- Coastal storm risk management
- Emergency streambank and shoreline stabilization
- Watershed planning
- Recreation
- Deep draft and inland navigation
- Municipal, industrial, and agricultural water supply, conservation, and reallocation

Economic modeling experts

Tetra Tech is well versed in developing and using many of the standard models implemented in water resource studies ranging from single-use flood-damage reduction to ecosystem restoration, including multipurpose projects. Our experience includes national economic development (NED), national ecosystem restoration (NER), and regional economic development (RED) studies. We are experienced with development of NED/NER Optimal Tradeoff Plans for multi-purpose projects. Economic models applied include:

- HEC-FDA, HEC-FIA, HEC-EAD, HAZUS
- @RISK for unique simulation requirements
- Crystal Ball for cost and schedule risk analysis
- IWR-PLAN Suite for tradeoff analysis, cost effectiveness, and incremental cost analysis
- BEACH-Fx for risk-based coastal storm damage reduction analysis
- IWR-MAIN for water demand forecasting and water conservation analysis
- IMPLAN, RECONS, and REMI for regional economic analysis

Our team has extensive experience with risk-based flood damage reduction modeling for USACE studies, including projects where HEC-FDA was applied. We have experience running HEC-FDA for evaluating levee project performance for both existing and future with-project conditions. Conditional non-exceedance is the current project performance statistic used in risk-based analysis to measure reliability. We have project experience with determining FEMA criteria for projects meeting 90% conditional non-exceedance probability for the 1% event. We have also applied HEC-FDA for multiple dam break and dam safety studies for the NRCS.



1420 5th Avenue
Suite 650
Seattle, WA 98101 USA

Ridge Robinson
+1 (206) 728-9655
ridge.robinson@tetrattech.com

Learn more at [tetrattech.com](https://www.tetrattech.com)

