OAK RIDGE NATIONAL LABORATORY

ENVIRONMENTAL SCIENCES DIVISON

"SCIENCE TO SUSTAIN OUR ENVIRONMENT"

SCIENCE AREAS

- Atmospheric & Aerosol Science
- Environmental Chemistry
- Subsurface Science
- Biological Monitoring
- Environmental Analysis
- Water Sustainability
- Environmental Data Systems and Science
- Microbial Ecology & Physiology
- Microbial Genomics
- Bioenergy Resource & Engineering Systems
- Consequence Analysis
- Energy Analysis
- Society-Technology Interactions
- Carbon-Climate Simulation Science
- Carbon & Nutrient Biogeochemistry
- Experimental Terrestrial Ecology
- Landscape Ecology & Regional Analysis
- Plant Molecular Ecology
- Terrestrial Water-Carbon Cycles

WHO WE ARE

The Environmental Sciences Division (ESD) is an interdisciplinary research and development organization with more than 60 years of achievement in local, national, and international environmental research. Our vision is to expand scientific knowledge and develop innovative strategies and technologies that will strengthen the nation's leadership in creating solutions to help sustain the Earth's natural resources. Scientists in ESD conduct research, develop technology, and perform analyses to understand and assess responses of environmental systems at the environment-human interface and the consequences of alternative energy and environmental strategies. We seek to understand how natural and anthropogenic factors (e.g., global and regional change, environmental stress, and energy production and use) interact to influence environmental systems and society. Our methods integrate field and laboratory methods with new theory, modeling, data systems, policy analysis, and evaluation to create solutions to complex environmental challenges.

We have six core areas of research that frame our objectives in advancing environmental science, technology, and policy:

Earth Sciences
Understand fate and transport processes at multiple scales to allow extrapolation across domains of observation and prediction

Ecological Management
Create and apply effective methods to measure, assess, and manage ecosystems

Environmental Data Science & Systems
Provide data management and analysis for large, integrated environmental databases to the nation's research community and policymakers

Microbial Systems Biology
Harness the capabilities of microbial systems by understanding interactions at genomic, physiological, organism, and community levels

Social, Behavioral, and Economic Sciences
Develop methods and models, conduct analyses, and produce tools that address key issues at the intersection of science, technology, society, and policy

Terrestrial Ecology
Understand and predict the dynamic behavior of ecosystems at multiple scales (molecular to watersheds)

UT-BATTELLE
Management Contractor for DOE's Oak Ridge National Laboratory