

Geomatic Technologies Group

Integrated Mapping Solutions

Tetra Tech provides integrated mapping solutions using state-of-the-art mapping software, airborne sensors and camera systems, and a robust information technology infrastructure. Our clients receive accurate, innovative geospatial and mapping solutions for commercial, governmental, and defense applications.

Our ASPRS-certified photogrammetrists, FAA-certified UAS pilots, certified geographic information systems professionals, remote sensing professionals, and LiDAR analysts have more than a century of collective industry experience. Tetra Tech's geomatic technologies professionals support our clients with a full suite of services—from air, land, water, and desktop.

Core Products and Services

Planimetric and Topographic Mapping

Our team develops precision-engineering scale maps and topographic contours. We customize end-product deliverables to client standards and file formats.

Orthoimagery

We have extensive experience in producing high-quality orthoimagery, digital camera or film-based acquisition, and satellite imagery that can be used as a basemap for both visual interpretation and engineering design.

Light Detecting and Ranging (LiDAR)

LiDAR inherently measures points on vegetation and infrastructure for detailed feature extraction and analysis. Our specialists combine photogrammetry and LiDAR, enabling modeling of optimal terrain-based products.

Markets We Serve

- Civil engineering and land survey firms
- Federal, state, and local agencies
- Military bases
- Energy companies
- Water and irrigation districts
- Mining industry
- Landfill operators
- Ports and harbors
- Golf courses and racetracks
- Environmental consultants
- Land development and land management firms
- Railroad and rail authorities
- International agencies
- Oil and gas agencies

Multispectral and Hyperspectral Technology

We use multispectral and hyperspectral imagery, which encompasses a vast portion of the electromagnetic spectrum, for agricultural, environmental, forestry, and geologic studies.

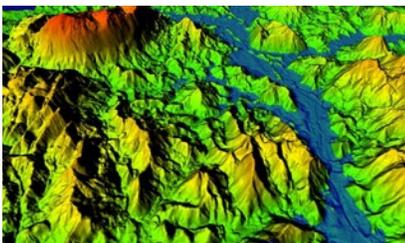
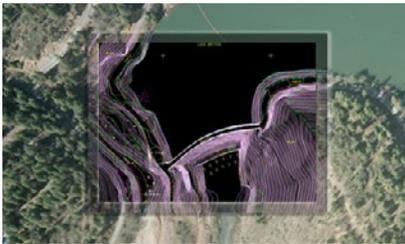
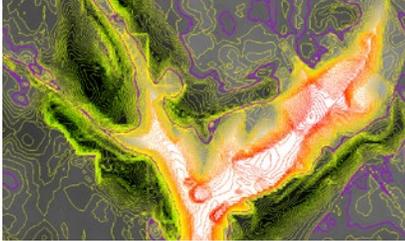
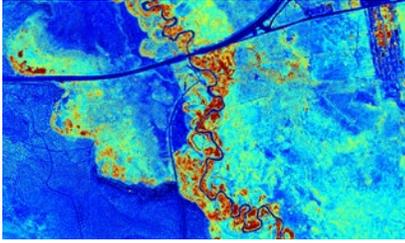
Geographic Information Systems (GIS)

Tetra Tech's GIS capabilities include data development and analysis, data conversion and editing, programming, cartographic production, and WebGIS. Our expert knowledge includes the latest software packages such as the ESRI software suite and Open Source GIS.

Unmanned Aerial Systems (UAS)

Our team is flying fixed-wing and quadcopter systems for aerial data acquisition. The data is often used for change detection and precision mapping products such as 3D surfaces, oblique or orthoimagery, and contour maps.

Project Samples



Signature Projects

Regional, County, and City

- High-resolution orthophotography using a large format digital camera for GIS basemap in Inyo County, California
- Imagery classification of land-use and land-cover for a hydrodynamic watershed model of Jordan Watershed, North Carolina
- Scanning, aerotriangulation, and orthorectification of more than 9,600 historical aerial images for a GIS basemap for Los Angeles, California

Military Bases

- LiDAR mapping and GIS for floodplain modeling and 3D terrain analysis at Edwards Air Force Base (AFB), California
- Hyperspectral acquisition and processing for sensitive species habitat at Edwards AFB, California
- Landfill mapping and volume calculations using archival aerial imagery for Vandenberg AFB, California

Water and Utility Districts

- Transmission line LiDAR survey and planimetric mapping to generate as-builts for reconductor design in Bakersfield, California
- LiDAR and six-inch, true-color orthoimagery for more than 5,500 square miles of terrain along the United States-Mexico border for the U.S. International Boundary and Water Commission
- Photogrammetric mapping for engineering design of a wind farm connection to an electrical substation in Central California

Environmental Consulting Firms

- High-resolution orthoimagery to support watershed management and conservation in North Carolina
- High-resolution true-color and color infrared orthoimagery to support a hydroelectric project in Pit River, California
- High-resolution orthoimagery and planimetric mapping captured with data from a UAS quadcopter at Pismo Beach, California, to monitor and evaluate coastal erosion of cliffs

International

- Aerotriangulation, orthorectification, and terrain extraction of aerial imagery in the Panama Canal region
- Engineering scale planimetric and topographic mapping of an IndyCar racetrack in support of video enhanced technology in Toronto, Ontario
- Helmand Transmission Line planimetric mapping in Afghanistan



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