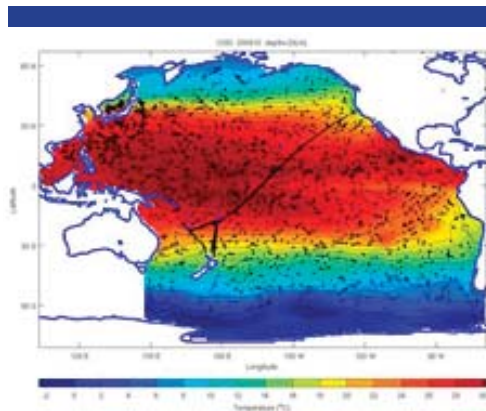


## CORPORATE OVERVIEW

ERT is a trusted partner to the government, providing scientific analysis and modeling, engineering, information technology, and environmental services and solutions to NOAA, NASA, DoD, USGS, the Army Corps of Engineers, and other Federal and state government agencies.

## ERT AT A GLANCE

- Woman-owned small business (WOSB)
- DCAA-approved accounting system
- ISO 9001:2008 certification
- CMMI Maturity Level 2 rating
- Award-winning company earning recognition from NASA, NOAA, and industry
- Core services:
  - Science and technology support
  - Engineering support
  - IT solutions/services
  - Environmental services



Optimize algorithms for studying long term trends in ocean temperature.

- enhanced ground texture and wider dynamic albedo range. More detailed albedo can be used to study the evolution of forest disturbance.
- Integrate data from multiple remote sensing instruments internationally to enhance temporal coverage frequency for crop monitoring and disaster monitoring.
- Develop satellite instrument pre- and post-launch algorithms for both geostationary operational & polar-orbital environmental satellites to perform ultraviolet, visible, infrared, and microwave wavelength calibrations.
  - Conduct long-term monitoring and trending of instrument performance.
  - Characterize instrument biases with respect to other operational sensors and simulations.

## Research, Development, Test and Evaluation (RDT &E)

Our capabilities include analysis of research RDT&E efforts. Capabilities include:

- Tracking and evaluating current and ongoing R&D in specified mission areas.
- Informing numerous stakeholders of the latest developed technologies.
- Effectively reducing interagency redundancy in R&D efforts.

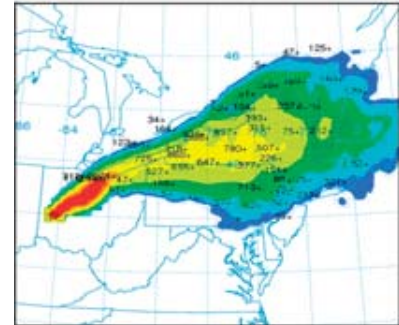
## CAPABILITIES

ERT has research and development (R&D) experience covering the breadth of our core services from science and technology, to engineering and environmental services.

### Modeling and Data Analysis

Our modeling capabilities span from data assimilation for model inputs to model development and analysis. Our modeling expertise is applied to various research efforts from climate change, to contaminant impacts, to natural disaster impact analysis. Capabilities include:

- High performance computing integration, testing, and evaluation of numerical prediction models and data assimilation approaches.
- Development and testing of data assimilation quality control and data preparation approaches.
- Geoid modeling calibration performing extensive fieldwork via laser ranging and gravimeters for in-situ observations to validate calculated or satellite-inferred calibrations.
- Dispersion modeling and modeling development for air quality (ozone, particulates, carbon, NOx), contaminant (oil plume, algal blooms, cyanobacteria), ocean sensor data (temperature, ph, sea level) observations, forecasts and predictions.
- Model analysis to predict environmental and human impacts and plan targeted and timely response strategies.



Atmospheric contaminant dispersion modeling.

### Remote Sensing, Algorithm Development, and Instrument Calibration & Validation

Our capabilities include remote sensing and algorithm development with the goal of enhancing ongoing data collection and research of various ecosystem processes.

- Create land, ocean, and atmospheric products through the use of algorithms and radiative transfer models. Examples include atmospheric aerosol content, ocean chlorophyll measurement, and vegetation net primary productivity.
- Develop algorithms to remove atmospheric effects from a variety of remote sensing instruments such as Landsat, MODIS, and SeaWiFs.
- Acquire and process hyperspectral data through development of algorithms.
  - In-situ and airborne/satellite study sites provide data from locations worldwide.
  - Data promotes understanding, monitoring, and modeling a wide variety of terrestrial ecosystem processes and plant physiology.
- Develop new 30-m measurements of reflectivity of the Earth's surface (albedo) to provide